



Brussels, 18.11.2022
SWD(2022) 751 final

PART 1/28

COMMISSION STAFF WORKING DOCUMENT

Education and Training Monitor 2022

Accompanying the document

**Communication from the Commission to the European Parliament, the Council, the
European Economic and Social Committee and the Committee of the Regions**

on progress towards the achievement of the European Education Area

{COM(2022) 700 final} - {SWD(2022) 750 final}

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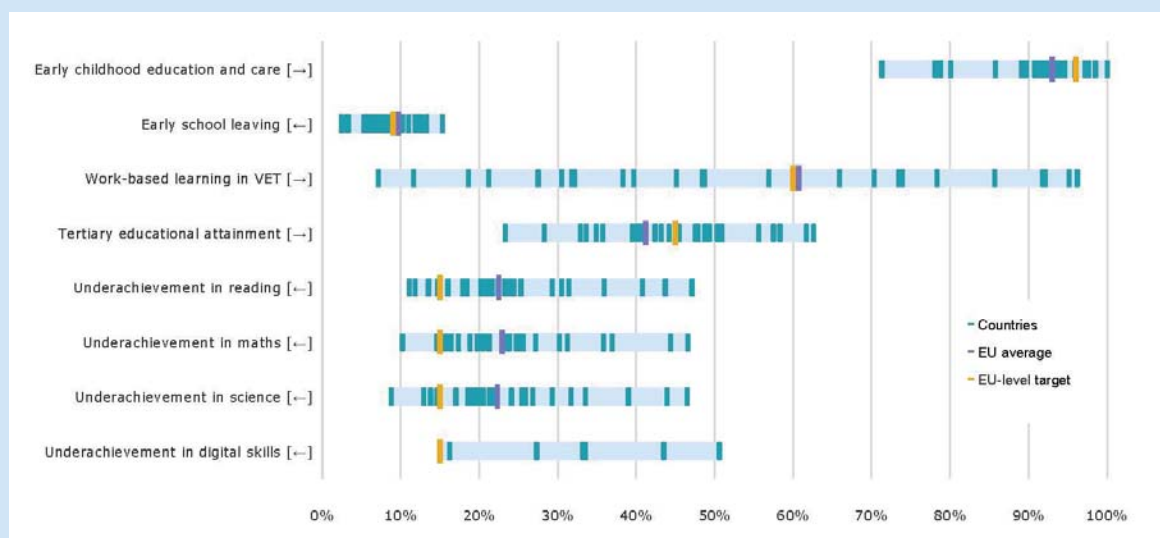
Executive summary

The Education and Training Monitor's comparative report comprises a broad, cross-EU analysis of education and training systems to go alongside 27 more in-depth country reports. The comparative report tracks progress towards achieving the EU-level targets agreed as part of the strategic framework for European cooperation in the field. Seven EU-level targets have been set, and this report complements them with numerous supporting indicators to shed light on context and possible policy levers. In addition, the 2022 edition starts with a brand new EU-level indicator – developed in response to a request from the Council – to be used as a broad measure of the equity of EU education and training systems. The 2022 Education and Training Monitor accompanies a Commission progress report on the European Education Area.

A new indicator brings the conversation closer to the roots of inequity in education

No education and training system manages to decouple performance from socio-economic status. Young people from disadvantaged socio-economic backgrounds are almost six times more likely to underachieve at age 15 than those from advantaged socio-economic backgrounds, suggesting a strong intergenerational transmission of educational disadvantage. Such inequities do not emerge at age 15 and do not stop there. Stepping up the focus on equity in education is likely to support future progress in all existing EU-level target domains. The 2022 Education and Training Monitor demonstrates key equity challenges across other domains, with underperformance widespread among specific population sub-groups, and often clustered in the same schools or areas.

A summary of country performance with regards to the EU-level targets under the EEA Strategic framework Resolution.



Source: Eurostat (EU Labour Force Survey 2021 and UOE 2020), OECD (PISA 2018) and IEA (ICILS 2018). Note: the EU-level target on adult learning is omitted as data supporting the main indicator will only be available as of 2023.

A level playing field is set in the early years

Quality early childhood education and care (ECEC) is a major contributor to equity when it can reach children from disadvantaged socio-economic backgrounds. Participation in ECEC contributes to better cognitive outcomes and better prospects, especially for vulnerable children. At 93.0% in 2020, the overall share of children between the age of 3 and the start of compulsory primary education enrolled in ECEC has remained stable. Yet children from disadvantaged backgrounds

continue to encounter obstacles to participation. Several EU countries have recently broadened access by extending the age of the ECEC place guarantee or improving affordability. Even though closures and restrictions were not as ubiquitous as at other education levels, the COVID-19 pandemic put pressure on the quality of provision, and a spotlight on pre-existing structural issues.

A better responsiveness is needed for future decreases in early school leaving

At 9.7% in 2021, the share of early leavers from education and training continues to fall and remains on track to achieving the 2030 target of less than 9%. Approximately 3.1 million young people are now disengaged from education and training while having attained lower secondary qualifications at most, with only 42.3% of them being employed. Future progress may require refocusing on the most disadvantaged and hardest-to-reach young people. For instance, young people whose parents have a low level of education are nine times more likely to be early school leavers than young people whose parents have a high level of education. The *Pathways to School Success* proposal links low attainment and low achievement in education, supporting a wide range of actors in their capacity to respond to the real-world needs of today's young people.

A diverse and evolving landscape characterises vocational education and training

Nearly half (48.7%) of all pupils enrolled in upper secondary education are in vocational education and training (VET). The 2022 Education and Training Monitor captures progress towards three key objectives for the VET sector, covering work-based learning, mobility and graduate employability. In terms of work-based learning, newly collected data reveal major differences between countries. While at EU level, the 2025 target seems within reach, the full impact of the COVID-19 pandemic is yet to be captured. The pandemic has also interrupted a gradual increase in VET learner mobility, with some recovery beginning in May 2021. Furthermore, at 76.4% in 2021, the employment rates of recent VET graduates suffered from the pandemic too, with recovery remaining incomplete.

An expansion of higher education masks persisting disparities

In 2021, 41.2% of 25-34 year-olds had a tertiary-level qualification, keeping the EU on track towards meeting its 2030 target of at least 45%. However, decades of educational expansion have coincided with an ever-widening gender gap, reaching 11.1 percentage points in favour of women. Evidence suggests that gender gaps emerge long before tertiary education and widen along the education trajectory, as mirrored in most data on new entrants, enrolments and completion. Study choice also retains a strong gender divide, and women remain underrepresented in disciplines such as ICT and engineering. In addition, tertiary educational attainment rates are 48.6 percentage points higher among young people whose parents have a high level of education than they are among young people whose parents have a low level of education.

An era of transitions demands lifelong skills development

In 2021, 10.8% of adults aged 25 to 64 participated in formal or non-formal learning activities over the preceding 4 weeks, showing a recovery from pandemic-induced drops the previous year. While adult learning in the preceding 4 weeks has increased among the unemployed (now 12.7%), it is still much less prevalent among people with a low level of education (4.3%) and people living in rural areas (7.8%). These data build on a new, more granular definition of adult learning – and will be improved again next year with the reference period for learning activities being extended to 12 months. It is the 12-month reference period that will be used for the EU-level targets for both 2025 and 2030, as well as for national targets set by the Member States.

A policy focus on key competences looks beyond basic skills

The fact that underachievement in basic skills is associated with less time being allocated for instruction could spell bad news for the learning losses that may have resulted from physical school closures. However, there are other key competences beyond reading, maths and science that should not be overlooked in a post-COVID-19 world. The 2022 Education and Training Monitor looks at the latest evidence on key competence domains such as multilingualism and citizenship. Firstly, almost two thirds of lower secondary students now learn at least two foreign languages, strengthening intercultural understanding. Secondly, in terms of civic awareness, substantial shares of young people give priority to issues such as inequality (42.8%) and climate change (39.4%).

A focus on digital and sustainability competences concerns learners of all ages

The promotion of digital and sustainability competences can benefit from them being mainstreamed in compulsory education as cross-curricular subjects. It will also benefit from the boosting of teachers' confidence and skills. Yet ensuring a basic proficiency in digital and sustainability competences has particular implications for adult learning, making sure that learners who already left the formal education and training systems do not miss out on the opportunities provided by an accelerating twin transition. Moreover, it should be emphasised that these competence domains are marked by the same inequities that permeate the entirety of education and training. For instance, boys are more likely to underachieve in digital skills than girls, and engagement in environmental protection activities is more prevalent among young people from advantaged socio-economic backgrounds in several Member States.

Part 1. The right of learning

The right to education is enshrined in the Universal Declaration of Human Rights and a cornerstone of the rights-based Sustainable Development Goal 4 for education¹, contributing to a fair society of equal opportunities. At EU level, it is the European Pillar of Social Rights² that plays a key role in battling inequalities between and within Member States³. Efforts to improve equity and inclusion in education and training complement the EU equality strategies adopted in 2020-21⁴. They form a strategic priority of European cooperation in education and training towards the European Education Area and beyond⁵.

Equitable education and training systems are not about equal educational attainment or equal educational achievement. Instead, they are expected to ensure that young people's educational performance is decoupled from individual circumstances such as socio-economic status – the latter often captured by parental education and occupation, or household income. Moreover, inclusive education and training systems are responsive to the outcomes and experiences faced by specific population sub-groups⁶.

Part 1 of this report puts equity front and centre. It starts off with a brand new EU-level indicator on equity in education and training, in response to an invitation to propose one as part of the [EEA Strategic framework Resolution](#). The proposed approach affirms the objective to decouple education outcomes from socio-economic status. The new indicator is based on the OECD's Programme for International Student Achievement (PISA). Part 1 then continues with a chapter on access to quality early childhood education and care, which levels the playing field in a truly equitable education and training system.

Box 1. Evidence suggests physical school closures have widened educational inequities

National research suggests that where learning loss occurred, it typically exacerbated educational inequalities stemming from pre-existing socio-economic gaps. In the Netherlands, for example, learning losses were 60% higher among students living in households where neither parent had achieved qualifications above lower secondary education level. Similarly, a study from Belgium found a correlation between the extent of the learning loss and school characteristics, with schools with higher shares of disadvantaged student populations experiencing larger learning losses. Studies from some other Member States showed similar patterns.

Several key factors were likely to influence children's vulnerability to learning loss. Parental education likely played an important role, as parents with lower educational achievement may have found it more difficult to provide their children with adequate learning support at home during physical school closures. Children living in single-parent households may have been particularly vulnerable, especially where single parents were employed and experienced work-life balance difficulties that prevented them from providing appropriate

¹ See UNESCO's [overview](#) of the right to education.

² Principle 1 of the European Pillar of Social Rights says that '[e]veryone has the right to quality and inclusive education, training and life-long learning in order to maintain and acquire skills that enable them to participate fully in society and manage successfully transitions in the labour market'.

³ Two headline indicators of the [European Pillar of Social Rights'](#) revised [Social Scoreboard](#) worth mentioning here as broader context indicators concern income inequality (comparing the ratio of equivalised disposable income received by the top quintile to that received by the bottom quintile) and the at-risk-of-poverty or exclusion rate for children aged 0-17 (measuring the share of children who are at risk of poverty, and/or severely materially or socially deprived, and/or living in households with very low work intensity).

⁴ These EU equality strategies comprise, inter alia, the [Gender equality strategy](#), the [EU anti-racism action plan](#), the [EU Roma strategic framework for equality, inclusion and participation](#), the [LGBTIQ equality strategy](#), and the [Strategy for the rights of persons with disabilities](#).

⁵ See the [2021 Council Resolution](#), henceforth noted as 'EEA Strategic framework Resolution'.

⁶ Disadvantaged backgrounds, above and beyond socio-economic status, concern young people that have been traditionally marginalised and/or discriminated against in education and training. Some disadvantaged groups remain invisible in regular cross-EU monitoring exercises, such as young people from racial and ethnic minorities and young people with special education needs or disabilities.

learning support. Migrant status of parents and children contributed to learning vulnerability, as parents may have struggled to provide learning support to their children due to language barriers or differences in educational systems between countries.

Above all, learning loss was concentrated among children experiencing socio-economic disadvantages, such as low household income, lack of access to educational tools, lack of internet access, or lack of parental support in learning. Migrant and displaced children, especially refugees and asylum-seekers, were more vulnerable to educational disruption where they had limited access to resources necessary for online learning. Children from certain minority ethnic backgrounds, such as Roma, experienced such poor digital infrastructure too. Limited internet access in certain remote rural locations was also likely to contribute to learning loss.

Source: *Employment and Social Developments in Europe (ESDE) review 2022*.

Chapter 1. A new indicator brings the conversation closer to the roots of inequity in education

1.1. Socio-economic status has an immense effect on educational performance

For the very first time, Figure 1 contrasts severe educational underperformance among learners from disadvantaged socio-economic backgrounds with that of learners from advantaged socio-economic backgrounds. Severe underperformance here means a low score on all three PISA scales simultaneously (reading, maths and science)⁷. Socio-economic status is captured by the OECD's index for economic, social and cultural status⁸, comparing its lowest and highest quarters. This broad measure of inequity tops no fewer than 35 percentage points in Romania (39.0) and Bulgaria (38.3)⁹. The gap is 19.3 percentage points on average across the EU, with students of low socio-economic status 5.6 times more likely to underachieve in school education than students of high socio-economic status¹⁰.

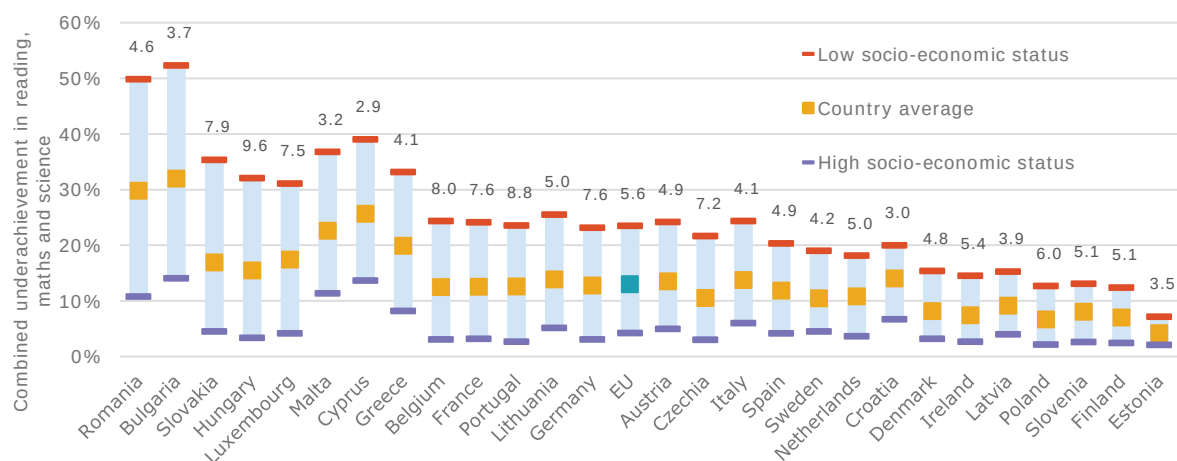
Figure 1. Educational underperformance is coupled with socio-economic status

⁷ This is in contrast to low achievement in reading, maths and science separately, which is captured by an existing EU-level target (see Section 7.1 and also Box 2 in this section). Section 7.1 reiterates how there has been negligible progress towards reaching the existing EU-level target. An insufficient focus on equity in education may be a primary cause of this negligible progress. The new EU-level indicator domain on equity in education brings the conversation closer to the root of the problem. It is worth noting however, that the share of severe underperformance may be underestimated. This is partly because the underpinning PISA tests may have excluded newly arrived migrants, learners with language difficulties, or learners with disabilities. Student exclusions from PISA 2018, albeit small, were attributed to functional disability, intellectual disability, language or other reasons.

⁸ This well-established index is a measure of students' access to family resources (financial capital, social capital, cultural capital and human capital). It comprises elements such as parental level of education, parental occupational status and various home possessions.

⁹ In both countries, around half of all 15-year-olds in the lowest quarter of socio-economic status underperform across reading, maths and science.

¹⁰ Comparing the two latest rounds of data collection (2015 and 2018), the gap has not changed substantially at EU level since 2015 when it stood at 18.8 percentage points and a 5.9 ratio. The addition of PISA 2022 in December 2023 will shed further light on trends over time, and may confirm whether gaps have widened since the onset of the COVID-19 crisis.



Source: European Commission (Joint Research Centre) calculations based on OECD's PISA 2018 data. Note: countries are shown in descending order according to the percentage point difference between the lowest and highest quarters of socio-economic status in terms of average underachievement in reading, maths and science (combined). Figures on top of each bar denote the ratio between the two values.

The outsized role of socio-economic status is not limited to a minority of Member States¹¹, but there are huge disparities between countries as to the size of underachievement gaps. Firstly, a gap of under 10 percentage points only exists in Estonia and Finland (5.1 and 9.9, respectively). These two countries are generally top performers in PISA and thereby show that there is no inherent trade-off between excellence and equity. Secondly, country variation is so substantial that students from advantaged socio-economic backgrounds in some countries are still much more likely to underperform than students from disadvantaged socio-economic backgrounds in other countries.

Box 2. How does the new EU-level indicator compare with the existing EU-level targets on underachievement in reading, maths and science?

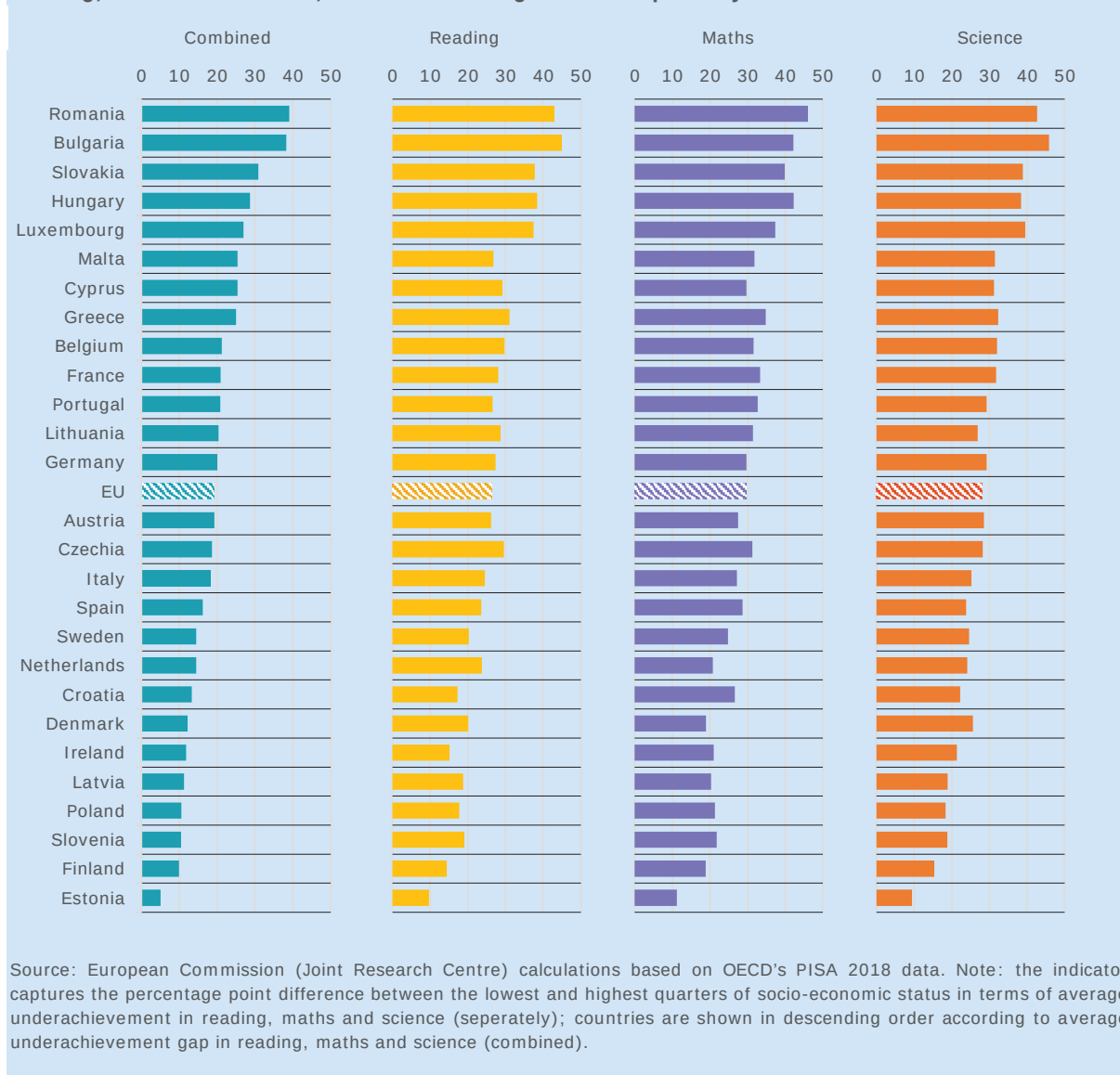
The new EU-level indicator for equity in education uses a combined measure of severe educational underachievement. Instead of looking at low achievement in reading, maths and science separately – as is the approach of the complementary EU-level target on underachievement in basic skills (Section 7.1) – it captures underperformance on all three proficiency scales simultaneously.

It is more likely for a 15-year-old to have a low score on one PISA scale than on all three PISA scales simultaneously. Across the EU, the shares of underachievement in reading (22.5%), maths (22.9%) and science (22.3%) are all higher than the share of underachievement in all three domains combined (13.0%). This illustrates how the new EU-level indicator on equity is built on a more severe definition of educational underachievement. Here, eight Member States yield shares above 15%: Bulgaria (32.0%), Romania (29.8%), Cyprus (25.7%), Malta (22.6%), Greece (19.9%), Luxembourg (17.4%), Slovakia (16.9%) and Hungary (15.4%).

Underachievement gaps by socio-economic status are also different when looking at the three PISA domains separately as opposed to combined (Figure 2). The new EU-level indicator for equity in education is more favourable to some countries and less favourable to others. Some Member States compare more positively with the EU average, such as Czechia (in particular when compared to reading and maths separately), Slovenia (maths, reading) and Denmark (science). Other Member States compare more negatively with the EU average, such as Malta (in particular when compared to reading separately) and Cyprus (maths).

¹¹ Even among the seven countries with overall shares of underachievement below 10%, the underachievement ratio between low and high socio-economic students ranges from 3.5 (Estonia) to 6.0 (Poland).

Figure 2. The underachievement gap between low and high socio-economic status when combining reading, maths and science, and when looking at them separately



Even though education and training systems all across the EU try to eliminate any negative effects arising from learners' individual circumstances, low socio-economic status may be the largest single explanatory factor obstructing equality of opportunity for many different disadvantaged groups¹². Low socio-economic status permeates the school experience in various ways. Its effects are evident for the youngest age brackets with comparative data available¹³ and even extend to 15-year-olds' expectations of completing tertiary education in the future¹⁴. Socio-economic status

¹² See the [2021 Council conclusions](#) on equity and inclusion in education and training in order to promote educational success for all.

¹³ The 2019 *Trends in International Mathematics and Science Study* (TIMSS) by the International Association for the Evaluation of Educational Achievement (IEA) is partially focused on students in grade 4 (age 10 on average). Across the EU, 4.5% of fourth graders reveal a low performance in the TIMSS tests for both maths and science. This share is only 1.0% among high socio-economic groups (measured on the basis of parental education), versus 9.9% among low socio-economic groups.

¹⁴ Strikingly, across the EU, whereas 81.8% of 15-year-olds from advantaged socio-economic backgrounds expect to complete tertiary education, only 45.4% of 15-year-olds from disadvantaged socio-economic backgrounds expect to do the same.

is so engrained in education and training systems that learners with low socio-economic status may end up clustered in schools with a concentration of similarly disadvantaged peers¹⁵.

The passing down of educational disadvantage throughout the generations remains pervasive in all EU-level target domains covered in the 2022 Education and Training Monitor with proxies for socio-economic background available. For instance, young people whose parents have a low level of education are nine times more likely to become early school leavers (Chapter 3) and 48.6 percentage points less likely to attain a tertiary educational qualification (Chapter 5) when compared to young people whose parents have a high level of education¹⁶.

1.2. Complementary evidence on specific disadvantaged groups adds further texture

Inclusive education presupposes an assessment of the disadvantage experienced by specific population sub-groups. Some elements of this disadvantage may be due to socio-economic status, whereas others could be attributed to factors such as prejudice, discrimination, language barriers or a lack of appropriate services.

Women outperform men in virtually all EU-level education statistics. Combined underachievement in reading, maths and science is about 3 percentage points less common among girls (with the socio-economic gap in underachievement being nearly identical). The risk of early leaving from education and training is 3.5 percentage points lower among girls (Chapter 3) and tertiary educational attainment is no less than 11.1 percentage points more common among women (Chapter 5). Education and training systems do nonetheless contribute towards engraining outdated gender stereotypes¹⁷. Gender equality measures in education are particularly targeted at creating a better gender balance in certain fields of study, and at developing equality plans, particularly in higher education institutions.

Migrant young people are 12.9 percentage points more likely to become early school leavers than the overall EU average (Chapter 3)¹⁸. They are 7.1 percentage points less likely to attain a tertiary education qualification (Chapter 5). The later migrants arrive in the education trajectory, the more education and training systems struggle to integrate them. The underperformance gap between low and high socio-economic status is 20.9 percentage points when the test language is not spoken at home¹⁹, versus 17.4 percentage points when it is (Figure 3). The difference is much more pronounced in Hungary (59.1 versus 27.8), Romania (64.2 versus 37.7), Slovakia (49.2 versus 23.9) and Portugal (40.2 versus 20.2).

Figure 3. A different home language widens inequities further in some Member States

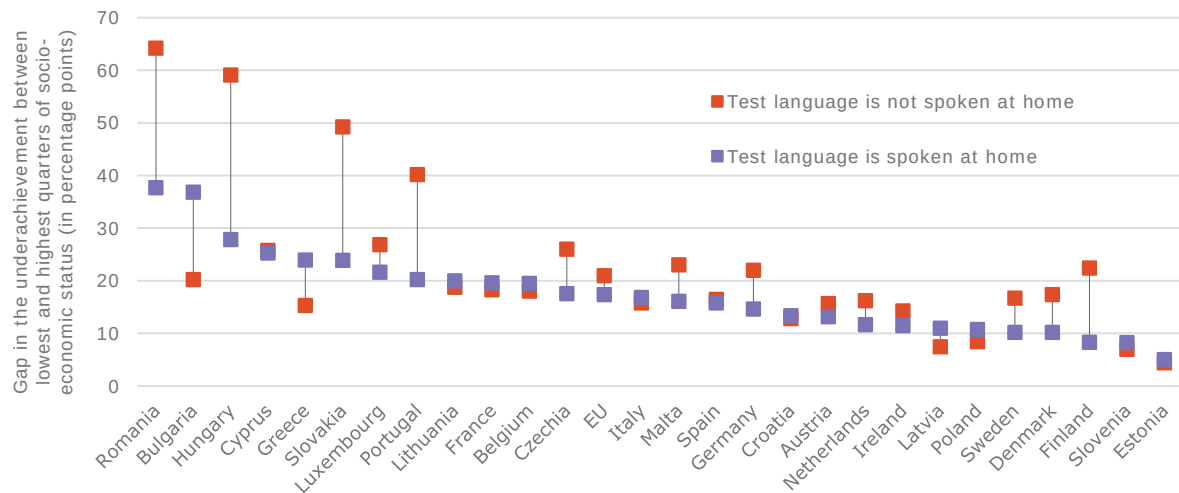
¹⁵ PISA's 'isolation index' can be used as a proxy for such school segregation. The index ranges from 0 (no segregation) to 1 (full segregation). Overall, the EU scores a 0.16. Segregation is, on average, lowest in Croatia (0.10), Finland (0.10) and Cyprus (0.10), and highest in Bulgaria (0.29) and Slovakia (0.29). The European Expert Network on Economics of Education (EENEE) published a [2021 analytical report](#) on school segregation that uses intra-class correlations on the basis of parental education and immigration status, both clearly correlating with the main indicator in Figure 1.

¹⁶ Data for early leavers from education and training (Chapter 3) and tertiary educational attainment (Chapter 5) are based on a 2021 ad hoc module of the EU Labour Force Survey (LFS).

¹⁷ Important elements that deserve further attention include, for instance: (a) the revision of textbooks and digital resources through a gender equality lens; (b) the need for gender-sensitive teaching as of ECEC; and (c) the fighting of gender-based bullying (including cyber-bullying).

¹⁸ Being born in another EU country or in a non-EU country are two vastly different concepts. Yet the difference is small in terms of early school leaving (21.4% versus 21.6%, respectively).

¹⁹ Migrant background is difficult to analyse meaningfully using the PISA data that underpins the equity main indicator (Figure 1). A first problem concern definitions, with non-immigrant students defined as 'students whose mother or father or both was/were born in the country/economy where the student sat the PISA test, regardless of whether the student him/herself was born in that country or economy'. A second problem concerns small sample sizes, particularly for Bulgaria, Lithuania, Poland, Romania and Slovakia. However, the test language being spoken at home is an imperfect proxy for migrant background too, and may misclassify some students.



Source: European Commission (Joint Research Centre) calculations based on OECD's PISA 2018 data. Note: countries are shown in descending order according to the underachievement gap among students who speak the test language at home. The difference between the test language being spoken at home or not in terms of underachievement gaps between low and high socio-economic status is not statistically significant at the 0.05 level for Cyprus, Ireland and Poland.

The new EU-level indicator domain on inclusion and equity must always remain a work in progress, taking on board the latest evidence as the knowledge base is strengthened further over time²⁰. Such a flexible approach enables the monitoring exercise to acknowledge, for instance, periodical data on young people from racial and ethnic minorities who are marginalised and/or discriminated against²¹, young people with disabilities and/or special education needs²², and school-age refugees (Box 4). Furthermore, non-discrimination in education is itself a sub-dimension that may strengthen the EU-level indicator domain on inclusion and equity in the future²³.

Box 3. Investigating the share of out-of-school 15-year-olds

Another fundamentally overlooked issue may be that of out-of-school young people²⁴, who do not have a chance to underperform in the first place. Figure 4 captures the share of unenrolled 15-year-olds across the EU. These 15-year-olds may be at different stages of each country's educational pathway (whether lower or upper secondary education), yet still at compulsory schooling age in most Member States. It is worth noting that low performing countries in Figure 1 (Romania, Bulgaria) also yield significant shares of out-of-school young people in Figure 4 (16.8% and 14.5% respectively). Further investigation of this indicator is warranted²⁵.

Figure 4. Around 3 % of all 15-year-olds are not enrolled in the national education system

²⁰ The Commission is examining on a wider scale the obstacles to collecting 'equality data' and is enabling the exchange of best practices. This is to encourage Member States, in full respect of their national contexts, to move towards collecting data disaggregated on the basis of all the relevant discrimination grounds.

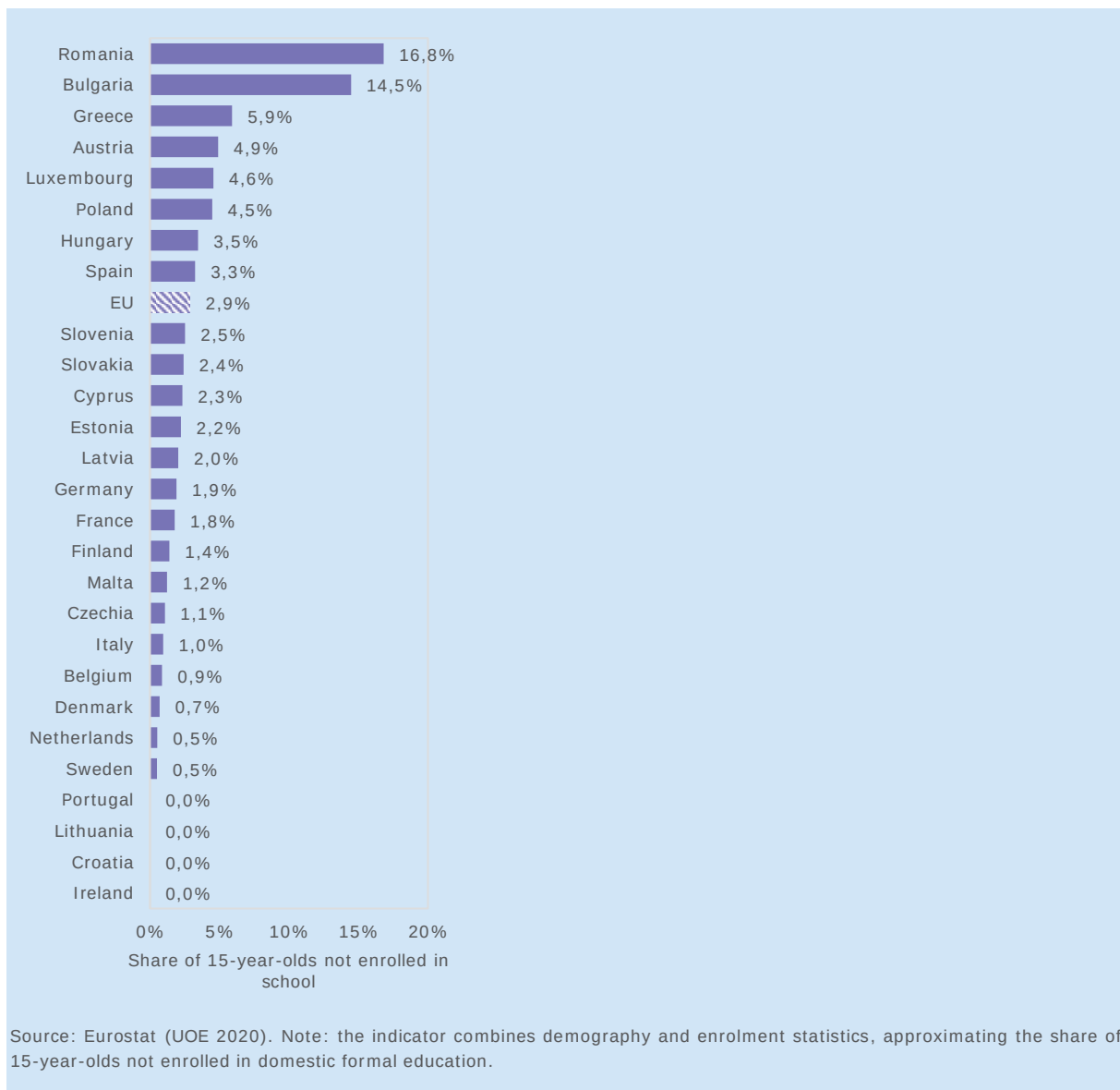
²¹ As a prime example, the EU's Fundamental Rights Agency (FRA) reproduced early school leaving statistics for their [2019 Roma and Travellers Survey](#). More than half of surveyed 15-24 year-olds complete at most lower secondary education in Belgium (59% of Roma and 71% of Travellers), France (84% of Travellers), Ireland (70% of Travellers) and the Netherlands (88% of Roma and 62% of Travellers and Sinti).

²² Albeit a simplified proxy, an important addition to the EU Labour Force Survey data will be two new biennial variables on self-perceived general health and self-assessed limitations in daily activities because of on-going (physical, mental or emotional) health problems.

²³ FRA captures self-reported experiences with discrimination in educational institutions (as a parent or as part of one's own education).

²⁴ Shares of out-of-school youth and adjusted net enrolment rates are an accepted complement in measures of educational poverty. Such indicators are calculated by the World Bank as a proxy for [schooling deprivation](#), and by UNESCO as SDG indicator 4.1.4. The latter was reported by OECD in [Education at a Glance 2021](#).

²⁵ Some limitations are worth flagging. The indicator may unintentionally reflect (however negligible) non-resident populations enrolled in domestic programmes, resident populations enrolled in non-domestic programmes, or home schooling.



1.3. Specific policies can alleviate inequities but remain underexploited

Equity and inclusion in education and training is a challenge across all Member States. Just like the scope and determinants of the problem vary from country to country, so do the various education and training systems in terms of institutional stratification²⁶ and specific policy measures to alleviate the effects of socio-economic status. This section summarises a few examples of the top-level financial and non-financial support that is provided by (and to) the education and training systems across the EU.

²⁶ There are a number of institutional characteristics that tend to stratify an education system, which are therefore commonly associated with educational inequity. Examples are the early tracking of learners in a highly differentiated system, or an overreliance on grade repetition. A [2020 Eurydice report](#) captures many of these institutional characteristics. Tracking already starts under the age of 13 in Germany (10), Hungary (10), Austria (10), Czechia (11), Slovakia (11), the German and Flemish Communities in Belgium (12), Ireland (12), Luxembourg (12) and the Netherlands (12). Parallel educational structures exist all the way throughout general education in Latvia, Lithuania and Spain. Grade repetition is particularly frequent in Belgium, Luxembourg, Portugal and Spain, all with at least one-fifth of 15-year-olds having repeated a grade at least once.

Most Member States provide additional financial support for schools²⁷ with disadvantaged students, either upon application or it is allocated automatically. Only Croatia, Cyprus, Greece, Hungary, Malta, Luxembourg and Romania do not report such measures. Moreover, top-level regulations or recommendations on the socio-economic composition of schools²⁸ exist in Belgium (Flemish Community), Hungary, Romania, Slovakia, Spain and Portugal, while the school catchment area can be adjusted in France, Hungary and Slovenia.

A [2022 OECD report](#) using data from the 2018 Teaching and Learning International Survey (TALIS) highlights how experienced schoolteachers with, for instance, high levels of self-efficacy or digital skills²⁹ tend to be clustered in socio-economically advantaged schools. The same report also confirms, through a combination of TALIS and PISA data, that there is a direct link between an uneven distribution of experienced teachers and lower than average reading scores. Remedial policies could tackle such disproportionate clustering, but the latest EU comparative overview³⁰ suggests that neither financial nor non-financial incentives are commonplace.

Firstly, financial support to teachers in disadvantaged schools (increased basic statutory salaries, allowances or other financial support) is crucial³¹. However, it is not prevalent across the EU. Only nine countries report such top-level incentives (France, Greece, Hungary, Lithuania, Poland, Romania, Slovakia, Slovenia and Sweden). Secondly, non-financial incentives in terms of better working conditions³² or career benefits³³ can raise the attractiveness of teaching in disadvantaged schools. Yet only six Member States report such incentives (Belgium³⁴, France, Lithuania, Slovenia, Spain and Portugal).

Box 4. Welcoming Ukrainian refugees

Russia's invasion of Ukraine forced many people to flee their homes. Women and children in particular are seeking protection from the war and Eurostat data suggest that over 1.4 million of children and young people are beneficiaries of international protection³⁵. Key priorities concern support to Ukrainian young people, to the education systems in Member States that are welcoming them as well as to Ukrainian teachers. Early evidence points at the difficulties of making sure school-age refugees are actually enrolled in school³⁶.

School education³⁷ in most EU education and training systems promote the integration of newly arrived children from Ukraine into regular classes, combined with intensive support for learning the language of instruction (and other subjects). Relatively fewer education systems favour the initial integration of refugee learners in separate classes. However, there is general consensus that longer-term efforts need to be focused on the integration of these learners into local schools.

This requires support to education systems in several fields: (1) organising reception and admission processes (including expanding capacity); (2) preparing educational institutions and staff to include displaced children; (3) running targeted activities to help include displaced children in education; (4) engaging with displaced families and communities and helping them maintain the link with Ukraine; (5) taking long-term measures to

²⁷ Throughout this section, top-level measures to improve equity in school education are taken from a [2020 Eurydice report](#). While this is the most recent comparative overview available, the Education and Training Monitor's country reports feature more detailed and up-to-date country-specific examples.

²⁸ These administrative measures are related to school admission policies or classroom grouping methods.

²⁹ See Chapter 8.

³⁰ See the [2020 Eurydice report](#).

³¹ See the [2020 Eurydice report](#).

³² For instance, reduced teaching time, reduced class size, job security, or access to mentoring/coaching.

³³ For instance, a preferential next appointment or faster career progression.

³⁴ Not including the German-speaking community.

³⁵ Data for Germany, Czechia, the Netherlands and Hungary are not available. Data for France and Ireland are not included as the age breakdown is not available

³⁶ See a [2022 Eurydice report](#).

³⁷ See a [2022 Eurydice report](#).

promote inclusive education; and (6) taking specific measures for early childhood education and care³⁸. The majority of education systems also provide top-level support for refugee learners who wish to follow distance learning according to the Ukrainian curriculum.

In higher education³⁹, Member States report a variety of large-scale measures to support the integration of refugee students, with most having had measures in place since before the Russian invasion of Ukraine⁴⁰. Only six higher education systems monitor the integration of refugees in their institutions, mostly tracking enrolment data, with no longer-term monitoring yet established. Recognition of previous educational attainment can be a particular challenge, particularly when evidence of qualifications cannot be provided. This is the reason why article 7 on the recognition of qualifications held by refugees and displaced persons was included in the Lisbon Recognition Convention.

In the field of vocational education and training (VET) and adult learning, the Commission⁴¹ has invited Member States to (1) ensure that people's skills and qualifications can be valued, assessed and quickly recognised, regardless of whether documentation is available; (2) provide targeted upskilling and reskilling opportunities, VET and/or practical workplace experience; (3) ensure quick access to initial VET, including apprenticeships, and explore ways to prolong ongoing stays of Ukrainian vocational learners; and (4) make opportunities available for adults fleeing Russia's war of aggression against Ukraine to access general education, including through second chance schooling, as well as enrolment in higher education institutions.

In higher education⁴², public funding is rarely provided on the basis of equity targets. Only in France and Italy are higher education institutions rewarded for meeting agreed targets in widening access, participation or completion. Top-level financial support in higher education is more commonly geared toward student accommodation, transport and meals. Only in Belgium⁴³, Ireland and Sweden is no such indirect support reported.

In terms of non-financial measures to support equity in higher education, only seven systems⁴⁴ require or recommend higher education institutions to offer staff training on diversity or inclusion (Figure 5). While eight systems offer higher education institutions financial support for such training⁴⁵, an additional nine offer non-financial support⁴⁶, such as administrative support or pedagogical materials and instructors.

Figure 5. A third of all Member States do not support higher education institutions in their offer of staff training on diversity or inclusion

³⁸ On 30 June 2022, the Commission published an [overview of collective experience and knowledge](#) that aims to disseminate shared expertise, information on good practice and practical insights supporting the inclusion of displaced children from Ukraine in education.

³⁹ See a [2022 Eurydice report](#).

⁴⁰ Higher education institutions have a substantial degree of autonomy, and may have taken measures at their own initiative to help refugee learners from Ukraine to pursue their studies in their institutions. Although such measures may be significant, they are likely to vary from one institution to another and are not considered large-scale.

⁴¹ On 14 June 2022, the Commission presented [operational guidelines](#) to support Member States in applying the Temporary Protection Directive in terms of access to the labour market, VET and adult learning. This new guidance builds on examples collected through a dedicated survey on VET-related measures. The [results](#) provide an overview of Member States' actions to date, including examples of good practices that can serve as inspiration to others. These include accelerated procedures, equivalence of studies and validation procedures, individual plans, mentoring and counselling, work-based learning, and preparatory classes, including those on language and interpersonal skills.

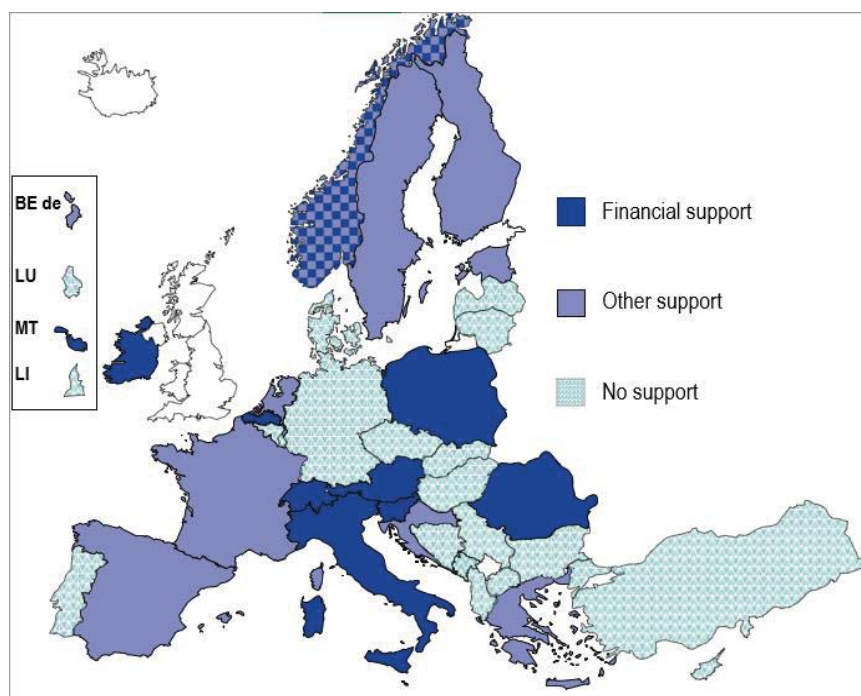
⁴² Throughout this section, examples of top-level measures to improve equity in higher education are taken from a [2022 Eurydice report](#). While this is the most recent comparative overview available, the Education and Training Monitor's country reports feature more detailed and up-to-date country-specific examples.

⁴³ No top-level support in the Flemish and German-speaking Communities. Only one out of three support types in the French community.

⁴⁴ Belgium's Flemish Community, Czechia, Estonia, France, Ireland, Italy and Spain.

⁴⁵ Financial support for training on diversity or inclusion is reported in Austria, Belgium's Flemish Community, Ireland, Italy, Malta, Poland, Romania and Slovenia.

⁴⁶ Non-financial support for training on diversity or inclusion is reported in Belgium's German-speaking community, Croatia, Estonia, Finland, France, Greece, the Netherlands, Spain and Sweden.



Source: [Eurydice 2022](#).

In a nutshell

No education and training system manages to decouple performance from socio-economic status. Young people from disadvantaged socio-economic backgrounds are almost six times more likely to underachieve at age 15 than those from advantaged socio-economic backgrounds, suggesting a strong intergenerational transmission of educational disadvantage. Such inequities do not emerge at age 15 and do not stop there. Stepping up the focus on equity in education is likely to support future progress in all existing EU-level target domains. The 2022 Education and Training Monitor demonstrates key equity challenges across other domains, with underperformance widespread among specific population sub-groups, and often clustered in the same schools or areas.

Chapter 2. A level playing field is set in the early years

EU-level 2030 target: 'At least 96% of children between 3 years old and the starting age for compulsory primary education should participate in early childhood education and care, by 2030.'

2.1. Future progress requires broadening access and improving affordability

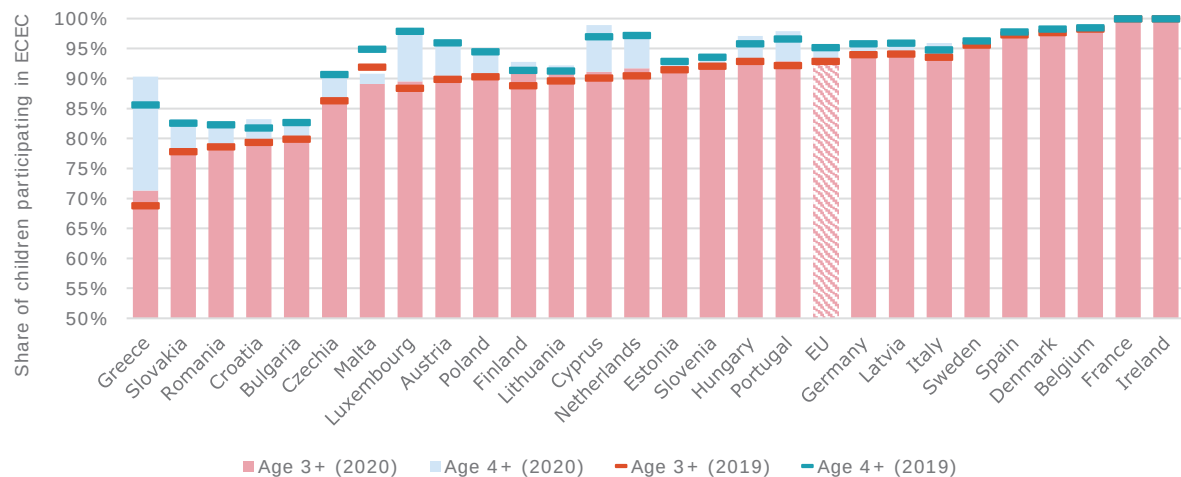
The seeds for equal opportunities are sown on the first step of the education ladder – the phase of early childhood education and care (ECEC). The benefits of high quality ECEC have been widely documented, especially for vulnerable children⁴⁷. Broadening access to quality ECEC has the

⁴⁷ For further information, see the [2022 report](#) by the European Platform for Investing in Children (EPIC), the [2018 analytical report](#) from the European Expert Network on Economics of Education (EENEE), the [2017 literature review](#) from the European Agency for Special Needs and Inclusive Education, and a [2021 OECD working paper](#).

potential to level the playing field in education and training. Five Member States have now reached the EU-level 2030 target (Belgium, Denmark, France, Ireland and Spain), which stipulates an ECEC participation rate of at least 96% among children between the age of 3 and the national starting age for compulsory primary education⁴⁸.

Between 2019 and 2020, the EU average barely increased at all, from 92.9% to 93.0% (Figure 6). The most prominent improvement was recorded in Greece⁴⁹ and Finland. A similar pattern is visible in the age group from 4 years upwards, which yields higher ECEC participation shares in all countries⁵⁰. All these figures still predate the COVID-19 pandemic⁵¹.

Figure 6. A number of countries are catching up on their ECEC participation rates



Source: Eurostat (UOE 2020). Note: the age brackets' upper limits are defined by each country's starting age for compulsory primary education.

Besides the EU-level target domain stemming from the EEA Strategic framework Resolution, the European Child Guarantee provides guidance to Member States on how to prevent and combat social exclusion of children in need, by ensuring they can access key services (Box 5). Meanwhile, the Barcelona targets support the development of childcare facilities for young children with a view to increasing parental labour market participation and improving work-life balance (Box 6). Broadening access to affordable ECEC caters to all these policy objectives.

Member States continue their efforts to increase access to ECEC, by introducing a legal entitlement or compulsory ECEC⁵². In Bulgaria, pre-school education will become compulsory for 4-year-olds in 2023-24. Spain is progressively increasing the offer of public places in the first cycle of ECEC in order to meet all requests that concern children under the age of 3. In Lithuania, a legal entitlement to pre-school education is being introduced for 4-year-olds as of 2023, 3-year-olds as of 2024 and 2-year-olds as of 2025. Romania sets out to lower the starting age of compulsory education to 4 in 2023 and to 3 in 2030. Cyprus is planning to introduce compulsory education for 4-year-olds from 2024.

⁴⁸ For this EU-level target, children are only considered as participating in ECEC if they are enrolled in programmes that are considered educational according to the International Standard Classification of Education (level 0/early childhood education), i.e. intentionally designed to support children's cognitive, physical and socio-emotional development.

⁴⁹ Based on estimated figures.

⁵⁰ Looking at the age group of pupils from 0 years and up, shares are increasing slightly in most countries.

⁵¹ The 2020 enrolment figures represent the number of pupils enrolled at the beginning of the 2019-20 school year.

⁵² See a 2022 Eurydice report on structural indicators for monitoring progress towards EU-level targets.

Affordability remains as big an issue. In 2016, 29.4% of all families reported difficulties in affording formal childcare services⁵³. This share reached 48.3% among low-income families. Member States continue to increase affordability of ECEC provision. For instance, the Cypriot national recovery and resilience plan aims to gradually extending free compulsory pre-primary education to the age of 4.

Box 5. Child Guarantee

In 2019, Commission President Ursula von der Leyen announced the creation of a European Child Guarantee to ensure that every child in Europe at risk of poverty or social exclusion has access to the most basic of rights like healthcare and education. The objective of the European Child Guarantee, which the Council adopted in June 2021, is to prevent and combat social exclusion by guaranteeing the access of children in need to a set of key services: ECEC; education (including school-based activities); healthcare; nutrition; and housing.

While most children in the EU already have access to these services, inclusive and truly universal access is vital for ensuring equal opportunities for all children, in particular those who experience social exclusion due to poverty or other forms of disadvantage. The European Child Guarantee itself will be effective only within a broader set of integrated measures, as outlined in the European Pillar of Social Rights action plan, and within a broader policy framework of the EU strategy on the Rights of the Child.

The 2021 Council Recommendation asks Member States to submit action plans for implementing the Child Guarantee. The action plans should cover the period until 2030 and take into account national, regional and local circumstances, as well as existing policy actions and measures to support children in need. The main purpose of the national action plans is to describe the existing and planned national and sub-national policy measures, which aim to improve access for children in need to the set of key services covered by the European Child Guarantee.

2.2. Inclusive ECEC reaches out to children who stand to benefit from it the most

Broad participation in ECEC contributes towards an inclusive, equitable education and training system. At country level, there is a correlation between the new main indicator for inclusion and equity (Chapter 1) and the share of ECEC participation as measured by the respective EU-level target. Member States with smaller underperformance gaps between low and high socio-economic status groups tend to have ECEC participation rates above or very close to the EU average. Conversely, the eight most inequitable education and training systems all have below-average ECEC participation rates.

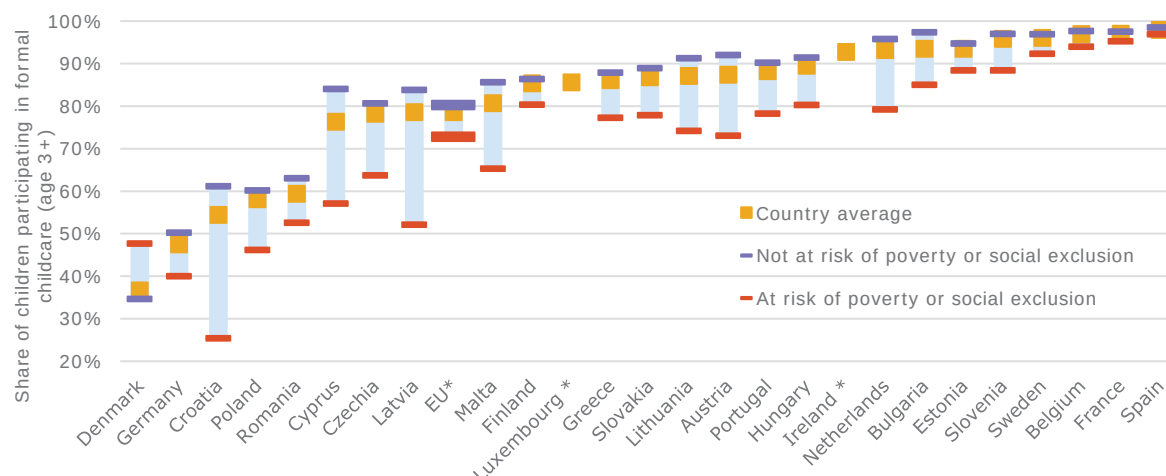
However, a broad ECEC participation rate may mask strong disparities by socio-economic status itself. Using a different data source enables a focus on children at risk of poverty or social exclusion⁵⁴. In almost all EU countries, the share of children at risk of poverty or social exclusion who are in formal childcare is consistently lower than the share among children not at risk (Figure 7). The participation gap is 7.5 percentage points on average, and ranges from 1.5 percentage points in Spain to no fewer than 35.7 percentage points in Croatia⁵⁵.

⁵³ Data sourced from a 2016 EU-SILC ad hoc module on access to services, and combine 'some', 'moderate' and 'great' difficulties in relation to affording formal childcare services.

⁵⁴ Note, however, that whereas the joint UOE data collection captures the attendance of pupils in programmes with an educational component, the EU-SILC survey captures participation in formal childcare, regardless of a possible educational component in the programme. Also, depending on the timing of the EU-SILC 2020 data collection, the data on participation in formal childcare may be affected by COVID-19 school closures in some countries. This is not the case with the 2020 UOE data collection.

⁵⁵ Disparities are even larger in the younger age group (until the age of 3), with the EU average gap between the uptake among at-risk and not at-risk an estimated 31.7 percentage points. For more information, see the Employment and Social Developments in Europe (ESDE) review 2022.

Figure 7. Children at risk of poverty or social exclusion are less likely to participate in formal childcare



Source: Eurostat (EU-SILC 2020). Note: [*] breakdown not available for Luxembourg and Ireland; breakdown unreliable due to small sample sizes for Denmark, Cyprus, Malta, Latvia and the Netherlands; no EU-SILC data on participation in childcare are available for Italy (Ireland, Italy and Luxembourg are not included in the EU average); the upper limit for age brackets is set out by each country's [starting age for compulsory primary education](#).

Box 6. Barcelona targets

As announced in the [European Pillar of Social Rights action plan](#), the revision of the 2002 Barcelona targets are part of the European care strategy. The Barcelona targets were first agreed by EU leaders in 2002 to improve the way childcare is provided across the EU and encourage Member States to remove disincentives to parental labour market participation.

The [2022 Commission proposal](#) for a Council Recommendation to revise the Barcelona targets encourages Member States to increase participation in ECEC, in particular for children in vulnerable situations or from disadvantaged backgrounds. Among the recommendations on flanking measures on quality, accessibility, staff, governance and data collection, two new targets are proposed. These ensure that, by 2030, at least 50% of children below the age of 3 participate in formal childcare⁵⁶; and at least 96% of children between the age of 3 and the starting age for compulsory primary education participate in ECEC⁵⁷.

As discussed in Chapter 1, there is more to inclusion and equity than socio-economic status. Providing ECEC to refugee children remains a structural challenge to be tackled by many EU countries⁵⁸. Pilot actions on Roma inclusion have demonstrated that ECEC may overcome the educational disadvantage that Roma children face⁵⁹. For children with special education needs, access to quality ECEC is key to countering segregation. However, organising inclusive education for specific groups requires dedicated policy attention. Needs assessments, coupled with adapting services and support, are prerequisites for finding the right setting to ensure mainstreaming⁶⁰.

⁵⁶ The source is the EU-SILC survey (Eurostat).

⁵⁷ The source is the UOE data collection (Eurostat) and the target is identical to the EU-level 2030 target included in the [EEA Strategic framework Resolution](#).

⁵⁸ The European Education Area Strategic Framework Working Group on ECEC provides a forum for Member States for peer learning and discussion. During 2022, a special focus has been placed on including Ukrainian children and families in ECEC across Europe.

⁵⁹ See a [2011 Commission Communication](#) on ECEC. A [2020 report](#) from the EU's Fundamental Rights Agency (FRA), based on the 2019 Roma and Travellers survey, suggests that 4- to 5-year-olds from the Roma or Travellers communities have alarmingly low ECEC participation rates in countries such as France (32%), Belgium (70%) and Ireland (75%).

⁶⁰ See a [2017 literature review](#) from the European Agency for Special Needs and Inclusive Education.

Lockdowns due to COVID-19 affected ECEC provision. Overall, ECEC closures were shorter and less extensive compared to restrictions in primary and secondary education, whether as a recognition of the critical importance of ECEC for children's development, the impossibility to replace provision with online equivalents, or because of parents' need for reliable childcare support⁶¹. Nonetheless, disadvantaged children and families are reported to have suffered disproportionately from closed or restricted services⁶².

When ECEC providers were closed, targeted policies to increase affordability, granting priority access, proactively reaching out to families and building trust with children and families all helped minimise the impacts of COVID-19 on accessibility. For example, in Belgium (Flemish Community) and Berlin, even during the first 2020 lockdown, centres were kept open for children of parents with essential jobs as well as for socially disadvantaged children.

2.3. Quality of ECEC provision took a hit during COVID-19

Among the core quality pillars of ECEC service provision (Box 7) are ECEC workers⁶³. During the pandemic, staff shortages, the perception of being undervalued and difficult working conditions all grew. Stakeholders reported recruitment and retention challenges during the pandemic as well as problems paying salaries due to closures – but also renewed demands for recognition, better working conditions and professional development. Meanwhile, professionals reported increased workloads and stress levels and a lack of managerial support⁶⁴. Stakeholders agree that the ECEC sector could have been better supported by COVID-19 policy responses and measures⁶⁵.

Box 7. Five quality pillars guide Member State ECEC policy

The foundations for high-quality ECEC are access to services, workforce, curriculum, monitoring and evaluation, governance and funding⁶⁶. In Czechia, an amendment of the Child Group Act in August 2021 ensures stable and predictable financing for ECEC providers, sets a maximum amount that parents of young children should pay for ECEC service and imposes new technical standards. The Recovery and Resilience Fund will also support childcare facilities, comprising the creation of more than 7,000 places for children below the age of 3 and the refurbishment of more than 300 facilities by 2025.

As part of the whole-of-government *First 5* strategy (2019-2028), Ireland introduced the Core Funding stream in September 2022. This new funding model aims to improve pay and conditions for the ECEC workforce as a whole and increase affordability for parents, as well as ensure a stable income to providers. Actions have been mapped to strengthen professional standards for those working in early learning and care, and to commit to a graduate-led workforce in ECEC by 2028. A more integrated governance will be centralised in a new agency for ECEC containing functions currently performed by separate agencies.

In Denmark, an evaluation study provides evidence that the updated and modernised ECEC curriculum, introduced in 2018, is now widely used and has provided a direction for the work in ECEC facilities in Denmark. The evaluation hints at less progress for disadvantaged children. An investment of DKK 1.8 billion (EUR 242.1 million) yearly from 2024 onwards aims at improving staff/children ratios and training more ECEC staff.

⁶¹ See a [2021 OECD publication](#) on the state of global education 18 months into the pandemic.

⁶² See a [2021 analytical report](#) from the Network of Experts working on the Social dimension of Education and Training (NESET), and a [2021 report from the Commission](#) on ECEC and the COVID-19 pandemic.

⁶³ The curriculum is another such core quality pillar. The educational value of ECEC is undisputed, with ECEC curricula or educational guidelines in place across all EU countries. See the 2022 Eurydice report on structural indicators for monitoring progress towards EU-level targets. Still, the educational component of ECEC was a temporary victim of the pandemic. Cognitive and educational development was, for a while, put second to childcare or health. See a [2021 analytical report](#) from the Network of Experts working on the Social dimension of Education and Training (NESET).

⁶⁴ Leaders or coaches with a clear pedagogical vision as well as steering capacity allowed their ECEC centres to deal effectively with the unpredictable nature of the crisis. Resilience of ECEC providers and their workforce turned out to be strongly dependent on how coherent and efficient their leadership was.

⁶⁵ See [2021 analytical report](#) from the Network of Experts working on the Social dimension of Education and Training (NESET), and a [2021 report from the Commission](#) on ECEC and the COVID-19 pandemic.

⁶⁶ See the [2019 Council Recommendation](#) on high quality ECEC systems.

Perhaps due to the pandemic and many professionals leaving or wanting to leave the profession, it is now widely recognised that professional development and working conditions (including wages) for all ECEC staff need to be substantially improved⁶⁷. Regarding the 3+ age bracket, 19 countries require at least one staff member with a tertiary-level qualification in education sciences, while in 22 countries continuing professional development (CPD) is mandatory or a prerequisite for promotion⁶⁸.

In addition, positive developments have also been observed during the pandemic⁶⁹. In several Member States, the shift from 'controlling' monitoring processes to 'supportive' processes were widely appreciated by ECEC staff during the crisis. In Italy, for example, quality management at municipal ECEC centres continued to be carried out internally by pedagogical coordinators within a collegial framework. The crisis, moreover, appears to have been dealt with more effectively by ECEC systems with structural financing, a good organisation and an integrated structure, without having recourse to extra support measures to ensure the sector's viability⁷⁰. This confirms that governance and funding are an important principle in the [EU Quality Framework for ECEC](#), and illustrates the effect that top-level measures can have on the resilience of ECEC systems.

In a nutshell

Quality early childhood education and care (ECEC) is a major contributor to equity when it can reach children from disadvantaged socio-economic backgrounds. Participation in ECEC contributes to better cognitive outcomes and better prospects, especially for vulnerable children. At 93.0% in 2020, the overall share of children between the age of 3 and the start of compulsory primary education enrolled in ECEC has remained stable. Yet children from disadvantaged backgrounds continue to encounter obstacles to participation. Several EU countries have recently broadened access by extending the age of the ECEC place guarantee or improving affordability. Even though closures and restrictions were not as ubiquitous as at other education levels, the COVID-19 pandemic put pressure on the quality of provision, and a spotlight on pre-existing structural issues.

⁶⁷ Staff working conditions and skills receive full attention in the [2022 Commission proposal](#) for a Council Recommendation on the revision of the Barcelona targets on ECEC.

⁶⁸ Finland, Ireland, Italy and Malta have introduced or are working on the introduction of a minimum qualification requirement for staff working with children, in addition to establishing systems to support CPD. Belgium (Flemish Community), Bulgaria and Estonia introduced reforms to provide a coherent system of CPD. See the 2022 Eurydice report on structural indicators for monitoring progress towards EU-level targets.

⁶⁹ See a [2021 report from the Commission](#) on ECEC and the COVID-19 pandemic.

⁷⁰ Conversely, countries or regions with fragmented and under-financed ECEC systems, or largely private for-profit or not-publicly-subsidised provision, needed emergency financial assistance to prevent centres from closing and to ensure staff continue receiving their salaries.

Part 2. The time of learning

The time to learn continues long after compulsory education ends, even if the learning activities of a 15-year-old and a 64-year-old have little in common. Compulsory education ends at age 15 across seven Member States⁷¹, although no 15-year-old reaches the minimum standard of upper secondary educational attainment. Enrolment, on average, remains at 97.2%. At age 34, only 4.5% are still enrolled in formal education⁷². Learning activities shift toward non-formal learning for most adults over 25. Indeed, most learning of 25-64 year-olds concerns non-formal learning, comprising three quarters of all participation in 2021 (8.0% against a total of 10.8%).

Part 2 of this report concerns formal and non-formal learning for young people and adults across the EU. It showcases four EU-level target domains from the [EEA Strategic framework Resolution](#). These cover a disengagement from school before the level of upper secondary educational attainment (Chapter 3), the exposure to work-based learning in vocational education (Chapter 4), tertiary educational attainment levels (Chapter 5) and the participation in learning activities among 25-64 year-olds (Chapter 6).

Two important cross-cutting considerations from Part 1 are carried over into Part 2. The first is the cross-cutting equity dimension. For instance, in Chapter 3, early school leaving rates are shown to signal deeply rooted patterns of exclusion and inequity. In Chapters 4 and 5, sizeable gender gaps are documented across the vocational and higher education sectors, both in terms of attainment levels and fields of study.

A second cross-cutting consideration concerns the teaching profession. In Chapters 1 and 2, it became clear that the burden of quality and equity is on the shoulders of teachers and school leaders. While expectations are not always realistic, it is clear that the teaching profession requires considerable amounts of top-level support to deal with the numerous challenges it is faced with. It also requires a better cross-EU monitoring to enable mutual learning and a better understanding of key obstacles and potential policy levers (Box 8).

Box 8. Monitoring the teaching profession

The COVID-19 crisis seems to have only increased the heavy demands on teachers, who are expected to deal with remote teaching, ever-evolving digital tools and practices, overcoming learning loss, and ensuring equal access to quality learning. Meanwhile, a complex interplay of working conditions, professional development, career progression, teacher appraisal, mobility, well-being and demographic factors all play their part in regional, national and EU-level teacher shortages⁷³.

Teachers receive recognition in the [EEA Strategic framework Resolution](#), which identifies them as the backbone of the learning process and one of the main contributors to achieving its aims. A solid evidence base can help make the right policy decisions. However, from a monitoring perspective, the teaching profession is one of the more complex, multifaceted domains in education and training. Many policy-relevant sub-dimensions interact, from input, output and effect angles. Aspects like school climate, teaching practices and well-being interact in their influence on students' acquisition of knowledge, skills and attitudes.

⁷¹ Czechia, Greece, Croatia, Cyprus, Austria, Poland and Slovenia. See the [2021 Eurydice report](#) on compulsory education in Europe.

⁷² At this age, educational attainment has become a tapestry of different levels. In terms of highest level of education attained, an average of 20.9% of 34-year-olds have attained at least a master's (or equivalent) degree, 16.0% have obtained a bachelor's (or equivalent) degree, 4.6% have a short-cycle tertiary certificate and 4.7% have attained post-secondary non-tertiary education. Still, 18.7% of 34-year-olds have at most a lower secondary educational attainment, which may not be a sufficient foundation for their future.

⁷³ For more information, see the [2021 Eurydice report](#) on teachers in Europe.

To provide structure to the monitoring, the Commission is preparing a dashboard that will bring together multiple equivalent indicators across different sub-dimensions, while remaining digestible for policy debate. Focusing on the attractiveness of the teaching career, the purpose of the dashboard is to assist Member States in monitoring supply and demand, but also important contributing factors such as training and professional development, working conditions, and the emotional well-being of teachers. Quantitative as well as qualitative indicators will capture phenomena at the central level, and should allow for a meaningful cross-EU comparison.

Chapter 3. A better responsiveness is needed for future decreases in early school leaving

EU-level 2030 target: 'The share of early leavers from education and training should be less than 9% by 2030.'

3.1. Past successes in reducing early school leaving rates are no cause for complacency

The share of early leavers from education and training continued to fall in 2021, even if disengagement during COVID-19 may still affect early school leaving rates in the future⁷⁴. On average across the EU, 18-24 year-olds without upper secondary educational attainment and no longer in education or training amounted to 9.7% of their cohort in 2021, down from 10.2% in 2019 and 9.9% in 2020 (Figure 8). This corresponds to approximately 3.1 million young people.

Some 16 Member States have early school leaving rates below 9% (the 2030 target for the EU as a whole), with top performers being Croatia (2.4%), Slovenia (3.1%), Greece (3.2%) and Ireland (3.3%). Five Member States maintain early school leaving rates of 12% or higher⁷⁵. Early leavers are more likely to be male (11.4%) than female (7.9%)⁷⁶ – a phenomenon that snowballs into vast gender disparities in higher education (Chapter 5).

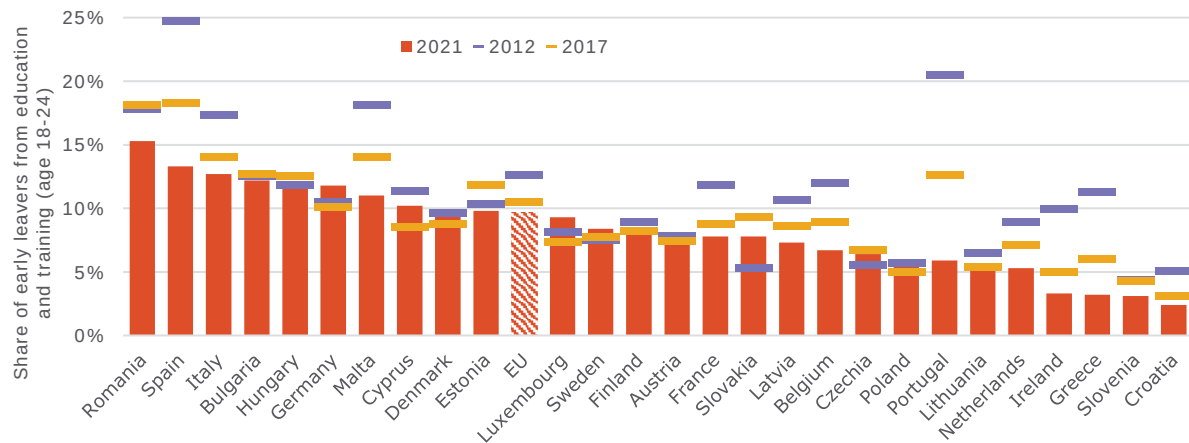
The last 10 years of progress tell a success story of positive upward convergence. Average early school leaving rates dropped 2.9 percentage points from 12.6% in 2012, with reductions of over 5 percentage points in Portugal (14.6), Spain (11.4), Greece (8.1), Malta (7.1), Ireland (6.6) and Belgium (5.3). On the other hand, between 2012 and 2021, no progress was observed in nine Member States. However, for 2021, only four of these countries have 2021 early school leaving rates above 9% (Germany, Luxembourg, Denmark and Hungary).

Figure 8. 10 years of decreasing early school leaving rates illustrate a positive upward convergence

⁷⁴ The indicator covers 18-24 year-olds, for whom a disengagement from school may have occurred (well) before 2020-21, meaning that any increase of such disengagement during COVID-19 takes time before being fully reflected in this measure.

⁷⁵ Insofar as data are available, bottom-performing (NUTS 2) regions in 2021 were Sud-Est (22.9%) and Centru (20.2%) in Romania, Észak-Magyarország (22.3%) in Hungary, Yugoiztochen (21.6%) in Bulgaria and Sicily (21.2%) in Italy. Among these five bottom-performing countries, there are strong relative rural disadvantages in Romania (23.2% as the average for its rural areas), Bulgaria (23.7%) and Hungary (19.7%). The degree of urbanisation has weaker effects in Spain and Italy.

⁷⁶ The EU average gender gap had increased in 2020 due to 2019-20 progress among girls and stable figures for boys, but decreased in 2021 due to a somewhat more sizable 2020-21 progress among boys than among girls. In 2020, there were sizable gender gaps (above 5 percentage points) in Spain (8.6), Portugal (7.5), Cyprus (6.6) and Italy (5.2), yet all Member States except for Spain have managed to decrease gender gaps to below 5 percentage points in 2021. In Spain, the 2021 gap was – at 7.0 percentage points – by far the most sizable.



Source: Eurostat (EU Labour Force Survey). Note: data for Croatia have low reliability due to small sample size. Breaks in time series for Czechia and France (2013), the Netherlands (2013, 2019), Poland (2013, 2018), Luxembourg and Hungary (2015), Denmark (2016, 2017), Belgium, Ireland and Malta (2017), Sweden (2018), Germany (2020) and for all countries in 2014⁷⁷ and 2021⁷⁸.

Upper secondary educational attainment has long been regarded as a minimum threshold. An estimated 84.6% of 20-24 year-olds had at least such qualifications in 2021, up from 82.8% 5 years prior. Less than 80% of young people have already attained at least upper secondary education in Denmark (75.4%), Luxembourg (76.6%), Germany (77.1%) and Spain (78.8%). The share is over 95% in Croatia (96.9%), Ireland (96.1%) and Greece (95.7%).

These two indicators – early school leaving and upper secondary attainment – mask an age group in transition, as well as different structures of education and training systems across the EU. Firstly, at 18, all young people across the EU have reached the end of their compulsory schooling age⁷⁹. An average of 82.1% still participates in education and training, but this participation rate drops to 29.2% for 24-year-olds⁸⁰. The share of early leavers increases from an average of 7.6% at age 18 to 11.1% at age 24.

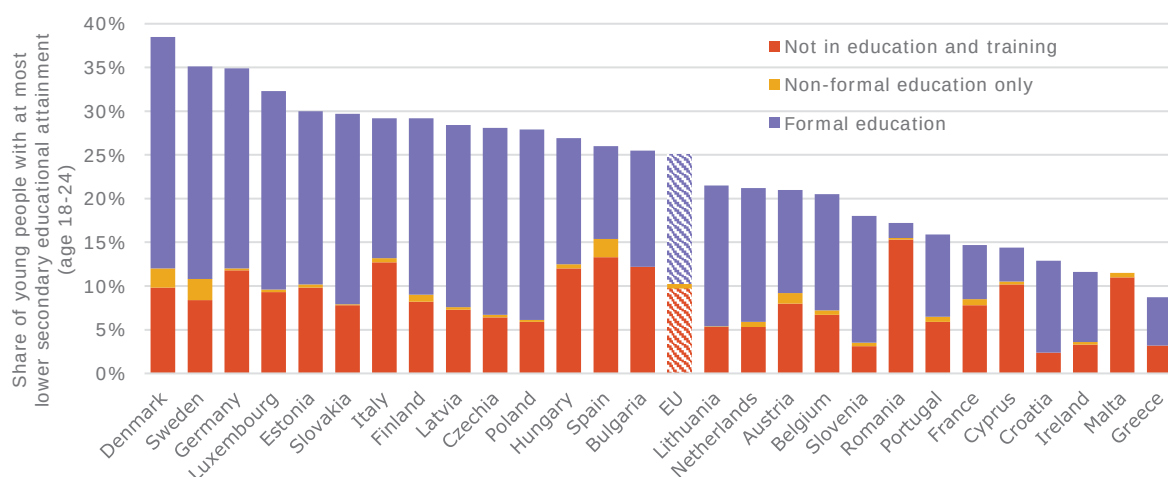
Figure 9. Most young people with at most lower secondary educational attainment are still in formal education

⁷⁷ The 2014 break in time series was due to the new International Standard Classification of Education (ISCED), with actual changes for only very few Member States. Further information on the changes can be found [here](#).

⁷⁸ As from 2021, new legislation applies to the EU Labour Force Survey (LFS) and therefore Eurostat flags all 2021 LFS data with 'b' (break in series). The methodological changes have a particular impact on labour force status but can also affect other LFS indicators. Further information on the changes can be found [here](#).

⁷⁹ See the [2021 Eurydice report](#) on compulsory education in Europe.

⁸⁰ Enrolment data are captured by the UOE data collection.



Source: Eurostat (EU Labour Force Survey). Note: the lower bars are equal to a country's early school leaving rate. Participation in non-formal education is higher in reality, as young people participating in both formal and non-formal education are recorded only under formal education.

Secondly, in some countries, large shares of the combined 18-24 age bracket with at most lower secondary educational attainment are still enrolled in formal education (Figure 9)⁸¹. In terms of early school leaving, in order to strengthen prevention and early intervention (Section 3.3), it is necessary to understand whether young people forego the transition from lower secondary education to upper secondary education altogether or whether they attempt upper secondary education and drop out before attaining any formal qualifications⁸². While comparative data struggle to capture the difference, administrative education registers can shed a light at the national level⁸³.

3.2. A return to education and training is difficult and costly

Without at least upper secondary educational attainment, young people face a precarious labour market integration and an employment disadvantage that is likely to persist throughout working age. With educational requirements for entering the EU labour market constantly increasing, the social exclusion of early school leavers is only expected to become more pronounced. Only 42.3% of early leavers from education and training were employed in 2021, with the remaining share either wanting to work (34.0%) or not (23.7%).

Youth unemployment (15-29 age bracket), which stood at 13.0% on average across the EU in 2021, reached 22.4% for young people without at least upper secondary educational attainment⁸⁴. It is worth emphasising that young people have been most affected by job losses due to the

⁸¹ See the [2021 Eurydice report](#) on the structure of European education systems.

⁸² Equally, it is necessary to understand whether young people disengaged from general programmes or from vocational programmes (Chapter 4). The School Education Gateway hosts a [European Toolkit for Schools](#) to promote inclusive education and tackle early school leaving. Cedefop hosts a comprehensive [VET toolkit for tackling early leaving](#), which provides support to both policymakers and education and training providers.

⁸³ See the [2019 assessment](#) of the implementation of the 2011 Council Recommendation on policies to reduce early school leaving.

⁸⁴ Using headline indicators from the European Pillar of Social Rights' [Social Scoreboard](#) (2021 annual data), the employment disadvantage associated with a lack of upper secondary educational attainment is equally evident among the population at large (age group 15-74). In this age bracket, the EU average unemployment rate for people with a low level of education (13.8%) is 6.8 percentage points higher than the overall unemployment rate (7.0%) and the long-term unemployment rate (12 months or more) is 3.4 percentage points higher for people with a low level of education (6.2%) than it is on average (2.8%).

economic impact of the COVID-19 crisis, with particular downturns for young people with low levels of education or disadvantaged socio-economic backgrounds⁸⁵.

Enabling undereducated young people to return to education and training is particularly difficult and costly. The Commission's reinforced Youth Guarantee (Box 9) helps 15-29 year-olds who are not in employment, education or training (NEET) find offers of employment, apprenticeships, continued education or traineeships. The NEET rate is higher among young people with at most lower secondary education (15.5% compared to an average of 13.1%), but a return to formal education is exceedingly rare. Only about 10% of offers concern continued education each year, with the latest figure at 10.2% (2020 monitoring data).

Box 9. The reinforced Youth Guarantee

The reinforced Youth Guarantee is a commitment given by all Member States to ensure that all young people under the age of 30 receive a good quality offer of employment, continued education, apprenticeship or traineeship within a period of 4 months of registering with public employment services. All EU countries have committed to the implementation of the reinforced Youth Guarantee in a [2020 Council Recommendation](#).

The Youth Guarantee has created opportunities for young people and acted as a powerful driver for structural reforms and innovation. As a result, most public employment services have improved and expanded their services for young people. A network of national Youth Guarantee coordinators ensures there is a direct link between the Commission and authorities managing the Youth Guarantee in each Member State.

The Recommendation is backed up by significant EU financing under NextGenerationEU and the long-term EU budget. The EU provides policy support and mutual learning activities to help Member States strengthen the infrastructure and measures for the reinforced Youth Guarantee. The EU also monitors the progress made across Member States.

Enabling a return to education requires strong partnerships between public employment services and the education and training sector. Undereducated young people may not be eager return to education, and would benefit from a more diversified continued education offer. For instance, bridging courses or second chance education programmes can help early leavers from education and training and low-skilled young people ease their way back into formal education and training more carefully⁸⁶. VET pedagogies and work-based learning (Chapter 4) may be particularly responsive to the (re)engagement of young people⁸⁷.

3.3. Future progress requires a policy focus on young people at highest risk

The [2022 Commission proposal](#) for a Council Recommendation on *Pathways to School Success* links early school leaving to the 'early warning' indicator of underachievement at age 15 (Section 7.1). It aims to improve the responsiveness of schools to the needs of young people who may be struggling. Such responsiveness goes beyond a narrow definition of educational performance and requires a broad range of actors to become involved. This section covers three possible gaps in schools' responsiveness.

The first challenge is the decoupling of educational performance from socio-economic status, as emphasised in Chapter 1. Ad hoc data from 2021 (Figure 10) confirm a striking disparity in EU average early school leaving rates between young people whose parents have a low level of

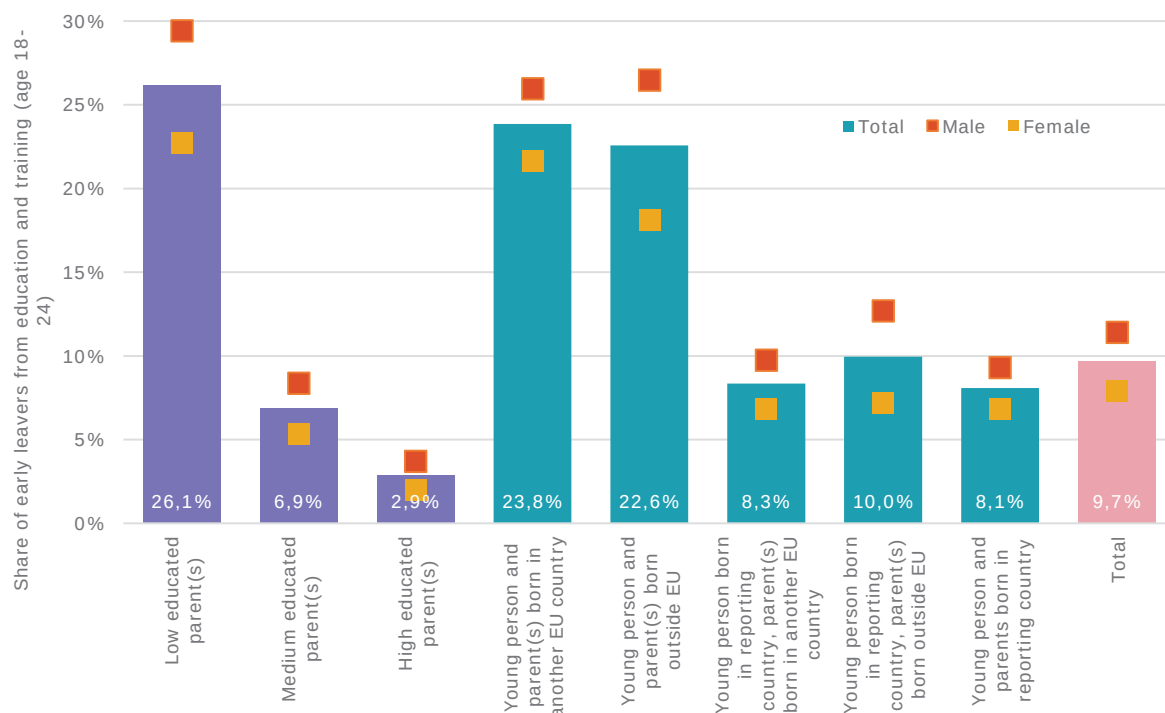
⁸⁵ For more information, see the [Employment and Social Developments in Europe \(ESDE\) review 2022](#).

⁸⁶ For more information, see the [2020 Commission Staff Working Document](#) underpinning its proposal for a Council Recommendation on a reinforced Youth Guarantee, drawing lessons from a [2018 study](#) on continued education offers.

⁸⁷ See a [2022 Cedefop working paper](#).

education (26.1%) and young people whose parents have a high level of education (2.9%). This means the risk of leaving school early is nine times higher among the former group than it is among the latter. Such socio-economic gaps exist, albeit to varying degrees, across all Member States for which the breakdown can be assessed reliably. It is another sobering example of how educational disadvantage can be passed down from previous generations – a vicious cycle that education and training systems are supposed to break.

Figure 10. New evidence sheds light on parental education and parental country of birth



Source: Eurostat (EU Labour Force Survey 2021 ad hoc module for parental education and EU Labour Force Survey 2021 for parental country of birth and total). Note: parental education denotes the highest level of education successfully completed between the father and the mother of the respondent; low reliability for females born in the reporting country with parent(s) born outside the EU.

Secondly, new comparative data reveal that children from migrant parents or parents from other EU countries who were themselves born in the reporting country do not have early school leaving rates that are substantially different from the overall average (Figure 10)⁸⁸. Only first-generation migrants and EU mobile young people face, on average, high risks of early school leaving – and the difference between the two groups is remarkably small⁸⁹. Past editions of the Education and Training Monitor already established that, among young people born outside the reporting country, the number of years since arrival is a major determining factor for the disadvantage faced⁹⁰. In terms of early leavers from education and training, special attention is needed for young people arriving in the reporting country during – and especially towards the end of – mandatory schooling age⁹¹.

⁸⁸ It is worth noting that these EU averages mask a diverse picture across the Member States.

⁸⁹ Breakdowns at national level are often unavailable. Among the exceptions, Italy, Cyprus and Greece are worth mentioning as young people born outside the EU face substantially higher risks of early school leaving (34.7%, 31.4% and 30.0%, respectively). In this group, men have particularly high early school leaving rates in Greece (45.9%) and Italy (40.6%).

⁹⁰ Early school leaving rates among those who arrived in the reporting country before the start of compulsory education have been found to be similar to those of the native-born population.

⁹¹ A 2019 Eurydice report focused on the school integration of newly arrived migrant children. A 2020 report from the Fundamental Rights Agency (FRA) focused on unaccompanied children's transition to adulthood.

Box 11. Recent examples of prevention and early intervention

Italy's community education pacts were introduced in the 2020-21 'plan for schools'. The pacts are agreements between, among others, schools, local authorities, and public and private institutions. Initially implemented largely as a form of support to help schools reopen safely, the pacts are proving instrumental in combating educational poverty and reducing early school leaving. Essentially, the pacts strengthen the role of the school as a social and community focal point and learning hub, enriching the education offer and learning opportunities.

In Bulgaria, reducing the share of early school leavers is among the priorities of the 2021-30 strategic framework for developing education, training and learning. For 2030, the Bulgarian authorities have set themselves the target of reducing the rate of early leavers from education and training to 7%. A coordination mechanism, uniting efforts of different ministries and stakeholders, continues to operate. The coordinated approach is designed to ensure outreach to out-of-school children, inclusion in compulsory education and prevention of dropout.

In Cyprus, the Commission supported a 2021 project aimed at re-engaging students at risk of school dropout and offering new opportunities to those who already dropped out. The project investigated the causes for students disengaging and dropping out from secondary education, and the policy measures Cyprus has to address these causes. The project has informed the Cypriot authorities on providing equitable educational opportunities that can engage students struggling in school and re-engage those who prematurely left education and training.

Thirdly, lengthy periods of physical school closures and lockdown measures across 2020-22 have put an immense pressure on the well-being of adolescents, which is – among many other potentially devastating repercussions – strongly associated with educational outcomes⁹². Schools and teachers often proved ill-equipped to identify such problems, connect to the young people affected and help young people get the appropriate support⁹³. Future editions of the Education and Training Monitor will aim to capture the overlooked dimension of well-being at school through regular data collections⁹⁴.

In a nutshell

At 9.7% in 2021, the share of early leavers from education and training continues to fall and remains on track to achieving the 2030 target of less than 9%. Approximately 3.1 million young people are now disengaged from education and training while having attained lower secondary qualifications at most, with only 42.3% of them being employed. Future progress may require refocusing on the most disadvantaged and hardest-to-reach young people. For instance, young people whose parents have a low level of education are nine times more likely to be early school leavers than young people whose parents have a high level of education. The Pathways to School Success proposal links low attainment and low achievement in education, supporting a wide range of actors in their capacity to respond to the real-world needs of today's young people.

⁹² See a [2019 OECD report](#) assessing what school life means for students' lives.

⁹³ For more information on a whole-school approach to mental health and well-being, see a [2021 analytical report](#) from the Network of Experts working on the Social dimension of Education and Training (NESET).

⁹⁴ The objective is to strengthen the evidence base on, among other things, top-level measures to promote the development of multidisciplinary support teams, social and emotional support to young people at risk, teacher education and training on the social and emotional development of learners, and a more granular early warning system.

Chapter 4. A diverse and evolving landscape characterises vocational education and training

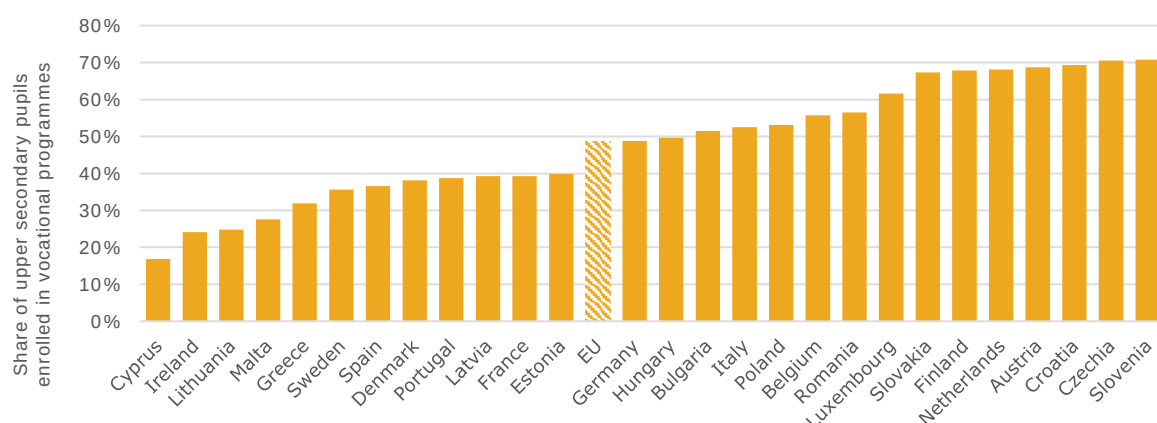
EU-level 2025 target: 'at least 60% of recent graduates from VET should benefit from exposure to work-based learning during their vocational education and training by 2025'

4.1. VET and work-based learning provide skills for today and for the future

Vocational education and training (VET) aims to equip young people and adults with the knowledge, skills and competences required in specific occupations or more broadly on the labour market. It covers a wide range of qualifications: initial VET at secondary level, continuing VET for adults and vocationally oriented education and training at higher levels. In recent years, the offer of VET programmes has become more diverse, driven by the importance of lifelong learning and the needs of a changing labour market, notably the green and digital transitions⁹⁵.

Nearly half of all pupils in upper secondary education in the EU (48.7% in 2020) are enrolled in VET (as opposed to programmes with a general orientation)⁹⁶. In absolute numbers, this corresponds to over 8.7 million students in upper secondary VET programmes. The share of VET in upper secondary education varies considerably across EU Member States, from less than 25% in Cyprus, Ireland and Lithuania to over 70% in Czechia and Slovenia (Figure 11)⁹⁷.

Figure 11. Across the EU, nearly half of all pupils enrolled in upper secondary education are in vocational programmes



Source: Eurostat (UOE 2020).

In addition to pupils enrolled in upper secondary vocational education, 1.3 million learners were enrolled in post-secondary, non-tertiary vocational education in 2020, with the vocationally oriented programmes covering 94% of all students at this level. An additional 1.3 million were

⁹⁵ See the [2022 Commission brochure](#) on skills for today and for the future.

⁹⁶ In lower secondary education, VET oriented programmes account for a relatively small share of the enrolled pupils: approximately 393 000 pupils or 2% of the overall population at this level.

⁹⁷ Male pupils form a majority of upper secondary VET pupils (58%), whereas at post-secondary non-tertiary level, female learners are more numerous (59%). The most popular fields of study also differ. At upper secondary level, the main field is 'engineering, manufacturing and construction', whereas at post-secondary non-tertiary level, it is 'health and welfare'. At short-cycle tertiary level, enrolment is more balanced between men (52%) and women (48%), but fields of study remain gendered: 'engineering, manufacturing and construction' for men; 'services' and 'business, administration and law' for women). Similar gender stereotypes in study choice are found in tertiary education (Section 5.2).

enrolled in short-cycle vocational education at tertiary level (98% of all students at this level are in vocational streams). Indeed, higher level VET is gaining importance⁹⁸.

The [2020 Council Recommendation](#) on VET sets out key principles to ensure VET provides quality learning opportunities for young people and adults. The Recommendation is strongly focused on increased flexibility, increased opportunities for work-based learning and apprenticeships, and improved quality assurance⁹⁹. The Recommendation also sets three EU-level objectives to be achieved by 2025: (1) at least 60% of recent VET graduates benefit from some form of work-based learning during their studies¹⁰⁰; (2) at least 8% of VET learners study abroad (see Section 4.2)¹⁰¹; and (3) at least 82% of VET graduates are employed (see Section 4.3).

Box 12. A spotlight on apprenticeships

The [2018 Council Recommendation](#) on a European Framework for Quality and Effective Apprenticeships (EFQEA) aims to increase the employability and personal development of apprentices and help develop a highly skilled and qualified workforce, responsive to labour market needs and a cohesive society.

Some 3 years after the EFQEA Recommendation was adopted, the Commission examined how EU Member States had put the framework and the criteria it set into practice. Key findings of the [report](#) show that most Member States had criteria on learning and working conditions¹⁰² in place. Further progress is needed in implementing framework conditions¹⁰³, notably graduate tracking. The report also indicates that the framework supports Member States in incrementally and continuously improving their apprenticeship schemes, including on those criteria that were already partially in place in 2018. In conclusion, the analysis confirms that the EFQEA remains a key instrument to improve the quality and effectiveness of apprenticeships across the EU.

The Commission continues to help Member States implement the framework and, more broadly, it helps the wider apprenticeship community by improving the supply, quality and image of apprenticeships, as well as the mobility of apprentices, also through the [European Alliance for Apprenticeships](#) and the [Apprenticeship Support Services](#).

For learners in VET, work-based learning¹⁰⁴ is highly beneficial: it equips them with the technical skills and knowledge that are specific to their chosen profession, as well as more general work-related skills. Work-based learning can make for a more rewarding learning experience for young

⁹⁸ In 2022, the OECD, with EU financial support, published a report on '[Pathways to Professions](#)', providing comparative data and analyses on higher vocational and professional tertiary education systems. The study shows there is a wide diversity in VET programmes, including two-year programmes in tertiary institutions, professional bachelor degrees and free-standing professional examinations designed to upskill existing professionals. Professional programmes are sometimes the only type of tertiary education directly accessible from upper secondary VET. In some cases, these programmes provide a bridge into 'academic' higher education.

⁹⁹ The [2020 Osnabrück Declaration](#) on VET complements the Council Recommendation by defining concrete actions for 2021–25 at both national and EU level.

¹⁰⁰ Also enshrined in the [EEA Strategic framework Resolution](#).

¹⁰¹ The 8% VET learning mobility target for 2025 will be measured as the share of mobile learners in a calendar year, as a proportion of a cohort of VET graduates in the same year. The indicator will be based on the mobility data sourced from Erasmus+ data and VET graduate data sourced from the UOE data collection.

¹⁰² These criteria refer to: a written agreement; learning outcomes; pedagogical support; a workplace component; pay or compensation; social protection; and work, health and safety conditions.

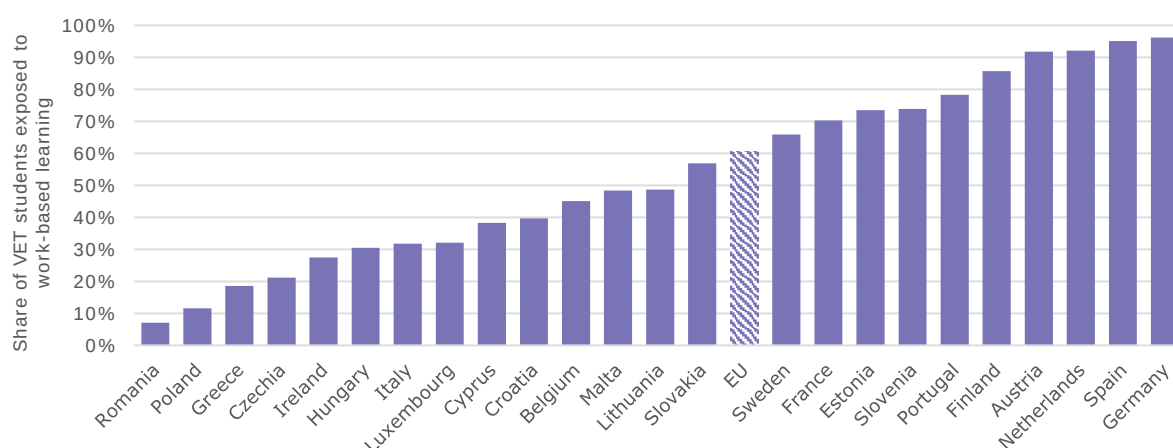
¹⁰³ These criteria include: a regulatory framework; involvement of social partners; support for companies; flexible pathways and mobility; career guidance and awareness raising; transparency; and quality assurance and tracking of apprentices.

¹⁰⁴ Work-based learning in this context refers to experience gained at a workplace (i.e. beyond or in addition to school-based learning or practical exercises at a training centre). The relevant work experience is part of the curriculum of the formal programme leading to the VET qualification (unlike most traineeships). Within these boundaries, there is large variety in work-based learning. Work experience can take place in different sectors and types of workplaces (companies, government institutions or non-profit organisations), with varying duration (from 1 month to a year or more). Learners may work under different contractual statuses (e.g. dual learning with employment contract, apprenticeship) and conditions (paid or unpaid work experience). The indicator includes all VET graduates who left the VET programme 0-3 years ago, including those who are still in education and training, to cover the graduate population in the most comprehensive way while ensuring the quality and the precision of the indicator.

people that are eager to discover the world of work. Young people's skills that are relevant to the labour market, as well as their contacts with employers, can smoothen school-to-work transitions.

Newly collected data reveal substantial differences across Member States (Figure 12). In several countries, notably Romania, Poland and Greece, work-based learning in VET remains rather exceptional (with less than 20% of learners exposed to it). By contrast, in Germany, the Netherlands, Spain and Austria, over 90% of learners in VET have gained work experience as part of their curriculum. In 2021, the EU average stood at 61%, thereby just exceeding the level of the 2025 target¹⁰⁵.

Figure 12. VET pupils and students' participation in work-based learning varies strongly across Member States



Source: Eurostat (EU Labour Force Survey 2021). Note: the indicator captures the share of 20-34 year-olds who had a work experience of at least 1 month as part of the curriculum and have graduated from medium-level VET (upper secondary or post-secondary non-tertiary) in the last 3 years. Low reliability of data for Germany, Cyprus and Hungary. Data are not available for Bulgaria, Denmark and Latvia.

On average, close to 40% of VET learners who were engaged in work-based learning had paid work experience, with male students paid more often than female students in every Member State. However, behind this average there are large differences between countries (ranging from 94.5% in Germany to 2.3% in Italy). Work-based learning experience that lasted for long periods (7 months or longer) is common practice in only a few Member States, including Germany, Austria and the Netherlands.

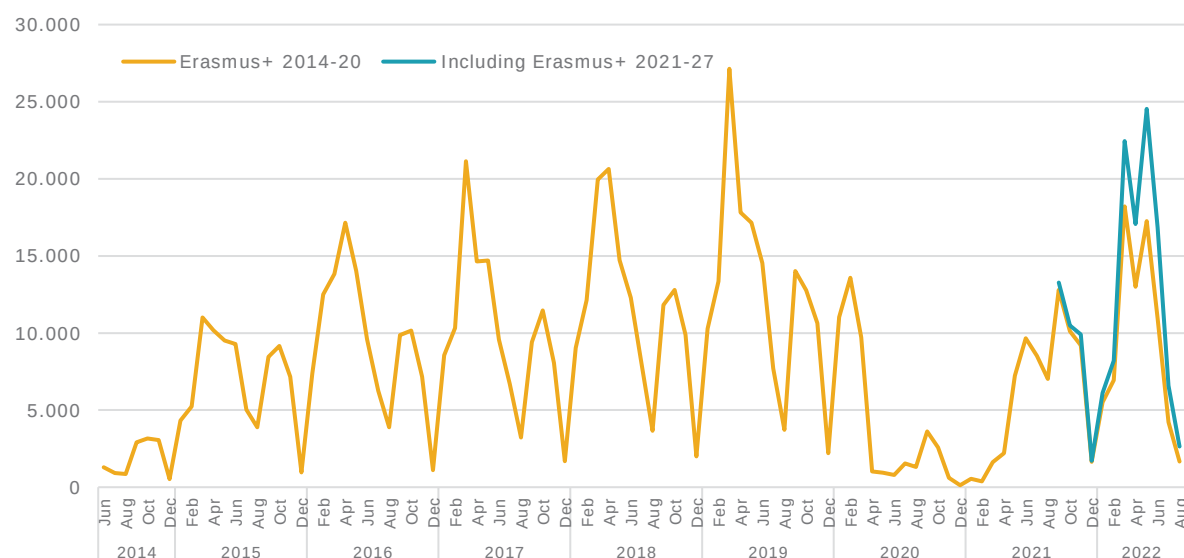
4.2. The mobility of VET learners was interrupted by the pandemic

Supporting VET learner and staff mobility abroad has been a cornerstone of European cooperation in VET¹⁰⁶. It has provided a wide range of personal, professional and academic benefits to participants, whether gaining new transferable skills, boosting self-confidence or contributing to cultural awareness and open-mindedness¹⁰⁷.

¹⁰⁵ However, caution is warranted when comparing the 2021 EU average to the 2025 target. Firstly, the brand new data yield low data reliability for some Member States, and unavailability for others. Some data revisions may occur. Secondly, a large part of the work-based learning recorded in 2021 (work experience while studying, having graduated in the last 3 years) precedes the COVID-19 pandemic. The latter is known to have had a major negative impact on work-based learning (Box 13).

¹⁰⁶ The 2021-27 Erasmus+ programme provides unprecedented levels of support for VET learners and staff mobility, ensuring adequate levels of funding to help almost 2 million VET learners and staff study/work abroad.

¹⁰⁷ Learning mobility in VET also helps modernise education and training systems through close cooperation with VET providers and companies abroad, while providing companies with access to high skilled learners. It benefits society at large with qualified people contributing to high levels of innovation, growth and social cohesion.

Figure 13. The gradual increase in VET mobility was interrupted by the COVID pandemic

Source: Erasmus+, 2014-2022. Note: the indicator refers to the number of VET learners taking part in mobility experiences abroad (KA1), presented by the month in which their mobility experience started. The data include all VET learner mobility that took place in that period, as reported by project beneficiaries. This includes mobility related to projects funded under the 2019 and 2020 calls of the previous programming period that are ongoing and not yet finalised (e.g. projects that have been postponed due to COVID-19 travel restrictions). The data were extracted in August 2022, from the Erasmus+ mobilities records for the programming periods 2014-20 and 2021-27. Due to lags in reporting, data for the most recent period are preliminary, and are likely to be revised upwards.

However, COVID-19 suspended practical training in most sectors (Box 13) and greatly affected transnational mobility. Seasonal fluctuations notwithstanding, the demand for EU-funded VET mobility had been growing steadily for years until the COVID-19 pandemic disrupted all education and training activities. Figure 13 confirms this gradual increase in VET mobility participants over the years, and its interruption at the start of the COVID-19 pandemic in March 2020, with some recovery beginning in May 2021¹⁰⁸.

Box 13. The impact of COVID-19 lockdown measures on work-based learning

The impact of lockdown measures on learning may have been particularly damaging in certain fields of VET. In addition to school closures, VET students were often affected by closures and social distancing requirements of businesses where the practical part of the combined school-and-workplace programmes was due to take place. This may have resulted in cancellation and/or postponement of substantial parts of workplace-based education, with negative consequences for students' learning.

The limitations and closures of workplace-based education varied strongly by sector. For example, healthcare and the food industry often continued their vocational education programmes, whereas lockdowns led to lengthy interruptions in leisure and tourism. As a result, participation in (certain fields of) VET fell in some countries.

In Germany, the number of new apprenticeships dropped by 9.3% in 2020 compared with 2019 (from about 510 870 to 463 331) and 23% of German companies reported knowledge transfer gaps in VET due to the pandemic. The Finnish National Agency for Education estimated a reduction of 4% in the number of VET

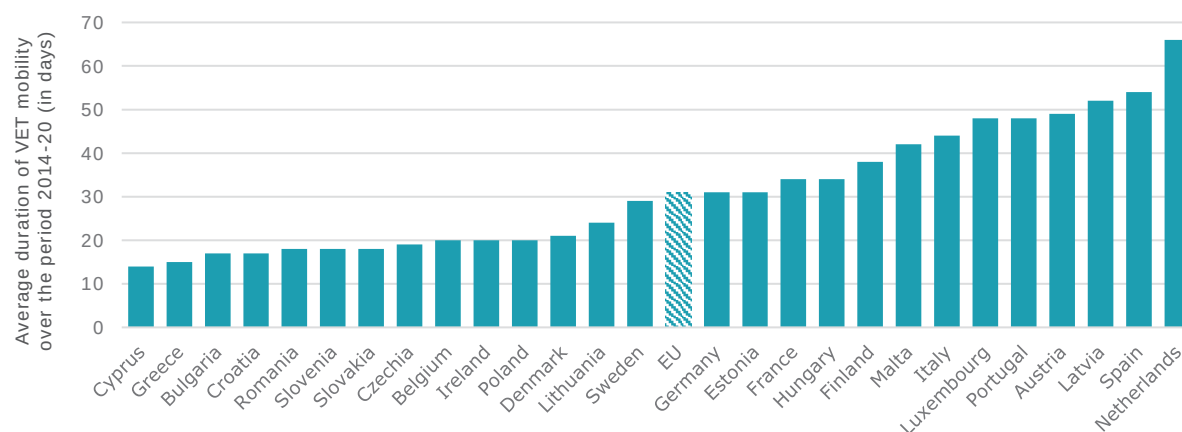
¹⁰⁸ Note that figures relate to the 2014-20 Erasmus+ programme and do not yet include mobility figures funded under the new 2021-27 programme. However, even if VET mobility activities have gained a new impetus since early 2021, the levels of mobility are still far below the pre-COVID-19 level.

graduates in 2021 compared with the previous year. In the Netherlands, VET learners had difficulties finding internships and the quality of internships was perceived to have deteriorated.

Source: *Employment and Social Developments in Europe (ESDE) review 2022*.

In addition, it is worth looking at the duration of VET mobility, albeit largely pre-COVID. Overall, from 2014 to 2020, the average VET placement abroad lasted 31 days. The duration of VET learner mobility varied significantly depending on the country concerned (Figure 14). These differences in duration were mainly due to national circumstances, as the offer for support provided by Erasmus does not vary across countries. Only 7% of VET learners remained abroad for over 3 months¹⁰⁹.

Figure 14. Average VET mobility duration ranges from 2 weeks to 2 months



Source: Erasmus+. Note: the indicator refers to the average duration of the outgoing mobility experiences abroad, of VET learners taking part in Erasmus+ projects (KA1), by sending country. The data include all VET learner mobility that took place as part of Erasmus+ projects approved in the period 2014-20, as reported by project beneficiaries. The data were extracted in August 2022, from the Erasmus+ mobilities records for the programming period 2014-20.

4.3. VET is a pathway onto the labour market

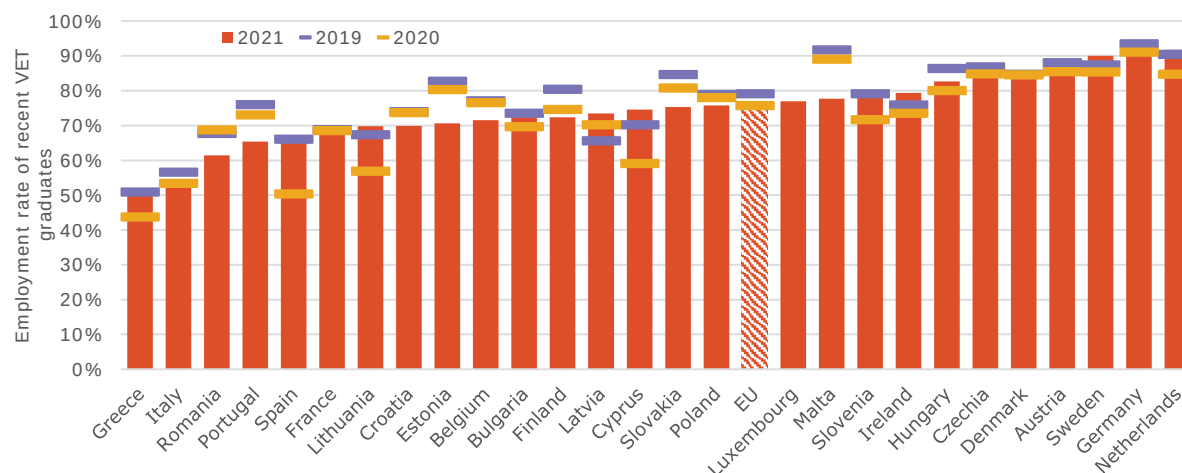
The employment of recent graduates is an important benchmark for VET, given the aim to equip learners with skills for specific occupations or the labour market in general. By 2025, the EU has set a target of 82% for the employment rate of medium-level VET graduates¹¹⁰. In 2021, this rate stood at 76.4% (Figure 15)¹¹¹. In terms of employment, the VET graduates clearly outperformed graduates from medium-level general education (61.7%), though lagged behind the average employment rate of graduates from tertiary education (84.9%).

Figure 15. In most Member States, recent VET graduates have good employment prospects

¹⁰⁹ According to a *2021 Cedefop paper*, the duration of mobility tends to be lower for apprentices (3% having a mobility spell of 3 months or longer) when compared to other VET learners (8.6%).

¹¹⁰ Upper secondary and post-secondary non-tertiary levels.

¹¹¹ The employment outcomes depend on many factors: the macro-economic context of a given country, decisions of graduates to re-enter education and training or be active on the labour market, as well as the different impact of the COVID-19 pandemic across occupations. For more information, see the *Employment and Social Developments in Europe (ESDE) review 2022*.



Source: Eurostat (EU Labour Force Survey). Note: the indicator captures the employment rates of young people aged 20 to 34 who are no longer in education and training, having graduated 1-3 years prior from VET at upper secondary or post-secondary non-tertiary level. Break in series for Germany in 2020 and for all countries in 2021. Low reliability for Cyprus (all years) and Luxembourg (2019 and 2020).

Again, the COVID-19 pandemic has strongly affected the employment of VET graduates¹¹². Across the EU on average, their employment rate dropped by nearly 3 percentage points between 2019 and 2020. Decreases occurred in nearly all Member States, except for Romania and Latvia. The recovery remains incomplete at EU level, with an increase by 0.7 percentage points between 2020 and 2021. The recovery is driven by a starkly diverse pattern across countries. In 12 Member States, there was a (continued) decline, whereas the remaining 15 Member States recorded an increase¹¹³.

In a nutshell

Nearly half (48.7%) of all pupils enrolled in upper secondary education are in vocational education and training (VET). The 2022 Education and Training Monitor captures progress towards three key objectives for the VET sector, covering work-based learning, mobility and graduate employability. In terms of work-based learning, newly collected data reveal major differences between countries. While at EU level, the 2025 target seems within reach, the full impact of the COVID-19 pandemic is yet to be captured. The pandemic has also interrupted a gradual increase in VET learner mobility, with some recovery beginning in May 2021. Furthermore, at 76.4% in 2021, the employment rates of recent VET graduates suffered from the pandemic too, with recovery remaining incomplete.

¹¹² In the context of the COVID-19 pandemic, employment rates have been volatile for recent graduates of all education levels (from 79.9% in 2019 to 77.4% in 2020 and 78.7% in 2021). Whereas in 2020 the decline in employment rates for recent VET graduates (-3.4 percentage points) was less pronounced than for those in general secondary education (-4.5 percentage points), the latter recovered more strongly in 2021 (3.4 percentage points compared to 0.7 percentage points for VET). Still, there remains a sizeable gap: in 2021, the employment rates for recent medium-level VET graduates were nearly 15 percentage points higher than those of their peers from upper secondary education with general orientation.

¹¹³ Nevertheless, throughout the COVID-19-induced crisis, the relative performance of Member States did not change substantially: the gap between the highest and lowest employment rates in 2021 exceeds 40 percentage points, as it did in 2019. Most of the top performers in 2019 managed to sustain high employment rates.

Chapter 5. An expansion of higher education masks persisting disparities

EU-level 2030 target: 'The share of 25-34 year-olds with tertiary educational attainment should be at least 45%, by 2030.'

5.1. Progress in tertiary educational attainment is led by young women

Higher levels of educational attainment are associated with higher employment rates, lower unemployment, better job prospects and higher earnings. Highly educated young people (84.9%) were more likely to be employed in 2021 compared to those with a medium level of education (77.5%) and those with a low level of education (54.8%)¹¹⁴. The higher education sector has an essential role to play in Europe's post-pandemic recovery and in shaping sustainable and resilient societies, of which deeper and more effective transnational cooperation is a key element¹¹⁵.

The tertiary educational attainment rate of 25-34 year-olds in the EU stood at 41.2% in 2021. This continues the steady growth seen in the past decade, up from 34.1% in 2012 and 37.6% in 2017 (Figure 16). In all but three Member States, attainment rates have increased compared to 2017¹¹⁶. At EU level, the current rate is 3.8 percentage points shy of the 45% target for 2030, with 13 Member States surpassing it in 2021. Top performers are Luxembourg (62.6%), Ireland (61.7%), Cyprus (58.3%), Lithuania (57.5%) and the Netherlands (55.6%). Eight Member States have yet to reach 40%¹¹⁷.

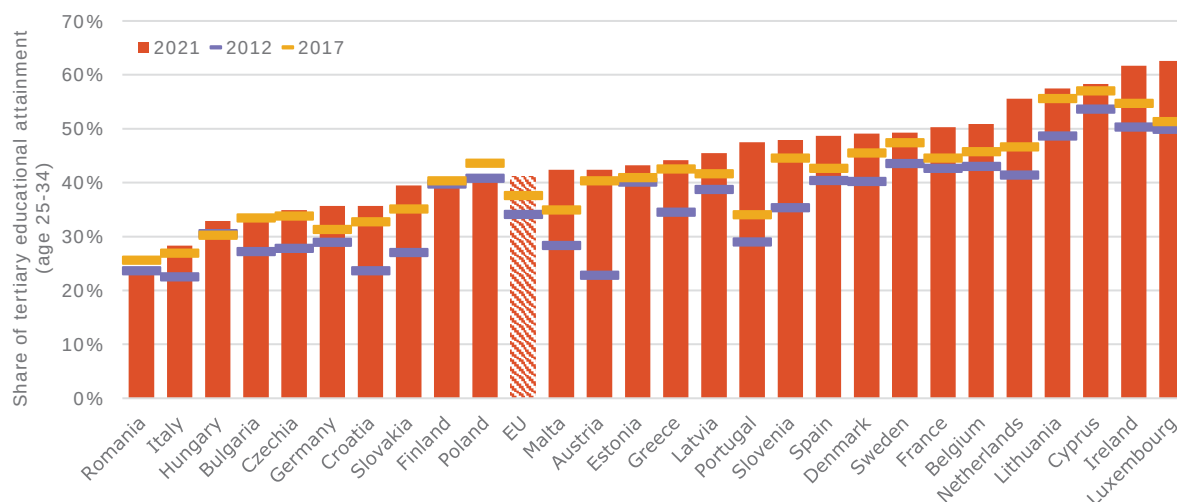
Figure 16. 10 years of educational expansion has brought about higher shares of tertiary level attainment

¹¹⁴ This concerns the 25-34 age cohort. Despite having a higher rate of tertiary educational attainment, highly educated women (82.9%) were less likely to be in employment than men (87.9%). If considering the unemployment rate, which only covers people in the labour force, the difference between highly educated women and men is minor (0.2% in favour of men in 2021).

¹¹⁵ To this end, the European Commission adopted a [European strategy for universities](#) in early 2022, which was endorsed by [2022 Council conclusions](#). Encouraging deeper transnational cooperation, a [2022 Council Recommendation](#) aims to build bridges for effective European higher education cooperation.

¹¹⁶ Poland (-3.0 percentage points), Romania (-2.3 percentage points), and Finland (-0.2 percentage points) are the exceptions.

¹¹⁷ Looking closer at this group of young people with tertiary educational attainment, a master's level or equivalent is most common (44.4%), closely followed by bachelor's level or equivalent (43.5%). Also, a notable share of these young people having obtained their highest attainment level through short-cycle tertiary education (10.6%). Attainment at doctoral level or equivalent is not as prevalent for this age cohort (1.5%). In comparison, 3.0% of 25-64 year-olds with tertiary level attainment have qualifications at the doctoral level. The shares of people with short-cycle tertiary education (14.1%) and master level or equivalent qualifications (45.6%) are slightly higher in this age cohort, while the share of people with bachelor level or equivalent qualifications (37.3%) is lower. The overall tertiary educational attainment rate (33.4%) is significantly lower compared to the younger age cohort.



Source: Eurostat (EU Labour Force Survey). Note: breaks in time series for Belgium (2017), Denmark (2016, 2017), Germany (2020), Ireland (2017), France (2013), Luxembourg (2015), the Netherlands (2013, 2019), and Sweden (2018), and for all countries in 2014¹¹⁸ and 2021¹¹⁹.

Three dimensions of inequality in educational attainment are worth emphasising here: the gender gap, the socio-economic gap and the effect of first-generation migration and EU mobility. Firstly, there is a sizeable and persistent gender gap in tertiary educational attainment across the EU, which has been expanding over the previous decades (Figure 17) and is now substantial across all Member States¹²⁰. Educational attainment at this level is much more common among women than men in the 25-34 age group. At 46.8%, the female EU average has exceeded the target¹²¹. In contrast, the attainment rate for men was 35.7% in 2021, 11.1 percentage points lower than the rate for women¹²².

Figure 17. The gender gap increased from 4.3 percentage points in 2002 to 11.1 percentage points in 2021

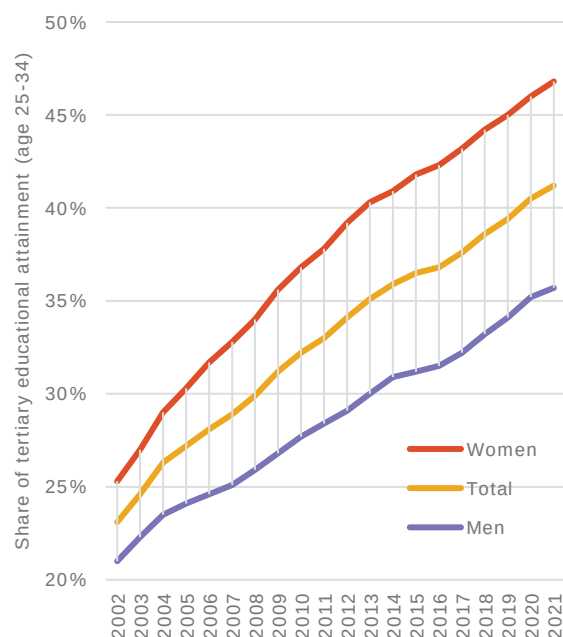
¹¹⁸ The 2014 break in time series was due to the new International Standard Classification of Education (ISCED), with actual changes for only very few Member States. Further information on the changes can be found [here](#).

¹¹⁹ As from 2021, new legislation applies to the EU Labour Force Survey (LFS). Therefore, Eurostat flags all 2021 LFS data with 'b' (break in series). The methodological changes have a particular impact on labour force status but can also impact other LFS indicators. Further information on the changes can be found [here](#).

¹²⁰ In 20 Member States, the tertiary educational attainment rate for females in the 25-34 age group exceeds 45%. Conversely, the male cohort has only reached this level of attainment in six Member States. In addition, there are only seven Member States where the gap is less than 10 percentage points. Germany stands out with the narrowest gap (3.8). Differences of more than 20 percentage points are found in Slovenia (23.6), Slovakia (23.0) and Estonia (21.2).

¹²¹ The target value was already reached by female 25-34 year-olds already in 2019 when the rate reached 45.0%.

¹²² The distribution across different tertiary education levels differs between women and men in the 25-34 age cohort. Most women with tertiary level attainment completed a degree at master's or equivalent level (45.7%), followed by bachelor's or equivalent level (43.6), short-cycle tertiary education (9.5%), and doctoral or equivalent level (1.3%). Attainment at bachelor's or equivalent level (43.5%) was more common among men with tertiary educational attainment, followed by master's or equivalent level (45.7%), short-cycle tertiary education (12.1%), and doctoral or equivalent level (1.7%).



Source: Eurostat (EU Labour Force Survey). Note: breaks in time series in 2014 and 2021.

Reducing the gender gap will be necessary if the EU level target is to be reached by 2030. This will require institutional changes at tertiary level to ensure equal opportunities and gender equality¹²³, but there is also a need for measures at lower education levels. Evidence suggests that gender gaps are already prevalent in secondary education (Chapter 3) and continue to widen along the education trajectory¹²⁴. At the time of entry into first-cycle programmes, a gender gap is already well-established¹²⁵ and increases through to completion of tertiary education¹²⁶. Moreover, there are large gender differences across fields of study, which will be examined closer in Section 5.2.

Box 14. A higher education sector observatory

In 2023, the Commission will set up a European Higher Education Sector Observatory to provide evidence on progress made in implementing the European strategy for universities. The observatory will combine the best of the current EU data tools and capacities (including ETER, U-Multirank, Eurostudent and Eurograduate) in one single place, while further improving their use and relevance for policymakers, universities, students and researchers.

Streamlining and upgrading existing European data sources will enable institutions and governments to strengthen their evidence base on key topics such as inclusion, learning outcomes, progress on digital, green and entrepreneurial skills, technology transfer, employability, students and labour market needs, strengthening research careers, open science, the institutions' role in innovation ecosystems, and transnational cooperation in the higher education sector.

¹²³ The Commission, in cooperation with stakeholders and Member States, plans to develop a European framework for diversity and inclusion, including for gender gaps, to this end (see the [2022 Commission Communication](#) on a European Strategy for Universities).

¹²⁴ A [2021 study](#) on gender behaviour and its impact on education outcomes points to a direct link between boys' underperformance in compulsory school education and the gender gap in tertiary educational attainment, as participation in higher education is highly dependent on grades and obtaining an upper secondary education qualification. For an overview of other determinants underlying the gender gap identified in the literature, see a 2021 [analytical report](#) from the European Expert Network on Economics of Education (EENEE).

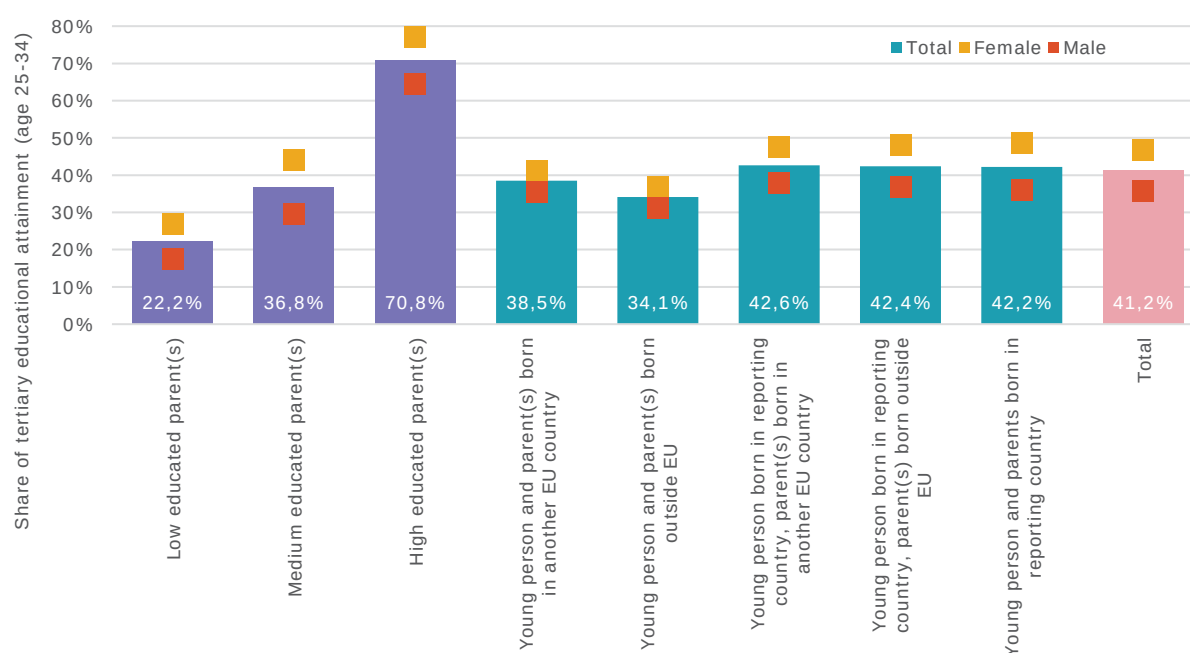
¹²⁵ In 2020, 54.0% of new entrants to bachelor's or equivalent level were female, up from 53.5% in 2016. Women outnumbered men both in terms of enrolled students and graduates.

¹²⁶ Data collected for OECD's [Education at a Glance](#) 2019 showed that, on average, women have a higher completion rates than men in bachelor's programmes.

The Observatory will make it possible to compare, analyse and showcase the higher education sector's performance across various fields – thereby supporting the transformation of higher education institutions. By building on the synergies between the existing data tools, it will ensure focused and purpose-driven monitoring, eliminating potential overlaps and decreasing data collection burden on higher education institutions.

Secondly, ad hoc data from 2021 confirm that tertiary educational attainment is often passed down from previous generations (Figure 18). The EU average tertiary educational attainment rates are 48.6 percentage points higher among young people whose parents have a high level of education (70.8%) than they are among young people whose parents have a low level of education (22.2%). Far from decoupling educational performance and socio-economic status (Chapter 1), parental education proves a robust determinant of tertiary educational attainment across the EU.

Figure 18. New evidence sheds light on parental education and parental country of birth



Source: Eurostat (EU Labour Force Survey 2021 ad hoc module for parental education and EU Labour Force Survey 2021 for parental country of birth and total). Note: parental education denotes the highest level of education successfully completed between the father and the mother of the respondent.

Thirdly, new evidence confirms that the children of migrant parents or parents from other EU countries do not yield lower tertiary educational attainment rates on average across the EU (Figure 18)¹²⁷. A young person born in the reporting country has similar chances of obtaining a higher education qualification if their parent(s) were born in another EU country (42.6%), outside the EU (42.4%) or in the reporting country (42.2%)¹²⁸. Only first-generation migration (34.1%) and EU mobility (38.5%) are associated with lower likelihoods of tertiary educational attainment. The gender gap is smaller among the latter two groups, amounting to 5.7 and 5.8 percentage points, respectively.

¹²⁷ Note that these averages mask substantial variation between Member States.

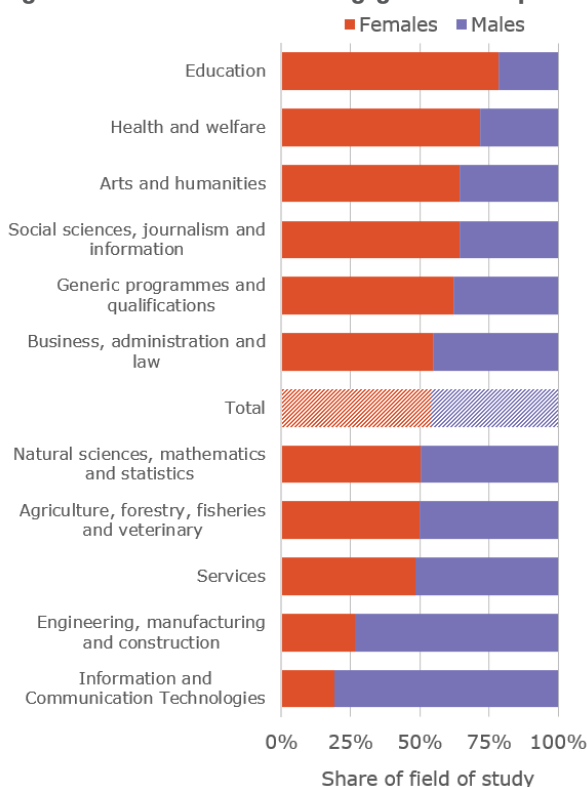
¹²⁸ At 42.2%, the average for 25-34 year-olds born in the reporting country as were their parent(s) is still below the 2030 target of at least 45%. This is different from early school leaving, where the equivalent group has reached the respective 2030 target of below 9%.

5.2. Gender stereotypes persist in study choice

Challenging gender prejudices and stereotypes throughout the education cycle, from early childhood education to adult learning, can reduce gender imbalances in other areas of life¹²⁹. Gender gaps in education choices are significant and, like the attainment gap, they persist over time. Figure 19 shows the distribution of women and men enrolled in higher education in the EU in 2020 across broad fields of study.

Men are underrepresented in the fields of education (21.5%); health and welfare (28.1%); arts and humanities (35.5%); and social sciences, journalism and information (35.6%). This contrasts female enrolment in the STEM (science, technology, engineering and mathematics) disciplines, where women only represent 31.3% of the enrolled students despite good employment opportunities in this area¹³⁰. Sweden (37.2%), Romania (36.8%), Italy (36.2%) and Poland (35.6%) are the only Member States where the female enrolment shares in STEM disciplines exceed 35%¹³¹.

Figure 19. There are strong gender disparities across fields of study



Source: Eurostat (UOE 2020). Note: the indicator covers students enrolled in tertiary education.

¹²⁹ Challenging gender stereotypes, closing gender gaps in the labour market and achieving equal participation across different sectors of the economy are central components of the Commission's 2020-25 [Gender Equality Strategy](#).

¹³⁰ The STEM disciplines encompass the following broad fields of study: 'natural sciences, mathematics and statistics', 'information and communication technologies' and 'engineering, manufacturing and construction'.

¹³¹ Considering the constituent STEM disciplines, substantial gender gaps are found in both ICT and engineering, manufacturing and construction, with women accounting for, on average, less than one third of enrolled students (19.3% and 26.8%, respectively). At country level, the pattern is consistent, with a female share of under 35% across all Member States in both fields. Natural sciences, mathematics and statistics differ from the other STEM disciplines insofar as there is almost gender balance at EU level (50.4% in favour of women), but with stronger variation at country level. See also the gender gaps in awareness of environmental problems in Section 8.3.

Existing research provides evidence of a complex set of determinants as regards the gender gap in STEM, highlighting aspects such as the educational context, the structure of the labour market and cultural values and social norms in society¹³². An example is the persistent labelling of study areas as either 'feminine' or 'masculine', which may result in study choices being limited to what is 'suitable' for either women or men. Reducing these barriers is important in order to allow young women and men to choose their study pathways more freely, without gender stereotypes constraining their possibilities (Box 15).

Box 15. Tackling gender stereotypes in study choice

In March 2022, Ireland published recommendations on gender balance in STEM education, expanding further on actions identified in its 2017-19 STEM Education Implementation Plan. These recommendations cover four key areas for action: (1) instilling a whole school culture change, to include early years leaders and educators, school leaders, teachers, learners and parents/guardians; (2) providing effective support for early years educators and teachers; (3) widening learner access to STEM; and (4) supporting a societal and cultural shift to address current barriers to gender balance in STEM.

The Estonian Social Affairs Ministry commissioned a study on women's representation in ICT education and the labour market. The study resulted in the following policy recommendations: (1) technology lessons and activities should be directed to boys and girls equally; (2) ICT should be a compulsory part of the national curriculum, either as a separate subject or integrated with other lessons; and (3) gender mainstreaming among teachers should be promoted and developed systematically. The recommendations were reflected in the updated 2022 curriculum for technology education, which stipulates that the division of students into study groups be gender-neutral and based on students' interests and preferences.

In Czechia, a 2004-18 project called *Break the Waves* (Prolomit vlny) aimed to increase equal opportunities for women and men in the labour market and education, by tackling occupational segregation. The project was conducted by a non-profit organisation. One of the work strands aimed to support non-gender-stereotyped career choices for girls and boys at the end of primary and secondary schools, by helping career counsellors and education providers change gender stereotypes in educational choices. The project produced, among other things, a handbook on gender-sensitive school management, a gender auditing methodology and a gender equality tool for teachers.

Closing the gender gap in STEM is likely to foster economic growth via both higher productivity and increased labour market activity. One example is Europe's digital transition (Chapter 8), which sees an increased need for skilled labour in the ICT sector. This is addressed through a proposed EU-level target under the Digital Decade of reaching 20 million employed ICT specialists by 2030. In 2021, there were 8.9 million employed ICT specialists in the EU, but only 19.1% of them were female. This is consistent across Member States, with none having female shares exceeding 30%. To achieve the Digital Decade objectives, education will play a central role, with the 2021-27 Digital Education Action Plan being one of the key enablers.

5.3. Learning mobility remains limited and highly unbalanced

The opportunity for learners to move abroad to study, as well as the broader cooperation across borders, are strong drivers for improving the quality of education and training institutions¹³³. Mobility is an essential part of lifelong learning and an important means to improve personal

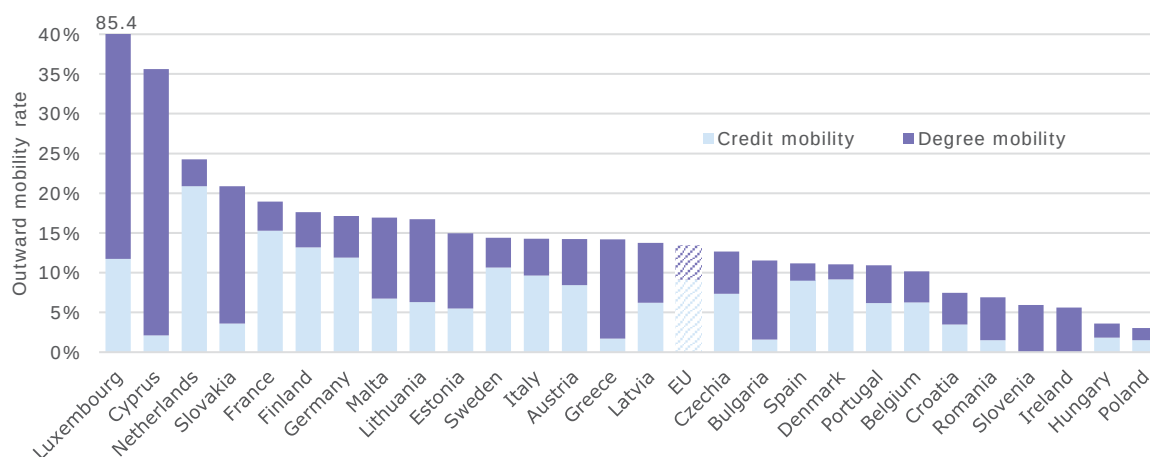
¹³² See a 2021 analytical report from the European Expert Network on Economics of Education (EENEE).

¹³³ Internationalisation is not only a strong driver for improving the quality of education and training systems. It can also have an impact on the economy. A 2020 analytical report from the European Expert Network on Economics of Education (EENEE) examines this in more detail.

development, employability, and adaptability. Moreover, learning mobility can increase cooperation between education institutions and step up transnational cooperation¹³⁴.

There were close to 4.1 million graduates from tertiary education in 2020 originating in the EU¹³⁵. Of these, approximately 550 000 completed parts of or all their studies abroad. This equates to a graduate mobility rate of 13.5%, which is on par with developments in recent years¹³⁶. Limited progress may hint at barriers to mobility that would need to be removed if the EU is to move towards achieving a European Education Area by 2025¹³⁷. An additional obstacle, yet to be fully reflected in the data on mobile graduates, is the COVID-19 pandemic¹³⁸. As was documented for the VET sector in Chapter 4, the pandemic significantly affected the globalisation of higher education (see Box 16).

Figure 20. A temporary stay abroad remains the favoured option for most mobile graduates



Source: European Commission calculations based on Eurostat (UOE 2020 on inward degree mobile and outward credit mobile graduates in the EU and EEA) and OECD (on EU-originating graduates and students in the other OECD countries). Note: calculations and metadata are detailed in the downloadable Excel file.

A temporary stay abroad was the favoured option for most mobile graduates, as indicated in Figure 20. At 9.1%, the credit mobility rate was more than double that of the degree mobility rate (4.3%) at EU level. Luxembourg (85.4%) had by far the highest outbound mobility rate in 2020, almost 50 percentage points above the second highest rate found in Cyprus (35.5%). Together with the Netherlands (24.3%) and Slovakia (20.8%), they are the only countries exceeding 20%¹³⁹. In 2020, the rate for most Member States was between 10% and 20%. However, six countries have yet to reach 10%¹⁴⁰.

¹³⁴ See the [2022 Council Recommendation](#) on building bridges for effective European higher education cooperation.

¹³⁵ The figure for graduates originating in the EU is computed by taking the number of graduates in the EU, subtracting graduates originating outside the EU who graduated in the EU, and adding graduates originating in the EU who graduated in a country outside the EU.

¹³⁶ Variations in reported data makes comparisons over time difficult. Excluding countries where not all data are reported would severely restrict the analysis, as inward degree mobility is the basis for computing outward mobility.

¹³⁷ Mutual recognition of higher education qualifications and the outcomes of learning periods abroad are two examples, which were addressed in a [2018 Council Recommendation](#). The latest edition of the [Mobility Scoreboard](#) supports this notion, and provides information on additional challenges. An in-depth overview is presented in Eurydice's 2020 [Bologna Process Implementation Report](#).

¹³⁸ The most recent data, from 2020, refer to the academic year 2019-20, which is too early to assess the full impact of COVID-19.

¹³⁹ In 2009, an [EU-level target](#) was adopted, which aimed for at least 20% of higher education graduates to have a study period abroad by 2020.

¹⁴⁰ Ireland did not report credit mobility data for 2020, which could result in the outward rate being underestimated.

Box 16. Learning mobility during COVID-19

COVID-19 resulted in large disruptions to the higher education sector and caused a major break in international student mobility. Campus closures and travel restrictions led to a move to online education both for domestic and international students.

The expected short-term impact of the pandemic on student mobility is a decrease in international enrolments. A recent [study](#) on university applications from foreign students in the United Kingdom found that the pandemic led to a reduction in applications of between 11% and 14% in 2020, which does not appear to have been driven by Brexit. These findings are in line with drops in international enrolments seen in many other countries in the academic year 2020-21¹⁴¹.

It is too early to predict the long-term impact of the pandemic on international student mobility. While short-term drops in enrolments are expected, it is still unknown whether the pandemic will alter the perception of studying abroad in the medium- and long-term. A rapid transformation of the way learning was organised during COVID-19 has shown that physical mobility is not the only option for internationalisation. Virtual mobility could reach more students but may reduce the number of students going abroad.

The EU's inward graduate degree mobility rate was higher than the outward degree mobility rate in 2020 (8.0% compared to 4.3%)¹⁴². More than two in three (70.4%) inward degree mobile graduates originated outside the EU¹⁴³. Stimulating mobility, as well as attracting and retaining talented students (alongside academics and researchers), can help maximise Europe's global influence as regards values, education, research and societal impact¹⁴⁴.

Figure 21 provides information on degree mobility balance in 2020, including mobility both within and outside the EU¹⁴⁵. It is important to strive for a balance in the mobility flows to optimise what is often referred to as 'brain circulation'. Figure 21 illustrates how balanced a system is in comparison to its outward degree mobility rate. Positive values on the x-axis indicate an imbalance in favour of inward mobility, whereas negative values indicate an imbalance in favour of outbound mobility. The most balanced country in 2020 was Romania, while the most imbalanced countries were the Netherlands and Denmark.

Figure 21. Most Member States receive more students than they send abroad

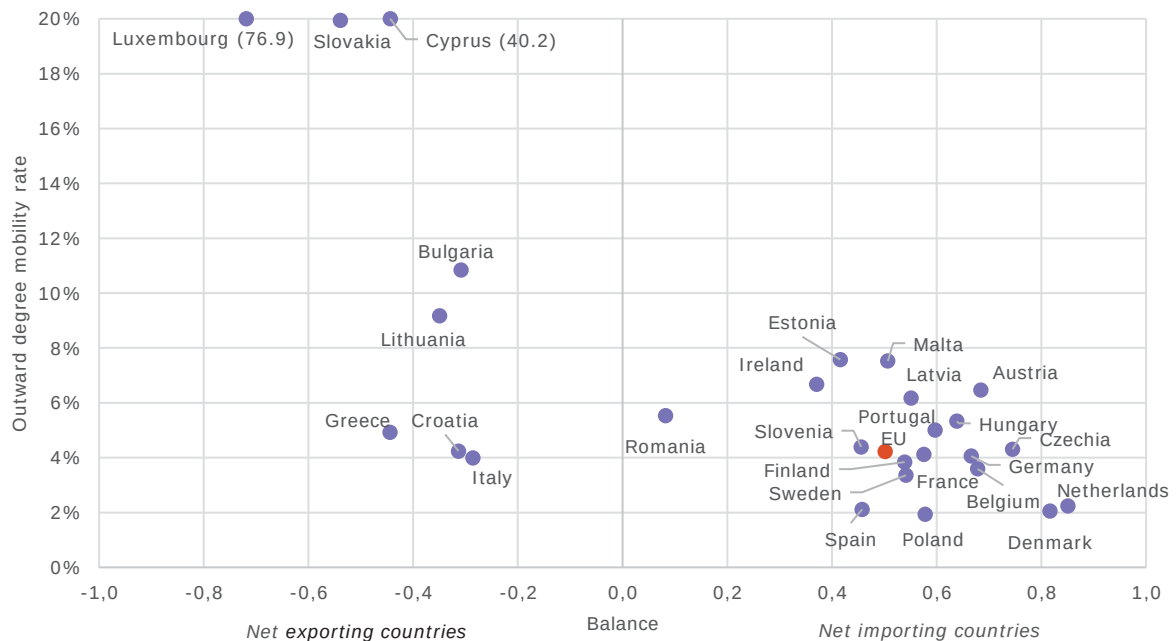
¹⁴¹ For more details, see a [2021 report](#) on the impact of COVID-19 on higher education by the Network of Experts working on the Social dimension of Education and Training (NESET).

¹⁴² The inward mobility rate for the EU is calculated as the number of inward degree-mobile graduates in the EU divided by the number of graduates originating in the EU.

¹⁴³ The highest share of degree mobile graduates came from Asia (23.3%), followed by Africa (17.1%), European countries outside the EU (12.9%), and the Caribbean, Central and South America (8.5%). The remaining two regions, Northern America (2.4%), and Oceania (0.2%), made up less than 3% of the inward degree mobile graduates. Graduates from unspecified regions of origin comprised 5.9%.

¹⁴⁴ The [European Strategy for Universities](#) highlights the importance of fostering mobility between Europe and other regions of the world.

¹⁴⁵ The data depicted in this chart is based on student mobility rather than graduate mobility. This increases coverage of outbound mobility to destinations outside of Europe, which in turn provides a more nuanced overview of mobility balance. Balance is computed as the absolute difference (incoming minus outgoing students) divided by the total number of incoming students (when the balance is positive) or by the total number of outgoing students (when the balance is negative).

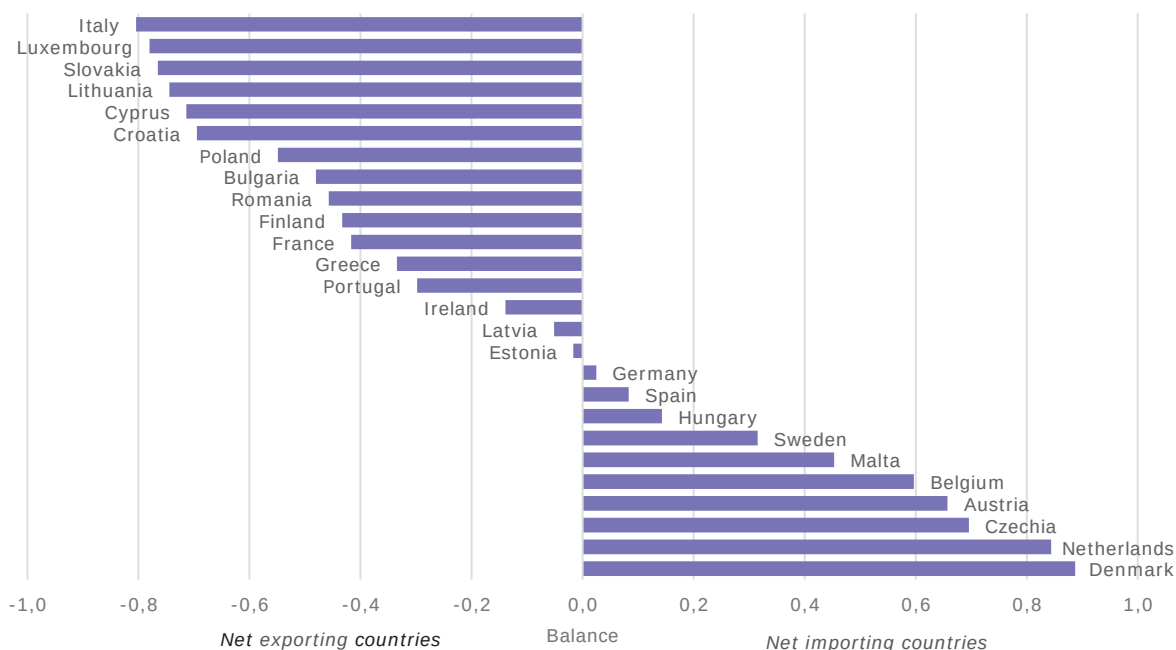


Source: European Commission calculations based on Eurostat (UOE 2020 on degree mobility) and OECD (degree mobility).
 Note: calculations and metadata are detailed in the downloadable Excel file.

Most Member States receive more students than the number of those going abroad, indicated by the cluster on the right-hand side of the x-axis. Countries with a high importing balance tend to have lower outbound mobility rates, albeit with substantial variation between countries. In 2020, Denmark and the Netherlands were the highest net importing countries, with mobility imbalances of more than 80%. Moreover, the outbound mobility rates in these countries (2.1% and 2.2%, respectively) were among the lowest in the EU.

The variation in outward mobility rates of net exporting countries is substantially higher than observed among net importing countries. Luxembourg, Slovakia, Greece, and Cyprus were the highest net exporting countries (above 40%), and saw outward mobility rates of 76.9%, 19.9%, 4.9% and 40.2%, respectively.

Figure 22. Intra-EU degree mobility is highly unbalanced across Member States



Source: European Commission calculations based on Eurostat (UOE 2020 on degree mobility). Note: calculations and metadata are detailed in the downloadable Excel file.

Considering only intra-EU degree mobility, the depiction of balance takes on a very different form (Figure 22). In 2020, Italy, Luxembourg, Slovakia, Lithuania, Cyprus and Croatia had the highest net export of degree mobile students to other Member States relative to how many students they received. A further 10 Member States also recorded a mobility flow imbalance in favour of outbound mobility. Notably, many countries move from being net import countries to net export countries if only intra-EU mobility is considered¹⁴⁶.

In a nutshell

In 2021, 41.2% of 25-34 year-olds had a tertiary-level qualification, keeping the EU on track towards meeting its 2030 target of at least 45%. However, decades of educational expansion have coincided with an ever-widening gender gap, reaching 11.1 percentage points in favour of women. Evidence suggests that gender gaps emerge long before tertiary education and widen along the education trajectory, as mirrored in most data on new entrants, enrolments and completion. Study choice also retains a strong gender divide, and women remain underrepresented in disciplines such as ICT and engineering. In addition, tertiary educational attainment rates are 48.6 percentage points higher among young people whose parents have a high level of education than they are among young people whose parents have a low level of education.

¹⁴⁶ Outward degree mobility to the EU accounts for more than 50% of the outbound mobility in all but seven Member States (France, Lithuania, Portugal, Sweden, Denmark, Ireland, and Malta). Conversely, inward mobile students from the EU account for less than 50% of inbound mobility in most Member States. In seven countries, the share is below 20% (Lithuania, Finland, Italy, Ireland, Portugal, France, and Poland). This is an important caveat when assessing intra-EU mobility. Systems may be much more attractive to foreign students than the intra-EU balance (Figure 22) would suggest. The share of inward mobility from outside the EU is above 80% in Poland, France, Portugal, Ireland, Italy, Finland, and Lithuania.

Chapter 6. An era of transitions demands lifelong skills development

EU-level 2025 target: 'At least 47% of adults aged 25-64 should have participated in learning during the last 12 months, by 2025'.

EU-level 2030 target: 'At least 60% of adults aged 25-64 should have participated in learning during the last 12 months, by 2030'.

6.1. Increasing participation in adult learning is a renewed priority

The COVID-19 pandemic has made it clear that everybody needs basic digital skills for study, work and daily life, whereas the green transition calls for new skills and attitudes (see Chapter 8). Meanwhile, skills shortages have become a standard fixture on the EU labour market. In 2019, labour shortages were at their highest in around half of the Member States, declining during the pandemic but increasing again in 2021¹⁴⁷. Eurofound reported that, in a context of post-pandemic recovery and transition to a climate-neutral economy, the construction, energy, manufacturing and transport sectors were likely to need additional labour supply and new skills the most.

Stepping up the development of the existing labour force's skills can play a major role in tackling skills shortages. Therefore, increasing participation in adult learning has become a priority issue and was the focus of one of three headline targets for social policy welcomed by EU leaders in 2021, which aims to ensure 60% of adults are participating in learning every year by 2030¹⁴⁸. The 2025 EU-level target of 47% adults participating in learning annually has become a milestone towards reaching the 2030 target¹⁴⁹. In addition, Member States have set national targets by 2030 (Box 17).

Box 17. National targets for 2030

Achieving the 2025 and 2030 EU-level targets requires sustained measures, and in some countries radical reforms, to increase adult learning participation. On 16 June 2022, the employment and social affairs ministers of EU Member States presented their 2030 national targets for (a) the employment rate; (b) reducing the number of people at risk of poverty; and (c) participation in adult learning. The overview below shows the 2030 national targets for adult learning, compared to a 2016 baseline (the latest data available using the same 12-month reference period).

	Baseline (2016)	Target (2030)		Baseline (2016)	Target (2030)
EU	37.4	60.0	Latvia	39.0	60.0
Belgium	39.4	60.9	Lithuania	25.0	53.7
Bulgaria	11.8	35.4	Luxembourg	42.6	62.5
Czechia	22.8	45.0	Hungary	54.8	60.0
Denmark	50.4	60.0	Malta	32.8	57.6
Germany	46.4	65.0	Netherlands	57.1	62.0
Estonia	33.9	52.3	Austria	55.3	62.0

¹⁴⁷ See the analysis in the Joint Employment Report 2022, as based on data from the European Business and Consumer Survey.

¹⁴⁸ An EU-level 2030 target of 60% of adults participating in learning every year was welcomed in the 2021 Porto Declaration, signed by EU leaders, and then by the European Council in its 2021 conclusions.

¹⁴⁹ The 2025 target of 47% adults participating in learning every year is part of the EEA Strategic framework Resolution.

Ireland	46.0	64.2	Poland	20.9	51.7
Greece	16.0	40.0	Portugal	38.0	60.0
Spain	30.4	60.0	Romania	5.8	17.4
France	48.4	65.0	Slovenia	40.3	60.0
Croatia	26.9	55.0	Slovakia	42.6	50.0
Italy	33.9	60.0	Finland	51.4	60.0
Cyprus	44.8	61.0	Sweden	58.8	60.0

Source: 2022 press release '[Commission welcomes Member States' targets for a more social Europe by 2030](#)'.

The [2022 Council Recommendation](#) on 'individual learning accounts' outlines how Member States can stimulate participation in adult learning by closing support gaps and fostering the integration of financial and non-financial support (Box 18). The [2022 Council Recommendation](#) on a European approach to micro-credentials for lifelong learning and employability aims to increase transparency concerning the quality and recognition of short training courses, which constitute the bulk of adult learning (Box 19).

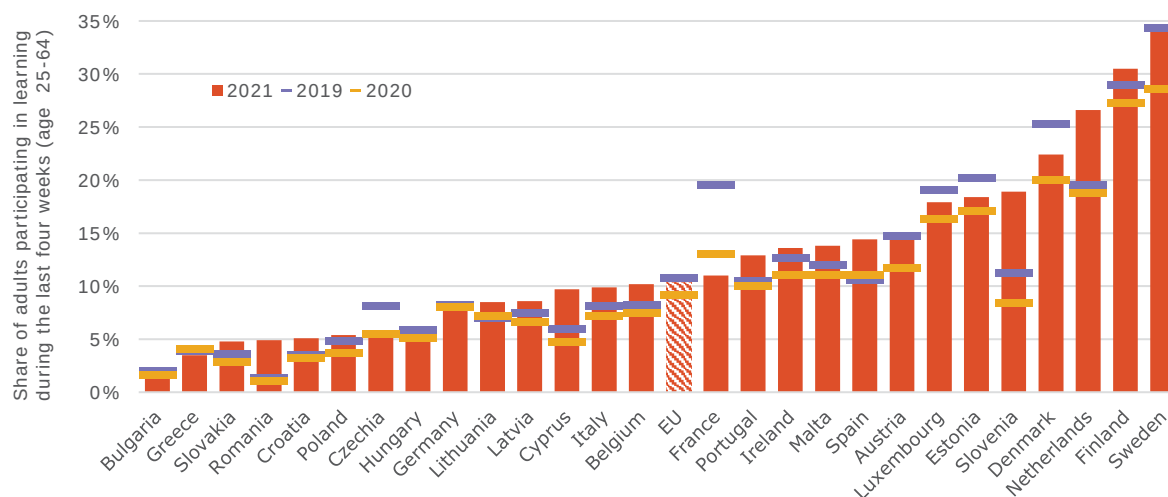
6.2. There are signs of recovery amid a strikingly uneven country performance

While future EU-level monitoring of adult learning will use a 12-month reference period, the most recent data available concern participation in adult learning participation over the 4 weeks preceding the survey¹⁵⁰. There was a near-universal decrease of adult learning in the past 4 weeks between 2019 and 2020 (from 10.8% to 9.1% in the EU average, with drops in all Member States except Greece, Spain and Lithuania), likely due to the health measures introduced because of COVID-19, which disrupted learning provision, especially at the workplace. However, a near-universal increase of adult learning was observed between 2020 and 2021 (from 9.1% back to 10.8%, with increases in all Member States except Germany, Greece, and France). This may be due, in part, to the more granular measurement as of 2021¹⁵¹, or to the relaxation of COVID-19 measures, making it easier for adults to participate in learning activities again.

Figure 23. Adult learning took a hit during COVID-19 and picked up again in 2021

¹⁵⁰ As of 2022, and then every two years, the EU Labour Force Survey (LFS) will include questions about learning participation in the preceding 12 months (in addition to the annual question about participation in the last 4 weeks, as in the past). This will support the monitoring of Member States' progress towards the 2025 EU-level target, the 2030 EU-level target and the 2030 national targets.

¹⁵¹ The EU Labour Force Survey (LFS) is undergoing changes in the 2021 and 2022 annual data that affect, among other things, the measurement of adult learning. The 2022 revision is detailed in the previous footnote. As for the 2021 revision (with data already reported in this chapter), respondents are asked whether they have attended non-formal learning activities that are job-related, and subsequently whether they have only participated in learning activities that are not job-related (i.e. undertaken for personal reasons). The new implementation guidelines clarify that non-formal learning includes taught courses including workshops, seminars and tutorials as well as private lessons and massive open online courses. The advantage of this change is that the measurement of adult learning is expected to improve, as otherwise respondents may not have thought about learning that is not job-related in the context of the LFS.



Source: Eurostat (EU Labour Force Survey). Note: breaks in time series for Germany (2020) and for all countries in 2021¹⁵².

Most adult learning in the 4 weeks preceding the survey concerns non-formal learning, comprising three quarters of all participation in 2021 (8.0% against a total of 10.8%). This share is almost the same as it was in 2019, while it was a bit lower in 2020. Adult learners mostly follow short courses, more likely to be organised in non-formal settings¹⁵³. Non-formal learning represent less than half of all adult learning in only a couple of countries with a very low rate of participation¹⁵⁴. Most non-formal adult learning is job-related, but 1.9% of adults reported reporting participation only in non-formal learning that was not related to their job¹⁵⁵.

Box 18. Individual learning accounts

The aim of the [2022 Council Recommendation](#) on individual learning accounts is to promote adult participation in learning through direct financial support and complementary services. It invites Member States to consider setting up individual learning accounts to encourage adults to participate in training. Every adult, whether at work or not, is recommended to receive a personal account with training entitlements, which they can spend throughout their career on training courses that are relevant to the labour market and quality-assured, chosen from a registry of eligible opportunities.

In France, the use of individual learning accounts ('compte personnel de formation', CPF) has increased rapidly during the pandemic, against an overall trend of falling adult learning participation. The number of CPF-funded training courses increased from 489,000 in 2019 to 1 million in 2020, and then to 2.1 million in 2021. Workers in the accommodation and catering sector, which was particularly affected by the COVID-19 pandemic, recorded the strongest increase, suggesting that the CPF allowed many workers to use the period of low economic activity for (online) training. Following a 2019 reform that made it more user-friendly, use of the CPF has increased, in particular among low qualified adults, who are now well represented among CPF users.

¹⁵² As from 2021, new legislation applies to the EU Labour Force Survey (LFS) and therefore Eurostat flags all 2021 LFS data with 'b' (break in series). The methodological changes have a particular impact on labour force status but can also impact other LFS indicators. Further information on the changes can be found [here](#).

¹⁵³ See a [2021 Eurydice report](#) on adult education and training in Europe.

¹⁵⁴ A little over a quarter in Bulgaria and a little over a third in Greece. Note that non-formal learning may be even more important when using a 12-month reference period.

¹⁵⁵ In some countries, the improved measurement of non-formal learning not related to the job may have helped increase overall adult learning participation. In the Netherlands and Slovenia, where participation significantly increased in 2021, the growth is almost completely thanks to higher participation in non-formal learning, and half of it concerns non-formal learning not related to the job (5.4% in the Netherlands and 4.8% in Slovenia). In Denmark, non-formal learning not related to the job (9.8%) is more than half the non-formal share (17.1%), though not enough to bring the total participation (22.4%) back to its 2019 level (25.3%). An increase in non-formal learning in Cyprus (3.1% in 2019 versus 7.5% in 2021) also explains its 2021 total, with little contribution from non-job related learning (1.2%). In Romania, the impact of non-job related learning (0.3%) was also minimal, and overall growth was thanks to participation in mostly job-related non-formal learning, which was half of its total in 2020 (0.5% against 1.0%) and 90% of a much larger total in 2021 (4.4% against 4.9%).

France provided additional incentives for the acquisition of digital skills, supported by the Recovery and Resilience Facility.

The Netherlands has introduced individual learning budgets, allowing adults to claim a budget of up to EUR 1 000 per year to spend on eligible training activities ('STAP' scheme). STAP replaces an income tax deduction for training expenses, after an evaluation found this income tax deduction only had limited success in encouraging people to take up additional training. In contrast, the STAP budget is available to all adults on the Dutch labour market regardless of whether their income is sufficiently high to pay income taxes, and it does not require pre-financing by individuals. In the first application period (March-April 2022), the budget was exhausted after 3 days: 36 000 individuals received a STAP budget, enrolling in 4 000 different training programmes managed by 235 different providers.

Greece is setting up a scheme of Lifelong Skilling Accounts with support from the Recovery and Resilience Facility, helping people to take up training that responds to their individual needs. The initiative includes a new national register of eligible training providers, based on a revised quality assurance system. The scheme is part of a comprehensive reform, which also envisages an investment in general skills programmes for 500 000 participants and aims to develop basic- and medium-level digital skills, skills for the green transition and financial literacy skills. A National Skills Council will annually revise the national skills strategy.

More adult women (11.6%) than men (10.1%) participated in learning in the 4 weeks preceding the survey, with proportions stable throughout recent years. This pattern is repeated across many Member States, with only few exceptions¹⁵⁶. Some countries record a particularly strong female predominance. Three women participate in learning activities for every two men in Denmark (26.6% against 18.1%) and Finland (35.8% against 25.5%). The female share is twice the male share in Latvia (11.5% against 5.5%) and Croatia (6.4% against 3.7%).

Higher female participation is also the case among unemployed adults, with 14.3% of women participating in learning activities versus 11.2% of men. In total, adult learning among unemployed people has increased at EU level to 12.7% (from 10.5% in 2020 and 10.7% in 2019)¹⁵⁷, possibly thanks to active labour market policies that responded to the impact of the pandemic. Differences between countries remain huge, with almost half of unemployed people in Sweden participating in learning compared to less than 1 in 10 in eleven other Member States¹⁵⁸.

6.3. Adult learning is rare among people with a low level of education and in rural areas

The participation of adults with a low level of education remains below half of the general rate, with an EU average of 4.3%, exactly the same as in 2019, recovering from the rate of 3.4% in 2020¹⁵⁹. Adults with a low level of education whose parents have a high level of education are four times as likely to participate in learning as adults with a low level of education whose parents also have a low level of education (14.2% versus 3.5%). This suggests that socio-economic status has a strong influence on learning participation, going beyond what is reflected in an adult's own formal educational attainment.

Figure 24 captures non-formal learning across three levels of educational attainment. It confirms that most non-formal learning is job-related and substantially more prevalent among people with higher levels of education than it is among people with lower levels of education. However, Figure

¹⁵⁶ For example, the pattern is flipped in Cyprus with a 9.9% share among men versus 9.5% among women.

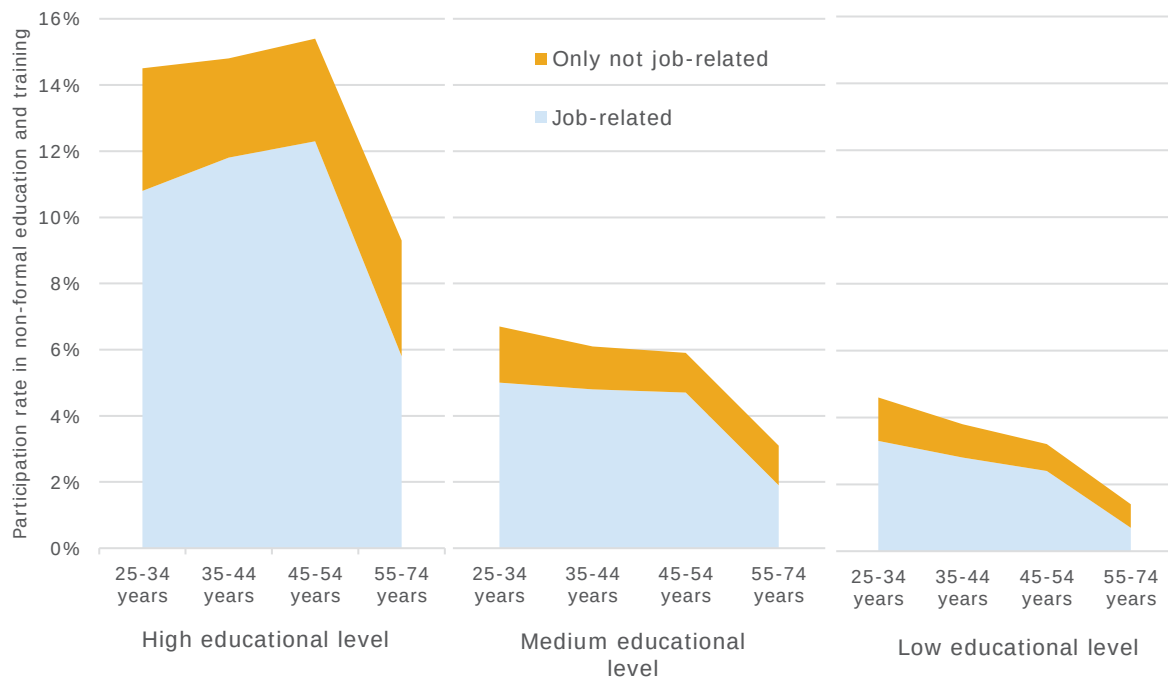
¹⁵⁷ Growth in adult learning among unemployed people was substantial in some Member States, such as the Netherlands (19.5% in 2019 and 30.4% in 2021) and Slovenia (9.7 in 2019 and 15.9% in 2021), largely contributing to the increase of overall adult learning rates in these countries.

¹⁵⁸ Romania, Slovakia, Hungary, Croatia, Czechia, Greece, Poland, Lithuania, Italy, Latvia and Cyprus.

¹⁵⁹ While in a few Member States female participation is higher among adults with a low level of education (Sweden, Finland and Denmark), in most countries adult learning is slightly more prevalent among men with a low level of education, as reflected also in the EU average (4.4% men versus 4.2% women).

24 also illustrates how age plays into the participation rates for the three groups, here including people beyond the working age. While participation in general decreases with age at all levels of attainment, among people who are highly educated, participation in job-related non-formal learning has a clear peak in the mid-age groups, something that does not occur among people with medium or low levels of education.

Figure 24. Non-formal learning is led by people who are highly educated below the age of 55

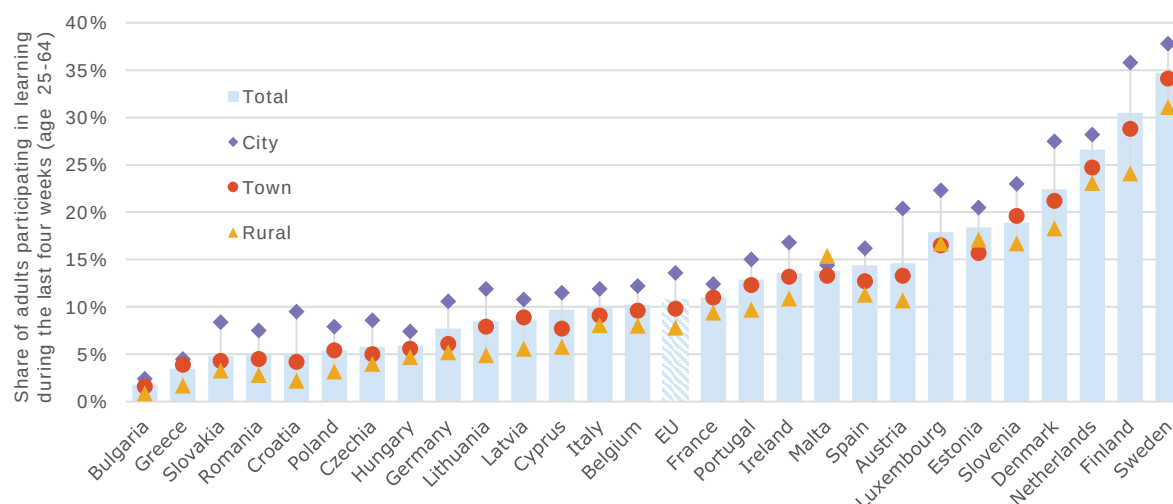


Source: Eurostat (EU Labour Force Survey 2021). Note: 'Not job-related' non-formal learning is more prevalent than suggested by the figure, as adults who have participated in both job-related and not job-related non-formal learning are only recorded under job-related non-formal education.

More generally, younger adults participate in formal *and* non-formal adult learning substantially more than older adults, with the EU average rate of the 25-34 age bracket (18.2%) about twice the rate of the 45-54 age bracket (9.2%). While one in four highly-qualified young adults participate in learning (24.9%), the participation rate (8.3%) of young adults with lower levels of qualification (25 to 34 years) is lower than the rate (9.9%) among highly-qualified older people (55 to 74 years).

As can be seen in Figure 25, the prevalence of adult learning in the 4 weeks preceding the survey is different when living in a city (13.6%), in a smaller town (9.8%) or in a rural area (7.8%) – which may in part reflect the proximity of training opportunities in more densely populated areas. In Malta, the distribution is balanced, and in Estonia, the Netherlands and Sweden, the gap is relatively small. However, in Austria, Cyprus, Czechia, Germany and Latvia, the participation rate in rural areas is about half the rate in cities, and in another seven Member States – Bulgaria, Romania, Croatia, Greece, Lithuania, Poland and Slovakia – it is less than half.

Figure 25. Adult learning is low in rural areas for the majority of Member States



Source: Eurostat (EU Labour Force Survey 2021).

The share of adult learning in the past 4 weeks among those born outside of the reporting country (11.0%) is very similar to the overall EU average rate (10.8%), with a slightly higher share for those born in non-EU countries (11.5%) and a lower share for adults born in other Member States (9.8%). In most countries, data are close to the average pattern, with only a few exceptions. In Lithuania, participation of adults born in the EU (12.4% in 2021) is much higher than that of adults born in non-EU countries (5.5%), while the opposite is true for Hungary (5.3% for those born in other Member States against 11.6% for adults born in non-EU countries).

Box 19. Micro-credentials

Most adult learning takes the form of short, non-formal courses, which is increasingly leading to micro-credentials being awarded. The [2022 Council Recommendation](#) on a European approach to micro-credentials aims to ensure the quality, recognition and understanding of micro-credentials, making it easier for individuals, employers, and education and training institutions to trust and appreciate them. Micro-credentials have huge potential to shape a better supply of targeted upskilling and reskilling courses, and to motivate people to take advantage of them, knowing that their new skills will be certified in a clear and credible document. Micro-credentials open the possibility for people to accumulate, or 'stack', different competences, which can be documented and recognised by learning providers, employers, and sectors – as well as across countries.

In Ireland, certificates released after short courses have been included in the National Framework of Qualifications since its establishment in 2003. In the Netherlands, micro-credentials ('edubadges') can be issued online and their recipients can store and share them with employers or education providers. In Croatia, 'micro-qualifications' have become part of formal adult education following the 2021 adoption of the new Adult Education Act, and units of learning outcomes related to short training courses can lead to partial or full qualifications. In Spain, recent legislation has integrated a number of micro-credentials into formal VET, which can be stacked and lead to a formal VET certificate. Latvia also allows micro-credentials to be accumulated in order to get a full qualification or used as standalone qualifications. Estonia is revising its Adult Education Act to regulate the content, provision, quality framework and duration of learning experiences leading to the award of micro-credentials¹⁶⁰.

In a nutshell

¹⁶⁰ Country examples are taken from a [2022 CEDEFOP briefing note](#).

In 2021, 10.8% of adults aged 25 to 64 participated in formal or non-formal learning activities over the preceding 4 weeks, showing a recovery from pandemic-induced drops the previous year. While adult learning in the preceding 4 weeks has increased among the unemployed (now 12.7%), it is still much less prevalent among people with a low level of education (4.3%) and people living in rural areas (7.8%). These data build on a new, more granular definition of adult learning – and will be improved again next year with the reference period for learning activities being extended to 12 months. It is the 12-month reference period that will be used for the EU-level targets for both 2025 and 2030, as well as for national targets set by the Member States.

Part 3. The kind of learning

Quality education equips young people with the knowledge, skills and attitudes required to thrive in life and to cope with the various challenges they will face¹⁶¹. Parts 1 and 2 of this report already touched upon a number of important dimensions of quality education, such as learning mobility, teaching and the way equitable education and training systems feed into quality learning for all. Part 3 looks at educational achievement¹⁶² as a proxy for quality education and an illustration of the kind of learning that is behind the educational credentials, diplomas and certificates mentioned in Part 2.

The final part of this report aims to broaden the focus on reading, maths and science and to expand coverage to other key competences in a lifelong learning perspective. Such an approach may, over time, reveal common characteristics and synergies that can improve our education and training systems. The [2018 Council Recommendation](#) on key competences for lifelong learning singles out eight broad domains: (1) literacy; (2) multilingualism; (3) mathematics (and science, technology and engineering); (4) digital; (5) personal, social and learning to learn; (6) citizenship; (7) entrepreneurship; and (8) cultural awareness and expression. Not all of these key competence domains lend themselves easily to cross-EU comparisons, but the quantitative and qualitative evidence is improving¹⁶³.

The Recommendation also refers to numerous 'horizontal enablers' that can be expected to benefit the development of most – if not all – key competences in an education and training system. Such enablers include cross-discipline learning, whole school approaches, learner continuity, cross-sectorial cooperation, the active participation and decision making of learners, guidance and support for innovative learning methodologies¹⁶⁴, and competence-oriented approaches in initial teacher education, continuing professional development and staff exchanges.

The [2020 Commission Communication](#) on achieving the European Education Area by 2025 continues the work on these 'horizontal enablers', and introduces additional enablers such as micro-credentials¹⁶⁵. The [2020 Commission Communication](#) on the European Skills Agenda strengthens the focus on the digital and green transition (see Chapter 8), while adding objectives on adult learning and the digital skills of the adult population. The European Skills Agenda also adds further 'horizontal enablers' such as individual learning accounts¹⁶⁶.

Box 20. Learning losses due to physical school closures

While there is no comparable EU-level evidence, national studies show large variation in the impacts of physical school closures on learning progress. This reflects considerable cross-country variation in the intensity of the pandemic, length and extent of school closures, different modes of distance or hybrid learning adopted, readiness to move towards online learning (and its efficiency), and also the type, scope and timing of measures adopted to mitigate learning loss.

The magnitude of reported learning loss varied significantly by country, subject, level of education, and school closure length. Declines were recorded in the Flemish Community of Belgium (maths and Dutch among sixth

¹⁶¹ See the [2020 Commission Communication](#) on achieving the European Education Area by 2025.

¹⁶² In a cross-EU assessment, educational achievement is often measured using large scale assessments from the OECD and the International Association for the Evaluation of Educational Achievement (IEA).

¹⁶³ A [2022 study](#) provides an overview of major reforms in the development of key competences across all Member States and a deep dive into reform processes in Denmark, Ireland, the Netherlands, Portugal and Slovakia.

¹⁶⁴ Including access to centres of expertise, tools and materials.

¹⁶⁵ See the [2022 Council Recommendation](#) on a European approach to micro-credentials for lifelong learning and employability. Chapter 6 features examples in Box 19.

¹⁶⁶ See the [2022 Council Recommendation](#) on individual learning accounts. Chapter 6 features examples in Box 18.

grade students), Italy (maths among primary school students), the Netherlands (maths, spelling and reading among students in grade 4-7) and Germany (reading comprehension, operations and numeracy among fifth grade students). Other national studies found less conclusive evidence or no evidence at all of learning loss. In addition, there may have been some learning recovery during the second year of the COVID-19 pandemic in countries that recorded learning losses in 2020.

Some pre-COVID-19 studies suggest that remedial measures could be effective in addressing educational disruption. In a March 2021 survey on COVID-19, 76% of participating Member States reported providing remedial measures to reduce learning loss at upper secondary level. These included specific supports for students in upper secondary grades ending with a national examination (65% of Member States) and for students in programmes with a vocational orientation (53%). In addition, 71% of countries reported introducing specific measures for disadvantaged students. More than 60% of Member States introduced supports for students at risk of early school leaving or grade repetition, as well as for students unable to access distance learning. Remedial actions were often preceded by an assessment of the gaps in student learning (71% of countries).

Source: *Employment and Social Developments in Europe (ESDE) review 2022*.

Chapter 7. A policy focus on key competences looks beyond basic skills

7.1. Underachievement in basic skills goes down with instruction time

EU-level 2030 target: 'The share of low-achieving 15-year-olds in reading, mathematics and science should be less than 15% by 2030.'

Underachievement in reading, maths and science is captured by data from the OECD's PISA, with its most recent 2018 round¹⁶⁷ well documented in previous editions of the Education and Training Monitor¹⁶⁸. Across the EU, the shares of underachievement in reading (22.5%), maths (22.9%) and science (22.3%) are all quite a distance from the 2030 target of below 15% and have actually increased when compared to the 2015 PISA round.

With PISA widely regarded as the benchmark for international comparisons in educational achievement, there is great interest in seeing whether its 2022 round will confirm further increases in underachievement, or whether any learning losses resulting from the 2020-21 physical school closures will have been remedied in the interim. In this section, further analysis of PISA 2018 data suggests that instruction time does correlate with underachievement, which may not bode well in terms of COVID-19 effects.

Instruction time is not the definitive hallmark of quality education¹⁶⁹, yet there is a clear association between the number of annual hours 14-year-olds were expected to spend overall in regular lessons¹⁷⁰ and the underachievement rate in reading¹⁷¹ at age 15 (Figure 26). Three out of

¹⁶⁷ PISA is currently conducted every 3 years. The next data collection has been delayed to 2022 due to the COVID-19 pandemic. The results will be released by the end of 2023.

¹⁶⁸ Note that PISA 2018 forms the basis for the new EU-level indicator on equity in education (Chapter 1).

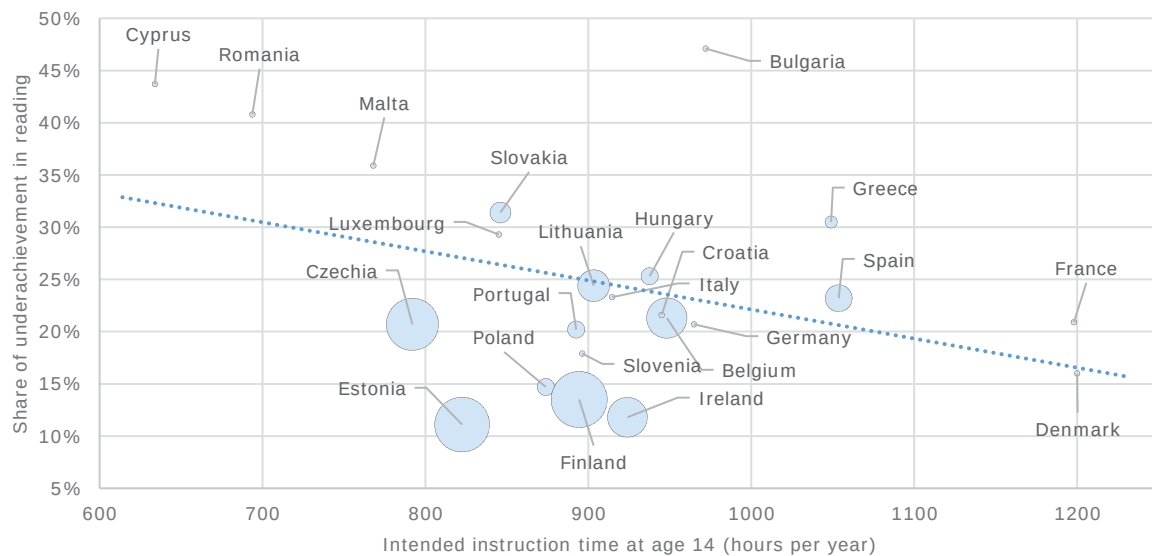
¹⁶⁹ The time students spend learning has a broader variety of characteristics (regular lessons, afterschool classes, private tutoring), and is heavily influenced by factors such as teaching practices.

¹⁷⁰ Intended instruction time (on the x-axis) ranges from 600 to 1 200 hours per year, although for most countries, the values are concentrated between 800 and 1 000 hours. They correspond to the intended instruction time in public institutions.

¹⁷¹ Similar association holds for the other domains – mathematics and science.

the four bottom performing countries with respect to underachievement in reading are also the countries with the lowest intended instruction time at age 14 (Cyprus, Romania and Malta).

Figure 26. Cyprus, Romania and Malta may benefit from increasing the instruction time



Source: OECD (PISA 2018) and Eurydice. Note: the values in the horizontal axis correspond to the intended instruction time (number of hours per year) in public institutions (no data for Austria, Latvia, the Netherlands and Sweden)¹⁷². The size of bubbles represents the degree of flexibility in time allocation, measured as the average of the share of vertical and horizontal subject flexibility over the total instruction time¹⁷³.

In Denmark, which has the highest number of hours and the highest share of language classes¹⁷⁴, the underachievement rate is 16.0%. In France, with a share of language classes that is closer to the EU average, the underachievement rate increases to 20.9%. Lower shares of language classes are also observed in countries with higher underachievement, such as Greece (8.1%) and Bulgaria (9.2%).

Furthermore, there is a group of countries (Estonia, Finland, Czechia, Ireland, and Belgium) where underachievement rates are below the EU average, while neither the instruction time nor the share of language classes are out of the ordinary. These countries share a varying degree of flexibility in the allocation of instruction time (as depicted by the bubble size in Figure 26), whether it be 'vertical flexibility'¹⁷⁵, as in Estonia, Czechia, Finland, or 'horizontal flexibility'¹⁷⁶ in Belgium and Ireland¹⁷⁷. These findings suggest that a higher degree of school autonomy could act as a leverage to tackle underachievement¹⁷⁸.

7.2. Multilingualism may be on the rise

¹⁷² See the [PISA 2018 system-level indicators](#).

¹⁷³ See the [2018 Eurydice report](#) on recommended annual instruction time. Data from 2017-18 is used to match the 2018 PISA data.

¹⁷⁴ European Commission (Joint Research Centre) calculations of the country average share of language class periods per week, derived from the PISA 2018 student's background questionnaire, ranging between 8.1% in Greece and 19.6% in Denmark (the EU average is 11.6%).

¹⁷⁵ Vertical flexibility refers to the capability of schools and/or local authorities to allocate a subject's instruction time across more than one grade. See the [2021 Eurydice report](#) on recommended annual instruction time.

¹⁷⁶ Horizontal flexibility refers to the capability of schools and/or local authorities to allocate instruction time for a group of subjects within a specific grade. See the [2021 Eurydice report](#) on recommended annual instruction time.

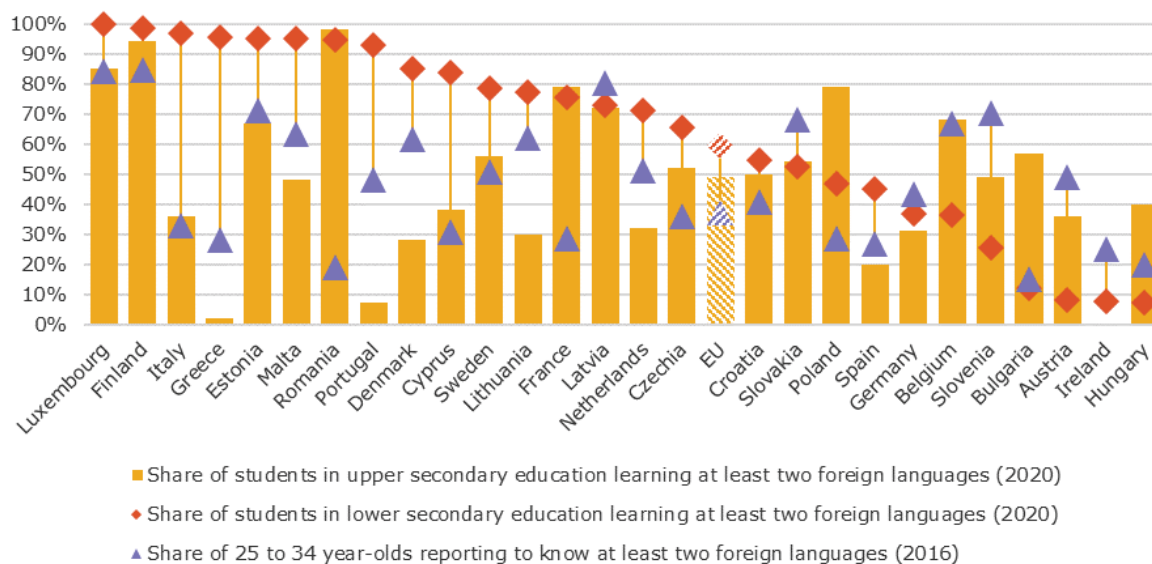
¹⁷⁷ Ireland was in the process of introducing vertical flexibility.

¹⁷⁸ The amount of instruction time in primary education might also influence the results in subsequent stages of education. Bulgaria and Romania are among the countries with the lowest number of hours of intended instruction time in primary education. See the [2021 Eurydice report](#) on recommended annual instruction time.

The EU's motto 'united in diversity' symbolises the essential contribution of linguistic diversity. Languages unite people, make other countries and their cultures accessible, and strengthen intercultural understanding. Foreign language skills play a vital role in boosting employability and mobility¹⁷⁹. Yet too many Europeans still leave school without a working knowledge of a foreign language. For this reason, the EU has set the improvement of language teaching and learning as a priority¹⁸⁰.

In 2016, 78.7% of young adults (25-34 years) reported they knew at least one foreign language¹⁸¹, but only 36.8% declared knowing more than one foreign language, the latter fairly stable across time¹⁸². Evidence suggests that proficiency among young adults may pick up in the future as younger cohorts age. In primary education, a strong majority of pupils are in contact with a foreign language (86.1% in 2020). Moreover, the share of lower secondary students learning more than one foreign language has been increasing in recent years, rising from 46.3% in 2015 to 59.2% in 2020 (Figure 27)¹⁸³.

Figure 27. The exposure of school-age youth to foreign languages bodes well for the improvement of multilingual proficiency among young adults



Source: Eurostat (UOE 2020; Adult Education Survey 2016).

The share of students who continue studying a second foreign language in upper secondary education (49.0% across the EU in 2020) tends to be lower than in primary and lower secondary education. Remarkable exceptions are Bulgaria, Hungary, Poland and Belgium, where the share from lower to upper secondary education increases by over 30 percentage points, followed by an increase of over 20 percentage points in Austria and Slovenia.

Some 60.0% of students enrolled in general programmes in upper secondary education are taught at least two foreign languages on average across the EU, compared to only 35.1% of students in vocational programmes. This pattern is observed in all countries except Italy, where students in

¹⁷⁹ Multilingualism also improves the competitiveness of the EU economy. For instance, poor language skills may cause companies to lose international contracts and may hinder the mobility of skills and talent.

¹⁸⁰ See the [2019 Council Recommendation](#) on a comprehensive approach to the teaching and learning of languages, reiterated under priority area 1 in the [EEA Strategic framework Resolution](#).

¹⁸¹ Among them, 64% declared their level of the best-known foreign language to be good or proficient.

¹⁸² The EU average yielded 35.2% in 2007, 37.0% in 2011 and 36.8% in 2016.

¹⁸³ The situation varies substantially across countries.

vocational education are more likely to learn a second foreign language than their peers in general education (48.1% versus 24.7% in 2020).

Box 21. Entrepreneurship competence

Entrepreneurship competence refers to the capacity to act upon opportunities and ideas, and to transform them into values for other people. It is founded upon (1) creativity, (2) critical thinking and problem solving, (3) taking initiative, (4) perseverance and (5) the ability to work collaboratively in order to plan and manage projects that are of cultural, social or financial value.

According to the 2021 [Global Entrepreneurship Monitor \(GEM\)](#), there is still insufficient training provided throughout primary and secondary education across the EU as regards creating or managing small and medium-sized enterprises (with Finland and the Netherlands being the only exceptions). At post-secondary and tertiary levels, the situation improves and five additional Member States can be added to the list (Spain, France, Lithuania, Germany and Luxembourg).

The European entrepreneurship competence framework ([EntreComp](#)) is a reference framework that explains what is meant by an entrepreneurial mindset. EntreComp offers a comprehensive description of the knowledge, skills and attitudes that people need to be entrepreneurial and to create financial, cultural or social value for other people. EntreComp comprises three key areas with 15 entrepreneurship competences, defined through learning outcomes – what a learner knows, understands and can do. The learning outcomes are mapped across eight different levels of progression, from beginner to expert.

EntreComp can be used in a variety of ways including: (1) supporting policy and practice to develop entrepreneurial skills; (2) assessing entrepreneurial skills; and (3) helping to train educators, trainers and teachers. EntreComp can be used across sectors and be a key tool used for collaboration and development work by educators, trainers, employers, professional bodies and policymakers.

Regarding the actual languages studied, in primary education the preferred language remains English (84.1%), and to a lesser extent French (5.5%) and German (3.4%). These are also the main languages studied in lower secondary education (98.3%, 30.6% and 21.4%, respectively), with the addition of Spanish (17.7%). Upper secondary education features a similar – though slightly more balanced – pattern, for English (88.1%), French (18.9%), German (20.0%) and Spanish (18.0%)¹⁸⁴.

The Commission is strengthening the central role of multilingualism by: (1) working with Member States and leading experts in language education to modernise language teaching; and (2) strengthening the evidence base for language policy, in collaboration with the Eurydice network and Eurostat, as well as with external partners such as UNESCO, OECD and the Council of Europe¹⁸⁵. For instance, results from the 2022 Adult Education Survey will provide valuable information, in particular for the younger age groups (from 18 years old).

¹⁸⁴ The 2023 follow-up to the [2017 Eurydice report](#) on teaching languages at school in Europe will provide an insight into participation in foreign language learning, and into the context and organisation of foreign language teaching. An analysis of innovative approaches to and strategies for teaching languages across the EU (Germany, Spain, Italy, Netherlands, Finland and Sweden) is available in a [2020 report](#) from the Network of Experts working on the Social dimension of Education and Training (NESET).

¹⁸⁵ The Council of Europe and its [European Centre of Modern Languages](#) focus on promoting innovation in language teaching. As many education systems are not using common methods of assessment, efforts to improve language teaching should be coordinated with the development of modern assessment methodologies. For instance, the initiative on '[relating language curricula, tests and examinations to the Common European Framework of Reference \(RELANG\)](#)' focuses on helping educational authorities link language examinations to the proficiency levels defined in the [Common European Framework of Reference for Languages \(CEFR\)](#). Another strand of this cooperation develops [support for multilingual classrooms](#), to help young migrants integrate and excel in school.

Crucially, the question remains whether language policies, curricula, instruction and learning can actually lead to students becoming proficient in foreign languages. The next PISA cycle will include an optional module¹⁸⁶ to assess the English language proficiency of 15-year-old students.

7.3. Citizenship attitudes evolve with education

Citizenship competence is the ability to act as responsible citizens and to fully participate in civic and social life, based on an understanding of social, economic, legal and political concepts and structures, as well as global developments and sustainability. Education plays an essential role in teaching fundamental values and promoting social inclusion in order to strengthening social cohesion and democratic participation¹⁸⁷.

The [2022 European Parliament Resolution](#) on implementing citizenship education actions called for the development of tangible and measurable EU objectives on citizenship education. The results from the 2022 edition of the International Civic and Citizenship Education Study (ICCS)¹⁸⁸, expected to be published in 2023, will provide a solid basis to inform such tangible and measurable EU objectives on citizenship education. In the meantime, a 2021 Eurobarometer [Youth Survey](#) sheds light on various citizenship attitudes and hints at how such attitudes evolve as young people progress through the education and training system.

Looking at the Youth Survey's results, a prioritisation of various civic issues¹⁸⁹ reveals clear differences based on the age at which the respondents left the education system (Figure 28), which could be regarded as a proxy for educational attainment¹⁹⁰. Young people who left early tend to give less priority to issues such as tackling poverty and inequality, improving people's health and well-being and combating climate change, when compared to those with a higher educational attainment or still in the education system. In fact, young people who left before the age of 16 indicate, on average, unemployment as their number one priority. Young people with higher levels of educational attainment or still in the education system attribute less relevance to issues such as terrorism or online threats. Instead, they tend to prioritise civic issues such as protecting human rights and democracy, freedom of speech and gender equality¹⁹¹.

Figure 28. Young people's priorities shift from unemployment to inequality and climate change the longer they spend time in education

¹⁸⁶ The [PISA 2025 Foreign Language Assessment](#) will assess reading, listening and speaking proficiency in the English language. The Commission has supported the development of the assessment framework and plans to co-finance Member States' international costs associated with participating in the optional module, through the Erasmus+ 2023 work programme.

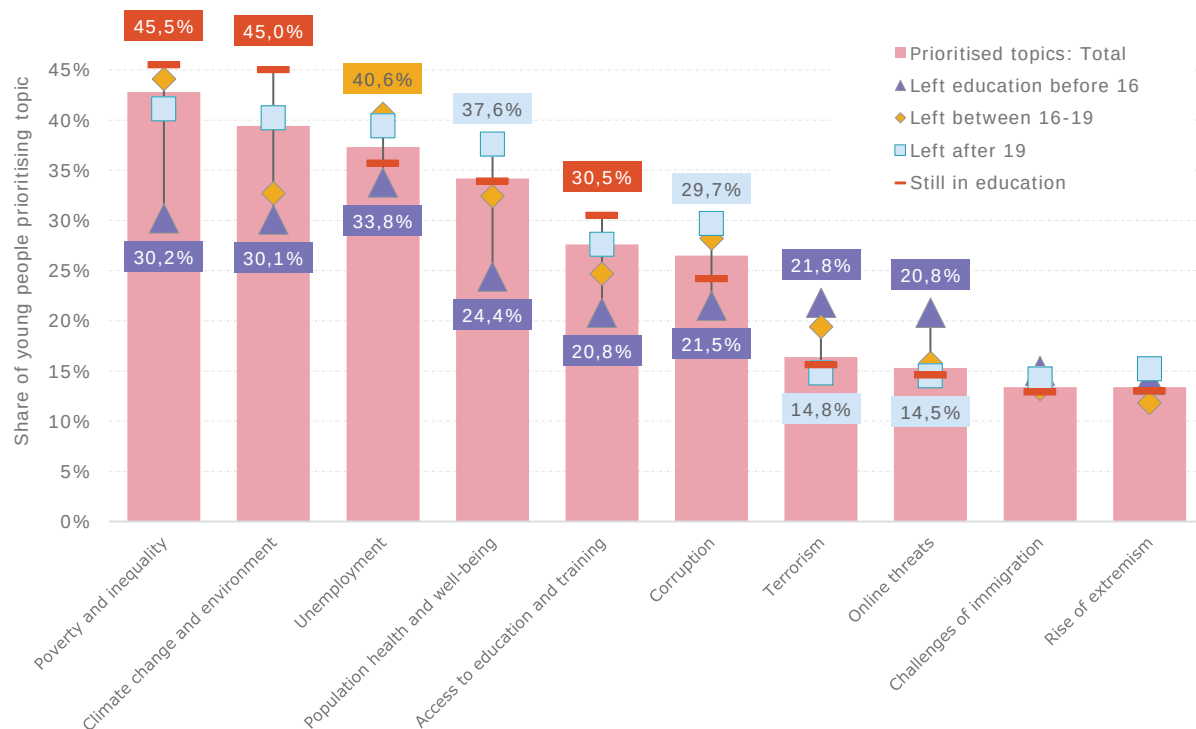
¹⁸⁷ See the [2018 Council Recommendation](#) on promoting common values, inclusive education, and the European dimension of teaching. The Council of Europe developed a [Reference Framework of Competences for Democratic Culture](#), to be adapted for use in primary and secondary schools and higher education and vocational training institutions throughout Europe.

¹⁸⁸ ICCS is carried out by the International Association for the Evaluation of Educational Achievement (IEA) and measures, among other things, eighth graders knowledge, conceptual understanding, and competences in civic and citizenship education.

¹⁸⁹ Part of the Eurobarometer project carried out by the European Parliament, this youth survey was conducted in June 2021 and targeted 16-30 year-olds across the EU. Respondents (18 156 in total) were asked to select three issues that should be given priority, among the following list: (1) combatting climate change and protecting the environment; (2) improving access to education and training; (3) tackling poverty and inequality; (4) combatting unemployment/lack of jobs; (5) improving population health and well-being; (6) tackling cyber/online threats (hacking, ransomware, identity theft); (7) dealing with the challenges of immigration; (8) tackling the rise of extremism; (9) tackling terrorism; and (10) tackling financial/political corruption.

¹⁹⁰ Differences in Figure 28 are much more prominent than when comparing age groups (16-19, 20-24, 25-29).

¹⁹¹ The links between education and active citizenship/civic engagement are explored further in a [2018 ad hoc report](#) from the Network of Experts working on the Social dimension of Education and Training (NESET).



Source: Eurobarometer Youth Survey 2021.

Citizenship competence has strong links to other competence domains, which is particularly evident in light of the green and digital transition (Chapter 8). Firstly, sustainability is a prominent sub-dimension of citizenship competence, and a clear civic priority for young people (Figure 28). Secondly, as part of the 2021-27 [Digital Education Action Plan](#), the Commission has been working on guidelines for teachers and educators to tackle disinformation – a civic issue that has been gaining substantial momentum in recent years¹⁹².

Box 22. Personal, social and learning to learn competence

The personal, social and learning to learn key competence is the ability to reflect upon oneself, manage time and information effectively, work with others in a constructive way, remain resilient and manage one's own learning and career. It includes the ability to cope with uncertainty and complexity, learn to learn, and support one's physical and emotional well-being.

[LifeComp](#) is a conceptual framework, which the Commission developed to establish a shared understanding on the personal, social and learning to learn key competence. LifeComp describes nine competences that are structured across three intertwined competence areas (personal, social and learning to learn). These nine competences are: (1) self-regulation; (2) flexibility; (3) well-being; (4) empathy; (5) communication; (6) collaboration; (7) growth mind-set; (8) critical thinking; and (9) managing learning. The conceptual framework can be used as a basis for developing curricula and learning activities.

In a nutshell

¹⁹² The guidelines are accompanied by a [report](#) that provides insights on how education and training can equip young people with the competences needed to address issues such as disinformation, referring also to good examples across the Member States.

The fact that underachievement in basic skills is associated with less time being allocated for instruction could spell bad news for the learning losses that may have resulted from physical school closures. However, there are other key competences beyond reading, maths and science that should not be overlooked in a post-COVID-19 world. The 2022 Education and Training Monitor looks at the latest evidence on key competence domains such as multilingualism and citizenship. Firstly, almost two thirds of lower secondary students now learn at least two foreign languages, strengthening intercultural understanding. Secondly, in terms of civic awareness, substantial shares of young people give priority to issues such as inequality (42.8%) and climate change (39.4%).

Chapter 8. A focus on digital and sustainability competences concerns learners of all ages

EU-level target: 'the share of low-achieving eight-graders in computer and information literacy should be less than 15%, by 2030.'

8.1. Member States are trying to keep up with an accelerated digital transition

All of education and training sectors, from early childhood education through to adult learning, have a role to play in addressing the latest competence requirements. Today, being digitally competent is needed to participate in democratic life, work and lifelong learning. Yet in 2021, 46% of the EU's adults (aged 16-74) and 29% of young people (aged 16-24) were assumed to have an insufficient level of digital skills¹⁹³. In a technology-driven society where these skills are a general requirement in daily life and across most occupations and sectors, all EU citizens should have the right to acquire basic digital skills¹⁹⁴.

To support Member States' education and training systems in adapting sustainably and effectively to the digital age, the 2021-27 [Digital Education Action Plan](#) sets out two priority areas: (1) fostering the development of a high-performing digital education ecosystem and (2) improving digital skills and competences for the digital transformation.

The COVID-19 pandemic expedited the digital transition, but also drew attention to pre-existing digital skills gaps and exposed new emerging inequalities in the EU. With the digital transformation accelerating, it is essential that education and training systems adjust accordingly. Acknowledging the need to equip young people at an early stage with the skills required to be prepared for the digital age, an ambitious EU-level target has been set to reduce underachievement in digital skills¹⁹⁵.

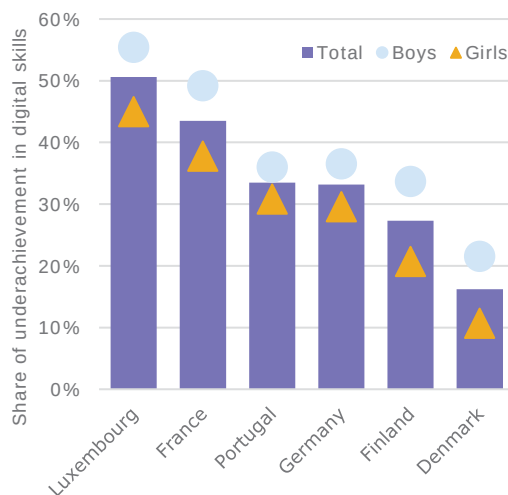
¹⁹³ Combined percentages for the categories 'low', 'narrow', 'limited' and 'no skills' from the [Digital Skills Indicator 2.0](#). This is a composite indicator capturing self-reported internet or software usage (age 16 to 74) in five specific areas (information and data literacy; communication and collaboration; digital content creation; safety; and problem solving). It is assumed that individuals who have carried out certain activities have the corresponding skills. Due to a revision of the survey methodology prior to the 2021 data collection, results are not comparable over time.

¹⁹⁴ In early 2022, the Commission proposed an inter-institutional declaration on [digital rights and principles for the digital decade](#), which states that 'everyone has the right to education, training and lifelong learning and should be able to acquire all basic and advanced digital skills'.

¹⁹⁵ Data to measure the progress made towards reaching the target stem from the International Computer and Information Literacy Study (ICILS), which is conducted every 5 years by the International Association for the Evaluation of Educational Achievement (IEA). The study targets students in their eighth year of schooling and uses computer-based assessments to test students' competence in computer and information literacy. The most recent results are from 2018, and the next cycle is scheduled for 2023 with results due to be released in late 2024.

Before to the pandemic, more than one in three students on average in Member States participating in the International Computer and Information Literacy Study (ICILS) performed below the threshold for underachievement. Moreover, as depicted in Figure 29, the ICILS showed evidence of a gender gap in favour of girls in average performance, with a higher share of underachieving boys¹⁹⁶. The gender gap is consistent across all proficiency levels in ICILS, except for the highest level¹⁹⁷. Despite outperforming boys during compulsory education, relatively few women chose to pursue studies and careers in ICT related fields (see Chapter 5).

Figure 29. Boys are more likely to underachieve in digital skills than girls



Source: IEA (ICILS 2018). Note: underachievement is defined as performance below the level 2 threshold (492 score points) on the ICILS computer and information literacy scale. The results from Italy are not comparable with those of other Member States and have been excluded from the figure.

Most Member States¹⁹⁸ start compulsory teaching of digital competence at school in primary education¹⁹⁹. In 13 Member States, compulsory teaching of digital competence already starts in the first grade²⁰⁰. At this level, the most common approach is to teach digital competence as a cross-curricular subject²⁰¹. However, it is common for different approaches to co-exist within the same education system. This is also seen in lower secondary education, where the general tendency is to teach digital competence as a compulsory separate subject while many education systems allow for more than one approach.

¹⁹⁶ See also a 2021 IEA [Compass Brief](#) and a 2019 Commission [policy note](#).

¹⁹⁷ There was either no difference or a slight difference in favour of girls in the participating Member States. In percentage points, the largest differences were found in Finland (1.5) and France (1.4), followed by Germany (0.3) and Luxembourg (0.3). In Denmark (0.0) and Portugal (0.0) there were no discernible differences.

¹⁹⁸ Policy levers captured in this section are based on a 2022 trial data collection by the Eurydice network. The selected indicators cover primary education and (general) lower secondary education. The reference school year is 2021-22. See the 2022 Eurydice report on structural indicators for monitoring progress towards EU-level targets.

¹⁹⁹ Cyprus and Malta are the exceptions, where compulsory teaching of digital competences is not introduced until lower secondary school (seventh grade). Albeit not compulsory, digital competence is addressed as a cross-curricular subject at primary level in both countries (and integrated in other compulsory subjects in Cyprus). In Belgium, Germany, Ireland, the Netherlands and Slovenia, top-level education authorities have not established a compulsory starting grade for the teaching of digital competences for all students.

²⁰⁰ Denmark, Estonia, Greece, Spain, France, Italy, Latvia, Lithuania, Luxembourg, Poland, Portugal, Finland and Sweden.

²⁰¹ Curriculum approaches to digital competence may include teaching through a cross-curricular topic, a separate subject, or several other subjects (integrated approach). Digital competences are taught as a compulsory separate subject from first grade in four Member States (Greece, Latvia, Poland and Portugal).

Although most education systems dictate specific learning outcomes for digital competence²⁰², its assessment in national tests is still uncommon in primary and lower secondary education. Only three education systems (France, Malta and Austria) assess students' digital competences through specific national tests related to individual student achievement²⁰³. In Denmark and France, digital competence is assessed through non-specific national tests, albeit only in lower secondary education. The remaining systems rely on sample-based tests²⁰⁴, do not test digital competences through national tests²⁰⁵, or do not organise national tests in any competence area²⁰⁶.

A key enabling factor for effective digital education and training concerns teachers and trainers who are confident and skilled in using digital technology to support their teaching and adapted pedagogy (Box 23). Before the COVID-19 pandemic, only 37.5% of lower secondary teachers in the EU felt that they were well or very well prepared to use digital technologies for teaching. Currently, only 15 education systems include teacher-specific digital competences for all teacher profiles as a mandatory component in the curricula of initial teacher education for primary and lower secondary education²⁰⁷. In another three systems (Latvia, Luxembourg and Malta), digital competences are only compulsory for some teacher profiles.

Box 23. Digital skills and the importance of more equitable teacher allocation

Data from [TALIS 2018](#) show that pre-service teacher education and training is a major driver of teachers' adoption of digital technology for their teaching activities. Teachers can only integrate technology into their teaching if they themselves acquire basic digital skills and are competent enough to tailor technology use to their own teaching. However, having qualified teachers is only part of the equation. If they are unequally distributed across schools, this could lead to achievement gaps widening.

Effective teachers do not necessarily work in the schools that need them the most, which can give rise to socio-economic inequalities in student performance. This is one of the findings from a [2022 OECD report](#). Moreover, as mentioned in Box 1 at the start of this report, early evidence suggests that learning losses due to the COVID-19 pandemic were more prominent among disadvantaged students than those from more affluent backgrounds. Unequal access to good quality digital infrastructure, equipment, and teachers who were trained in and feel capable of using ICT are likely determinants.

Top-level requirements to appoint a digital school coordinator²⁰⁸ and establish a school digital plan²⁰⁹ are not common across Member States. Actions in these areas are often left to the discretion of school leaders, which implies that practices vary and not every school benefits from such actions. Similarly, criteria related to digital education in external school evaluation are not

²⁰² Education systems have different ways of addressing digital competence in terms of curriculum content and learning outcomes, but Member States tend to include explicit learning outcomes in all five areas of digital competence as defined by the [European Digital Competence Framework](#). This is consistent with an earlier finding from the [2019 Eurydice report](#) on digital education at school.

²⁰³ Invariably, these tests take place in lower secondary education.

²⁰⁴ In the Flemish Community of Belgium (lower secondary education), Czechia, Estonia, France (primary education), Luxembourg and Finland, digital competences are assessed through sample tests that aim to monitor the quality of the education system rather than measure the attainment levels of individual students.

²⁰⁵ The French Community of Belgium, Bulgaria, Denmark (primary education), Germany, Ireland, Spain, Italy, Latvia, Lithuania, Hungary, Malta (primary education), the Netherlands, Poland (general lower secondary education), Portugal, Romania, Slovenia, Slovakia and Sweden.

²⁰⁶ The German-speaking community of Belgium, the Flemish Community of Belgium (primary education), Greece, Croatia, Cyprus, Austria (primary education) and Poland (primary education).

²⁰⁷ The French Community of Belgium, Bulgaria, Czechia, Denmark, Estonia, Ireland, Spain, France, Italy, Cyprus, Lithuania, Hungary, Poland, Romania and Sweden.

²⁰⁸ Appointment of a digital coordinator is only a top-level requirement in 10 education systems in the EU (the Flemish Community of Belgium, Spain, France, Italy, Cyprus, Luxembourg, Malta, Austria and Slovenia).

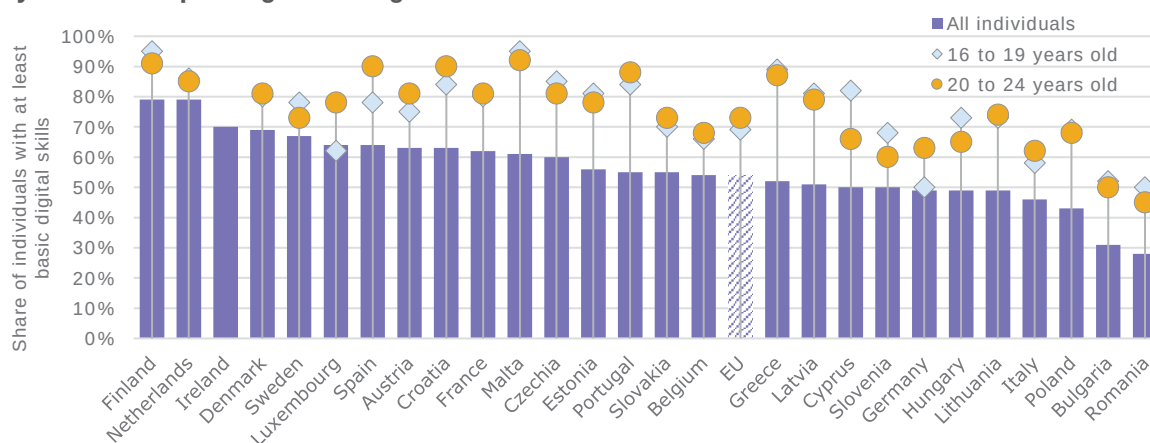
²⁰⁹ Establishing a school digital plan is only a top-level requirement in four countries (Ireland, France, Italy, and Portugal), but forms part of the school development plan in another five countries (Spain, Latvia, Lithuania, Luxembourg and Austria).

widespread. In the 23 Member States where external school evaluation is a requirement²¹⁰, only 13 have specific criteria related to digital education²¹¹.

8.2. Adult learning will be needed to reach the Digital Decade objectives

Looking beyond compulsory education, this section addresses digital skills of the adult population²¹². In 2021, 54% of 16-74 year-olds reported having at least basic digital skills, men (56%) more frequently than women (52%)²¹³. This is some way off the EU's ambitions for the Digital Decade, with at least 80% of the population reporting basic digital skills by 2030²¹⁴. Figure 30 shows that the Netherlands (79%), Finland (79%) and Ireland (70%) are the top performers in the EU. Seven Member States have yet to reach 50%²¹⁵.

Figure 30. Not a single Member State reaches the EU-level target of at least 80 % of 16-74 year-olds reporting basic digital skills



Source: Eurostat (EU survey on the use of ICT in households and by individuals 2021). Note: data are unreliable for Ireland (16-19 and 20-24) and Croatia (16-19).

Comparing the digital skills level of the general population to that of young people, there is evidence of an age gap in digital skills at EU level. At 16 to 19 years, the approximate age in the latter stages of upper secondary education, the share reporting to have at least basic digital skills was 69% in 2021, 15 percentage points higher than the general population. In the 20-24 age bracket, when many enter higher education for the first time, the share increases to 73%²¹⁶. Mirroring the findings of the test-based assessment of digital skills in ICILS, 72% of 16-24 year-old women report to have at least basic digital skills, compared to 70% of 16-24 year-old men²¹⁷.

²¹⁰ Bulgaria, Luxembourg, Austria and Finland do not use external school evaluation.

²¹¹ The Flemish Community of Belgium, Czechia, Germany, Estonia, Ireland (general lower secondary education), Spain, France, Lithuania, Hungary, Malta, Poland, Romania and Sweden.

²¹² The main data source utilised in this chapter is the Digital Skills Indicator 2.0. For further details, see the opening footnote of this chapter.

²¹³ If only considering individuals in the labour force (employed and unemployed), the share increases to 62%.

²¹⁴ This is one of two Digital Decade targets concerning digital skills. The second target stipulates that there should be 20 million employed ICT specialist in the EU by 2030, with convergence between women and men. The Digital Decade targets are outlined in a 2021 Commission Communication. The 80% target is also mentioned in the European Pillar of Social Rights Action Plan. For an analysis of gender disparities in ICT, see Chapter 5.

²¹⁵ The 2021 data are not comparable to data from previous years due to a change in the survey methodology. From 2021 on, individuals need to have skills in an additional fifth domain, 'safety', in order to be classified as having basic digital skills. For a more comprehensive assessment of EU progress on digital skills, see the Digital Economy and Society Index (DESI) 2022.

²¹⁶ This is on par with individuals classified as 'students', where 77% reported at least basic digital skills in 2021.

²¹⁷ This contrasts with the adult population, where there is a small gender gap in favour of men. Interestingly, there is no gap in the 25-54 age bracket, with gaps only present in the 16-24 age bracket (in favour of women) and the 55-74 age bracket (in favour of men). A different picture emerges when taking into account more advanced digital skills (above basic). More women than men report to have above basic digital skills in the 16-25 age bracket, while the opposite is the case for the 25-55 and 55-75 brackets.

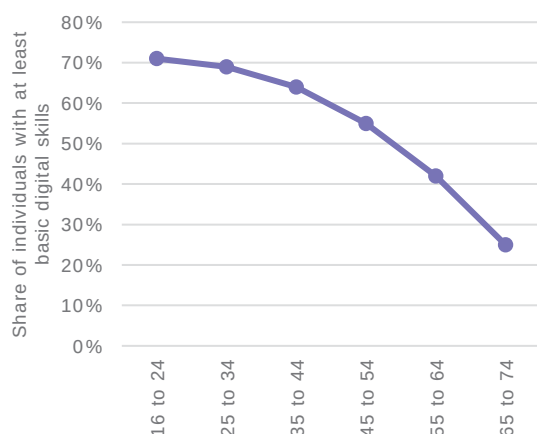
Box 24. Structured Dialogue with Member States on digital education and skills

The Structured Dialogue with Member States on digital education and skills delivers on Action 1 of the 2021-27 [Digital Education Action Plan](#), and aims to increase the political visibility and commitments on digital education and skills. The Structured Dialogue took place throughout 2022 in the form of bilateral and EU-level discussions with the Member States. It brought together different strands of policy into an integrated approach, seeking to make the most of the synergies between different policy fields – education, digitalisation, labour and finance. The dialogue also benefited from the involvement of the private sector, social partners and civil society.

The dialogue allowed Member State authorities and other participants to share experiences, best practices and success stories, while drawing lessons from each other's less successful initiatives. The outcomes of the dialogue will feed into future actions at EU level on digital education and skills, including the upcoming proposals for Council Recommendations on enabling factors for digital education and on improving the way digital skills are provided in education and training programmes.

As younger cohorts age, there will be a natural increase in the overall digital skill levels of the general population, as implied by Figure 31. However, this increase by itself would not be sufficient to achieve the ambitions of the Digital Decade. There are also other notable gaps that need to be addressed, such as a prominent urban-rural divide²¹⁸ and a pronounced disadvantage among migrants²¹⁹.

Figure 31. There is a strong cohort effect in the perceived level of digital skills among 16-74 year-olds



Source: Eurostat (EU survey on the use of ICT in households and by individuals 2021).

Increasing adult learning (Chapter 6) is paramount in order to close the digital skills gap. Unfortunately, the fact that adult learning is less prevalent among people with lower levels of education does not bode well for the digital transition, as it is these people who will most need such upskilling. Indeed, there is a strong link between educational attainment and individuals' perceived level of digital skills²²⁰. At EU level, adults with a low level of education (32%) are at a

²¹⁸ The EU-level share of adults reporting at least basic digital skills is 15 percentage points higher in cities (61%) compared to rural areas (46%).

²¹⁹ At EU level, the share of native-born people reporting at least basic digital skills (55%) is higher compared to the foreign-born population (49%). Among the latter, there is a marked difference between EU mobility (53%) and migration (46%).

²²⁰ Young people (aged 16-24) are at less of a disadvantage, regardless of attainment level. The gap between young people with a low level of education (64%) and those with a medium level of education (73%) was 9 percentage points in 2021. Although young people with a low level of education are better off than those with a medium level of education in the population at large, they are still at a considerable disadvantage compared to their peers with higher levels of educational attainment. This is highlighted by the substantial distance between them and highly educated young people (89%).

clear disadvantage compared to those with a medium level (50%) and high level (79%) of education.

8.3. Gender and socio-economic gaps are replicated in sustainability competence areas

Education and training can help achieve an environmentally sustainable, circular and climate-neutral world²²¹. Supporting the green transition is one of the key objectives of the Recovery and Resilience Plans and EU-level policy coordination is now being coordinated through several initiatives²²². Sustainability is high on young people's minds: a Eurobarometer from May 2022 suggests that poverty and inequality, as well as protecting the environment and fighting climate change are the top priorities among today's young people (Section 7.3)²²³.

Learners need to draw on several interlinked competences to live, work and act in a sustainable way. Learning for the green transition and sustainable development requires whole-institution approaches, reviewing the curricula, programmes and learning environments²²⁴. On the bright side, one of the positive effects of the COVID-19 pandemic is its potential to transform education. For instance, it appears to have opened up space for re-designing curricula and strategies in teaching sustainability in higher education institutions²²⁵. The 2022 European Strategy for Universities supports the higher education sector in adopting whole-institution approaches to achieving the green transition and sustainable development.

Box 25. Sustainability competences according to GreenComp

The Commission has developed a European sustainability competence reference framework – GreenComp. It defines sustainability as 'prioritising the needs of all life forms and of the planet by ensuring that human activity does not exceed planetary boundaries'. Sustainability competences are defined as those that empower 'learners to embody sustainability values, and embrace complex systems, in order to take or request action that restores and maintains ecosystem health and enhances justice, generating visions for sustainable futures'.

The framework focuses on developing sustainability knowledge, skills and attitudes for learners so they can think, plan and act with sustainability in mind. GreenComp consists of 12 competences organised into four areas: (1) embodying sustainability values (valuing sustainability, supporting fairness and promoting nature); (2) embracing complexity in sustainability (systems thinking, critical thinking and problem framing); (3) envisioning sustainable futures (futures literacy, adaptability and exploratory thinking); and (4) acting for sustainability (political agency, collective action and individual initiative).

GreenComp can serve a wide range of purposes, including curricula review, design of teacher education programmes, policy development, certification, assessment, and monitoring and evaluation.

²²¹ The education and training sector has a widely recognised role in responding to the overarching goals of the green transition set out in the 2019 Communication on the European Green Deal and the Biodiversity Strategy for 2030.

²²² Prominent examples are the 2022 Council Recommendation on learning for the green transition and sustainable development, the 2022 Council Recommendation on ensuring a fair transition towards climate neutrality, the European Skills Agenda (notably Action 6), the Education for Climate Coalition and a European sustainability competence framework (Box 25).

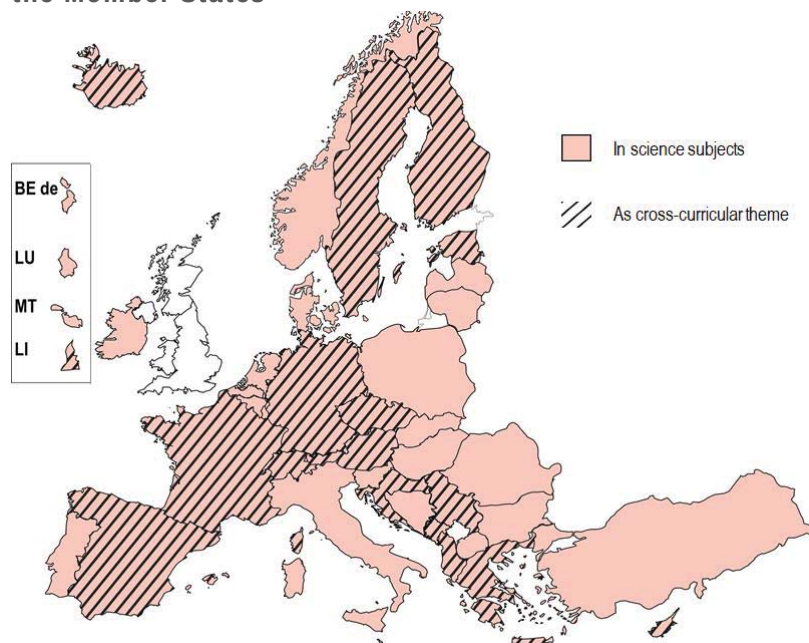
²²³ In addition, a 2021 pan-European survey by the European Environmental Bureau suggests that climate change is a top priority for many young Europeans (46%), who consider climate change and environmental degradation as the most important issues facing the world, even in the midst of the COVID-19 pandemic. See also the final outcome of the Conference on the Future of Europe, including 49 proposals. In particular, proposal 6 aims to increase knowledge, awareness, education and dialogues on environment, climate change, energy use, and sustainability. Proposal 46 on education includes learning about environmental sustainability and its connection to health, biodiversity and all ecological issues.

²²⁴ See the 2022 Council Recommendation on learning for the green transition and sustainable development.

²²⁵ See a 2022 analytical report from the European Expert Network on Economics of Education (EENEE).

In school education, environmental sustainability topics form a compulsory part of curricula²²⁶. In primary education, children often study nature and the need to take care for the environment in the integrated science subject, or they discuss it in the learning areas covering social and environmental aspects. In lower secondary education, learning about environmental sustainability topics takes place in biology, geography, physics and chemistry lessons. Environmental sustainability topics are included in science subjects in all Member States. In addition to that, they are covered as a cross-curricular theme in just under half of the Member States (Figure 32).

Figure 32. Environmental sustainability is a cross-curricular theme in just under half of the Member States



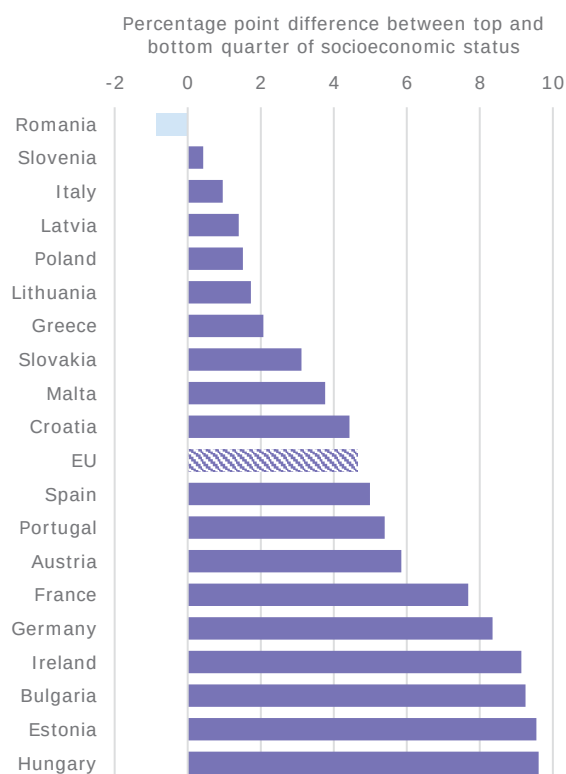
Source: [Eurydice 2022](#). Note: the indicator covers primary and lower secondary education.

Furthermore, evidence shows that strong gender and socio-economic disparities permeate environmental knowledge and attitudes. According to a [2022 report by the Commission and the OECD](#)²²⁷, students from disadvantaged socio-economic backgrounds are less likely to care about the environment or to be aware about environmental problems than their peers from advantaged socio-economic backgrounds. They also have lower levels of achievement in science and engage less in pro-environmental behaviour (Figure 33).

²²⁶ See a [2022 Eurydice](#) report on mathematics and science learning in schools. Five topics are used to operationalise how environmental sustainability is included in curricula: recycling; renewable and non-renewable sources of energy; air, soil and water pollution; biodiversity; and greenhouse effect. The Netherlands is the only Member State that did not mention any of the selected topics in its curriculum, but care for the environment is a compulsory part of its primary and lower secondary education and, furthermore, schools have a high level of autonomy.

²²⁷ The [report](#) compares the environmental behaviour, awareness and attitudes of 15-year-old students against their socio-economic background, scientific knowledge, global competences, collaborative problem-solving skills and financial skills. It adapts GreenComp (Box 25) to various rounds of PISA data. The PISA Science Expert Group is currently developing the PISA 2025 Science Framework, which includes a focus on climate competence.

Figure 33. Engagement in environmental protection activities is more prevalent among young people from advantaged socio-economic backgrounds in several Member States



Source: OECD/European Commission calculations based on PISA 2018 data. Note: data are unavailable for Belgium, Cyprus, Czechia, Denmark, Finland, Luxembourg, the Netherlands and Sweden. Socio-economic gaps are statistically significant at the 0.05 level only for Croatia, Spain, Portugal, Austria, France, Germany, Ireland, Bulgaria, Estonia and Hungary.

Whereas boys seem more aware of environmental problems such as nuclear waste, the increased greenhouse gases in the atmosphere, use of genetically modified organisms and the consequences of clearing forests for other land use, girls reported higher levels of awareness of water shortage, air pollution and extinction of plants and animals²²⁸. When looking at science content areas, boys performed better in physical, earth and science areas, and girls performed better in biology. These results seem to mirror gender stereotypes in STEM study choice (Section 5.2), with women more likely to pursue degrees in 'biology and related sciences' (a subfield of the broader 'natural sciences, mathematics and statistics' field) than in other STEM fields.

In a nutshell

The promotion of digital and sustainability competences can benefit from them being mainstreamed in compulsory education as cross-curricular subjects. It will also benefit from the boosting of teachers' confidence and skills. Yet ensuring a basic proficiency in digital and sustainability competences has particular implications for adult learning, making sure that learners who already left the formal education and training systems do not miss out on the opportunities provided by an accelerating twin transition. Moreover, it should be emphasised that these competence domains are marked by the same inequities that permeate the entirety of education and training. For instance, boys are more likely to underachieve in digital skills than girls, and

²²⁸ The assessment of gender disparities is based on PISA 2015.

engagement in environmental protection activities is more prevalent among young people from advantaged socio-economic backgrounds in several Member States.

Brussels, 18.11.2022
SWD(2022) 751 final

PART 2/28

COMMISSION STAFF WORKING DOCUMENT

Education and Training Monitor 2022

Accompanying the document

**Communication from the Commission to the European Parliament, the Council, the
European Economic and Social Committee and the Committee of the Regions**

on progress towards the achievement of the European Education Area

{COM(2022) 700 final} - {SWD(2022) 750 final}

Education and Training Monitor 2022

BELGIUM



The Education and Training Monitor's country reports present and assess the main recent and ongoing policy development at all education levels in EU Member States. They provide the reader with more in-depth insight of the performance of countries with regard to the EU level targets agreed within the EEA. They are based on the most up-to-date quantitative and qualitative evidence available.

Section 1 presents a statistical overview of the main education and training indicators. Section 2 focuses on how the Member State has addressed or is addressing one of its education challenges. Section 3 covers early childhood education and care. Section 4 deals with school education policies. Section 5 covers vocational education and training and adult learning. Finally, Section 6 discusses measures in higher education.

The Education and Training Monitor's country reports were prepared by the European Commission's Directorate-General for Education, Youth, Sport and Culture (DG EAC), with contributions from the Directorate-General for Employment, Social Affairs and Inclusion (DG EMPL).

The document was completed on 30 September 2022
More background data at:
<https://op.europa.eu/webpub/eac/education-and-training-monitor-2022/en/>



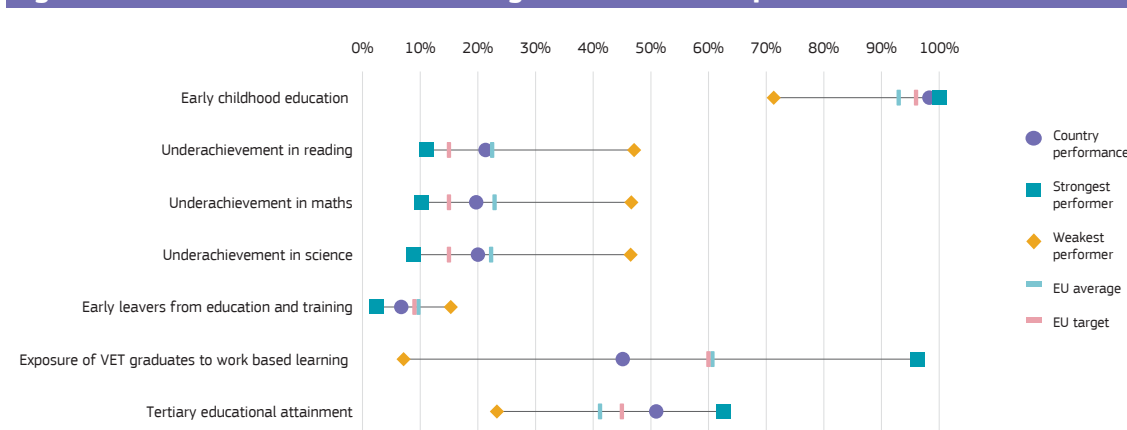
1. Key indicators

Figure 1: Key indicators overview

			Belgium		EU	
			2011	2021	2011	2021
EU-level targets			2030 target			
Participation in early childhood education (from age 3 to starting age of compulsory primary education)		≥ 96 %	98.3% ¹³	98.5% ²⁰	91.8% ¹³	93.0% ²⁰
Low achieving eighth-graders in digital skills		< 15%	:	:	:	:
Low achieving 15-year-olds in:	Reading	< 15%	17.7% ⁰⁹	21.3% ¹⁸	19.7% ⁰⁹	22.5% ¹⁸
	Maths	< 15%	19.1% ⁰⁹	19.7% ¹⁸	22.7% ⁰⁹	22.9% ¹⁸
	Science	< 15%	18.0% ⁰⁹	20.0% ¹⁸	18.2% ⁰⁹	22.3% ¹⁸
Early leavers from education and training (age 18-24)		< 9 %	12.3%	6.7% ^b	13.2%	9.7% ^b
Exposure of VET graduates to work-based learning		≥ 60 % (2025)	:	45.1%	:	60.7%
Tertiary educational attainment (age 25-34)		≥ 45 %	42.5%	50.9% ^b	33.0%	41.2% ^b
Participation of adults in learning (age 25-64)		≥ 47 % (2025)	:	:	:	:
Other contextual indicators						
Equity indicator (percentage points)			:	21.3 ¹⁸	:	19.30 ¹⁸
Early leavers from education and training (age 18-24)	Native		10.9%	5.8% ^b	11.9%	8.5% ^b
	EU-born		18.7%	10.8% ^{bu}	25.3%	21.4% ^b
	Non EU-born		26.3%	14.9% ^b	31.4%	21.6% ^b
Upper secondary level attainment (age 20-24, ISCED 3-8)			81.6%	88.2% ^b	79.6%	84.6% ^b
Tertiary educational attainment (age 25-34)	Native		44.7%	52.8% ^b	34.3%	42.1% ^b
	EU-born		44.6%	54.0% ^b	28.8%	40.7% ^b
	Non EU-born		27.2%	38.1% ^b	23.4%	34.7% ^b
Education investment	Public expenditure on education as a percentage of GDP		6.2%	6.6% ²⁰	4.9%	5.0% ²⁰
	Public expenditure on education as a share of the total general government expenditure		11.2%	11.2% ²⁰	10.0%	9.4% ²⁰

Sources: Eurostat (UOE, LFS, COFOG); OECD (PISA). Further information can be found in Annex I and at [Monitor Toolbox](#). 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; the equity indicator shows the gap in the share of underachievement in reading, mathematics and science (combined) among 15-year-olds between the lowest and highest quarters of socio-economic status; b = break in time series, u = low reliability, : = not available, 09 = 2009, 13 = 2013, 18 = 2018, 20 = 2020.

Figure 2: Position in relation to strongest and weakest performers



Source: DG Education, Youth, Sport and Culture, based on data from Eurostat (LFS 2021, UOE 2020) and OECD (PISA 2018).

2. A focus on equity in education

Belgium performs above the EU average on most EU-level targets, but its education systems fail to provide equal opportunities for all.

Students from disadvantaged (37.1%) and migrant (37.6%) backgrounds are more at risk of underperforming in reading compared to advantaged (7.2%) and native-born (16.6%) peers. More than 1 in 3 young adults with disabilities do not finish secondary education, and their limited participation in higher education is one of the reasons for their low employment rate (European Commission, 2022). The relevance of equity is gaining more importance with more diversity in the school population and demographic trends. Measures are being taken to address underperformance and early school leaving (Figure 1), but there is scope for more integrated policies and further preventive measures. One of the 2022 European Semester country-specific recommendations calls on Belgium to '(improve) the performance and inclusiveness of the education and training system, enhancing the quality and labour market relevance of the vocational education and training and developing more flexible and attractive career paths and training for teachers' (Council, 2022).

A disadvantaged background affects the whole education pathway.

Children from disadvantaged families participate far less in early childhood education and care (ECEC) (see Section 3). A significant language gap remains, as shown by the Dutch 'Koala' test of 5 year-olds in the Flemish Community. In primary education, community-level tests and international surveys (TIMSS and PIRLS) show a strong relationship between the socio-economic background of pupils and educational outcomes. Academic segregation (uneven average achievement level of students across schools) increases in secondary education (European Commission/EACEA/Eurydice, 2020). Repeating a year is higher among disadvantaged children, and they are more often in vocational education and training. On equity and inclusion, the higher education systems of the Flemish (BEfl)

and French (BEfr) Communities score average compared to other EU countries (European Commission/EACEA/Eurydice, 2022). Adult learning participation of the low skilled also remains low (4.0% vs. 10.2% overall in 2021).

Early tracking, school choice, repeating a year and limited access to experienced teachers could have a negative effect on equity.

The impact of socio-economic background on student performance is greater in systems with early tracking, a high number of students repeating a year and extensive differentiation between different school types in terms of school choice and school admission policies (European Commission/EACEA/Eurydice, 2020). Tracking starts at 12 years in BEde and BEfl, and there are high numbers of students repeating a year (23% of students repeat at least 1 year during primary or secondary education in BEfl; 43% in BEfr). In practice, academic achievement and socio-economic background play a role in school choice in secondary education. On meeting the same quality standards, Belgian schools enjoy a relatively high degree of autonomy in organising their teaching (European Commission/EACEA/Eurydice, 2020). Free school choice, school autonomy with limited accountability and de facto tracking based on academic performance lead to the highest gaps between advantaged and disadvantaged schools in secondary education in the EU (155 PISA points in reading compared to 137). The pitfalls of early tracking and cascading down are also reflected in the large difference in the educational performance of students in general and vocational education and training. Disadvantaged students also have less access to experienced teachers (Sections 4 and 5).

The Communities are taking measures to reduce inequalities.

Quality ECEC has been reinforced as a basis for future educational success, which should also benefit disadvantaged children (Section 3). Public funding for primary schools is relatively high (in 2018, USD PPP¹

¹ Purchase power parity

11 482 per pupil; EU-22: 9 601). Other structural measures include additional financial and non-financial support to disadvantaged schools, language bridging or integration classes for newly arrived migrant children, measures to improve pupils' language of instruction knowledge and diversification of the socio-economic composition of secondary schools ('enrolment decrees').

Better study guidance support and curricula reforms should also benefit disadvantaged learners. In all communities, targeted measures have led to a long-term decrease in early school leaving.

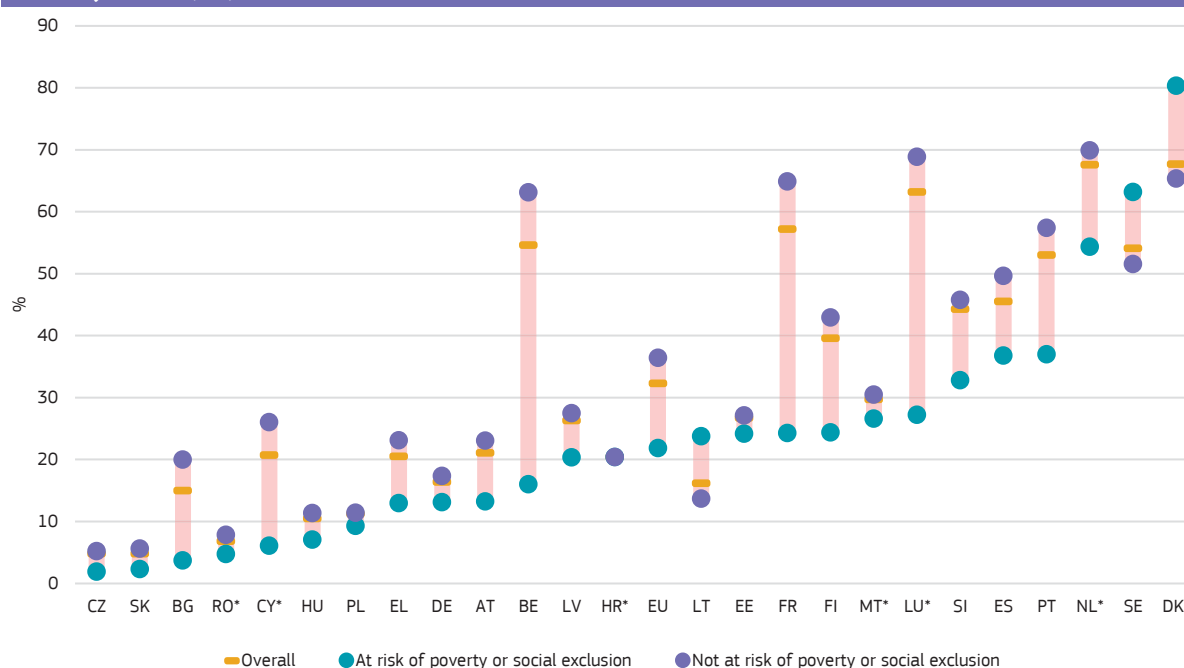
There are also some incentives to attract teachers to disadvantaged schools (European Commission/EACEA/Eurydice, 2020a). The Flemish Community focuses heavily on targeted funding and improving Dutch language knowledge and proficiency to improve equity. The French Community expects its systemic school reform (pact for excellence in education) to improve equity in education (Section 4).

3. Early childhood education and care

Belgium is among the best performers in the EU on participation in early childhood education and care (ECEC), but participation of disadvantaged children below 3 years old lags behind. Overall, 54.6%² of children below 3 participated in formal childcare or education in 2020 (4th highest in the EU), but only 16% of children at risk of poverty or social exclusion (AROPE) did so (Figure 3) (34.1% in 2019). The gap between children at risk and their peers was the highest among the EU countries (47.1 percentage points/pps; EU: 14.6 pps), and the second highest in 2019 (27.2 pps vs EU: 10.9 pps), Other research also shows a significant gap in

² Eurostat (EU-SILC).

Figure 3: Participation of children in formal childcare or education below 3 years old by AROPE, 2020 (%)



Source: Eurostat (EU-SILC), special extraction. Notes: * = Data with low reliability; Data for IE and IT not available. At risk of poverty or social exclusion, abbreviated as AROPE, corresponds to the sum of persons who are either at risk of poverty, or severely materially and socially deprived or living in a household with a very low work intensity.

participation between advantaged and disadvantaged children. With free entitlement to pre-primary education from 2.5 years, overall participation in formal childcare or education increased to 96.9% from 3 years to compulsory school age, the third highest rate in the EU. The gap between at risk (93.9%) and not at risk (97.6%) children also closed (3.7 pps vs EU 7.5 pps). In 2017, public spending on ECEC per child was above the EU average (USD PPP 6 100; EU-22 5 500), but spending on pre-primary education was much higher (10 000) than on childcare (2 000)³.

Quality ECEC for children above 2.5 years has been strengthened as a basis for future educational success. Since 2020/2021, compulsory education starts at 5 years. The universal entitlement to pre-primary education at 2.5 years will also be extended to the German-speaking Community (BEde) from 2022/2023. The Communities have also increased human and financial resources in ECEC in recent years. In BEfr, a first curriculum of ‘initial competences’ with related teacher training has been rolled out since September 2020. Free ECEC has been gradually rolled out and additional qualified staff deployed to remedy, among others, language deficiencies (2017-2019). In BEfl, from 2021/2022, 5 year-olds who fail a Dutch listening test need to follow language integration pathways, for which schools receive additional funding (EUR 12 million). The first test in October-November 2021 showed that 15% failed the test, but with peaks of 21%-32% in large cities.

4. School education

The downward trend in the rate of early leavers from education and training continued in 2021. In 2021, 6.7% of young people aged 18-24 had not finished upper secondary education and were no longer in education and training (EU: 9.7%). In the national recovery and resilience plan, BEfr has committed

to adopt a comprehensive action plan by the end of 2022 to tackle early school leaving.

Disadvantaged students, students in vocational education and training (VET) and those with special needs seem to be most affected by learning losses and demotivation due to the pandemic. Communities have taken initial measures to reduce the learning loss and the risk of early school leaving, targeting especially vulnerable pupils (European Commission, 2021). Surveys and tests indicate learning losses in mathematics and language of instruction in primary education (Gambi et al., 2021; CEB, 2022; BFP, 2022) and in secondary education (UNamur, 2022). Disadvantaged students are those most affected (Vlaanderen level tests; Duroisin et al., 2021), including in VET secondary education (Steunpunt, 2022). In BEfr, 1 in 3 students (34%) with learning disabilities had poorer outcomes, and 17% had dropped out of school (Apeda, 2022). School absenteeism in secondary education also increased by 56% between 2020/2021 and 2021/2022 (FWB, 2022a). Long-term monitoring and further measures will be needed in all Communities.

The Flemish Community focuses on improving Dutch language proficiency, standardised tests and targeted funding to improve quality and equity. Dutch language knowledge and proficiency are to be increased through language integration pathways (Section 3) and summer schools. From 2022/2023, new measures will be launched to improve reading skills (*Leesoffensief*), complemented by targeted continuous professional development for teachers. From 2024, digitally standardised, validated and benchmarked tests for mathematics and reading should strengthen schools’ accountability and enable pupils’ performance to be better monitored (European Commission, 2021). The evaluation of the equal educational opportunities policy (GOK) of providing targeted operational and teaching resources to schools with socio-economically disadvantaged pupils has shown some limited positive results, but more seems to be needed (Nicaise, 2019 and Vlaanderen, 2020a). The envisaged decree on pragmatic and realistic

³ OECD Social Expenditure Database.

learning support for all, which should replace the current decree for inclusive education (M-decree), has been postponed until 2023/2024.

The Flemish Community is revising its attainment targets and curricula to allow for more school autonomy. The Constitutional Court ruled that the minimum attainment targets for the second and third stage of secondary education implemented since 2021/2022 are so extensive and detailed that they do not leave room for schools' own pedagogical projects.

The French Community has been rolling out important measures under the 'pact for excellence in education', but challenges remain. The reform aims to increase both the performance and equity of the school system, which currently scores below the EU average. The school management plans show that 93% of schools aim to improve educational outcomes, 77% well-being and school climate and 54% aim to reduce the number of students repeating a year and dropping out of school (FWB, 2021a). A number of key reforms will be rolled out in 2022/2023, including a major curriculum reform (see Box 1). The reform of teacher evaluation and the introduction of an individual student file, as well as the reform of the initial teacher training programme have been postponed to 2023/2024. The latter aims to extend teacher education to a 4-year Master's degree, including a 'long-term internship'. The pact would be accompanied by the development of an evaluation culture. The reforms of initial teacher training and initial VET in the next few years, as well as strong continuous professional development, will be key to successfully improving equity.



Box 1: School reforms in the French Community from 2022/2023

The new common multi-disciplinary and poly-technical curriculum to be rolled out in grades 1 and 2 and the year after in grades 3 and 4 should reach grade 9 in 2028/2029. It should

boost basic and digital skills, art and culture, entrepreneurship and provide earlier second language learning. The roll-out will be complemented by personalised support of up to 4 hours in grades 1 and 2 and 2 hours from grades 3 to 6 to reduce school failure and inequalities. A revised school timetable with shorter summer holidays and longer holidays during the year, together with a reduction in student assessment and non-teaching days, is expected to mainly benefit disadvantaged students, but should also improve the well-being and performance of all pupils. The new scheme for continuous professional development of teachers and psychosocial staff provides for a tripling of the budget to EUR 33 million, modernisation of the offer and a special focus on novice teachers. The 48 specialised centres that provide support for inclusive education (*pôles territoriaux*) should become operational. Additional human and operational resources (EUR 278 million in 2022) have been allocated to these reforms. To be successful, challenges such as teacher shortages, overworked school heads and overcoming teachers' opposition about the reforms will need to be tackled.

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The growing shortage of teachers requires a rethink of the school organisation. The job vacancy rate in education in Belgium is almost twice as high as in the euro area (3.2% in Q1-2022 vs 1.7%). More than 1 in 5 novice teachers leave the profession within the first 5 years of teaching. In BEfl, education staff show the highest burnout symptoms (21.1%) of all labour sectors (SERV, 2022). Given the general tight labour market, an increasing student population and an expected retirement wave of teachers, the school networks and experts call for strengthening the teaching profession and for a change in the school organisation (De Witte, 2021a). The European Social fund (ESF) supports related innovative projects (Box 2).

The Communities are taking measures to tackle the shortages of teachers and school heads, but stakeholders are calling for more. The Communities have recently invested in non-teaching staff to support teachers and school heads. In BEfl, lateral entrants into teaching for bottleneck subjects or as school heads or ICT

coordinators can have up to 10 years of previous work experience recognised instead of 8 years (seniority). In 2021, the recruitment rules for permanent staff were changed, allowing 10 000 more teachers to be recruited. A new collective labour agreement also included measures to make the profession more attractive, such as better induction for novice teachers, more room for core tasks and ICT support. In BEfr, a recent draft decree includes measures such as a pilot pool of 48 replacement teachers in primary education, seniority of up to 5 years for lateral entry of language teachers into primary education, recognition of previous teaching experience between school networks and making it easier for lateral entrants to acquire teaching qualifications. An information and promotion campaign and closer collaboration with the regional employment services have also been planned. Flemish school networks and trade unions have asked for further measures to address teacher shortages (Vlaams Parlement, 2021).

Disadvantaged students have less access to experienced teachers. Appointments based on teacher seniority, qualifications and contractual status combined with teachers' preference to work in advantaged schools tend to lead to inequitable teacher allocation. As a result, socio-economically disadvantaged schools have a lower share of experienced teachers (BEfl -13 pps; BE -10 pps; EU-23 -4.7 pps) and comprehensively trained teachers (BEfl -8.4 pps; BE -8.3 pps; EU-23 3.5 pps). This is also the case for schools with a high concentration of students whose first language is different from the language of instruction (BEfr -10.1 pps; BE -7.3 pps; EU-23 -10.0 pps) (OECD, 2022). Teachers also need more support on how to teach vulnerable learners (European Commission, 2019).



Box 2: Caring schools (*Warme scholen*)

This project (upscaling a pilot from 7 to 70 schools) tests new school governance, shared

leadership and teaching methods to help adapt to the increased diversity of pupils and teacher shortages. Pupils' well-being and involvement are considered as levers for resilience and deep learning. Teams of teachers will guide groups of students throughout their school career. '*Warme scholen*' also build a learning community in which parents and the school community actively participate (whole school approach). Exchange among schools is organised via an online learning platform <https://www.warmescholen.net/inspiratie>. Monitoring and evaluation tools have also been developed to measure the resilience, well-being and involvement of young people.

The EUR 3.12 million project (40% from the ESF) runs from October 2021 to December 2023.

<https://www.esf-vlaanderen.be/nl/projectenkaart/warme-scholen-voor-veerkrachtige-jongeren-voor-een-veerkrachtig-vlaanderen>

5. Vocational education and training and adult learning

The share of upper secondary students in vocational education and training (VET) is high, but declining. In 2020, they represented 55.7% of all secondary graduates⁴, which is a decline of 4.0 pps compared to 2014, but still well above the EU average of 48.7%. However, participation in work-based learning⁵, which has proven to be effective in making the transition towards sustainable employment easier, with 45.1% of upper secondary VET students in 2021, remains well below the EU average of 60.7%. In 2021, 71.5% (EU: 76.4%) of recent VET graduates (ISCED 3-4) found employment between 1 and 3 years after graduation⁶.

There are concerns about the quality, labour market relevance and attractiveness of VET. The gap in educational outcomes (reading)

⁴ Eurostat, educ_uoe_enrs05.

⁵ Eurostat, edat_lfs_9919.

⁶ Eurostat, edat_lfse_24.

between 15-year-old students in general and those in vocational programmes is large (Section 2). The poor educational performance of VET students may jeopardise their chances of coping with the fast-paced technological change. This is also reflected in the gap in tertiary completion rates between students with a vocational upper secondary qualification and those with a general qualification, which is one of the largest among OECD countries (26 pps in BEfr and 31 pps in BEfl vs 12 pps in OECD countries on average) (OECD, 2019a). Furthermore, there are concerns about the labour market relevance of VET, in particular in BEfr, where only 3 out of the 10 most popular upper secondary VET options prepare students for occupations with labour shortages (European Commission, 2022). There are still concerns about the attractiveness of VET as a track of excellence, as reflected in the large share of the population with a negative perception of VET in Belgium (42.5% vs EU average 23.5%) (Cedefop, 2016).

Dual learning has not yet improved the attractiveness of VET. In BEfr, the reform of dual learning and boosting its attractiveness are included as one of the major strands of the Walloon recovery plan (RPW). To prepare for this reform, a pilot study was launched in June 2022. A collaborative agreement was signed in March 2022 between the training centres IFAPME (BEfr) and IAWM (BEde) to improve synergies between the two and promote the interregional mobility of learners in training courses. In the context of the RPW, IFAPME launched actions in April 2022 to boost outreach and cooperation with companies offering apprenticeships. In BEfl, dual learning was rolled out in the school year 2019-2020 as a fully fledged learning path alongside full-time school-based secondary education. The number of students in dual learning increased, but overall remains limited (2 338 in 2021/2022 or on average 3.6 students per study programme) and the number of schools providing dual learning has decreased slightly. There is still a negative perception of dual learning, in particular among parents (De Witte et al., 2021b). There are also concerns about the inclusiveness of the system, with plans to phase out the system of 'learning and working' and integrating it into dual learning

by 2025-2026 (Verhaest et al., 2019). Currently, this pathway hosts some very vulnerable pupils, for whom participation in dual learning may not be a realistic option. Since 2022/2023 adult education also offers dual learning.

Adult participation in learning remains low in Belgium, in particular for the low skilled. In 2021, 10.2% of the working age population (25-64) participated in training in the 4 weeks before the Labour Force Survey, which is slightly below the EU average of 10.8%. The low skilled (4.0%) are underrepresented, although they could benefit most from up- and reskilling to increase their employment prospects. The main barriers to adult learning are work, childcare and family responsibilities – costs were the least-cited barrier in all OECD countries (OECD, 2019b).

Strengthening participation in adult learning is high on the policy agenda. Belgium has defined a 2030 target of 60.9% of adults participating in learning in a year (against a 2016 rate of 39.4%). The Flemish government approved the action plan 'Set the course for a learning Flanders' in February 2022. It contains 47 priority actions, which aim to support the increase in adult participation towards the 2030 target of 60% and are planned to be financed partially by the European Social Fund Plus. It complements the ongoing actions to strengthen adult education in the context of the Flemish recovery plan (*Edusprong*) (Vlaanderen, 2021a). The Walloon recovery plan envisages several actions to reorganise and simplify the lifelong learning landscape and invest in improvement of the training infrastructure. In May 2022, a charter called 'Orientation tout au long de la vie', which sets out the overarching principles of cooperation, was signed between the different governments and players involved in lifelong learning in Wallonia and Brussels. In the context of the Go4Brussels strategy, the Brussels government and social partners work together to improve the quality and labour market relevance of the offer. All bodies have financial incentives to offer training courses in shortage professions, partly financed by REACT-EU resources in Flanders.

6. Higher education

Tertiary education attainment is high, but challenges exist in a highly publicly funded and largely open access system.

More than half of young people aged 25-34 (50.9%; EU-27 41.2%) held a tertiary education degree in 2021. More young people born outside the EU do so than a decade ago (38.1% vs EU 34.7%). The employment rate of recent tertiary graduates aged 20-34 (89.6%; EU: 84.9%) was high in 2021 and close to the level before the COVID-19 outbreak (89.7%). Challenges persist, in particular the decrease in funding per student, slow student progression rates and relatively low completion rates, together with insufficient support for research in university colleges. Belgian higher education systems would benefit from global long-term strategies to meet 21st century challenges.

The Higher Education Advancement Fund could inspire a comprehensive higher education strategy for Flanders.

The national recovery and resilience plan includes projects ('*Voorsprongfonds*') that develop lifelong learning, hybrid and digital education methods and flexible and future-proof training portfolios to increase the labour market relevance and society needs of higher education. BEfl has also committed to endorse a vision note for higher education in consultation with stakeholders by December 2023. This paper should define a new profile for higher education to promote excellence and lifelong learning. As other policy measure to improve student progression rates, from 2023/2024 students will need to succeed in all first year subjects (bachelor) before they can enter the third year.

The French Community is increasing funding for higher education, addressing student poverty and promoting academic success.

From 2022/2023, the reform of higher education ('landscape decree') will limit the time in which students must graduate, strengthen remediation for students encountering difficulties and provide additional funding for higher education institutions (HEIs) to help students succeed academically

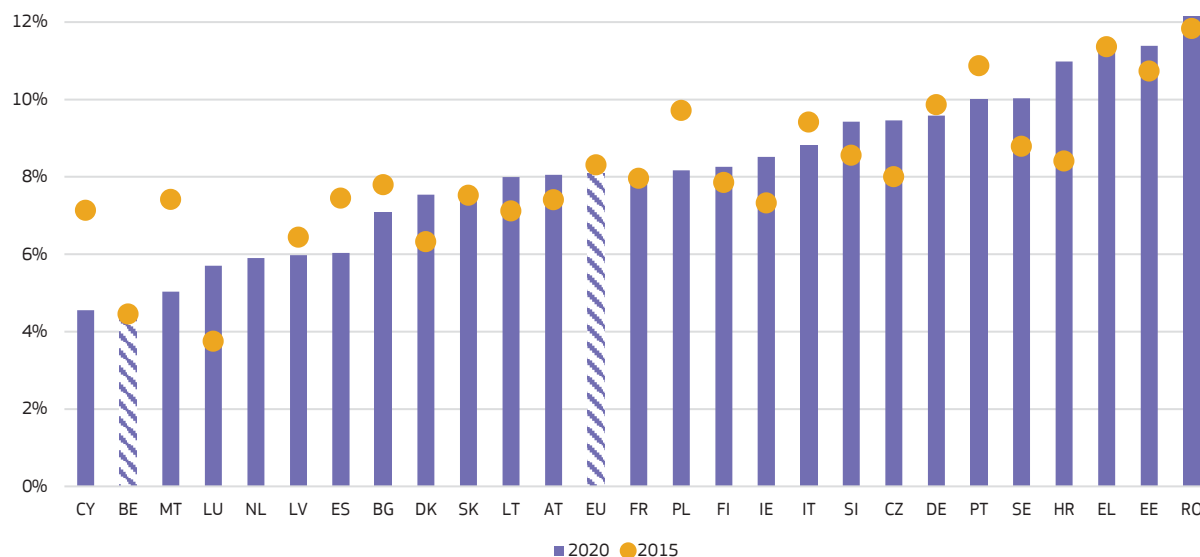
(FWB, 2021b). Measures were also taken to address student poverty in order to counter the negative impact of COVID-19 (European Commission, 2021). A centralised data exchange platform should also facilitate student administration, data collection and analysis, and evidence-informed policymaking ('E-Landscape decree'). Supported by the Recovery and Resilience Facility, BEfr is funding energy-saving infrastructure of universities, hybrid and digital equipment, and training in HEIs.

Belgium needs more science, technology, engineering and mathematics (STEM) graduates to master the digital and green transition.

In 2021, the level of basic digital skills of the population was around the EU average (54%), and two-thirds (66%; EU 69%) of 16- to 19-year-olds reported basic or above basic overall digital skills. The share of ICT higher education graduates is the second lowest in the EU (2.2%; EU: 3.9%). Overall, only 17.6% of tertiary graduates (EU: 24.9%) are STEM graduates, and their share is increasing slowly despite dedicated STEM action plans. Many more would be needed to meet the increasing labour market needs. The share of female STEM graduates (4.6%; EU: 8.1%) is particularly low compared to the EU (Figure 4). The draft STEM agenda 2030 in BEfl focuses on increasing intake in STEM courses and careers, on STEM specialists, and on strengthening STEM competencies in the wider society. Training of STEM teachers will get special attention. However, the Strategic Advisory Councils (SERV and VLOR) criticised the draft for lacking ambition, concrete action and measurable goals. BEfr intends to develop a STEAM⁷ action plan and make STEAM more attractive in higher education. The Belgian Women in Digital plan aims to provide a coherent strategy to boost coordination and synergies among the various initiatives taken to promote women in STEM/ICT at all sectoral and policy levels. All Belgian recovery plans focus heavily on digital education and skills at all levels of education.

⁷ STEM and arts.

Figure 4: Share of female STEM graduates over total tertiary graduates in 2015 and 2020 (%)



Source: Eurostat (UOE), [educ_uoe_grad02].

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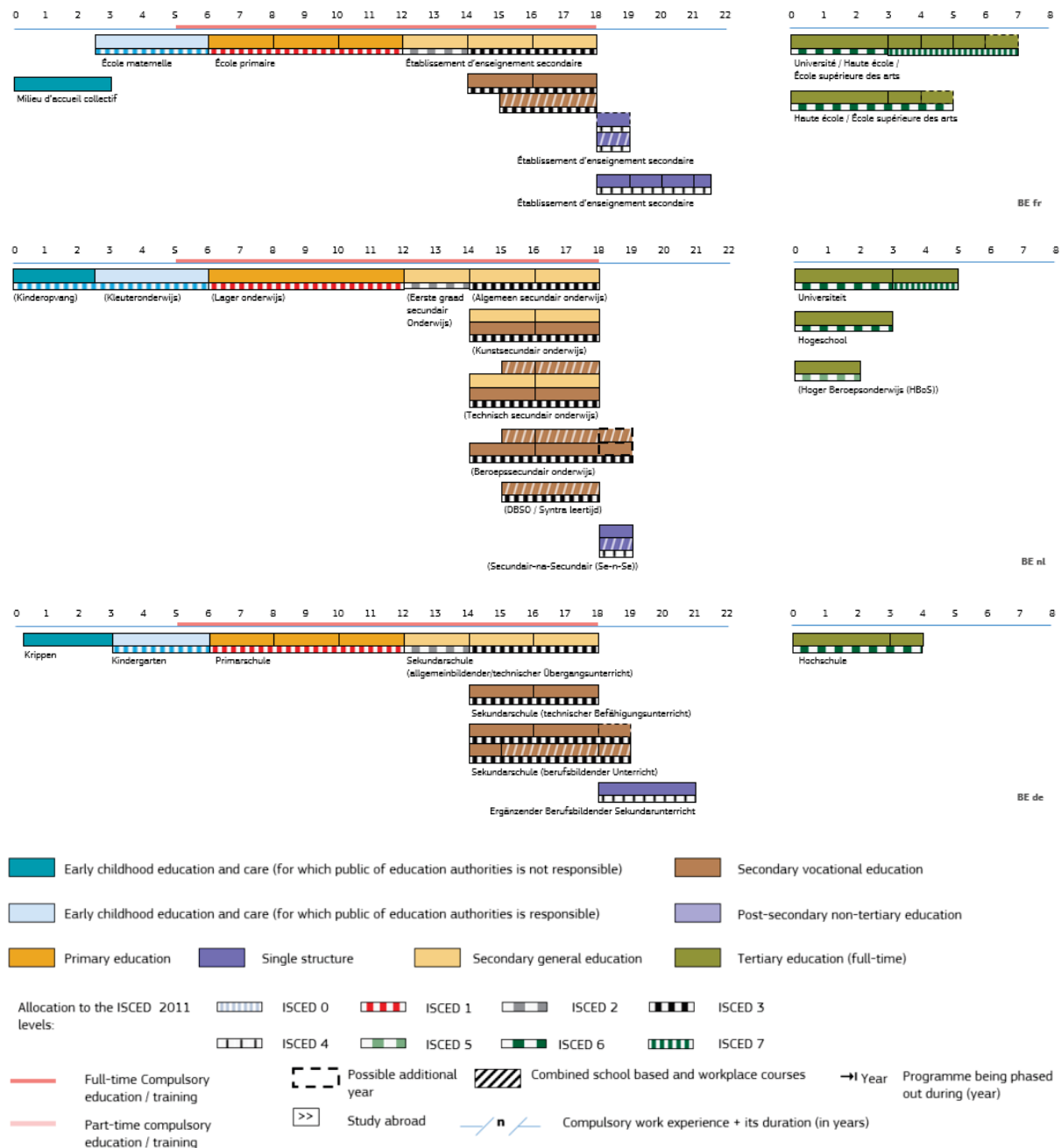
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Annex I: Key indicators sources

Indicator	Source
Participation in early childhood education	Eurostat (UOE), 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: Eurostat (LFS), edat_lfse_14 Data by country of birth: Eurostat (LFS), edat_lfse_02
Exposure of VET graduates to work based learning	Eurostat (LFS), edat_lfs_9919
Tertiary educational attainment	Main data: Eurostat (LFS), edat_lfse_03 Data by country of birth: Eurostat (LFS), edat_lfse_9912
Participation of adults in learning	Data for this EU-level target is not available. Data collection starts in 2022. Source: EU LFS.
Equity indicator	European Commission (Joint Research Centre) calculations based on OECD's PISA 2018 data
Upper secondary level attainment	Eurostat (LFS), edat_lfse_03
Public expenditure on education as a percentage of GDP	Eurostat (COFOG), gov_10a_exp
Public expenditure on education as a share of the total general government expenditure	Eurostat (COFOG), gov_10a_exp

Annex II: Structure of the education system



Source: European Commission/EACEA/Eurydice, 2022. The Structure of the European Education Systems 2022/2023: Schematic Diagrams. Eurydice Facts and Figures. Luxembourg: Publications Office of the European Union. Notes: Krippen starts from 3 months.

Please email any comments or questions to:
EAC-UNITE-A2@ec.europa.eu

Brussels, 18.11.2022
SWD(2022) 751 final

PART 3/28

COMMISSION STAFF WORKING DOCUMENT

Education and Training Monitor 2022

Accompanying the document

**Communication from the Commission to the European Parliament, the Council, the
European Economic and Social Committee and the Committee of the Regions**

on progress towards the achievement of the European Education Area

{COM(2022) 700 final} - {SWD(2022) 750 final}

Education and Training Monitor 2022

BULGARIA



The Education and Training Monitor's country reports present and assess the main recent and ongoing policy development at all education levels in EU Member States. They provide the reader with more in-depth insight of the performance of countries with regard to the EU level targets agreed within the EEA. They are based on the most up-to-date quantitative and qualitative evidence available.

Section 1 presents a statistical overview of the main education and training indicators. Section 2 focuses on how the Member State has addressed or is addressing one of its education challenges. Section 3 covers early childhood education and care. Section 4 deals with school education policies. Section 5 covers vocational education and training and adult learning. Finally, Section 6 discusses measures in higher education.

The Education and Training Monitor's country reports were prepared by the European Commission's Directorate-General for Education, Youth, Sport and Culture (DG EAC), with contributions from the Directorate-General for Employment, Social Affairs and Inclusion (DG EMPL).

The document was completed on 30 September 2022
More background data at:
<https://op.europa.eu/webpub/eac/education-and-training-monitor-2022/en/>



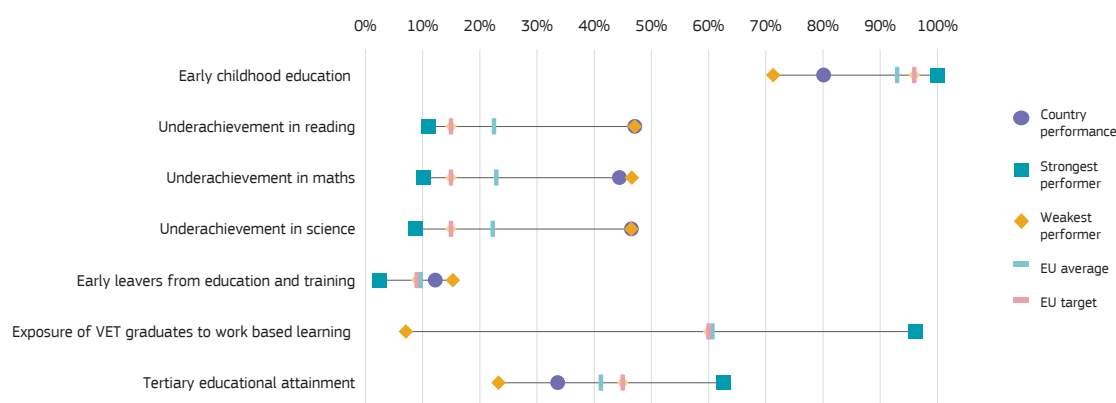
1. Key indicators

Figure 1: Key indicators overview

		Bulgaria		EU	
		2011	2021	2011	2021
EU-level targets		2030 target			
Participation in early childhood education (from age 3 to starting age of compulsory primary education)	≥ 96 %	83.8% ¹³	80.1% ²⁰	91.8% ¹³	93.0% ²⁰
Low achieving eighth-graders in digital skills	< 15%	:	:	:	:
Low achieving 15-year-olds in:	Reading	41.0% ⁰⁹	47.1% ¹⁸	19.7% ⁰⁹	22.5% ¹⁸
	Maths	47.1% ⁰⁹	44.4% ¹⁸	22.7% ⁰⁹	22.9% ¹⁸
	Science	38.8% ⁰⁹	46.5% ¹⁸	18.2% ⁰⁹	22.3% ¹⁸
Early leavers from education and training (age 18-24)	< 9 %	11.8% ^b	12.2% ^b	13.2%	9.7% ^b
Exposure of VET graduates to work-based learning	≥ 60 % (2025)	:	: ^u	:	60.7%
Tertiary educational attainment (age 25-34)	≥ 45 %	27.2% ^b	33.6% ^b	33.0%	41.2% ^b
Participation of adults in learning (age 25-64)	≥ 47 % (2025)	:	:	:	:
Other contextual indicators					
Equity indicator (percentage points)		:	38.3 ¹⁸	:	19.30 ¹⁸
Early leavers from education and training (age 18-24)	Native	11.9% ^b	12.2% ^b	11.9%	8.5% ^b
	EU-born	:	: ^{bu}	25.3%	21.4% ^b
	Non EU-born	: ^b	: ^{bu}	31.4%	21.6% ^b
Upper secondary level attainment (age 20-24, ISCED 3-8)		86.7% ^b	86.3% ^b	79.6%	84.6% ^b
Tertiary educational attainment (age 25-34)	Native	27.2%	33.5% ^b	34.3%	42.1% ^b
	EU-born	: ^u	: ^{bu}	28.8%	40.7% ^b
	Non EU-born	: ^u	: ^{bu}	23.4%	34.7% ^b
Education investment	Public expenditure on education as a percentage of GDP	3.4%	4.0% ²⁰	4.9%	5.0% ²⁰
	Public expenditure on education as a share of the total general government expenditure	10.0%	9.5% ²⁰	10.0%	9.4% ²⁰

Sources: Eurostat (UOE, LFS, COFOG); OECD (PISA). Further information can be found in Annex I and at [Monitor Toolbox](#). 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 and training systems – ISCED level 0; the equity indicator shows the gap in the share of underachievement in reading, mathematics and science (combined) among 15-year-olds between the lowest and highest quarters of socio-economic status; b = break in time series, u = low reliability, : = not available, 09 = 2009, 13 = 2013, 18 = 2018, 20 = 2020.

Figure 2: Position in relation to strongest and weakest performers



Source: DG Education, Youth, Sport and Culture, based on data from Eurostat (LFS 2021, UOE 2020) and OECD (PISA 2018).

2. A focus on digital education

The low level of digital skills among young people and adults is a major challenge in Bulgaria. People with at least basic digital skills account for 29% of the population aged 16 to 74, against an EU average of 56%. Only 11% of people have above basic skills, slightly less than a third of the EU average (DESI, 2021). Among young people aged 16-19, only half of them (52%) have basic or above basic digital skills.¹ This is one of the lowest rates in the EU (average 69%). The digital skills of adults are even lower, which is aggravated by a declining working-age population, and the weak link between higher education and adult training and the needs of the labour market. Consequently, companies have difficulties in finding skilled staff to innovate and grow (DESI, 2021). The low percentage of higher education graduates in STEM (science, technology, engineering and mathematics) adds to the problem (Figure 3). In contrast, with 28%, Bulgaria is in the lead in Europe regarding the share of female ICT specialists (compared to the EU average of 19%). Technological workshops for girls are organised at an early school age. The Bulgarian Centre of Women in Technologies encourages women to participate in digital industry.

The pandemic exposed the challenges in digital education and accelerated the process of reforms and investment. Improving digital skills has become a priority in Bulgaria. During the recent waves of the pandemic, the Ministry of Education and Science continued to distribute laptops to students and teachers. Coding and computer modelling as subjects were progressively introduced in primary education (from the 3rd grade). The number of compulsory teaching hours per week increased. Information

technology, gradually replaced by computer modelling, became compulsory in lower secondary schools. The level of acquired competences is measured by an annual national external assessment. The high speed connectivity of schools has improved. Nowadays, most schools are connected, although digital equipment and IT infrastructure in schools are still lagging behind. Insufficient digital competences of teachers also hamper the use of technology in classrooms.

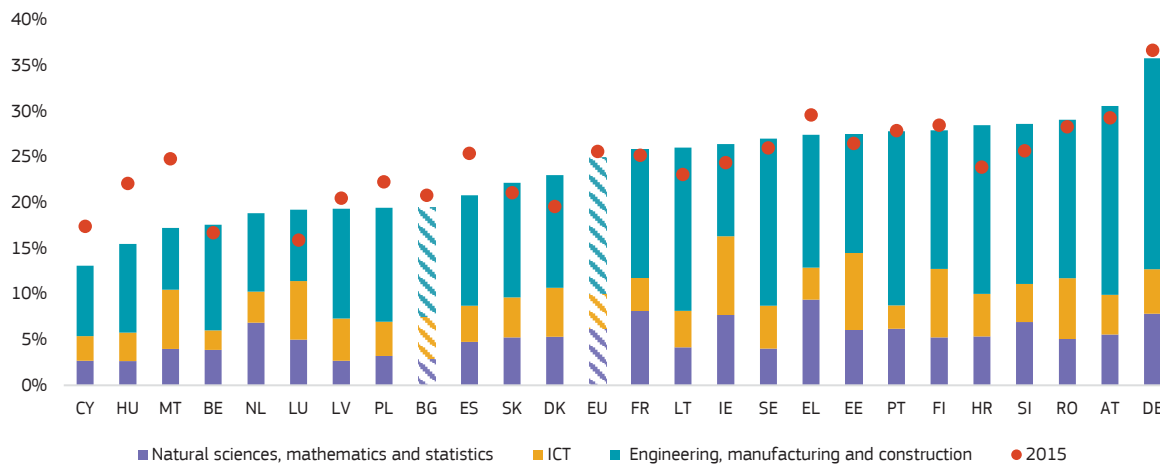
Investment in digital skills continues. The process of digitalising education has accelerated, also due to the establishment of a national cloud ICT infrastructure for e-learning. A new national platform for e-lessons was launched in April 2022 and will be operational as of the 2022/23 school year. The platform will enable teachers to create digital learning content, such as lessons, exercises or tests, by using different electronic resources². 6 200 teachers will be trained on how to create interactive lessons and another 12 000 on how to work with the platform. This investment is developed under the 'Education for Tomorrow' project of the operational programme 'Science and Education for Smart Growth 2014-2020', co-financed by the European Structural Funds. The national programme 'Digital Bulgaria 2025' provides a framework for modernising and implementing intelligent solutions, including modernising schools and higher education in the field of ICT.

Improving STEM infrastructure is also a priority area in Bulgaria's recovery and resilience plan, endorsed in May 2022. The reforms and investment in the plan will help develop digital skills and promote STEM fields in schools. STEM laboratories, including high-tech classrooms, will be constructed in schools. Bulgaria will set up one national and three regional STEM centres, which will coordinate trainings for teachers, develop

¹ Eurostat, ISOC_SK_DSKL_I21.

² <https://www.mon.bg/bg/news/4764>

Figure 3: STEM tertiary graduates as a proportion of total graduates in 2015 and 2020, (%)



Source: Eurostat (UOE), [educ_uoe_grad02]. Note: 2015 Data for NL not available,

teaching materials, and set up an electronic portal and electronic library. The plan envisages the establishment of a digital platform for e-learning for adults, open to the public in 'digital clubs', staffed and equipped with computers. 500 000 people should receive digital skills training by 2026.

3. Early childhood education and care

Enhancing access to quality early childhood education and care (ECEC) has been a longstanding priority. For the first time since 2014, the participation rate of children aged between 3 and the starting age of compulsory primary education slightly improved and reached 80.1%, but is still well below the EU average of 93% and the EU-level target of 96% by 2030. The reform lowering the starting age of compulsory pre-school education from 5 to 4 entered into force in September 2020. It has been gradually applied across the country and should be implemented in all municipalities by 2023–2024.

A new law approved in spring 2022 allows parents to enrol their children in nurseries and kindergartens without any fees. This should also improve participation in ECEC. In addition, in municipalities where compulsory pre-primary education for 4 year-olds is implemented, financial compensation is offered to families whose children are not granted a place in a kindergarten.

Although ECEC capacities are broadly sufficient across the country, it remains problematic in the capital, which is the main destination for many young families. In spring 2022, in the first round of admissions almost half of the applications in Sofia were refused due to a lack of places. According to the Sofia municipality, the shortage of places in the capital is over 7 000 for children aged 3–6 years old, resulting in many children left without access to pre-school education. Although investment in education is improving, including through the recovery and resilience plan (which will renovate 57 kindergartens), rolling out the inclusive education reform requires additional resources.

Figure 4: Early leavers from education and training, 2019, 2020 and 2021 (%)



Source: Eurostat (EU – LFS), [edat_lfse_14].

4. School education

The rate of early leavers from education and training remained stable in the past decade.

In 2021, it decreased to 12.2% (compared to 12.8% in 2020 and 14% in 2019), but was still above the EU average of 9.7% (Figure 2). The gap between urban and rural areas is significant (6.8% and 23.7%, respectively), and there are wide disparities between regions (from 6.7% in Ugozapaden with the capital of Sofia to 21.6% in Yugoiztochen). Unlike many EU countries, there is no major gender gap among early school leavers.

Increasing the quality of education remains a major issue in primary and secondary education.

As emphasised by a World Bank Survey, learning outcomes in Bulgaria have not changed much over the past 14 years. 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 these percentages above 60% among disadvantaged students. Compared to other EU countries, students in Bulgaria performed 67 points lower in reading, which corresponds roughly to more than one-and-a-half years of schooling (World Bank Group, 2020). Bulgaria aims to reduce the proportion of underachieving students to 25% by 2030, which will require major efforts (European Commission, 2021). According to PISA 2018, 6% of Bulgarian students report

speaking another language at home (OECD, 2019). The performance gap between this group and those, whose mother tongue is Bulgarian is significant. A score point difference of 74 in reading (OECD, 2019) is the highest gap in the EU. One of the national programmes adopted in 2022 envisages additional language support for migrant and refugee children to learn

Bulgarian as a foreign language. Being one of the countries hosting the largest number of Ukrainians fleeing war in 2022, Bulgaria has provided minors arriving from Ukraine with the rights and support needed to continue their schooling, including language support.

The government continues its efforts to improve the quality of education.

In 2022 the Ministry of Education and Science commenced a comprehensive review of text books in general school subjects from grade 1 to 12. Also in 2022, for the first time, graduates of higher secondary education were able to choose a matriculation exam in a less widely spoken language, such as Japanese, Chinese, Korean, or Hebrew, if they have studied it as a profiling subject at school. This is regarded as an important step in developing multilingualism competences among students. A new methodology for assessing the added value of the education provided in secondary education will be established and tested, based on the model developed by the World Bank. It will be an important step in

identifying objective measures to evaluate quality in the educational system. It could contribute to ensuring higher-quality education across Bulgaria by collecting relevant data and information, thus helping to provide more targeted support to address shortcomings in learning.



Box 1: National programmes for the development of education

In 2022, the Bulgarian government approved 21 national programmes for the development of education. This is an important step in improving the quality and inclusiveness of education. A new initiative 'Together in arts and sports' will support the personal development of students through collective sports and arts activities. Another programme will support the staff costs of 900 educational mediators and social workers. Funds will be provided for pre-school and school education. The 'Innovation in Action' programme will develop methodology and training resources for STEM education. The 'Back Together' programme will operate for the second consecutive year to overcome the negative consequences of school closures during the pandemic. The Ministry of Education will continue to finance municipal projects for educational desegregation, as well as hiring substitute teachers. All these efforts are welcomed, as they contribute to the overall development of education, and bring Bulgaria closer to reaching EU goals. Nevertheless, an evaluation framework for these policy initiatives would allow more targeted evidence-based interventions and better monitoring and evaluation of the measures implemented.

Source: www.mon.bg

Segregation in education remains a challenge and a main obstacle for access to quality education. The share of Roma children aged 7-15 who attend formal education is 86.2% against 94.6% of the total population (Fundamental Rights Agency, 2022). Only 28% of Roma students aged 20-24 complete upper

secondary education, while for the Bulgarian population as a whole this figure was 83.6%³. Almost two thirds of Roma children aged 6-14 years old attend school or kindergarten where all or most of their schoolmates are Roma. Three quarters of Roma children under 18 are at risk of poverty (Fundamental Rights Agency, 2022). PISA shows that students with similar socio-economic status and performance levels tend to be concentrated in the same schools.⁴ A survey by the EU's Fundamental Rights Agency reports that educational segregation is getting worse in general schools in particular. Parents are withdrawing their children from schools where Roma children are concentrated. Desegregation programmes are limited in scope. Authorities do not collect information about the ethnic origin of students. However, schools do gather information about the parents' educational status. This information helps identify vulnerable groups eligible for additional funding from the state.

The government has implemented measures to improve teachers' situation. Lack of training opportunities and poor education infrastructure impact negatively on the attractiveness of the teaching profession. Almost half of school teachers are aged 50 and above.⁵ From April 2021, the average teacher salary rose by about 12% and reached 125% of the national average. This is already a second rise in teachers' salaries in the past 3 years. It should contribute to the overall effort of increasing the attractiveness of the teaching profession. Despite an increase of 10% in the number of teachers in school education between 2005 and 2018 (World Bank Group, 2020), teacher shortages are emerging, in particular in rural areas, where the concentration of students from disadvantaged backgrounds is higher. Meanwhile, teachers with higher levels of education or experience tend to be concentrated in schools in urban areas or middle-size cities. The

³ Eurostat, [TPS00186] 28.04.2022

⁴ The isolation index of disadvantaged students vs all other students in Bulgaria was 0.29, against the EU average of 0.16, as measured by PISA 2018. This is the worst result in the EU.

⁵ Eurostat: educ_uoe_perp01

measures implemented at national level, such as raising of salaries or programmes related to teacher development, go in the right direction, but their long term results on improving the quality of education remain to be seen. The 'Education for Tomorrow' project, co-funded by the European Social Fund, has been supporting training of teachers, including in digital skills. The European Commission has also supported a comprehensive review of teacher policies and policy recommendations through the Structural Reform Support Programme (World Bank Group, 2020).

A recent national survey 'School time in Bulgaria and Europe' showed that Bulgarian students attend fewer hours of schooling compared to other students in Europe. The total number of compulsory classes 1 to 10 are 7 040 hours per year, while the average for countries in Europe is 8 617 hours⁶. Bulgarian pupils and students also have the longest holidays in Europe – on average 91 school days per year. This is above the average of 70 days in other European countries. As the lower amount of classroom time, combined with other factors, may impact learning outcomes, this survey provoked discussion about the need to restructure the school year and the duration of holidays.

Bulgarian authorities continued to help pupils and students undertake distance learning during the COVID pandemic. Research proves that online learning and teaching can only be effective if students have consistent access to the internet and computers, and are provided with relevant and individualised pedagogical support (Sternadel, 2021). As the school closure continued in 2021 and partially in 2022, the Ministry of Education and Science continued to distribute laptops and other electronic devices. It also plans to analyse the gaps and deficiencies in specific subjects (i.e. maths and Bulgarian language), which occurred due to the pandemic. Under the special programme 'Together Again', individualised assistance is available for children during or after

the summer break to compensate the potential loss of learning time.



Box 2: Support for the Dual Learning System

The aim of this project, co-financed by the European Social Fund (ESF), is to improve the relevance of vocational education and training to labour market needs. The project is providing support for activities focused on increasing the attractiveness of the dual learning system among students and parents, as well as raising awareness among and involvement by businesses.

Students in secondary education are given support to participate in a dual education by enrolling in a 'probationary internship' at a partner company.

Part of the activities are directed at improving the vocational training competences of teachers and trainers and helping mentors in the partner companies to acquire pedagogical and methodological skills.

So far, an electronic platform has been developed and a toolkit for quality assessment of teaching and of the workplace is being elaborated. A total of 159 VET schools have been selected and 20 information campaigns have been conducted in different regions of Bulgaria to promote the dual learning system. A total of 2 180 students have been engaged in additional training and 7296 students participated in a 'probationary internship.'

Source: <https://dual.mon.bg>

5. Vocational education and training and adult learning

Despite ongoing measures, including with EU support, the alignment of vocational education and training (VET) with labour market needs could be further improved. The Ministry of Education and Science has a systematic policy for restructuring the admission plan in VET and dual VET is being rolled out, but the total share of students and schools is relatively low. The latest available data show that the number of new entrants in upper secondary

⁶ <https://www.mon.bg/bg/news/4716>

VET is decreasing. The enrolment rate⁷ was 51.5% in 2020 (EU average: 48.7%), a slight decrease compared to the two previous years.⁸ The employment rate of recent VET graduates⁹ increased from 69.6% in 2020 to 72.4% in 2021, albeit still below the EU27 average of 76.4%.

Work-based learning forms a substantial part of all VET programmes. Amendments to the VET Act from 2018 and 2020 defined requirements related to VET quality assurance, work-based learning included. Employers and trade unions have decision-making and advisory roles in shaping VET through their participation in regional and national councils and their involvement in developing national education standards and in updating the list of professions for vocational education and training (LPVET) and the lists of state-protected specialties. An update of the lists of VET occupations and standards will be piloted under an ESF+ strategic operation to be launched in 2022. As part of the recovery and resilience plan, new amendments to the regulatory framework for VET are envisaged, introducing changes to the list of professions for VET and their programmes, in accordance with the needs of professional competences, including in the green and digital sectors.

Between 2021 and 2027, VET will continue to be supported by the European Social Fund Plus (ESF+). Around EUR 290 million will be earmarked from ESF+ under the 2021-2027 Programme Education to improve attractiveness, accessibility, quality and labour market relevance of VET. Support will be given to piloting and expanding forms of dual VET, including in higher education, career guidance, apprenticeships and developing entrepreneurial skills for students, teacher and mentor training, implementing a graduate tracking system and introducing joint

programmes on areas important for the economy of the regions and the labour market, with innovative digital learning content. In addition, support will be provided for work of 24 VET Centres of Excellence, which will be renovated through the recovery and resilience plan.

Bulgaria continues to have one of the lowest participation rates in adult learning in the EU, despite some measures already undertaken. Bulgaria's population aged 25-64 that participated in education and training during the preceding 4 weeks of the Labour Force Survey decreased from 2% in 2019 to 1.8% in 2021. The participation rate in 2021 falls 9 pps below the EU-27 average for 2021 (10.8%) and behind all European countries. Moreover, a 2021 survey found that just 5% of adults had followed an online course (in the last three months), against an EU average of 18%. This is consistent with the low numbers of people who have at least basic digital skills.

Participation rates in adult learning by low-skilled adults stand at around one quarter of those for the general population. Adult literacy and qualifications for people with a disadvantaged background, such as Roma, also represent a significant challenge. Measures to target low-skilled, low-qualified adults and those with a disadvantaged socio-economic background, as well as upskilling pathways, are included in the Bulgarian 2020-30 Strategic Policy Framework for Education, Training and Learning and 2020-30 Employment Strategy, adopted in 2021. The National Strategy of the Republic of Bulgaria for Equality, Inclusion and Participation of Roma (2021-30) and its action plan (adopted in 2022) encourage the participation of persons from vulnerable groups, including Roma, in continuing education and training.

Bulgaria has set a 2030 target of 35.4% of adults participating in learning every year (three times the baseline rate of 11.8 % in 2016). To this end, substantive amounts were earmarked from the national budget and EU funds for reskilling and upskilling the population, in close cooperation with employers, unions and other civil society organisations. The introduction of

⁷ Eurostat, educ_uoe_enrs05.

⁸ National data (Education Information Database, Center for Information Provision of Education) indicate an increase again in 2021.

⁹ Eurostat, edat_ifse_24.

individual learning accounts (ILAs) is included in the 2021-27 ESF+ Human Resources Development (HRD) programme, starting as a pilot. A recent focus on digital skills, for which around EUR 286 million are allocated under the ESF+, complements the efforts under the national recovery and resilience plan. Moreover, the Bulgarian authorities are open to implementing the new ALMA initiative (Aim, Learn, Master, Achieve), under the Social innovation priority theme, part of ESF+ HRD programme. EUR 78 million will be also earmarked under the 2021-2027 ESF+ programmes to support adult literacy.

A roadmap of skills governance has been developed by the Ministry of Education and Science, in cooperation with Cedefop. The Ministry of Education and Science and Ministry of Labour and Social Policy agreed to synchronise the information provided on labour market forecasts with the system of VET qualifications, while synergies will be achieved within an interactive platform for analyses and labour market forecasts. In addition, Bulgaria is working with the OECD on developing a national Skills Strategy, through a project funded under the Technical Support Instrument.

6. Higher education

The tertiary educational attainment level remains comparatively low. Students' socio-economic background affects their academic ambitions. On average, one third of the Bulgarian population aged 25-34 holds a tertiary degree. This rate did not improve significantly over the last 5 years (33.6% in 2021) and remains below the EU average of 41.2% and the EU-level target of 45% by 2030. The gap between the tertiary attainment in the urban and rural areas remains considerable (47.4% and 13.7%, respectively). The tertiary educational attainment in Bulgarian cities is close to the EU average of 51.4%. The regional disparities in tertiary educational attainment also remain visible and differ between 20.8% in the North-West Region and 46.5% in South-West Region (with the capital in Sofia). This is linked to the concentration of universities in Sofia. The adoption of the National Map of Higher Education

– one of the milestones of the recovery and resilience plan – should help promote a more balanced distribution of the higher education offer across the country. At the same time, the gender gap persists, with 39.5% of women aged 25-34 educated at tertiary level, compared to 28% of men.

Although participation rates in tertiary education show positive trends since 2013¹⁰, the transition to the labour market is still difficult. The Bulgarian government is making an effort to foster the relevance of higher education to the labour market. The number of graduates was highest in business and administration (23.6%), education (14.4%), social and behavioural sciences (9.9%), engineering and engineering trades (9.2%) and health (8.8%).¹¹ Tracking of graduates shows that 53% of them have worked in positions requiring higher education (an increase of almost 10% compared to 2014). Bulgaria is also advancing cooperation between higher education, science and business. A new national scientific programme 'Enhancing research capacity in the field of mathematical sciences (PICOM)' will be implemented by 2025. It will support the policy of equal access to quality higher education, developing scientific potential and building a sustainable relationship between education, science, and business.

The quality of higher education remains a priority for the Bulgarian authorities. Amendments to the Higher Education Act and the Act on Development of Academic staff are expected to improve the quality and internationalisation of Bulgarian universities¹².

¹⁰ Eurostat: [educ_uoe_enrt01] and [demo_pjan].

¹¹ https://nsi.bg/sites/default/files/files/press_releases/Education2021_en_OCQ5H5R.pdf

¹² In 2021, more than 8% of all students enrolled at universities in Bulgaria were foreign students, which is almost 6% more than in the previous year and 24% more than in 2017/2018. Almost half of the foreign students come from Greece, the UK and Germany (https://nsi.bg/sites/default/files/files/pressreleases/Education2021_en_OCQ5H5R.pdf). At the same time, the top 3 destinations for Bulgarians under the Erasmus+ in 2020 were Spain, Romania and Greece.

Bulgaria is raising requirements for teaching staff, improving the accreditation system, changing the teaching staff attestation and introducing measures against plagiarism. The latter is a widespread phenomenon, hence measures against it are highly relevant for improving the quality of education. The Ministry of Education and Science proposes a two-tier structure to check plagiarism: scientific organisations and higher education institutions as a first tier, and the National Commission on Academic Ethics as the upper one. The 2022 budget envisages an increase in student and PhD scholarships, as well as academic staff salaries. Still, investment and salaries in higher education are low in Bulgaria, which limits the attractiveness of an academic career. The ESF+ programme will provide support to enhance the quality of higher education by investing in its human capital. The infrastructure of higher education institutions also impacts the quality of education. The recovery and resilience plan, together with European Regional Development Fund programme, will help improve the infrastructure by modernising and constructing university campuses and student dormitories.

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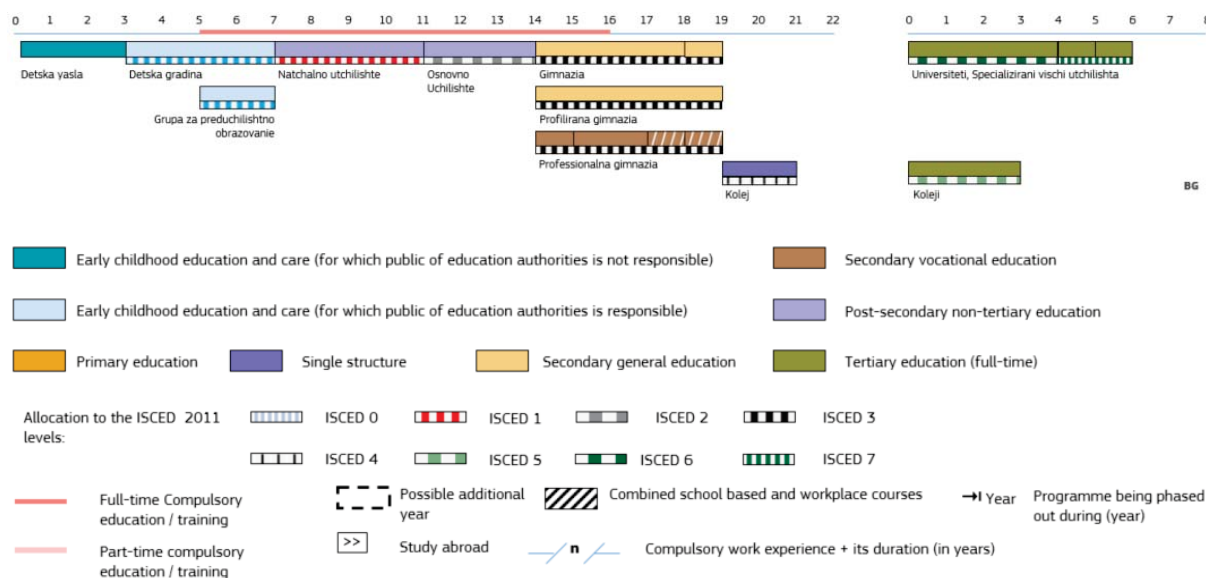
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Annex I: Key indicators sources

Indicator	Source
Participation in early childhood education	Eurostat (UOE), 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: Eurostat (LFS), edat_lfse_14 Data by country of birth: Eurostat (LFS), edat_lfse_02
Exposure of VET graduates to work based learning	Eurostat (LFS), edat_lfs_9919
Tertiary educational attainment	Main data: Eurostat (LFS), edat_lfse_03 Data by country of birth: Eurostat (LFS), edat_lfse_9912
Participation of adults in learning	Data for this EU-level target is not available. Data collection starts in 2022. Source: EU LFS.
Equity indicator	European Commission (Joint Research Centre) calculations based on OECD's PISA 2018 data
Upper secondary level attainment	Eurostat (LFS), edat_lfse_03
Public expenditure on education as a percentage of GDP	Eurostat (COFOG), gov_10a_exp
Public expenditure on education as a share of the total general government expenditure	Eurostat (COFOG), gov_10a_exp

Annex II: Structure of the education system



Source: European Commission/EACEA/Eurydice, 2022. The Structure of the European Education Systems 2022/2023: Schematic Diagrams. Eurydice Facts and Figures. Luxembourg: Publications Office of the European Union.

Please email any comments or questions to:
EAC-UNITE-A2@ec.europa.eu



Brussels, 18.11.2022
SWD(2022) 751 final

PART 4/28

COMMISSION STAFF WORKING DOCUMENT

Education and Training Monitor 2022

Accompanying the document

**Communication from the Commission to the European Parliament, the Council, the
European Economic and Social Committee and the Committee of the Regions**

on progress towards the achievement of the European Education Area

{COM(2022) 700 final} - {SWD(2022) 750 final}

Education and Training Monitor 2022

CZECHIA



The Education and Training Monitor's country reports present and assess the main recent and ongoing policy development at all education levels in EU Member States. They provide the reader with more in-depth insight of the performance of countries with regard to the EU level targets agreed within the EEA. They are based on the most up-to-date quantitative and qualitative evidence available.

Section 1 presents a statistical overview of the main education and training indicators. Section 2 focuses on how the Member State has addressed or is addressing one of its education challenges. Section 3 covers early childhood education and care. Section 4 deals with school education policies. Section 5 covers vocational education and training and adult learning. Finally, Section 6 discusses measures in higher education.

The Education and Training Monitor's country reports were prepared by the European Commission's Directorate-General for Education, Youth, Sport and Culture (DG EAC), with contributions from the Directorate-General for Employment, Social Affairs and Inclusion (DG EMPL).

The document was completed on 30 September 2022
More background data at:
<https://op.europa.eu/webpub/eac/education-and-training-monitor-2022/en/>



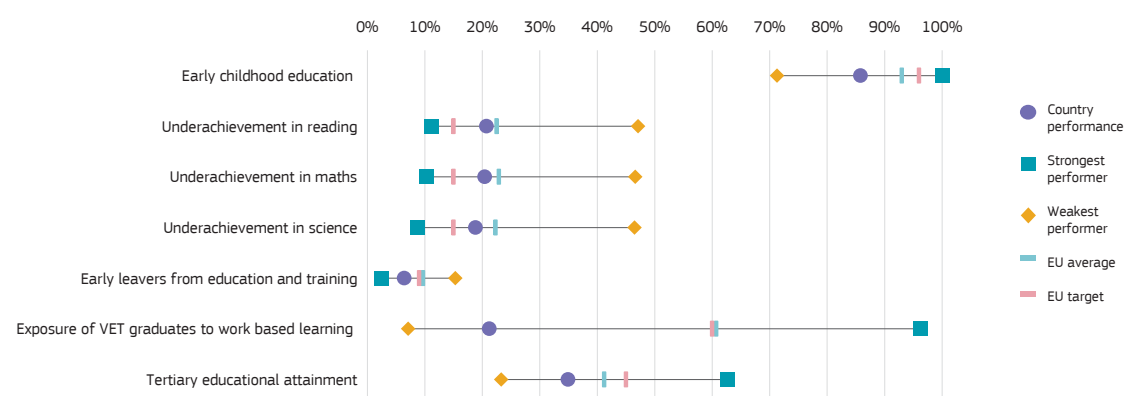
1. Key indicators

Figure 1: Key indicators overview

			Czechia		EU	
			2011	2021	2011	2021
EU-level targets			2030 target			
Participation in early childhood education (from age 3 to starting age of compulsory primary education)	≥ 96 %		76.8% ¹³	85.8% ²⁰	91.8% ¹³	93.0% ²⁰
Low achieving eighth-graders in digital skills	< 15%		15.0% ¹³	:	:	:
Low achieving 15-year-olds in:	Reading	< 15%	23.1% ⁰⁹	20.7% ¹⁸	19.7% ⁰⁹	22.5% ¹⁸
	Maths	< 15%	22.3% ⁰⁹	20.4% ¹⁸	22.7% ⁰⁹	22.9% ¹⁸
	Science	< 15%	17.3% ⁰⁹	18.8% ¹⁸	18.2% ⁰⁹	22.3% ¹⁸
Early leavers from education and training (age 18-24)	< 9 %		4.9% ^b	6.4% ^b	13.2%	9.7% ^b
Exposure of VET graduates to work-based learning	≥ 60 % (2025)		:	21.2%	:	60.7%
Tertiary educational attainment (age 25-34)	≥ 45 %		25.1% ^b	34.9% ^b	33.0%	41.2% ^b
Participation of adults in learning (age 25-64)	≥ 47 % (2025)		:	:	:	:
Other contextual indicators						
Equity indicator (percentage points)			:	18.6 ¹⁸	:	19.30 ¹⁸
Early leavers from education and training (age 18-24)	Native		4.8% ^b	6.2% ^b	11.9%	8.5% ^b
	EU-born		13.2% ^{bu}	17.2% ^{bu}	25.3%	21.4% ^b
	Non EU-born		:	9.0% ^{bu}	31.4%	21.6% ^b
Upper secondary level attainment (age 20-24, ISCED 3-8)			91.7% ^b	89.3% ^b	79.6%	84.6% ^b
Tertiary educational attainment (age 25-34)	Native		24.9%	34.0% ^b	34.3%	42.1% ^b
	EU-born		29.8%	54.1% ^b	28.8%	40.7% ^b
	Non EU-born		27.8%	42.7% ^b	23.4%	34.7% ^b
Education investment	Public expenditure on education as a percentage of GDP		4.6%	5.1% ²⁰	4.9%	5.0% ²⁰
	Public expenditure on education as a share of the total general government expenditure		10.6%	10.8% ²⁰	10.0%	9.4% ²⁰

Sources: Eurostat (UOE, LFS, COFOG); OECD (PISA). Further information can be found in Annex I and at [Monitor Toolbox](#). 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; the equity indicator shows the gap in the share of underachievement in reading, mathematics and science (combined) among 15-year-olds between the lowest and highest quarters of socio-economic status; b = break in time series, u = low reliability, : = not available, 09 = 2009, 13 = 2013, 18 = 2018, 20 = 2020.

Figure 2: Position in relation to strongest and weakest performers



Source: DG Education, Youth, Sport and Culture, based on data from Eurostat (LFS 2021, UOE 2020) and OECD (PISA 2018).

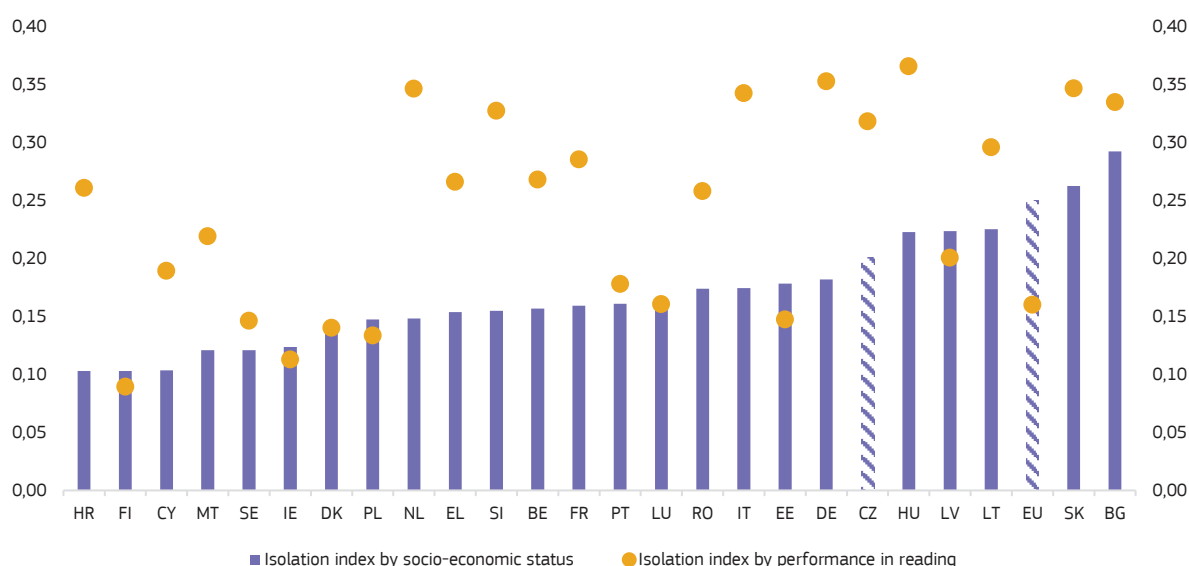
2. A focus on inclusive education

The Czech education system is marked by wide disparities in the performance of schools. Education outcomes are strongly influenced by socio-economic background and school location. Advantaged students outperform their disadvantaged peers by 148 PISA score points, the equivalent of around 3 years of schooling (EU: 130 points). This large gap is partly linked to the high selectivity of the education system. As a result, disadvantaged and low-performing pupils tend to concentrate in certain schools, as evidenced by Czechia's ranking in the PISA isolation index (see Figure 3). The early tracking of 10-25% of pupils – typically of higher socio-economic status – through multi-year secondary schools¹ contributes to the widening of

inter-school differences. As PISA findings show that a more heterogeneous student population at school level is generally associated with better overall performance, the high selectivity of the Czech education system is likely to be a drag on education outcomes in general. A recent analysis of spatial disparities by the School Inspectorate, 'Czech education in maps' (CSI, 2022), identified further drivers for geographic disparities, such as the shortage of qualified teachers, weaknesses in school management and poor cooperation with stakeholders. Research (PAQ, 2022) has also found that municipalities in which pupils performed better than expected based on their social situation sought to address social and educational challenges simultaneously, for instance by reducing segregation, working with disadvantaged communities, improving access to pre-school education and engaging in social work. Cross-sectoral approaches are all the more important, as the 'islands of educational

¹ Six- and eight-year secondary schools (gymnasia) correspond to ISCED levels 2 and 3, while students enrolled in conservatories can obtain a short-cycle tertiary qualification (ISCED 5).

Figure 3: Isolation index of disadvantaged students and low-achieving students, PISA 2018



Source: OECD (PISA 2018). Note: The left axis indicates isolation by socio-economic status, and the right axis indicates isolation by performance in reading. The isolation index measures whether students of a certain type (here disadvantaged students and low-achieving students) are more concentrated in some schools. The index is related to the likelihood of a representative of this type to be enrolled in schools that enrol students of another type. It ranges from 0 to 1, with 0 meaning no segregation and 1 full segregation. OECD, PISA 2018, Vol. II.

failure² across regions are often associated with 'destabilising family poverty' (PAQ, 2022).

As part of the Education 2030+ Strategy, a comprehensive set of measures is being implemented to address inequalities. The pandemic-induced school closures have deepened existing inequalities. At the end of the 2020/21 school year, 50 000 pupils were lagging behind due to insufficient participation in online learning, mostly from disadvantaged backgrounds (CSI, 2021b). Furthermore, a study (PAQ, 2021) conducted among 5th graders (May/June 2021) found that Czech pupils lost the equivalent of 3 months of in-person learning on average. To compensate for the learning losses, a large-scale national tutoring plan was launched in September 2021. While all schools benefit from the programme, schools with more pupils from disadvantaged backgrounds receive more support. In recent years, significant efforts have been made to address inequalities through increased support for disadvantaged schools. The number of teaching assistants has increased steadily, and further measures are planned to address the need for teachers to receive support from school psychologists and special education professionals in mainstream schools (under the European Social Fund Plus). The 'middle points of support' currently being piloted (see European Commission, 2021), which provide methodological guidance to schools, also aim to address inequalities between schools. Furthermore, under the national recovery and resilience plan, additional funding is planned to be provided to 400 disadvantaged schools for support measures (e.g. support specialists, training for teachers to work with heterogeneous groups), complemented by guidance to school leaders. In the light of the further revision of the funding of schools planned the end of 2025, it will be crucial to evaluate if these measures were effective.

Segregation of Roma pupils persists despite legislative changes to promote inclusive

² Educational failure here refers to an index developed by PAQ Research (2022) that measures: 1. Share of compulsory school completion before the 9th year of primary school; 2. Proportion of non-thriving pupils (primary school pupils receiving a 'failed' assessment at the end of the school year); 3. Rate of absenteeism (number of missed school hours per pupil).

education. Around half of all Roma pupils (aged 6 to 15) report that they attend schools where all or most of their schoolmates are also Roma, a significant increase from 29% in 2016 (FRA RS, 2022). In most cases, segregation cannot be explained by the predominance of Roma living in the schools' catchment areas. It stems more from the placement of Roma pupils in special classes as well as school admission practices. In an effort to promote inclusive education, the so-called 'practical schools' for pupils with mild mental disabilities were abolished in 2016. Instead, a new programme was created with adjusted learning outcomes, which could be provided in mainstream settings. The possibility of placing pupils in special schools or special classes (minimum of 6 pupils) was however kept, requiring parents' consent. Due to weaknesses in implementation, little changed for Roma pupils: The number of pupils following programmes with adjusted learning outcomes is largely equivalent to those previously attending practical schools. The majority (85%) of pupils with special educational needs are placed in segregated schools, special classes or study groups. According to national data based on qualified estimates, Roma pupils constituted one quarter of all pupils diagnosed with mild mental disability in 2019-20 (against a share of 3.5% in the school-aged population) (Government of the Czech Republic, 2021). Moreover, the large variations in the share of Roma pupils with special educational needs by region (ranging from 7.3% in the disadvantaged region of Karlovy Vary to more than 20% in Prague, Zlin and Liberec regions) raise doubts about the objectivity of diagnosis and suggests the influence of other school-related factors.

The lack of societal consensus on the benefits of inclusive education restrict opportunities for Roma pupils. The education prospects of Roma pupils are much lower than those of their peers, with only 22% completing upper secondary education (ISCED 3) (vs 89.3% in the total population) (FRA RS, 2022). Their educational disadvantage already starts at an early age with lower participation in early childhood education and care (see Section 3). The majority of pupils from segregated primary schools tend to choose vocational paths that do not offer a school-leaving exam ('maturita') and have a higher risk of dropout due to inadequate

preparation at primary level. Beyond lower academic expectations, a segregated environment also aggravates social disadvantages resulting from limited contacts with non-Roma peers. A general lack of commitment to inclusive education, coupled with a lack of incentives for desegregation, hinder progress. Wrong diagnosis of special needs is incentivised by schools' funding mechanisms, directly linked to the number of pupils with special educational needs. Segregated schools therefore tend to be well funded and seen as more suited to addressing the needs of vulnerable pupils than mainstream schools. They often attract Roma families from beyond their catchment area, who feel better supported than in mainstream schools. The National Roma Integration Strategy 2021-30 aims to reduce the education gap of Roma, with a strong focus on early interventions. These will be partly supported under the Johannes Amos Comenius Programme (European Social Fund Plus), which contains a Roma-specific objective (EUR 112 million). The strategy however lacks details on how desegregation will be pursued and how the necessary commitment to the strategy will be achieved at local level.



Box 1: The European Social Fund supports “fair schools” in the city of Liberec

The project focuses on the implementation of long-term strategic plans for social inclusion and inclusive education in the city of Liberec. It supports 26 primary schools and 33 kindergartens in the introduction and implementation of individual integration, which will improve the overall quality of education of children and pupils in Liberec. Activities include tutoring pupils at risk of school failure, counselling and support for parents, literacy clubs for active citizenship, social and personal development, and cooperation between participating institutions to support the transition of children between educational levels.

Allocation: EUR 2 655 523 (CZK 73 085 46)

3. Early childhood education and care

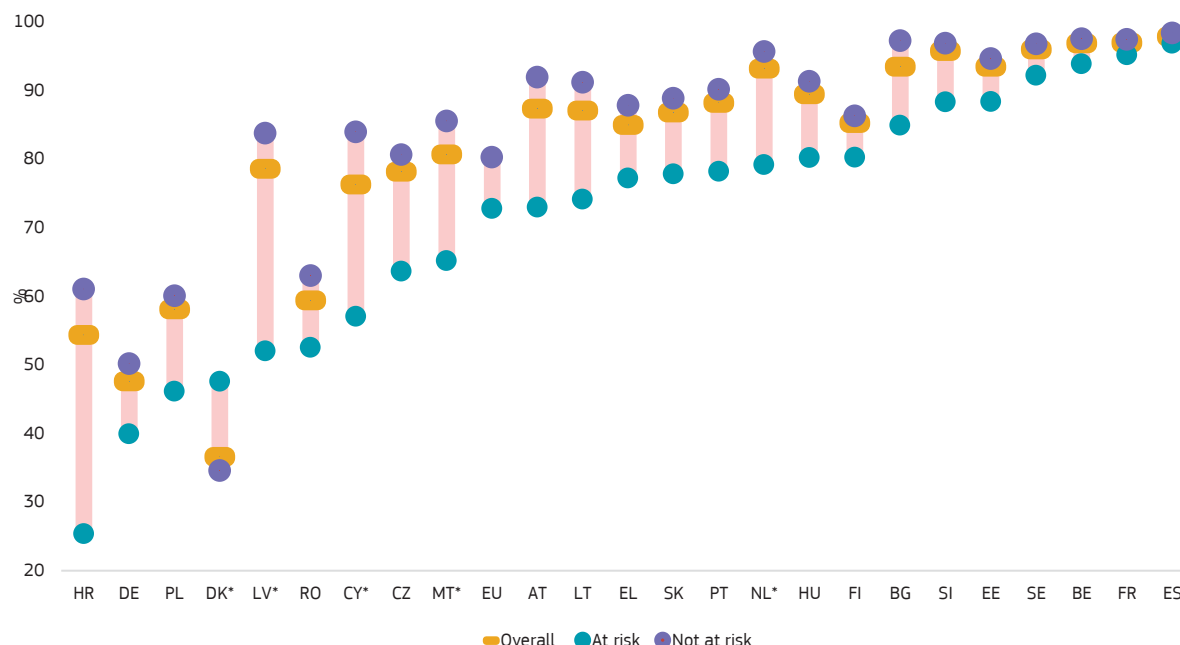
Participation in early childhood education remains low and shows a slight downward trend.

In 2020, 85.8% of children aged 3 and older participated in early childhood education and care, well below the EU average of 93% and the 2030 EU level target of 96%. While participation increased steadily in the past decade to peak at 87.7% in 2017, the positive trend has stalled and even slightly reversed in recent years. Similarly, the low participation rate of children under three further dropped to 4.8% in 2020 (from 6.3% in 2019). While this could be partly explained by the impact of the pandemic, it is the lowest figure recorded in the EU and far below the EU average (32.3%). Access is limited due to the inadequate and uneven distribution of capacities. Whereas in the east of the country around 98% of children above the age of three participate in early childhood education and care, this is only 80.5% for the region around the capital. At the same time, only 87% of the total capacity of preschools was used in 2021 due to underuse in remote areas.

Inequalities persist in terms of access and quality of early childhood education and care.

While the benefits of access to quality education from an early age are highest among children from disadvantaged backgrounds, only 63.6% of Czech children at risk of poverty and social exclusion attend formal childcare or kindergartens, compared to 80.6% of those not at risk. Participation of Roma children is even lower at 51% (FRA RS, 2021). Access is not only hindered by capacity shortages, but also by financial barriers and additional requirements set by certain kindergartens (CSI, 2022). The introduction of compulsory preschool from the age of 5 has been a key measure to improve access, but implementation is incomplete. To address capacity constraints, the government aims to increase childcare facilities by 40% by 2025 with the support of the Recovery and Resilience Facility. With the support of the European Regional Development Fund (ERDF), 9500 new capacities are expected to be created and another 10 000 modernised. Improving access for disadvantaged groups is a key priority under the Education

Figure 4: Participation of children in formal childcare or education between 3 and minimum mandatory school age by AROPE, 2020 (%)



Source: Eurostat (EU-SILC), special extraction. Notes: * = Data with low reliability; Data for IE, IT, LU not available. The AROPE rate is the share of the total population at risk of poverty or social exclusion.

Strategy 2030+ underpinned by EU funds. Further efforts are needed to increase the quality of services, in particular in disadvantaged areas, in the light of growing shortages of qualified staff.

Capacity problems are further aggravated by the inflow of displaced children from Ukraine. It is estimated that by May 2022, 15 000 children below the age of three had arrived in the country. For comparison, around 20 000 childcare places were already lacking for this age group (MPSV, 2020). By 29 June 2022, 20 349 children between 3 and 6 had been granted residence permits. In total, 10 685³ children have been accepted to kindergarten for the years 2021/22⁴ and 2022/23. To address the shortages, a special law (Lex Ukrajina I, 2022) was adopted, which greatly simplifies the conditions under which the capacity of kindergartens can be

increased. A system of redistribution of children within and between regions has also been set up. Many employers also launched their own company kindergartens or child groups. To support the integration of Ukrainian children, preparatory groups as well as informal adaptation groups have been set up, where children learn the language and receive psychological support.

4. School education

Early school leaving is low compared to the EU average, but there are significant regional variations. The overall share of 18- to 24-year-olds with at most lower secondary education fell from 7.6% in 2020 to 6.4% in 2021, breaking the worsening trend of the past decade (+2.7 pps between 2010 and 2020). Almost all regions recorded an improvement in the last year and have rates below the EU-level target of 9%. However, Karlovy Vary and Ústí nad Labem regions stand out with 14.1% (down from 17.4% in 2020). The challenges in these regions are addressed by targeted programmes with the support of EU funds.

³ Reference date: 5 October 2022. Of these, 9 371 attended.

⁴ One-fifth of these children no longer attend kindergarten.

Education outcomes are overall good, but challenges facing the teaching profession represent a risk in the medium term.

An ageing teacher workforce (44.3% of teachers are older than 50 years vs EU 38.9%) and emerging teacher shortages, particularly in certain subjects and in disadvantaged areas, may have a negative impact on the quality of education and reinforce inequalities. In an effort to make the teaching profession more attractive, teacher salaries have risen significantly in recent years. Nevertheless, they are still far below the average salary of those with tertiary qualifications (60-77%). The 2022 increase was only 2% (as opposed to 3% previously announced), which was criticised by trade unions in the light of inflation of above 6%. A recent campaign ('Teachers matter') aims to strengthen the prestige of the teaching profession and attract more young people to teaching. Initial teacher training is also being reformed, the primary aim being to increase its practical component, but is still in a preparatory phase. The completion of this reform is essential, as only two-thirds of teachers report having taught in schools during their studies (TALIS 2018), the lowest share in the EU.

A review of the framework curriculum has been launched to boost the acquisition of key competences.

The reform is based on the Education Strategy 2030+ and the Environmental Education Action Plan 2022-2025. The guidelines for the reform of the primary and lower secondary framework curriculum were published for public consultation in March 2022. They propose a fundamental revision of education content and assessment methods to support a competence-based approach to teaching and learning as well as the reorganisation of entrance examinations. There is a special focus on education for environmental sustainability. The objective is to start implementing the new curricula gradually from September 2024.

Significant reforms are under way to boost innovation in the context of the digitalisation of education.

Czech pupils are among the top performers in digital skills (ICILS). In 2021, 85% of Czechs aged 16 to 19 reported to have at least basic digital skills, well above the EU average (69%). The national recovery and resilience plan is expected to give a further boost

to the digital transformation of education by financing major reforms and investments. The revision of the framework curricula related to digital skills is being gradually rolled out. The number of teaching hours of information and communication technology (ICT) has been increased and computational thinking strengthened. In 2022, Czechia launched its own edition of the IT Fitness Test⁵ - designed in Slovakia and based on EU DigComp - which will help students assess their digital skills. Furthermore, at least 9 000 schools will be equipped with digital technologies, including augmented reality, virtual reality, robotics and 3D printing equipment. To address the digital divide, at least 70 000 disadvantaged pupils devices will be given devices. Moreover, a network of IT counsellors (IT 'gurus') will be set up. They will provide targeted mentoring to at least 1 120 schools on their purchase of IT equipment, IT administration set-up, connectivity and internal school network.



Box 2: Policy experimentation with hybrid learning in schools

Since 2021, the Ministry of Education, Youth and Sport (MŠMT, 2021e) has opened up the opportunity for 63 schools (35 primary schools, 10 grammar schools and 18 vocational schools) to test various ratios of distance learning to face-to-face teaching. The project will last until December 2023. The aim is to examine the possibilities of organising content and methods for blended learning, which could be an extension of the school's educational offer in future. Preliminary data collected by the National Pedagogical Institute together with the Czech School Inspectorate (NPI, 2021) so far suggest that hybrid learning supports children's ability to learn independently, work individually and in groups, and that it develops the communication and presentation skills necessary for independent work and for reflecting on learning outcomes.

⁵ <https://itfitness.eu/>

The majority of children displaced from Ukraine are yet to be integrated in the Czech education system.

As of 12 July 2022, Czechia had granted residence permits to 74 155 Ukrainian children between 3 and 15. Children in this age group are entitled to a place in kindergarten or primary school, but only a proportion of Ukrainian families made use of this possibility. In total, 52 647⁶ pupils have been registered in primary schools for 2021/22⁷ and 2022/23, although special admissions continue. Many chose to follow adaption classes, which focus on teaching the Czech language. A large number of children continued their education via distance learning provided by their schools in Ukraine. Access to secondary education is voluntary, and a place is not guaranteed. In the next school year 2022/23, all children of compulsory school age will be required to attend school (Lex Ukrajina II, 2022). If there are excessive numbers, children might have to change schools according to capacities. Schools will receive further financial support for employing coordinators and bilingual assistants. Secondary schools will join the scheme of free language courses, which have been limited so far to primary schools and kindergartens.

5. Vocational education and training and adult learning

Vocational education and training (VET) attracts a relatively large share of secondary school pupils, who have good labour market prospects overall. The share of upper secondary school pupils participating in VET was 70.5% in 2020, similar to the rate in 2019 but down from 73.8% in 2013⁸. The employment rate of mid-level VET graduates, one to three years after graduation, is 84.1%, well above the EU average of 76.4%⁹. At the same time,

pandemic-related school closures had a particularly strong effect on pupils in vocational schools, who are most at risk of academic failure. Steps to attract higher-performing pupils to vocational schools, such as information campaigns or scholarships, have so far been ineffective.

The employment prospects of apprentices are precarious.

The share of VET students who were exposed to work-based learning is relatively small (21% in 2021) compared to the EU average (60.7%)¹⁰. The employment situation is unfavourable for category E study programmes (lower secondary education, leading to a vocational certificate) such as food production, food processing, masonry, construction work, sales work, and service operations. For category H study programmes (secondary education leading to a vocational certificate, with a possibility to continue studies to 'maturita'), there is little evidence of graduates' ability to find employment in occupations such as food manufacturing or as baker, confectioner or cook/waiter.

Some measures are planned to address structural problems in the vocational education system.

The issues include an overly broad, inflexible range of subjects, low permeability of the system due to a lack of a solid general subject base and the low social status of apprentices (MŠMT, 2021d). The Education 2030+ Strategy envisages a revision of the framework education programmes in the the common core of vocational training.

Individual learning accounts (ILAs), supported by the national recovery and resilience plan¹¹, are expected to become a key feature of adult learning. The Ministry of Labour and Social Affairs is preparing an ILA scheme to help boost lifelong learning, develop a systemic environment for further education and to increase participation in further education in line with the objectives of the European Skills

⁶ Reference date: 5 October 2022. Of those registered, 43 921 attended school.

⁷ Of those registered for 2021/22, more than one-fifth no longer attended primary school in June 2022.

⁸ Eurostat, educ_uoe_enrs05.

⁹ Eurostat, edat_ifse_24.

¹⁰ Eurostat, edat_ifs_9919.

¹¹ [Czechia's recovery and resilience plan](#) | European Commission (europa.eu)

Agenda¹² (NPI, 2022). Until now, the opportunity to participate in state-funded training has been reserved for people registered with the Labour Office who have decided to undertake a retraining course to help them find a suitable job. However, the concept of ILAs will require more preparation and systematic changes in the approach to lifelong learning, including effective use of funding. The education of 130 000 adults in a wide range of digital and Industry 4.0 skills are planned to be supported under the national recovery and resilience plan up to 2025.

Under 2030 national targets, Czechia is committed to increase adult learning participation from 23% (2016) to 45%¹³. This will double participation, though it will still remain below the EU target of 60%. Measures are expected to lead to an increase in the motivation of adults to participate in education and support the participation of employed people who are not looking for a new job but want to improve their qualifications. A publicly accessible database of retraining and further education, from which people can choose training courses, will also help expand the range of education on offer (NPI, 2022).

6. Higher education

Reducing the dropout rate is crucial to increase the persistently low level of tertiary education attainment. The share of 25- to 34-year-olds holding a tertiary degree increased slightly to 34.9% (+1.9 pps from 2020) and is close to the modest national target of 35%¹⁴ (MŠMT, 2020b), but far from the EU average (41.2%) and the EU-level target of 45% by 2030¹⁵. Many more women (43.3%) complete tertiary education than men (27.1%), resulting in a

gender gap well above the EU average (16.2 pps vs EU 10.9 pps) that is growing. The dropout rate is high: almost half of the total studies started in 2017 had been abandoned by students without completion by 2021. The underlying factors seem to be wide-ranging, and are likely to be partly driven by external factors linked to labour market trends. The high dropout rate in the first year (33.4% in 2019/20) points to the weaknesses of the professional orientation system and financial benefits linked to enrolment in higher education. Nine out of ten students have a paid job during their studies (Hauschildt, K. et al., 2021). While this helps overcome financial barriers, it could prolong the study period and increase the risk of dropout due to insufficient time for studies. The low labour market relevance of courses, which also manifests itself in few opportunities for practical experience, can be another demotivating factor (MŠMT, 2020b). Only 1 in 5 students report having done an internship (Hauschildt, K. et al., 2021). At the same time, due to favourable labour market trends and emerging labour shortages, those leaving their studies prematurely can find jobs relatively easily. The employment rate of tertiary graduates – at 86.7% – is only slightly above that of upper secondary graduates at 81.2% (CZ: 5.5 pps, EU 14.7 pps), the smallest difference in the EU¹⁶. The wage premium is also small (16% vs EU-22 +25%).

Reforms aim to adapt higher education better to changing labour market needs.

Higher education struggles to equip young people with the skills demanded by the labour market. 76% of Czech businesses report difficulties in finding ICT specialists, the highest share in the EU (55%) (DESI, 2022). The government aims to address these challenges by improving the flexibility and labour market relevance of higher education (MŠMT, 2020b), strategic management (MŠMT, 2020d) and internationalisation (MŠMT, 2020c). The national recovery plan aims to support higher education institutions by adapting study content, increasing work-based elements of programmes and promoting blended formats. At least 35 new study programmes are expected to receive accreditation, including 15 in fast-growing, high value-added sectors that suffer from a lack

¹² European Skills Agenda - Employment, Social Affairs & Inclusion - European Commission (europa.eu)

¹³ Cf. press release IP/22/372. This covers participation in the last 12 months. The 2016 baseline was a special extraction by Eurostat based on the 2016 Adult Education Survey.

¹⁴ The target refers to the 30-34 age group, while the new EU-level target refers to 25- to 34-year-olds.

¹⁵ Eurostat, edat_ifse_03.

¹⁶ Eurostat, edat_ifse_24.

of highly skilled specialists, such as cybersecurity or artificial intelligence. Moreover, at least 20 additional study programmes (Bachelor's or Master's) with a professional profile and 20 new lifelong learning courses (including microcredentials) are planned to be developed by universities. These measures have the potential to strengthen the role of higher education in driving innovation and economic growth. However, further efforts are needed to increase education attainment and boost advanced skills to improve labour productivity, which has stalled in recent years.

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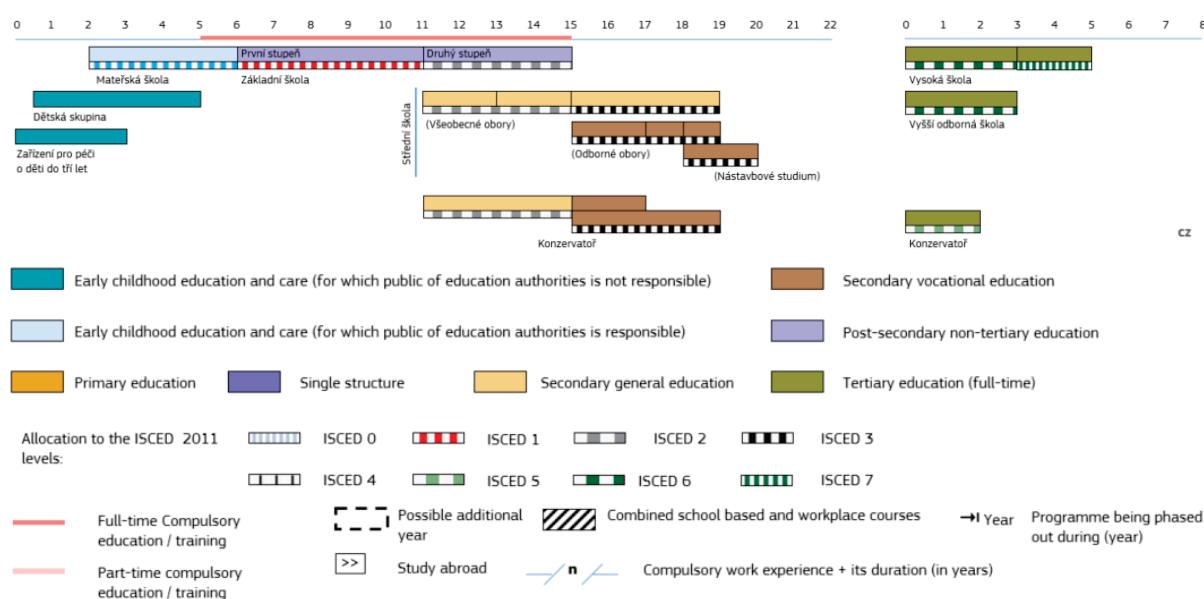
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Annex I: Key indicators sources

Indicator	Source
Participation in early childhood education	Eurostat (UOE), 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: Eurostat (LFS), edat_lfse_14 Data by country of birth: Eurostat (LFS), edat_lfse_02
Exposure of VET graduates to work based learning	Eurostat (LFS), edat_lfs_9919
Tertiary educational attainment	Main data: Eurostat (LFS), edat_lfse_03 Data by country of birth: Eurostat (LFS), edat_lfse_9912
Participation of adults in learning	Data for this EU-level target is not available. Data collection starts in 2022. Source: EU LFS.
Equity indicator	European Commission (Joint Research Centre) calculations based on OECD's PISA 2018 data
Upper secondary level attainment	Eurostat (LFS), edat_lfse_03
Public expenditure on education as a percentage of GDP	Eurostat (COFOG), gov_10a_exp
Public expenditure on education as a share of the total general government expenditure	Eurostat (COFOG), gov_10a_exp

Annex II: Structure of the education system



Source: European Commission/EACEA/Eurydice, 2022. The Structure of the European Education Systems 2022/2023: Schematic Diagrams. Eurydice Facts and Figures. Luxembourg: Publications Office of the European Union.

Please email any comments or questions to:
EAC-UNITE-A2@ec.europa.eu



Brussels, 18.11.2022
SWD(2022) 751 final

PART 5/28

COMMISSION STAFF WORKING DOCUMENT

Education and Training Monitor 2022

Accompanying the document

**Communication from the Commission to the European Parliament, the Council, the
European Economic and Social Committee and the Committee of the Regions**

on progress towards the achievement of the European Education Area

{COM(2022) 700 final} - {SWD(2022) 750 final}

Education and Training Monitor 2022

DENMARK



The Education and Training Monitor's country reports present and assess the main recent and ongoing policy development at all education levels in EU Member States. They provide the reader with more in-depth insight of the performance of countries with regard to the EU level targets agreed within the EEA. They are based on the most up-to-date quantitative and qualitative evidence available.

Section 1 presents a statistical overview of the main education and training indicators. Section 2 focuses on how the Member State has addressed or is addressing one of its education challenges. Section 3 covers early childhood education and care. Section 4 deals with school education policies. Section 5 covers vocational education and training and adult learning. Finally, Section 6 discusses measures in higher education.

The Education and Training Monitor's country reports were prepared by the European Commission's Directorate-General for Education, Youth, Sport and Culture (DG EAC), with contributions from the Directorate-General for Employment, Social Affairs and Inclusion (DG EMPL).

The document was completed on 30 September 2022
More background data at:
<https://op.europa.eu/webpub/eac/education-and-training-monitor-2022/en/>



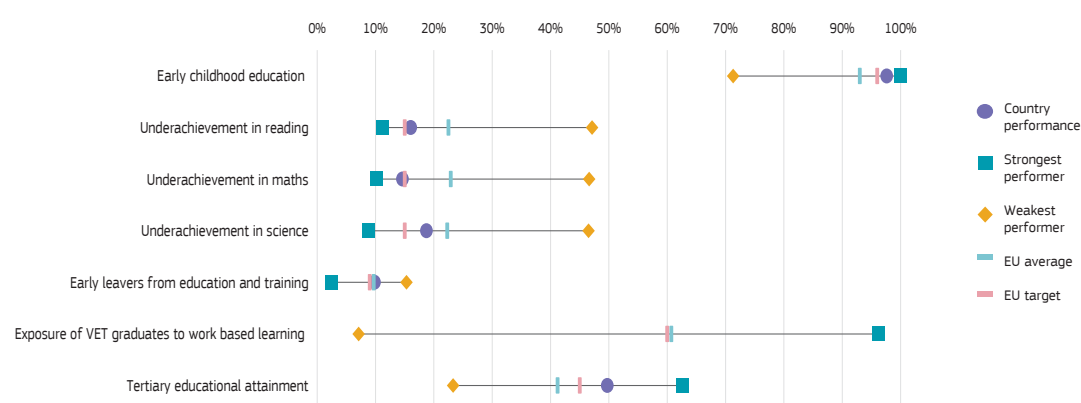
1. Key indicators

Figure 1: Key indicators overview

			Denmark		EU	
			2011	2021	2011	2021
EU-level targets			2030 target			
Participation in early childhood education (from age 3 to starting age of compulsory primary education)	≥ 96 %		97.6% ¹³	97.6% ²⁰	91.8% ¹³	93.0% ²⁰
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	16.0% ¹⁸	19.7% ⁰⁹	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	18.2% ⁰⁹	22.3% ¹⁸
Early leavers from education and training (age 18-24)	< 9 %		10.3%	9.8% ^b	13.2%	9.7% ^b
Exposure of VET graduates to work-based learning	≥ 60 % (2025)		:	: ^u	:	60.7%
Tertiary educational attainment (age 25-34)	≥ 45 %		38.6%	49.7% ^b	33.0%	41.2% ^b
Participation of adults in learning (age 25-64)	≥ 47 % (2025)		:	:	:	:
Other contextual indicators						
Equity indicator (percentage points)			:	12.2 ¹⁸	:	19.30 ¹⁸
Early leavers from education and training (age 18-24)	Native		10.0%	9.7% ^b	11.9%	8.5% ^b
	EU-born		: ^u	: ^{bu}	25.3%	21.4% ^b
	Non EU-born		15.1% ^u	13.9% ^{bu}	31.4%	21.6% ^b
Upper secondary level attainment (age 20-24, ISCED 3-8)			70.5%	75.4% ^b	79.6%	84.6% ^b
Tertiary educational attainment (age 25-34)	Native		39.7%	49.1% ^b	34.3%	42.1% ^b
	EU-born		46.0% ^u	60.6% ^b	28.8%	40.7% ^b
	Non EU-born		25.0% ^u	49.5% ^b	23.4%	34.7% ^b
Education investment	Public expenditure on education as a percentage of GDP		6.8%	6.4% ²⁰	4.9%	5.0% ²⁰
	Public expenditure on education as a share of the total general government expenditure		12.1%	11.9% ²⁰	10.0%	9.4% ²⁰

Sources: Eurostat (UOE, LFS, COFOG); OECD (PISA). Further information can be found in Annex I and at [Monitor Toolbox](#). 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; the equity indicator shows the gap in the share of underachievement in reading, mathematics and science (combined) among 15-year-olds between the lowest and highest quarters of socio-economic status; b = break in time series, u = low reliability, : = not available, 09 = 2009, 13 = 2013, 18 = 2018, 20 = 2020.

Figure 2: Position in relation to strongest and weakest performers



Source: DG Education, Youth, Sport and Culture, based on data from Eurostat (LFS 2021, UOE 2020) and OECD (PISA 2018).

2. A focus on teachers and educators

The increasing shortage of qualified teachers in Denmark risks undermining the quality of education.

Education outcomes are highly dependent on the availability of a well-trained and motivated teacher workforce. Danish research has demonstrated a positive correlation between teachers' subject knowledge and learning outcomes (VIVE, 2019). However, Denmark lacks qualified personnel in early childhood education and in primary and lower secondary schools ('Folkeskole'). It forecasts that it will need an additional 13 100 school teachers by 2030. (Danske Professionshøjskoler, 2021). Approximately one third of the currently employed educators in early childhood education and care (ECEC) lack teaching qualifications (EVA 2020) and only 10% of ECEC assistants have had training (EVA 2020). The situation is similarly worrying in primary and lower secondary schools in Denmark, where 16% of employed staff lack teacher training (EVA, 2021)¹.

Teacher training institutes fail to attract sufficient applicants; graduates increasingly leave the teaching profession.

Training programmes for qualified ECEC staff have fewer applicants than other professions. Salary prospects play a major role (Union of pedagogues for children and young people (BUPL), 2022a). Since 2013, the share of newly recruited teachers for primary and secondary schools leaving the profession has continuously increased, resulting in 5 500 fewer graduates remaining in primary and lower secondary schools (Folkeskole) in 2020 (Arbejderbevægelsens Erhvervsråd, 2021b). In 2020, an estimated 28 390 trained teachers worked outside Folkeskolen. Close to 40% worked in public administration and just over a third in

private primary schools. According to a recent survey², there might be potential to attract more students as about 10% of young people enter higher education initially consider studying education and choosing teaching as a career. However, many change their mind due to an insufficiently attractive image of the profession as well as the working conditions (Danmarks Evalueringsinstitut, 2022a). According to Eurydice, Danish teachers are – on average – more stressed than other teachers in the EU (53.5%, which is 6.7pps higher than the EU average)³. One out of three Danish teachers considers that the teaching job has a negative impact on mental and physical health (European Commission/EACEA/Eurydice, 2021).

The government supports lateral access routes and the professionalisation of ECEC teaching staff.

A new 2.5-year long programme, 'sporskiftemodel', offers training for applicants holding a tertiary degree to become ECEC educators. The programme is designed to facilitate career change; it is one year shorter than the regular training and participants can also work in ECEC while training (Uddannelses- og Forskningsministeriet, 2022). Minimum quality standards for ECEC have been agreed on (with effect from January 2024), combined with government support for continuous education of both pedagogical assistants and educators. To access funding, municipalities must present a plan for improvements. Since the funding will not be enough to cover all municipalities, those with the lowest education coverage will be given priority (Børne- og undervisningsministeriet, 2020a). Denmark is investing EUR 27 million (DKK 200 million) in a new research programme on pedagogical issues in ECEC (Uddannelses- og Forskningsministeriet, 2022b).

Denmark has yet to reach the objective of the Folkeskole reform to ensure a high share of qualified teachers in all subjects. In

¹ Another recent study estimates the share of untrained teachers at one in five. (Arbejderbevægelsens Erhvervsråd, 2021a). Overall, untrained staff tends to work fewer hours. Therefore the overall share of untrained teachers measured in full time equivalents fell to one in eight (DR, 2021), but remains significant.

² 24 422 students participated in the EVA survey.

³ Teachers in Europe: Careers, Development and Well-being, p. 142.

primary and lower secondary education, the aim of the 2014 Folkeskole reform was to improve the quality of education by ensuring that by 2020, 95% of lessons would be taught by teachers qualified in the subject they teach. The date has now been postponed to 2025, and the evaluation of the reform showed that key targets were not met. The government decided in May 2022 to release EUR 8.8 million (DKK 65 million) in 2022/23 to provide students with more teaching hours, guidance and feedback. In September 2022, a broad political agreement in the parliament agreed on a new teacher education programme providing EUR 16.8 million (DKK 125 million) in 2023 and EUR 26.9 million (DKK 200 million) a year from 2023 onwards.

Continued professional development could help securing quality teaching. There is no legal obligation for ECEC staff and teachers in Denmark to follow continued professional development (CPD) (European Commission, 2021). However, municipalities are responsible for schools and required to draw up education plans with each school. School heads must discuss training opportunities with each teacher (European Commission/EURYDICE/2021). A recent study has shown that ECEC staff would benefit especially from continuous professional development (DEA 2022a). However, the take-up of CPD continues to fall (DEA, 2022b) for a variety of reasons⁴. For instance, teachers' needs for upskilling compete with their need to train in digital or environmental sustainability skills. Denmark's new digital strategy is investing EUR 27 million (DKK 200 million) in developing teachers' digital skills, though the effectiveness of most recent training courses has not yet been evaluated.

3. Early childhood education and care

Denmark has a very high participation rate in early childhood education and care (ECEC),

especially for under children under 3. The share of children between 3 years and the age of compulsory education in ECEC was 97.6% in 2020, above the 96% EU-level target and 3.7 pps. above the EU average. The share of children below the age of 3 in ECEC has been constantly above 60% for the last five years and 67.7% in 2020, far above the EU longer term average of around 35%. In addition, in Denmark basically all children attend ECEC for 30 hours or more and only 2.1% attend ECEC for less. Denmark has therefore by far exceeded the 33% Barcelona target.

The government is taking measures to improve ECEC quality. According to a survey covering 80 municipalities, the share of vulnerable children in early childhood education is increasing (Danmarks Evalueringsinstitut, 2022b). The government has placed an increased emphasis on reforming ECEC to improve its quality and also to battle uneven service provision since 2021 (see European Commission, 2021). The quality of service provision is a precondition for ECEC having a preventive effect, especially for children from disadvantaged socio-economic backgrounds. Quality also plays an important role in the 2022 agreement between the government and the association of municipalities on the financing of municipalities (Altinget, 2022a). The Danish Centre for Social Science Research (VIVE) on behalf of the Ministry of Children and Education is currently running a survey on quality that should provide additional data to feed into the agreement in 2023 (VIVE, 2021). An evaluation in spring 2022 confirmed that the updated and modernised curriculum in ECEC is welcomed and widely used (Danmarks Evalueringsinstitut, 2022c).

Denmark focuses on including green education in early childhood education. In 2018, the new strengthened pedagogical curriculum for ECEC formally introduced environmental sustainability for the first time as a key concept linked to the traditional focus on nature. Education on sustainability for young children has concentrated on children's democratic participation, on enabling children to experience nature and on developing their knowledge of the environment.

⁴ <https://www.eva.dk/dagtilbud-boern/paedagogisk-personale-daginstitutioner-uddannelse>

COVID-19 had some negative impact on early childhood education and care. As of September 2021 restrictions for ECEC were lifted. During the height of the pandemic, in winter 2021/2022, there was nevertheless a high level of staff absenteeism due to illness, which had a partly negative impact on service quality. The government encouraged municipalities to adapt regulations (Altinget, 2022c) to local circumstances including allowing to temporarily close facilities in an emergency (Fagblade FOA, 2022).

4. School education

The rate of students leaving education and training early remains above the EU-level target and has even slightly increased. At 9.8% in 2021, early school leaving remained above the 9% EU-level target and increased by 0.5 pp. compared to the previous year. This is despite Denmark's comprehensive approach to prevent students leaving school early, under which parents are required to ensure that their children receive education (European Commission, 2019). The share of early leavers among foreign-born young people is only 1.4 pps. higher than of their Danish-born peers, which is the smallest difference in the EU. The rate is 11.6% for boys and 8.1% for girls. At 5.8%, Denmark has a higher share of early leavers who are employed than unemployed (4.0%). This effect is stronger for young men, who have a higher employment rate than young women⁵. Interestingly, the share of young women leaving school early to join the labour market doubled between 2015 and 2021 but it increased only about a third for men.

Pupils in Denmark have good average basic skills and the share of underachievers is low. The share of 15-year-olds that underachieve in basic skills, as measured in the OECD's Programme for International Student Assessment (PISA) 2018, is well below the EU average. It is above or close to the 15% EU benchmark

(mathematics 14.6%, reading 16.0% and science 18.7%). Since 2012, the share of underachievers remained broadly unchanged in all three tested competences. The share of top performers is close to the EU average and, while largely unchanged for mathematics and science (11.6% and 5.5% respectively), the rate almost doubled in the past decade for reading (now at 8.4%). Nevertheless, according to the 2020 final report, the Danish Folkeskolereform 2013 has not yet produced the desired results, neither in improving education outcomes nor well-being, both key goals of the reform (European Commission, 2021 and Vive 2020). The impact of students' socio-economic background on learning outcomes also remained unchanged.

There are clear differences in Denmark between advantaged and disadvantaged schools. The difference in class teaching time between advantaged and disadvantaged schools as well as between private and public schools is particularly stark in Denmark (OECD 2022a). According to the OECD, more teaching time can translate into higher student achievement; a large-scale experiment in 2016 also demonstrated this in Denmark (Andersen et al 2016). The quality of teachers is also not evenly distributed throughout the country. For instance, principals in urban areas are more likely to help students develop their learning than those in rural areas (OECD 2022a). Additionally, comprehensively educated teachers are more likely to be employed in private than in public schools, which is also not unusual for other countries (OECD 2022). According to the OECD PISA 2018 isolation index, Danish young people with a migrant background tend to be highly segregated in certain schools (OECD 2019, OECD 2022b)

Denmark is advanced on digitalisation and students have strong basic digital skills, but more progress is needed in certain areas. In 2021, 80% of 16-19 year-olds in Denmark considered themselves to have basic or above-basic digital skills, 11 pps. above the EU average, but 15 pps. behind the top performer, Finland. 69% of 16-74 year-olds have basic skills and 37% have above-basic digital skills (EU average

⁵ While the difference is 0.7 pp. on 3.7% unemployed women, it is 2.6 pps. on 4.4% unemployed men.

54%/26%) (DESI 2022⁶). Denmark's schools are very well equipped and connected⁷. This, together with digitally active teachers having already had experience with digital teaching and with established digital school platforms, enabled Denmark's school system to move relatively easily to distance and hybrid learning during the COVID-19 pandemic (see European Commission 2020 and 2021 reports). This high degree of preparation is the result of consecutive, comprehensive and inclusive digital strategies involving several stakeholders (including the education sector) and the wider society. Currently, under the Digital Denmark Strategy for 2022-2026, the country reserves EUR 28.4 million (DKK 210 million) for education with a focus on investing in technology for primary and lower secondary education (Børne- og Undervisningsministeriet, 2022). Denmark has adopted a framework for technology in primary schools with the aim of creating a more practice-based school and supporting the development of teaching methods and competences, plus other measures for primary and lower secondary schools.

Nevertheless, there are areas for improvement. Danish teachers in public schools report higher needs for ICT training and those who need more intensive training tend to be located more in rural areas than in cities (OECD 2022a). Almost 9 out of 10 Danish teachers show high self-efficacy in using ICT for teaching. Denmark scored very high in the 2018 ICILS⁸ survey comparison. However, 6 out of 10 students still reached only level 2 or lower. The sufficient training of teachers could therefore be a factor with regard to the share of students with low digital skills. It may also affect the scope to further increase students' high level digital competences and move from digital applications to creation.

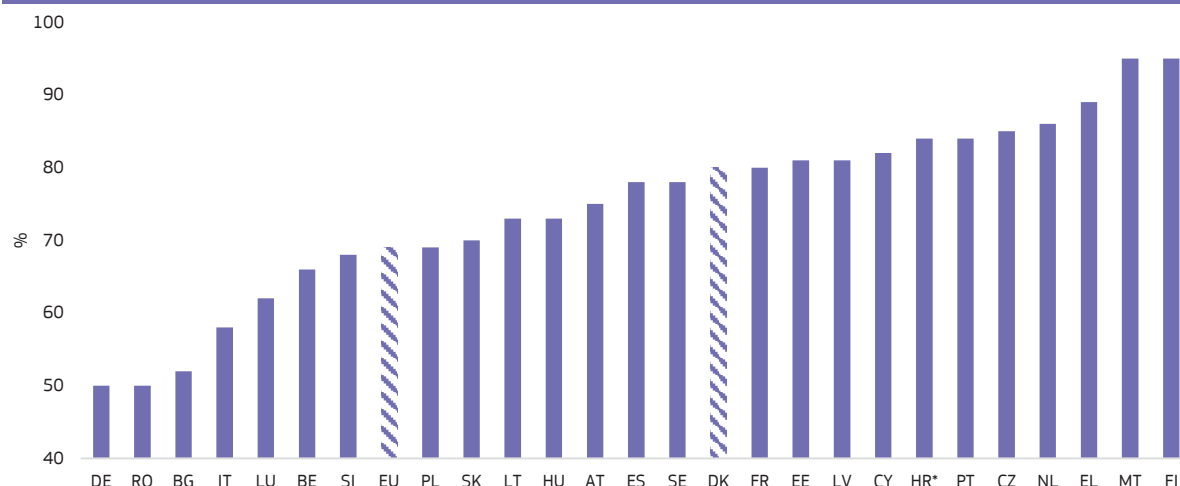
Denmark has a long-standing practice in green and sustainable education. Since the 1980s, the country has developed an interdisciplinary field for sustainable development primarily focusing on science and environmental pedagogy. However, integrating sustainability into education was more based on individual practice (including inclusion in curricula) than on national

⁶ <https://digital-strategy.ec.europa.eu/en/policies/desi-denmark>

⁷ EU Survey on ICT in schools 2020: primary schools 90%; lower secondary schools 90%; upper secondary schools 88% (EU average 35/52/72).

⁸ International Computer and Information Literacy Study (ICILS), <https://www.iea.nl/studies/iea/icils/2018>.

Figure 3: 16-19 year-olds with basic or above-basic overall digital skills, 2021 (%)



Source: DESI, [isoc_sk_dskl_I21. Note: * = Data with low reliability. Data for IE not available.

implementation strategies (European Commission, 2022). In the curriculum for primary and secondary education it is left to individual teachers to choose their learning material from the digital platform emu.DK⁹ and to interpret education for sustainability without clear national guidance. Many private organisations partially supplement teaching material with a more consistent vision. In 2013, the concept of sustainability was integrated into the initial bachelor programme of teachers, again without a very clear definition. It remains lacking in continued professional development.



Box 1: Merkantil dannelse i et STEM perspektiv
(‘Studying trade from a STEM perspective’ (ESF Project))

The aim of this project is both to increase the rate of completion of vocational training courses and – in the long term – to attract more young people to vocational training. Improving the transition after EUX studies¹⁰, when half of the students tend to drop out, is the main instrument for this. This should also help increase the number of skilled workers and ensure students develop a good mix of skills by supporting the work of Knowledge Centres and implementing and disseminating their information and policies.

In this context, the project develops new elective subjects for students to acquire STEM (science, technology, engineering and maths) competences and increase their competences in sustainability. It also increases the attractiveness of branding these type of training courses during the Danish Championship in Skills. It is based on close cooperation between businesses and schools and the effects are expected to last beyond the completion of the project. Between October 2019 and September 2022, the project involved 2 000 beneficiaries and produced good results by ensuring close

cooperation between businesses and schools.

Budget: EU EUR 1.2 million (total support: EUR 2.4 million)

<https://udviklingidanmark.erhvervsstyrelsen.dk/merkantil-dannelse-i-et-stem-perspektiv>

5. Vocational education and training and adult learning

The Danish labour market faces sector-specific supply and demand mismatches. Current policies have failed to attract enough vocational education and training (VET) students. In particular, there are mismatches between the high demand for skilled labour and the structural low supply of VET graduates, since VET programmes fail to attract sufficient numbers of young people¹¹. For several years, only around 20% of compulsory school graduates start a VET programme straight away, significantly below the government’s 2025 target of 30%. However, Denmark has very high share of the adult population in learning in a year, at 50% in 2016, already close to the 2030 target of 60%.

VET continues to be a high-priority issue in Denmark with implementation of reforms ongoing. With several measures and reforms from previous years ongoing, Denmark has created a national programme for choices in youth education to encourage more students to choose VET as their first choice. It is also investing in ten knowledge centres, a quality pool and a taximeter boost with more funding per student in vocational education. A further important strategic measure is the tripartite agreement to provide more apprenticeships and unequivocal responsibility from 2020, implementing several measures to increase the number of apprenticeships and provide all students with an apprenticeship.

⁹ <https://emu.dk/verdensmaal>

¹⁰ Special upper secondary course combining general upper secondary education and vocational education and training. In particular, this includes practical training in a company.

¹¹ In 2020, 38.2% of upper secondary pupils were in VET (below the EU average of 48.7%). Eurostat, educ_uoe_enrs05.

Denmark has supported the establishment of climate-related VET schools to increase the future supply of green skills.

The Danish Parliament passed the Danish Climate Act in 2020. Denmark's prospects of achieving its goal to become a climate-neutral society by 2050 depend to a large degree on having a sufficient number of skilled workers. This places VET at the core of the green and digital transitions. A new reform package for the Danish economy in early 2022 allocates EUR 13.4 (DKK 100) million annually for 2024-2029 and EUR 4 (DKK 30) million annually thereafter to climate-related schools. Though funding was already earmarked in 2021, implementing provisions were only agreed on in spring 2022, following applications from vocational schools and labour market training colleges. These green-skill schools should provide vocational education and training in sectors potentially contributing to the climate objectives by 2030. In the longer term, by 2050, this should also benefit the agricultural, transport, energy, construction, industrial and waste sectors.

The COVID-19 lockdown sped up the use of ICT-based education across age groups.

The lockdown seriously affected adult education and learning in Denmark, and caused a fall in enrolment, despite constructive government initiatives. It also increased awareness of and the skills needed to use digital tools in teaching and learning. Many providers of continuing education and training had to close schools physically and embarked massively on ICT-based education. All education sectors, including adult education, used existing digital tools and platforms. Adjusting exam regulations made online exams possible. Educational institutions and teachers developed digital practices by taking a bottom-up approach. Central authorities supported these dynamics by adjusting regulations and providing additional funding.

The government stepped up initiatives to support action to integrate adult migrants

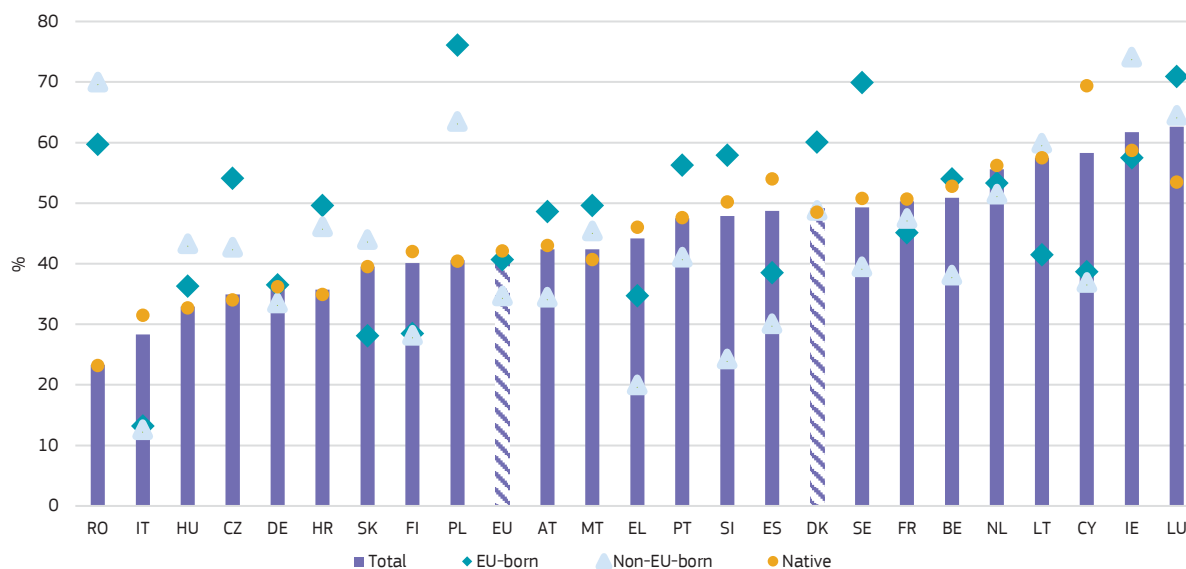
and refugees. It set up Preparatory Basic Education (FGU), which has increased the options for young adults (up to 25). Regional FGU schools include both general and vocational educational programmes. The government and social partners extended the agreement on basic education for integration in early 2022. This temporary two-year programme run by the Ministry of Employment targets immigrants with a Danish residence permit. It is based on a combination of paid internships and school-based teaching and has been extended to 2023. The Ukraine crisis has challenged Danish society to respond to a sudden arrival of a large number of refugees. The government has taken action to integrate the refugees in Danish society, the labour market and education. Swift policy responses are supporting this goal, such as providing access to adult education, the basic education for integration programme and assistance to companies and educational institutions and to quickly assess the qualifications of Ukrainian applicants. Denmark's student support is also available for Ukrainian refugees, including for higher education.

6. Higher education

Denmark's tertiary attainment rate is high and keeps rising but a wide gender gap remains.

Since 2012, tertiary attainment has increased by 9.5 pps. to reach 49.7% in 2021 (a 2.6 pps. hike since 2020), potentially also related to the pandemic. In 2021, 57.8% of women had a tertiary degree compared to only 40.6% of men, leading to a wide gender gap of 17.2 pps, 6.1 pps. wider than the EU average. Tertiary attainment in cities is nearly double the rate in rural areas at 62.6% vs 33.7%; both above the EU average and resulting in a wide urban-rural gap. In 2021, the share of Danish and non-EU-born students was practically identical at around 49%, however the share of 25-34 year-olds from other EU countries reached 60.6%; hinting at Denmark's attractiveness as a place to study and work (see chart).

Figure 4: Tertiary educational attainment rate for the age group 25-34 by country of birth (%), 2021



Source: Eurostat (LFS) [edat_lfse_9912] Note: Data for BG, EE, LV not available.

Since 2015, Denmark has improved its share of STEM graduates markedly, but it still lags behind the EU average.

In 2020, fewer students in Denmark graduated in STEM subjects with 23% 1.9 pps. fewer than the EU average. Nevertheless, the increase since 2015 is remarkable, when Denmark's share of STEM graduates among all graduates was the lowest in the EU. The share of women graduates among them, at 7.5%, was 2020 also 0.6pps below the EU average. Danish graduates' choice of studies is broadly in line with other EU countries. However, there are some important exceptions with fewer graduates in education (5.2%, EU 9.7%) and close to half in services (3.3%, EU 5%). More young people graduate in health and welfare (20.6%) and in ICT (5.4%) than in the EU on average..

Recommendations for a substantial reform of Higher Education have been presented.

In April 2022, after more than a year's work, the Reform Commission presented the first part of their recommendations (New Reform Roads 1). They include (1) making Master's programmes more flexible, for example allowing universities to shorten their duration in many areas; (2)

converting grants at Master's level into loans, with an increase in the available amount¹²; (3) investing in quality¹³; and (4) creating a new admission system to access tertiary education. The proposed recommendations also aim to improve the quality of teaching by increasing company-based teaching and strengthening competence development (Uddannelses- og Forskningsministeriet, 2022b).

Some study places will be reallocated outside the big cities.

Parliament decided to reallocate 6.4% of all study places from big cities to other parts of the country by 2030 to create better educational opportunities all over Denmark. (Uddannelses- og Forskningsministeriet, 2022c). The initial phase (2021-2028) will be funded with EUR 109 million (DKK 805 million) to be followed by permanent funding of EUR 56 million (DKK 413

¹² The current government is unlikely to follow this recommendation.

¹³ One year Master's programmes would receive relatively more funding than two-year programmes. A quality supervision process would be set up. External funding could support the development of teaching and enterprises, and the public administration should be involved in developing new university courses.

million), which will mainly go on increasing (by 107%) the support provided per student (Uddannelses- og Forskningsministeriet, 2022a).

Fewer applicants apply for higher education.

60 034 students enrolled in 2022, about 10% less compared to pre-pandemic 2019. The drop was even more important for educators in early childhood education and school teachers. These student numbers contrast to elevated numbers during the COVID-19 pandemic. In 2022, about 7 500 qualified applicants were rejected in the admission procedure and about 8 500 candidates did not meet the entry requirements. Various reasons are identified for the decrease in enrolment. Future students might delay entering into higher education and work first or enjoy the habitual Danish 'gap year'. Other students might already be in higher education as they advanced the beginning of their studies during the pandemic. The Danish Agency for Higher Education and Science is offering targeted support to rejected qualified applicants. About a third of the drop in student figures is attributed to the fact that 56 English-language programmes are not admitting students in 2022¹⁴. This results from the government decision from June 2021 to reduce the number of English-language higher education programmes and places. Denmark has provided grants to foreign students, but many have not integrated into the Danish labour market upon graduation. (Uddannelses- og Forskningsministeriet, 2022d).

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¹⁴ <https://ufm.dk/uddannelse/statistik-og-analyser/sogning-og-optag-pa-videregaende-uddannelser/2022/notat-1-overblik.pdf>

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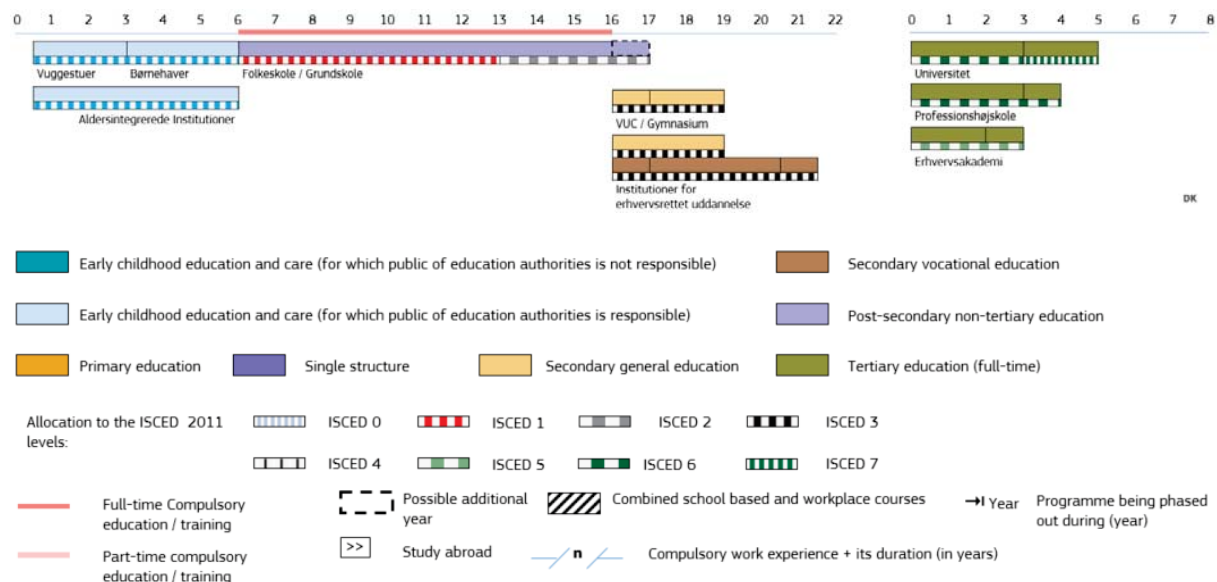
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Annex I: Key indicators sources

Indicator	Source
Participation in early childhood education	Eurostat (UOE), 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: Eurostat (LFS), edat_lfse_14 Data by country of birth: Eurostat (LFS), edat_lfse_02
Exposure of VET graduates to work based learning	Eurostat (LFS), edat_lfs_9919
Tertiary educational attainment	Main data: Eurostat (LFS), edat_lfse_03 Data by country of birth: Eurostat (LFS), edat_lfse_9912
Participation of adults in learning	Data for this EU-level target is not available. Data collection starts in 2022. Source: EU LFS.
Equity indicator	European Commission (Joint Research Centre) calculations based on OECD's PISA 2018 data
Upper secondary level attainment	Eurostat (LFS), edat_lfse_03
Public expenditure on education as a percentage of GDP	Eurostat (COFOG), gov_10a_exp
Public expenditure on education as a share of the total general government expenditure	Eurostat (COFOG), gov_10a_exp

Annex II: Structure of the education system



Source: European Commission/EACEA/Eurydice, 2022. The Structure of the European Education Systems 2022/2023: Schematic Diagrams. Eurydice Facts and Figures. Luxembourg: Publications Office of the European Union.

Please email any comments or questions to:
EAC-UNITE-A2@ec.europa.eu



EUROPEAN
COMMISSION

Brussels, 18.11.2022
SWD(2022) 751 final

PART 6/28

COMMISSION STAFF WORKING DOCUMENT

Education and Training Monitor 2022

Accompanying the document

**Communication from the Commission to the European Parliament, the Council, the
European Economic and Social Committee and the Committee of the Regions**

on progress towards the achievement of the European Education Area

{COM(2022) 700 final} - {SWD(2022) 750 final}



EUROPEAN
COMMISSION

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[...] (2021) XXX draft

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Education and Training Monitor 2022

GERMANY



The Education and Training Monitor's country reports present and assess the main recent and ongoing policy development at all education levels in EU Member States. They provide the reader with more in-depth insight of the performance of countries with regard to the EU level targets agreed within the EEA. They are based on the most up-to-date quantitative and qualitative evidence available.

Section 1 presents a statistical overview of the main education and training indicators. Section 2 focuses on how the Member State has addressed or is addressing one of its education challenges. Section 3 covers early childhood education and care. Section 4 deals with school education policies. Section 5 covers vocational education and training and adult learning. Finally, Section 6 discusses measures in higher education.

The Education and Training Monitor's country reports were prepared by the European Commission's Directorate-General for Education, Youth, Sport and Culture (DG EAC), with contributions from the Directorate-General for Employment, Social Affairs and Inclusion (DG EMPL).

The document was completed on 30 September 2022
More background data at:
<https://op.europa.eu/webpub/eac/education-and-training-monitor-2022/en/>



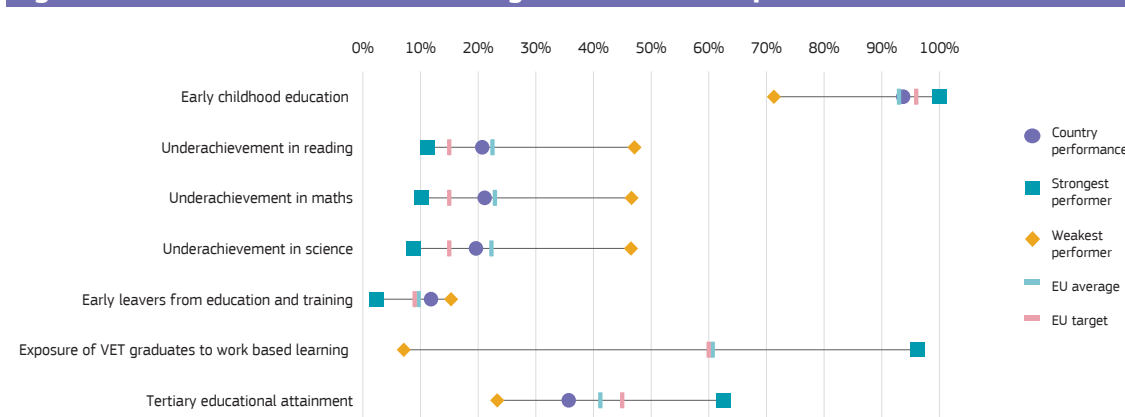
1. Key indicators

Figure 1: Key indicators overview

			Germany		EU	
			2011	2021	2011	2021
EU-level targets			2030 target			
Participation in early childhood education (from age 3 to starting age of compulsory primary education)		≥ 96 %	95.8% ^{13,d}	93.7% ²⁰	91.8% ¹³	93.0% ²⁰
Low achieving eighth-graders in digital skills		< 15%	29.2% ^{13,t}	33.2% ¹⁸	:	:
Low achieving 15-year-olds in:	Reading	< 15%	18.5% ⁰⁹	20.7% ¹⁸	19.7% ⁰⁹	22.5% ¹⁸
	Maths	< 15%	18.6% ⁰⁹	21.1% ¹⁸	22.7% ⁰⁹	22.9% ¹⁸
	Science	< 15%	14.8% ⁰⁹	19.6% ¹⁸	18.2% ⁰⁹	22.3% ¹⁸
Early leavers from education and training (age 18-24)		< 9 %	11.6%	11.8% ^b	13.2%	9.7% ^b
Exposure of VET graduates to work-based learning		≥ 60 % (2025)	:	96.2% ^u	:	60.7%
Tertiary educational attainment (age 25-34)		≥ 45 %	27.6%	35.7% ^b	33.0%	41.2% ^b
Participation of adults in learning (age 25-64)		≥ 47 % (2025)	:	:	:	:
Other contextual indicators						
Equity indicator (percentage points)			:	20.1 ¹⁸	:	19.30 ¹⁸
Early leavers from education and training (age 18-24)	Native		10.3%	9.2% ^b	11.9%	8.5% ^b
	EU-born		:	31.6% ^b	25.3%	21.4% ^b
	Non EU-born		:	27.6% ^b	31.4%	21.6% ^b
Upper secondary level attainment (age 20-24, ISCED 3-8)			75.5%	77.1% ^b	79.6%	84.6% ^b
Tertiary educational attainment (age 25-34)	Native		28.6%	36.2% ^b	34.3%	42.1% ^b
	EU-born		:	36.5% ^b	28.8%	40.7% ^b
	Non EU-born		:	33.5% ^b	23.4%	34.7% ^b
Education investment	Public expenditure on education as a percentage of GDP		4.3%	4.7% ^{20,p}	4.9%	5.0% ²⁰
	Public expenditure on education as a share of the total general government expenditure		9.5%	9.2% ^{20,p}	10.0%	9.4% ²⁰

Sources: Eurostat (UOE, LFS, COFOG); OECD (PISA). Further information can be found in Annex I and at [Monitor Toolbox](#). 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; the equity indicator shows the gap in the share of underachievement in reading, mathematics and science (combined) among 15-year-olds between the lowest and highest quarters of socio-economic status; b = break in time series, p = provisional, u = low reliability, : = not available, 09 = 2009, 13 = 2013, 18 = 2018, 20 = 2020.

Figure 2: Position in relation to strongest and weakest performers



Source: DG Education, Youth, Sport and Culture, based on data from Eurostat (LFS 2021, UOE 2020) and OECD (PISA 2018).

2. A focus on equity in education

Educational outcomes and choices remain heavily influenced by socio-economic and migrant background. This finding has not significantly changed during the last two decades. The German education report 2022¹ identifies three different socio-economic risk factors for educational success: low-skilled parents, unemployment and family poverty². Among children without migration background, 16% are affected by at least one risk factor and 1% by all three. For children with a migrant background, this multiplies to 48% and 8% respectively³. Over 40% of children under 6 had a migrant background in 2020 (Autor:innengruppe Bildungsberichterstattung, 2022). According to a recent study, the performance of pupils at the end of the fourth grade in reading and mathematics has continued to fall in recent years, and the link between performance and socio-economic background has become stronger (Stanat, 2022).

Reducing educational inequality remains a key challenge. Although the education system allows students to pass between the different educational tracks and access higher education without an *Abitur* (school-leaving exam), these possibilities are still underutilised (Autor:innengruppe Bildungsberichterstattung, 2022). During the last decade, German *Laender* (federal states) have reformed the number of tracks in secondary education, mostly reducing them to two, with one geared towards an academic pathway and the other towards vocational education. Young people from

disadvantaged backgrounds choose academic education pathways far less often than their more advantaged peers. Only 13.9% of the most disadvantaged pupils expect to complete tertiary education – the lowest value in the EU – while in the EU average is 43.4% (OECD (2019 Vol II)⁴. This is partially linked to an accumulated performance gap of up to 1 year of learning already during primary school, less self-confidence and self-limiting aspirations both of disadvantaged young people and their parents (Autor:innengruppe Bildungsberichterstattung, 2022 and OECD 2019 Vol II).

Early childhood education and care (ECEC) cannot fully mobilise the potential of children due to low participation, a shortage of places and quality issues. High-quality ECEC might be the most important phase in education, offering children from a disadvantaged background a good start⁵. The participation rate of under 3-year-olds has remained around 30% over the last 5 years, with disadvantaged children participating 4.3 percentage points (pps) less often⁶. According to the Education Report 2022, the participation gap for those under 3 between low and high social economic status amounts to 20 pps, and between those with and without a migrant background to 12 pps; for 3- to 6-year-olds, this was 16 pps and 11 pps respectively. Despite federal support to expand the ECEC offer and improve quality (Good ECEC Act / Gute-KiTa-Gesetz) the staff/children ratio improved only slightly and staff education levels remained broadly unchanged. Staff ratios They are much more favourable in the west of the country compared to the east (Education Report 2022). According to a recent study among 1 000 ECEC

¹ The German education report, published every 2 years, is a key scientific reference for education in Germany. (Autor:innengruppe Bildungsberichterstattung, 2022)

² Around 12% of all children have low-qualified parents; 9% and 20% are affected respectively by unemployment and poverty. The risk of poverty increases proportionally with the number of children per household: one child: 34%, two 41%, three and more 59%.

³ 61% of children with parents born abroad face at least one risk level, and 33% have low-qualified parents.

⁴ The difference remains significant even when accounting for differences between education systems.

⁵ Council Recommendation of 22 May 2019 on High-Quality Early Childhood Education and Care Systems <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32019H0605%2801%29>

⁶ Children at risk of poverty or social exclusion attended ECEC much less in 2019 – 26% compared to 32% of children at no risk – and in 2020 13.1% compared to 17.1%. This includes children with a migrant background.

Figure 3: Isolation index of disadvantaged students and low-achieving students, PISA 2018



Source: OECD PISA 2018. Note: The left axis indicates isolation by socio-economic status, and the right axis indicates isolation by performance in reading. The isolation index measures whether students of a certain type (here disadvantaged students and low-achieving students) are more concentrated in some schools. The index is related to the likelihood of a representative of this type to be enrolled in schools that enrol students of another type. It ranges from 0 to 1, with 0 meaning no segregation and 1 full segregation. OECD, PISA 2018, Vol. II.

institutions, 80% of respondents considered ECEC places in large towns and cities inadequate; over 50% cited a lack of skilled staff to be able to fully use existing capacities, and 60% found that staff/children ratios were insufficient (Der Paritätische, 2022).

Language proficiency is an important prerequisite for succeeding in school.

According to PISA 2018, the difference in language proficiency between immigrant students who speak German or another language at home was 70 points, more than double the EU average (30.4) and equivalent to almost 2 years of schooling. Children who do not speak German at home (68% of all children with a migrant background) could benefit most from ECEC. The share of 3- to 6-year-olds who do not speak German at home and attend ECEC has improved by 5 pps since 2008, rising to 21% in 2021. Nevertheless, the share of children with a migrant background who attend ECEC continues to lag behind. All 16 *Laender* use their own methods to identify language skills; they increasingly move to

language support that is integrated into the daily routine of the institution instead of being supplementary. The German vocabulary of children from an advantaged background remains richer during their lifetime compared to the vocabulary of disadvantaged ones⁷. The younger a child starts ECEC, the more progress it can achieve in language development, especially in terms of vocabulary. Pisa 2018 clearly shows that students with weak performance in reading remain highly concentrated in certain schools and that this concentration is also linked to the socio-economic status of their parents (Figure 3). This further limits the likelihood of them improving their language skills.

All-day schooling could offer chances in primary education. In primary education, there is an increasing trend towards private education as well as the risk of segregation. Pupils make the

⁷ Autor :innengruppe Bildungsberichterstattung 2022

most progress in languages and mathematics during primary school (Autor:innengruppe Bildungsberichterstattung, 2022). The right to a place in an all-day primary school as of 2026/27 could provide more equal opportunities as these schools are designed to provide the same support to each child, irrespective of their background.

The full integration of pupils with special needs in general education is progressing slowly, with clear differences by Land. In 2020, 44% of students with special needs were integrated in mainstream schools, which is around twice the figure for 2010. Their share differs by Land. The preference for inclusive schooling is provided by law in more than half of the Laender, under the condition of available financial and spacial capacities. However, financial and space constraints seem to exist in schools. The Laender also differ in terms of the additional financial and special teaching support provided. Only Saarland does this systematically (Education Report, 2022).

3. Early childhood education and care

Germany's increase in places is outstripped by demand. In 2020, 93.7% of children between 3 and school age attended ECEC – around the EU average (93%), but still below the EU-level target of 96%⁸. Participation of children under 3 has increased over time, levelling during the last 7 years around 30%, still below the Barcelona target of 33%. Around two-thirds attend ECEC for 30 hours or more a week, which is still well below the EU average. In 2021, Germany had 3.8 million approved ECEC places – 84 000 more compared to the previous year. The rate of expansion and demand differs by Laender. Since 2013, all children under 3 have the legal right to a place in ECEC. However, in 2021 available places were still 13 pps behind the identified needs in the west of the country (44%) and 31% in the east. The Education Report 2022 therefore expects this legal obligation to be met only in 2025 in the east

and in 2028 in the west. Between 244 000 and 310 000 additional places for under 3-year-olds and between 158 000 and 272 000 places for 3- to 6-year-olds are needed by 2030⁹.

Issues with service quality remain. Germany has taken significant measures to improve the quality of services. Federal investments of EUR 5.5 billion were made available to the Laender between 2019 and 2022 (Gute KiTa Gesetz). According to the annual monitoring report, some progress has been made notably in several quality areas including on staffing ratios and managerial framework conditions (BMFSFJ 2021). However, a recent study involving over 4 800 ECEC managers identified a decrease in the quality and quantity of available staff compared to the previous year. According to the study, at least 57% of the managers of institutions polled for the under 3 age group and at least 75% of those for the 3-6 age group considered staff/child ratios to be below scientifically recommended levels. Over half of the managers indicated that they would operate with less staff than required (in terms of supervision) for more than a fifth of the time, with 16% of them operating with less staff for more than three-fifths of the time (DLKLK, 2022).

Lack of qualified staff remains an issue, and has been made worse by the recent pandemic. In 2021, 675 000 people (540 000 full-time equivalents) worked in formal ECEC, excluding childcare provided e.g. by childminders. Of these, 68% were trained in general vocational schools (*Fachschulen*), 14% in specialist vocational schools (*Berufsfachschulen*) and 6% obtained higher education degrees. These shares remained relatively stable between 2011 and 2021, with a positive increase in academic qualification. An acute shortage of staff triggered broader enlarging access to ECEC professions. This trend was at least temporarily strengthened during the COVID-19 pandemic (Autor:innengruppe Bildungsberichterstattung, 2022). While the Bertelsmann Stiftung (2022) identifies the need

⁸ Eurostat, educ_uoe_enra21.

⁹ Kinderbetreuung kompakt 2021

for more than 100 000 additional staff up to 2030 “Fachkräftebarometer Frühe Bildung 2021” identified a need between 70 000 and 150 000.

COVID-19 showed the overall resilience of the ECEC system, but at the expense of staff. Studies underlined the crucial role of ECEC in limiting negative effects on children, families and communities. Children from a disadvantaged background were given priority access to ECEC services during all phases of the pandemic. Germany’s integrated ECEC systems appeared to be more resilient as they could also rely on well-established trans-institutional cooperation (and established monitoring procedures through self-assessment at local level) (European Commission 2021b). While closures and reopening increased the stress levels of staff and management, the pandemic only caused a structural absence of up to 10% of staff (DKLK 2022, Deutsches Jugendinstitut 2022).

4. School education

Germany’s rate of early leaving from education and training is stagnating, with socio-economic and migrant background having a distinct negative impact. Germany’s rate has remained around 10% since 2012, while in the EU it declined from well above 10% to below 10%. After methodological adjustments in 2021, it was 11.8%, 2.1 pps above the EU average and still a long way from the 9% EU-level target. The gender gap tripled to 3.6 pps from 2012 to 2021. At 26.3%, young people with low-educated parents leave seven times more often than their peers with highly educated parents (3.7%). This is close to the EU average (26.1%) Boys from a disadvantaged background (29.6%) leave a third more often than girls (22.8%)¹⁰. Young people with a migrant background leave education and training more than three times more often than their native-born peers, with a negative trend to the fore.

¹⁰ LFS ad hoc module.

Performance in basic skills is above the EU average, but has weakened over time. Overall, performance in 2018 PISA is above the EU average, particularly in science (OECD, 2019 Vol. I). In 2018, Germany had more top achievers in science (10%, +3.7 pps), reading (11.3%, +2.8 pps) and mathematics (13.3%, +2.3 pps) than the EU average. The share of low achievers remained below the EU average in 2018 in all three areas tested and is also already below the EU-level target (15%). While the competences of German pupils have remained relatively stable compared with 2015, they have weakened significantly compared to 2011¹¹ (European Commission, 2021a). National testing (Stanat, P. et al (2022).) shows that fourth grade (10 year old) pupils’ skills in the German language and mathematics continue to decline. Testing started in 2011 at five-year intervals, with an even larger loss recorded over the last 5 years in reading This translates to a learning loss of one-third of a school year in reading and one-fourth in mathematics (IQB, 2022). In addition, international testing confirms a growing disadvantage for young people from weak socio-economic and migrant backgrounds (see Section 2).



Box 1: Team teaching

The aim of this European Social Fund project was to compensate for social disadvantages. Individual and group work can enrich everyday school life with elements of social learning. Students experience opportunities for equal participation in the classroom. Running from 2015 to 2022 with a budget of EUR 8.2 million, the project reached 17 schools and 5 000 students in 2020.

The project combines competence development with socio-educational support for students. A social emotional learning specialist accompanies a class throughout the entire

¹¹ Schwippert et al, (2020), p. 84.

teaching day (lessons and breaks) and works together with various teachers. This provides the specialists with a deep insight into the socio-educational challenges of a class and enables them to react promptly. Recognising emerging conflicts and classroom disruptions means they are reduced and resolved more quickly. In addition, the teachers become more confident and receive additional support, which improves their job satisfaction and health.

<https://www.teamteaching.de>

Education for sustainable development is well established. Education for sustainable development has been part of education for more than three decades¹², and was reinforced during the UN Decade for Sustainability and related UNESCO action¹³. Sustainability has become part of the training for ECEC staff and teachers. The sustainability competence is being built up, starting in ECEC as a cross-sectional issue¹⁴. The interim report on education for sustainability from 2019 observes that, despite differences between the Laender, sustainability has been structurally introduced in all schools. It is also supported by additional individual activities that implement the UNESCO Global Action Programme on Sustainable Development. In all Laender, curricula contain sustainability and global warming mostly linked to other subjects. However, they do not yet follow a uniform concept. The same goes for teacher training.

German students grasp the concept of sustainability well, but hesitate to put it into practice, while those from disadvantaged backgrounds do significantly worse. According to PISA 2018, 20% of 15-year-olds are 'advanced all-rounders', i.e. they score the highest in the four environmental sustainability competence areas.

This puts Germany in a leading position in the EU, above the EU average of 13%. However, looking at sustainability values reveals a slightly differentiated picture, putting German students far below the average on actually caring about the environment or doing something like actively saving energy. Young people from disadvantaged backgrounds do significantly worse in both OECD 2022 studies on sustainability, indicating that German initial education fails to equip many of them with the core competences. One of the activities to improve learning on sustainability is the 'National Award – Education for Sustainable Development'. This recognises innovative learning and teaching opportunities, and is awarded three times a year¹⁵.

Germany is strengthening its strategic orientation towards digitalisation of education and increasing related federal investments. German education ministers updated their 2016 'Education in a digital world' strategy with additional recommendations on 'teaching and learning in a digital world' at the end of 2021¹⁶. The document builds on experience from the pandemic and underlines the importance of teaching quality and school development when implementing new technologies. The Digital Pact for Schools comprises EUR 6.5 billion federal support to a programme to digitise schools. More than half of the original EUR 5 billion had been spent by the end of 2021 as envisaged. EUR 1.5 billion has been added due to the pandemic, with one-third each earmarked to support IT administrators in schools and to provide laptops to students as well as to teachers. The latter was also financed by the Recovery and Resilience Facility in addition to a unique meta platform on digital learning that encompasses existing platforms in Germany.

¹² Compare decisions by the Standing Conference of the Ministers of Education and Cultural Affairs (Kultusministerkonferenz / KMK) as early as 1980 on environment and teaching.

¹³ Final report

¹⁴ Rahmenlehrplan

¹⁵ <https://www.bmbf.de/bmbf/shareddocs/pressemitteilungen/de/2022/03/300322-BNE-Preise.html>

¹⁶ https://www.kmk.org/fileadmin/veroeffentlichungen_beschluesse/2021/2021_12_09-Lehren-und-Lernen-Digi.pdf

Attracting, training and recruiting enough teachers will be a challenge in the coming years.

Several factors such as more pupils, expanding all day school places as well as replacing retiring teachers could cause even more teacher shortages, to varying degrees depending on the *Laender* and school level. Around two-fifths of German teachers in primary and secondary education (ISCED 1-3) are 55 or older¹⁷. The latest forecast up to 2035 puts the annual need for new teachers in general and in professional education at 34 100 individuals (Autor:innengruppe Bildungsberichterstattung, 2022). After recruiting all recent graduates from teacher training, 1 600 posts a year will remain unfilled, creating a cumulative gap of 23 500. Since KMK figures do not yet take into account additional staffing requirements caused by Russia's aggression against Ukraine and all additional needs arising from all-day school and inclusion, the real gap might even be higher (Autor:innengruppe Bildungsberichterstattung, 2022). While upper secondary education could face an oversupply after 2025, other levels of education face a serious undersupply. Lower secondary schools are expected to be able to recruit only 72% of the required staff. This could compound existing teacher shortages, predominantly in science, technology, engineering and mathematics (STEM) subjects (Autor:innengruppe Bildungsberichterstattung, 2022). Even if salaries are favourable compared to other countries worldwide, it could still be a challenge to get enough young people to opt for a teaching career, which is generally not considered attractive.

Continued professional development becomes more important as more teachers have no pedagogical training.

The share of teachers being lateral entrants (*Seiteneinsteiger*) and are recruited each year has more than doubled from 4% in 2015 to 10% in 2020. The share of lateral entrants varied widely by *Laender* in 2021/22. Berlin continuing to lead the way by taking on 60% of all newly recruited teachers as lateral entrants, while Bavaria with close to zero

lateral entrants¹⁸. This poses challenges on how to integrate these teachers, who often lack a regular teaching degree, and to ensure adequate in-service training. Procedures and approaches differ by *Laender* and often have an ad hoc character. Strong continued professional development is a precondition to ensure the quality of teaching and keep teachers up to date on evolving concepts of competences, for instance on digital pedagogy (study and use of digital technologies in teaching and learning).

5. Vocational education and training and adult learning

Demand for skilled workers remains widespread, and vocational education and training (VET) has a key role in this regard.

Nearly half of upper secondary pupils are enrolled in VET programmes¹⁹ (48.8% in 2020, similar to the EU average), and VET graduates have excellent employment prospects (91.6% employed in 2021, compared to 76.4% across the EU). Both the federal government and *Laender* support stakeholders in increasing the supply and quality of VET, as well as strengthening reskilling and upskilling. The lack of qualified staff continues to be the main factor hampering innovation and digitalisation among small businesses. Problems in finding skilled staff also affect education in the school-based vocational training system, which now trains people mainly in health, education and social occupations (85%). Even if education and healthcare occupations have increased by 16% and 14% respectively since 2012, the National Education Report states that this increase still falls far short of the growing demand for skilled workers in these fields.

Germany has launched funding opportunities to incentivise training activities. With the

¹⁷ Eurostat, educ_uae_perp01.

¹⁸ <https://deutsches-schulportal.de/bildungswesen/quereinstieg-ins-lehramt-von-der-notmassnahme-zur-normalitaet/>

¹⁹ Eurostat, educ_uae_enrs05.

Excellence Initiative for Vocational Education and Training, the Federal aims to provide the necessary boost in attractiveness and modernity in initial, continuing and further training. Hereby, the Excellence Initiative does not only focus on promoting excellent minds and a more international orientation of vocational education and training, but also promotes excellent and innovative vocational training programs in equal measure. In January 2019, the BMBF launched the competition "Shaping the future - innovations for excellent vocational education and training" (InnoVET) to increase the attractiveness, quality and equivalence of VET through innovation and excellence, with a focus on higher VET. 17 so called innovation clusters are funded (2020-2024) in which regional and sector-specific stakeholders develop and test innovative initial and continuing training programmes. The Work of Tomorrow Act, in response to structural change, expanded the Federal Employment Agency's funding to increase the employability of the active workforce during the digital transformation. For adults pursuing their first vocational qualification, the law created the right to financial support under specific conditions.

The participation rate in adult education increased slightly. The rate went up to 7.7% in 2021, but remains significantly lower than the EU average of 10.8% (participation in the last 4 weeks). The education and labour market policy has been focusing on adult learning in recent years, especially during the pandemic. This – at least temporarily – severely restricted the range of continuing education on offer (Autor:innengruppe Bildungsberichterstattung, 2022). In particular, adult education centres, which rely more on face-to-face events, were only able to implement a small part of their planned events. Participation in continuing education remained at a high level overall (57% for 18- to 69-year-olds). Repeated lockdowns made the population learn in a more self-organised way. A record of just over two-thirds of 18- to 69-year-olds have therefore learned informally. For 2030, Germany has set itself the target of 65% of adults in training every year, a massive improvement from 46% in 2016.

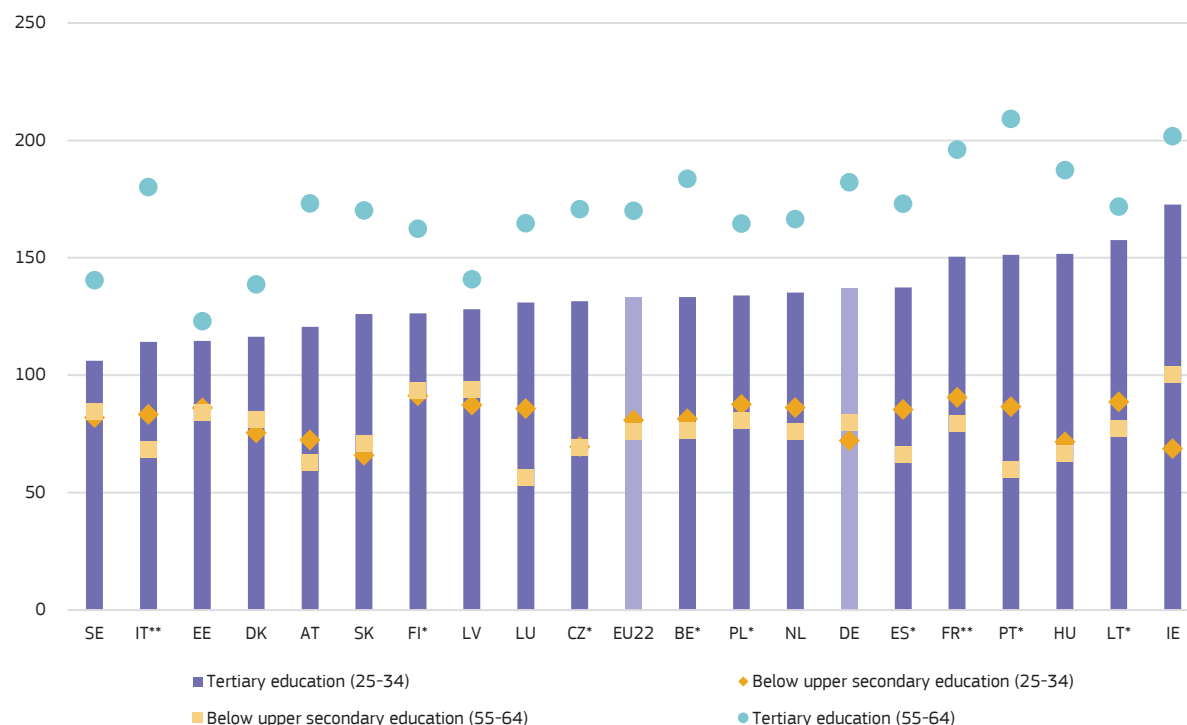
Germany has been promoting the digital transformation of vocational training. In April 2020, the Federal Ministry of Education and Research launched the innovation competition INVITE (Digital Platform for Continuing Vocational Education and Training). The framework promotes innovative digital access, with AI-supported processes preferred so that the general public can easily and quickly track the continuing education offer. Within the framework of INVITE ToolChecks, the broad public is invited to try out the INVITE prototypes and at the same time provide their feedback for a user-oriented further development of the prototypes.

6. Higher education

Tertiary education attainment is increasing, but remains low. Tertiary education attainment continues to increase but, at 35.7%, lags far behind the 45% EU-level target and the 41.2% EU average. This is also due to a very strong VET sector. Foreign-born young people have a tertiary education attainment rate of 34.3%, only 1.9 pps below the native-born, a minimal difference compared to other EU Member States. While the gap between rural areas and cities increased after 2010 (to -15.8pps), it started to decrease to 14.6 pps in 2021. Berlin remains the Land with the highest tertiary attainment (51.1% in 2021), Sachsen-Anhalt still lags behind at 23.5% – the lowest level in 2021. Nearly as many men as women study, with a gender gap of only 3.8 pps – this is much higher in most other EU countries

Enrolment numbers have stagnated after a period of continuous growth. In 2020, 761 219 academic students were newly enrolled at ISCED level 6 or 7, 8.2% less than in 2019. While 29% of men choose STEM subjects at Bachelor's level, only 9% of women do so. The share at Master's level is 24% and 12% respectively, an imbalance also identified by OECD (2021). In 2020, the share of new students has not much improved; This indicates that promoting STEM studies is not yet

Figure 4: Relative earnings by educational attainment, 2019



Source: OECD, EAG 2021. Note: ISCED 3= 100; data for EL and SI not available; **= 2017, *=2018

fully successful. OECD (2021) compares earnings in different age brackets. Compared to the EU, starting salaries for non-tertiary professional qualifications are low in Germany, but increase during one's career. German academic degrees guarantee already from the beginning a modest premium, but with a more significant increase over time. As a result, 25- to 34-year-olds with tertiary education have a clear earnings premium of 37% (+4 pps compared to the EU average) compared to their peers with upper secondary education. During one's career, it increases to 82% for 55- to 64-year-olds compared to 70% in the EU (Figure 4).

More and more students combine work and study, and enter higher education via alternative pathways. The trend towards dual studies – combining higher education with in-company training – increased fourfold between 2004 and 2019 (CHE 2022a). The number of entrants to higher education without an *Abitur*, the school-leaving exam granting access to higher education (CHE 2022b), also increased. Both pathways are still fairly negligible, with a 4.2%

share of dual students and a 2.2% of students without an *Abitur*. However, they both seem to indicate a trend towards more varied educational pathways.

Germany aims to increase participation in tertiary education by offering more support to students. The government is taking steps to increase student numbers by planning to revamp student support. As a first step, the federal grants and loans system (BAföG) has been overhauled by increasing its scope, expanding needs rates significantly and raising the age limit from 30-35 years²⁰ to 45. In addition, the possibility of residual debt relief after 20 years is being expanded (BMBF 2022b). In response to the pandemic, an emergency aid instrument is currently being devised.

²⁰ Maximum age for starting a Master's degree was 35 years.

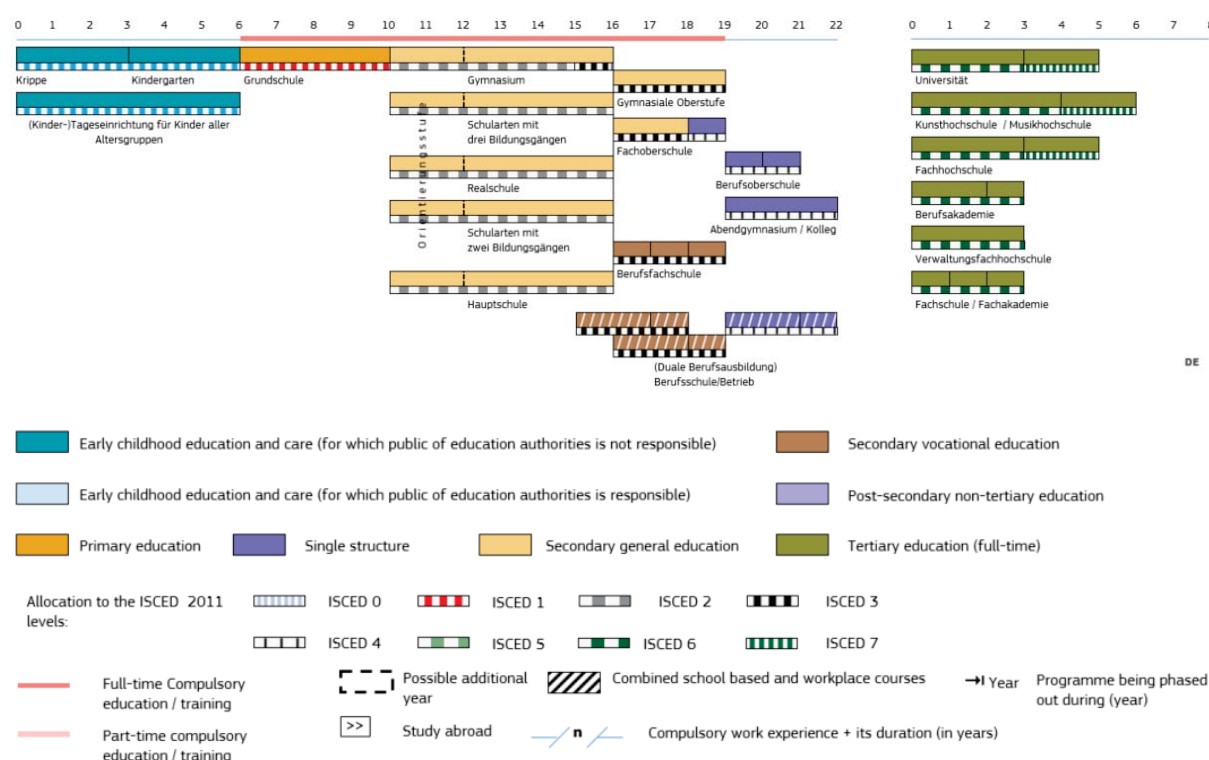
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Annex I: Key indicators sources

Indicator	Source
Participation in early childhood education	Eurostat (UOE), 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: Eurostat (LFS), edat_lfse_14 Data by country of birth: Eurostat (LFS), edat_lfse_02
Exposure of VET graduates to work based learning	Eurostat (LFS), edat_lfs_9919
Tertiary educational attainment	Main data: Eurostat (LFS), edat_lfse_03 Data by country of birth: Eurostat (LFS), edat_lfse_9912
Participation of adults in learning	Data for this EU-level target is not available. Data collection starts in 2022. Source: EU LFS.
Equity indicator	European Commission (Joint Research Centre) calculations based on OECD's PISA 2018 data
Upper secondary level attainment	Eurostat (LFS), edat_lfse_03
Public expenditure on education as a percentage of GDP	Eurostat (COFOG), gov_10a_exp
Public expenditure on education as a share of the total general government expenditure	Eurostat (COFOG), gov_10a_exp

Annex II: Structure of the education system



Source: European Commission/EACEA/Eurydice, 2022. The Structure of the European Education Systems 2022/2023: Schematic Diagrams. Eurydice Facts and Figures. Luxembourg: Publications Office of the European Union. Notes: Full-time compulsory education/training ends at the age of 18 or 19 depending on the Länder.

Please email any comments or questions to:
EAC-UNITE-A2@ec.europa.eu



Brussels, 18.11.2022
SWD(2022) 751 final

PART 7/28

COMMISSION STAFF WORKING DOCUMENT

Education and Training Monitor 2022

Accompanying the document

**Communication from the Commission to the European Parliament, the Council, the
European Economic and Social Committee and the Committee of the Regions**

on progress towards the achievement of the European Education Area

{COM(2022) 700 final} - {SWD(2022) 750 final}

Education and Training Monitor 2022

ESTONIA



The Education and Training Monitor's country reports present and assess the main recent and ongoing policy development at all education levels in EU Member States. They provide the reader with more in-depth insight of the performance of countries with regard to the EU level targets agreed within the EEA. They are based on the most up-to-date quantitative and qualitative evidence available.

Section 1 presents a statistical overview of the main education and training indicators. Section 2 focuses on how the Member State has addressed or is addressing one of its education challenges. Section 3 covers early childhood education and care. Section 4 deals with school education policies. Section 5 covers vocational education and training and adult learning. Finally, Section 6 discusses measures in higher education.

The Education and Training Monitor's country reports were prepared by the European Commission's Directorate-General for Education, Youth, Sport and Culture (DG EAC), with contributions from the Directorate-General for Employment, Social Affairs and Inclusion (DG EMPL).

The document was completed on 30 September 2022

More background data at:

<https://op.europa.eu/webpub/eac/education-and-training-monitor-2022/en/>



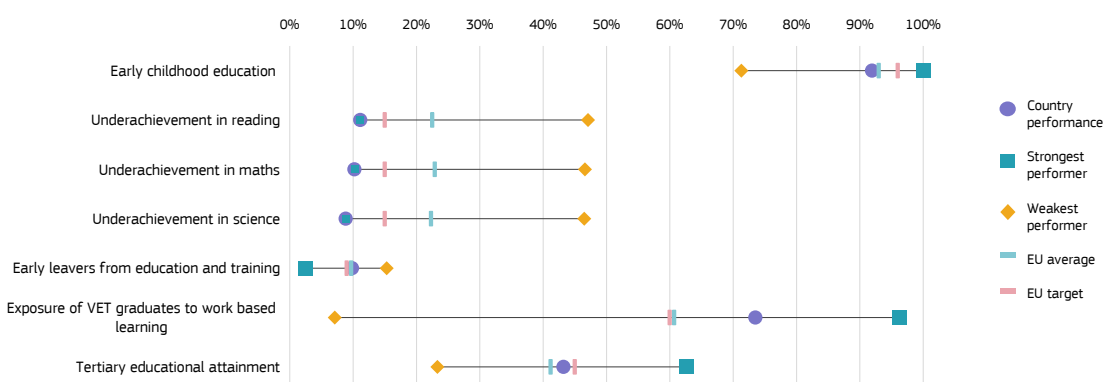
1. Key indicators

Figure 1: Key indicators overview

			Estonia		EU	
			2011	2021	2011	2021
EU-level targets			2030 target			
Participation in early childhood education (from age 3 to starting age of compulsory primary education)	≥ 96 %		89.6% ¹³	91.9% ²⁰	91.8% ¹³	93.0% ²⁰
Low achieving eighth-graders in digital skills	< 15%		:	:	:	:
Low achieving 15-year-olds in:	Reading	< 15%	13.3% ⁰⁹	11.1% ¹⁸	19.7% ⁰⁹	22.5% ¹⁸
	Maths	< 15%	12.6% ⁰⁹	10.2% ¹⁸	22.7% ⁰⁹	22.9% ¹⁸
	Science	< 15%	8.3% ⁰⁹	8.8% ¹⁸	18.2% ⁰⁹	22.3% ¹⁸
Early leavers from education and training (age 18-24)	< 9 %		10.6%	9.8% ^b	13.2%	9.7% ^b
Exposure of VET graduates to work-based learning	≥ 60 % (2025)		:	73.5%	:	60.7%
Tertiary educational attainment (age 25-34)	≥ 45 %		39.0%	43.2% ^b	33.0%	41.2% ^b
Participation of adults in learning (age 25-64)	≥ 47 % (2025)		:	:	:	:
Other contextual indicators						
Equity indicator (percentage points)			:	5.1 ¹⁸	:	19.30 ¹⁸
Early leavers from education and training (age 18-24)	Native		10.6%	9.6% ^b	11.9%	8.5% ^b
	EU-born		:	: ^{bu}	25.3%	21.4% ^b
	Non EU-born		: ^u	: ^{bu}	31.4%	21.6% ^b
Upper secondary level attainment (age 20-24, ISCED 3-8)			82.8%	85.9% ^b	79.6%	84.6% ^b
Tertiary educational attainment (age 25-34)	Native		38.6%	41.5% ^b	34.3%	42.1% ^b
	EU-born		: ^u	: ^{bu}	28.8%	40.7% ^b
	Non EU-born		48.4% ^u	66.6% ^b	23.4%	34.7% ^b
Education investment	Public expenditure on education as a percentage of GDP		6.1%	6.6% ²⁰	4.9%	5.0% ²⁰
	Public expenditure on education as a share of the total general government expenditure		16.3%	14.3% ²⁰	10.0%	9.4% ²⁰

Sources: Eurostat (UOE, LFS, COFOG); OECD (PISA). Further information can be found in Annex I and at [Monitor Toolbox](#). 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; the equity indicator shows the gap in the share of underachievement in reading, mathematics and science (combined) among 15-year-olds between the lowest and highest quarters of socio-economic status; b = break in time series, u = low reliability, : = not available, 09 = 2009, 13 = 2013, 18 = 2018, 20 = 2020.

Figure 2: Position in relation to strongest and weakest performers



Source: DG Education, Youth, Sport and Culture, based on data from Eurostat (LFS 2021, UOE 2020) and OECD (PISA 2018).

2. A focus on gender equality in education

Boys and men are overrepresented among those with lower educational achievement, while the labour market does not always reward girls' and women's higher levels of education. Boys leave school early almost twice as often as girls. While the gender gap in early school leaving has diminished over time, it is still the third highest in the EU, with 4.4 pps in 2021. Low achievement at the end of lower secondary school is much higher among boys (Government of Estonia, 2021a). Educational paths differ too: boys choose vocational education and training more often, while more girls continue in upper secondary general education (HaridusSilm, 2022). Consequently, male vocational education graduates significantly outnumber female graduates (see figure 3), while more girls graduate from university. As a result, the tertiary education attainment gap is among the highest in the EU (21.2 pps in 2021, EU average: 11.1 pps). Although Estonia boasts the highest share of women among ICT graduates across the EU, with 35.5%¹, women are still underrepresented both in ICT programmes and on the labour market, where only 22.1% of ICT specialists are female (2021 Digital Economy and Society Index). Lower

participation of women in high-paying ICT jobs plays a part in the gender pay gap, which is the second highest in the EU². While men have more leadership positions in education, science and research³, schoolteachers are predominantly female: 85% across education levels, and 99.5% in early childhood education and care (OECD, 2019b).

Gender gaps throughout the education system are one of the bottlenecks in unlocking the population's full potential.

Skills shortages persist, so gender segregation in education matters. For example, the jobs and skills forecasting system OSKA concluded that 2 600 new ICT professionals are needed every year – a number that the education system currently cannot supply (in 2020, 766 students graduated with an ICT degree)⁴. Finding a job is easier with higher levels of education: in 2021, 92.4% (EU: 84.9%) of recent university graduates found a job versus 70.6% of recent vocational education and training graduates (EU: 76.4%). Yet, implications of educational inequality might be broader: Estonians with a higher education diploma report being in good health more often than those

¹ Eurostat [educ_uoe_grad02].

² 21.1%, compared to the EU average of 13%, unadjusted, Eurostat [SDG_05_20].

³ Gender Statistics Database of the European Institute for Gender Equality, indicator on decision-making in education, science and research.

⁴ Eurostat [educ_uoe_grad02].

Figure 3: Share of male graduates in upper secondary vocational education, 2020



Source: Eurostat (UOE), [educ_uoe_grad01]. Note: Data for CZ not available.

without⁵. The gender gap in life expectancy at birth is one of the highest in the EU (8.5 years in favour of women in 2020, EU average: 5.6 years)⁶. While the causal links between education, gender, employment and health need further research, governments should assess the broader indirect implications of gender inequality in education (Staring, Donlevy, & Day, 2021).

The Estonian government acknowledges gender gaps in education and their broader implications for society. Estonia's education strategy for 2035 highlights the importance of gender equality and recognises the need to organise learning in gender-sensitive ways. It mentions that from secondary school on, the choice of educational paths influenced by a person's gender might lead to socioeconomic inequality and labour market segregation. On the reasons for boys' lower performance, the strategy refers to 'differences in attitudes towards learning' (Government of Estonia, 2021a). The Gender Equality Act (§ 10) underlines that the design of curricula and study materials should help promote gender equality (Riigi Teataja (Official Journal), 2004). Consequently, the welfare development plan for 2016–2023 stipulated that gender equality would be systematically included in curricula, study materials, teacher education and continuous training at all educational levels (Ministry of Social Affairs, 2016). In practice, this is often not yet done (Anniste, Haugas, & Sepper, 2021). Finally, according to the Estonian language strategy for 2035, ensuring that everyone has good Estonian language skills will, inter alia, reduce gender inequality in education (Government of Estonia, 2021b).

Policies and measures addressing the gender gaps exist, but could be further consolidated. In an earlier report, the Education Ministry pointed out that Estonia is one of the few EU Member

States that does not have a targeted policy to change gender norms and stereotypes in education (Valk, 2017). The report also suggested to take additional action to change gender stereotypes and gender-based behaviour in the school environment and in teacher education. The Education and Social Affairs Ministries collaborate on gender inequality on an ad hoc basis. The government takes measures to promote girls' participation in science, technology, engineering and mathematics (STEM)⁷, but there are no specific measures to address boys' difficulties. Rather, existing programmes are seen as also benefiting boys⁸. While some argue that programmes should not be specifically targeted at boys to preserve inclusiveness in education, others maintain that a 'gender blind' approach undermines the effectiveness of policies and might reduce boys' chances to succeed.

Civil society stakeholders also take action.

The Estonian Association of Kindergarten Teachers and the Estonian Women's Associations Roundtable organise a course to raise kindergarten teachers' awareness of how gender stereotypes influence children's development and lifestyles (Papp & Kütt, 2022). The organisation HK Unicorn Squad provides free learning resources (including tutorials and rooms) for setting up girls' tech groups. The aim is to raise girls' interest in engineering, robotics and natural sciences. Around 2 000 girls between 8 and 14 participate to date.

⁷ For example, the government's action plan for 2021–2023 includes the task 'Analysis and proposals for bringing girls and women into the field of ICT', for which the Social Affairs Ministry commissioned the study 'Glass walls and glass ceilings in Estonian ICT: nudges to increase women's representation in ICT education and the labour market'.

⁸ For example, the new action plan (running until 2027) for strengthening the Youth Guarantee (funding for innovative solutions to prevent early school leaving), ongoing work to better integrate non-formal and formal learning, and making better use of general competency tests to improve individual feedback to learners (<https://harno.ee/uldpadevustestid#opipadevustest>). Pursuing a learner-centred approach, one of the main aims of the education strategy is also seen as potentially benefiting boys, by making learning more flexible and interesting, thus increasing their motivation.

⁵ On average, 67.4% of Estonians with a university diploma state being in good or very good health (82% in the EU), whereas only 40.3% of Estonians without diploma do (56% in the EU) (Eurostat [hlth_silc_02]).

⁶ Eurostat [tps00208].

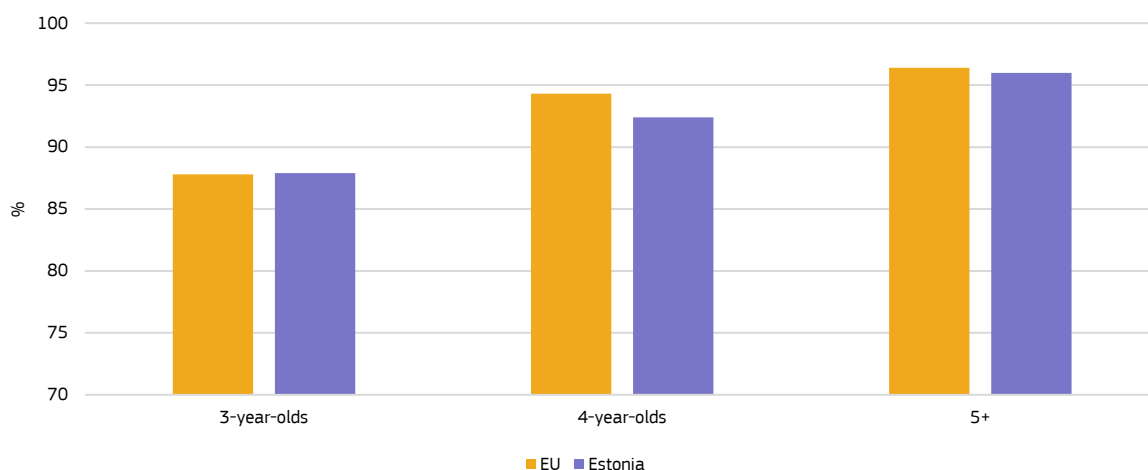
3. Early childhood education and care

Participation in early childhood education and care increases with children's age, but remains somewhat below EU average also for older children (see figure 4). Participation of children between 3 years and the starting age of compulsory education (7 years) stood at 91.9% in 2020, somewhat below the EU average of 93% and the national target of 95% by 2035. Among children below the age of 3, 26.7% were enrolled in childcare in 2020 (EU: 32.3%), a decline of 5.1 pps compared to 2019. The participation decline was almost 3 times higher among children at risk of poverty or social exclusion (-11.1 pps) compared to more advantaged children (-3.8 pps). The reasons might partly be linked to the COVID-19 pandemic when fees were waived for parents who were keeping their children at home. The availability of places remains an issue: in 2020, 7% of children between 18 months and 3 years did not get a place (Lang, Sandre, Kallaste, & Sõmer, 2021). Whereas the number of children aged 0-7 is forecast to decline by 11.2% by 2030, which somewhat reduces the pressure to increase the available offer, newly arrived children from Ukraine also attend childcare (1 685 children were

enrolled as of 12.9.2022). To support their integration, local governments receive financial support per child and early childhood education and care institutions are provided with training, advice and learning resources.

A reform aims to improve accessibility and quality of early childhood education and care. According to the draft act, the development of children's general skills will be based on a national preschool curriculum from age 3 onwards (currently from age 6). These general skills cover playing, cognitive and learning, self-regulation and social skills. Local municipalities must offer all 1.5-year-olds a place in childcare within 2 months after receiving a request from the parents. Kindergartens will have to appoint a coordinator for children with special educational needs who organises support services. By 2027, each child group in a kindergarten should have at least one Estonian-speaking teacher to ensure Estonian language learning. The reform also creates a single legal framework for the entire sector, previously fragmented across education, social care and healthcare (Riigikogu, 2022a). The Estonian Association of Early Childhood Education Managers welcomed the draft law and called for its swift implementation. However, it recalled that

Figure 4: Share of children from age 3 to the starting age of compulsory education participating in early childhood education and care



Source: Eurostat (UOE), [educ_uoe_enra20], [educ_uoe_enra19], [educ_uoe_enra18].

inclusive education requires skilled staff, which is difficult to find, also given the low salaries in the sector (EAHJÜ, 2022). The Ministry of Social Affairs is leading the development of an action plan on support specialists, after the national auditor found shortcomings in this area (Riigikontroll, 2020). In 2021/22, local governments received EUR 15 million to, inter alia, fund support specialists.

The long-awaited reform faced hurdles in Parliament. In April 2022, after several consultation rounds with stakeholders, the government submitted the Preschool Education and Childcare Act to Parliament. The draft law was rejected at first reading in June, amid the break-up of the governing coalition. Various Estonian teachers' and headmasters' associations expressed their dissatisfaction with the rejection of the draft law (Eesti Haridustöötajate Liit, Eesti Lasteaednike Liit, Eesti Koolijuhtide Ühendus, Eesti Alushariduse Juhtide Ühendus, 2022).

4. School education

Addressing early leaving from education and training remains a priority under the new education strategy for 2035, adopted in late 2021. The early leaving rate was 9.8% in 2021, up from 8.5% in 2020. While this rate is in line with the EU average (9.7%), it can be considered high in the Estonian context: early school leaving and drop-out remain stumbling blocks to solving skills shortages and reducing the gender gaps in education (see sections 2 and 6). The strategy's first goal is to address the problem of early leaving and drop-out from all levels of education and training. Supported by the EU's Structural Reform Support Programme, the Education Ministry and the OECD have prepared indicators to measure progress in achieving the strategy's goals. This should strengthen monitoring practices and steer school improvement by helping local and central governments to take data-based decisions (OECD, 2021).

An action plan aims to improve the working conditions, training and career progression of teachers, and the image of their

profession. Teacher shortages and ageing continue and negatively affect teacher qualification levels. School heads can sign 1-year fixed-term contracts with candidates that have at least secondary education if no qualified teacher can be recruited. As a result, in 2020/21, 57% of beginning teachers did not meet the qualification requirements (Ministry of Education and Research, 2022e). These teachers need flexible pathways towards qualification while working. The new action plan takes a broad approach by focusing on: (i) the quality of management and the organisational culture in schools; (ii) initial and in-service training for teachers and support staff; (iii) career and development opportunities; (iv) support throughout the career cycle, including support for beginning teachers; (v) involvement of support staff; and (vi) the attractiveness of the teaching profession. The first activities launched in 2022 are to create additional study places in teacher education and to open a teacher academy (Ministry of Education and Research, 2021b). The academy provides flexible opportunities for initial and continuous teacher education, in cooperation with Tallinn and Tartu universities. The lack of such opportunities and support for novice teachers had been identified as a reason for early drop-out from the profession.



Box 1: Professional development of teachers and school leaders

An EU-funded project issued policy recommendations to strengthen the teaching profession in Estonia (British Council, 2021). It concluded that the roles of school leaders and senior teachers need to be strengthened to improve teacher recruitment and retention. The career and pay progression framework should become more transparent. Proposals to improve continuous training included organising more in-school training and implementing an impact evaluation system. Another core feature of the project was the development of an analytical tool that allows teachers to analyse their teaching, select specific action steps and practice them with a learning partner. The tool is

supported by an online platform. The project was funded with EUR 300 000 from the EU's Structural Reform Support Programme.

More information available at:
<https://www.britishcouncil.ee/en/programmes/education/improving-system-professional-development-teachers-and-school-leaders>

Estonia swiftly put in place support for children who fled Ukraine. The government provided additional study places at all levels of education, seminars for teachers on integrating displaced pupils and information sessions to local authorities. Support for students with special educational needs, language support and psychological help as well as educational counselling are also available to Ukrainian pupils and their parents (Ministry of Education and Research, 2022a). The “Freedom School” in Tallinn opened its doors for several hundred Ukrainian pupils in autumn 2022 (Ministry of Education and Research, 2022c), teaching the Estonian curriculum partly in Ukrainian. The EdTech and the public sector provide Ukrainian language e-learning resources free of charge. Almost 16 525 Ukrainian children and youth under 19 are registered in Estonia, of which circa 7 272 are enrolled in school (19.9.2022)⁹.

Measures to mitigate the pandemic's impact on learning outcomes and mental health continue, while first ideas emerge to maintain the education system's resilience. The Education Ministry supports schools to bridge learning gaps: additional funding covers individual consultations, new diagnostic tools to identify learning gaps, additional lessons and the hiring of assistant teachers. In cooperation with the association of school psychologists, a free helpline was opened for students, educators and parents (Ministry of Education and Research, 2022d) (Riigikogu, 2022b). The education system will have to remain flexible and resilient also after the

pandemic. A study suggested specific ways to help achieve this: (i) EdTech data could be better used for monitoring and feedback (learning analytics); (ii) teachers must receive assistance in developing a hybrid or digital pedagogy; and (iii) schools should provide systematic opportunities to acquire socio-emotional skills, which are important for successful learning, as the pandemic showed (Mägi, 2021).

Efforts to improve the teaching and learning of Estonian continue. The education strategy and the Estonian language strategy (Government of Estonia, 2021b) set the framework for Estonian language development. The education strategy envisages that 95% of lower secondary school graduates with Estonian as a second language will have a B1 level by 2035 (in 2019, this was 67.8%)¹⁰. The government provides funding to: (i) support pupils to learn Estonian; (ii) develop teachers' skills in teaching in multilingual classrooms; and (iii) help minority language students to learn their mother tongue better. The new government's coalition agreement from July 2022 aims to complete the transition to an Estonian-speaking education system already by 2030.



Box 2: Digital resources for creative learning at primary school

Against the background of the COVID-19 pandemic, a European Social Fund project supported learner-centred and interactive teaching. New learning material was developed that supports students' creativity, science-based thinking and learning skills with the help of creative and research activities, focusing on ICT subjects. Between November 2021 and May 2022, video tutorials and worksheets for teachers and learners were developed, covering

⁹ Figures are regularly updated and available under:
<https://www.politsei.ee/et/eestisse-saabunud-ukraina-sojapogenike-arv> (refugee numbers);
<https://www.hm.ee/en/news> (enrolment numbers).

¹⁰ A B1 language user understands the main points of standard input on familiar matters regularly encountered in work, school, leisure, etc. and can produce simple texts on familiar topics.

various phases of creative work: finding an idea, time planning, recording the work process, self-management, academic integrity, self-reflection and presentation. The European Social Fund contributed EUR 18 000 to the project.

<https://e-koolikott.ee/et/oppematerjal/32173-Pohikooli-loovtoo-protsessi-toetav-digitaalne-oppevara>

5. Vocational education and training and adult learning

The education strategy addresses challenges in vocational education and training (VET), especially developing work-based learning and better integration of general and upper secondary education by 2035. In 2020, 39.9% of upper secondary pupils were enrolled in VET programmes¹¹ (compared to an EU average of 48.7%). The number of VET students doing apprenticeships is increasing: in 2020/21, around 9% of VET students and 15% of VET graduates had done apprenticeships (up from 12.4% of graduates in 2019; the target being 21% by 2025). The introduction of a compulsory professional exam developed by employers and valued by them might have helped to increase this share. Young learners can enrol in preparatory studies enabling a flexible and student-oriented choice of the professional curriculum. Newly arrived students from Ukraine are also frequently enrolled in these preparatory studies. The purpose of integrating general and vocational secondary education is to add flexibility to education and to develop skills needed in the labor market; a common secondary education standard will be developed. The national implementation plan of the Council Recommendation on VET is linked to the education strategy for 2035 and its VET-related priorities and targets.

Distance learning in VET during the pandemic was challenging for most learners, but offered some opportunities as well. A recent

study found that the experience of distance learning motivated teachers to use digital tools, to improve their digital skills, and to collaborate more effectively. For learners, distance learning was challenging: it was less effective compared to classroom learning and made acquiring new skills more difficult (Loogma & Sirk, 2021).

The recovery and resilience plan helps develop digital and green skills in VET. The support provided to the digital transition includes the development of VET curricula and micro-credentials as well as the renewal of professional standards and skills profiles. Workers' knowledge and skills related to the green economy are strengthened by updating the content of higher education and VET programmes, in-service training and retraining, and by introducing new technologies. The planning for training and mapping the skills needed is based on the analyses by the jobs and skills forecasting system OSKA. Professional standards are reviewed to add green skills.

The education strategy also aims to increase adults' participation in learning. It will do so by providing flexible learning pathways and additional retraining opportunities. The continued monitoring of skills needs will ensure that the acquired skills meet the needs of the labour market and support high value-added activities (Government of Estonia, 2021a). The aim is that by 2030, 52.3% of adults participate in learning every year, contributing to the EU target of 60%. Additionally, Estonia set a target of 25% of adults having participated in learning in the last month (this was 20% in 2019), to be reached by 2035. Indicators will be developed to monitor participation in informal learning. In the short run, the main priority for Estonia will be to restore training participation levels across various societal groups.

The COVID-19 pandemic negatively impacted participation in learning. Among 25-64-year-olds, participation fell from 19.6% in 2019 to 16.6% in 2020 but recovered to 18.4% in 2021. According to Statistics Estonia, recovery is slower among men, younger age groups, non-Estonians and people with higher education. During the

¹¹ Eurostat (UOE), [educ_uoe_enrs05].

pandemic, more online learning opportunities were created (Rosenblad, et al., 2020). The courses offered by the Education Ministry were primarily targeted at low-skilled people or people needing reskilling (Ministry of Education and Research, 2021a).

Reforms and investments included in the Estonian recovery and resilience plan support skills development. Secondary legislation setting out the terms of support for the development of digital and green skills entered into force: both employed and unemployed people can upskill and retrain in ICT and have skills acquired outside formal learning recognised. The My First Job scheme and the Youth Guarantee action plan contribute to reducing youth unemployment.

6. Higher education

Tertiary education attainment is high, but men and those living in rural areas lag behind. In 2021, 43.2% of Estonians between 25 and 34 held a university degree (EU average: 41.2%), a 3.1 pps increase from 2020. Despite this relatively high rate, some disparities persist: in addition to the gender gap (see section 2), the rural-urban gap stood at 22.2 pps in 2021 (21.8 pps in the EU). A recent study found that making tuition free in 2013 did not attract more people from rural areas to higher education. Their lower participation might rather be the result of peer effects, information asymmetry and insufficient financial support: rural families have fewer peers who go to university and are less well informed about the benefits of higher education, and the available needs-based grants might be too low (Pöder & Lauri, 2021). Another reason could lie in the challenge of combining work and studies: more than half of students worked regularly in 2018-2020, a share clearly above the OECD average (Arenguseire Keskus, 2022). While gaining experience can be a motivation for working, 45% of students said that they could not afford to study without their paid job (Hauschildt, Gwośc, Schirmer, & Wartenbergh-Cras, 2021).

High drop-out rates and low graduation on time pose challenges to the labour market – and to universities' finances. According to the education strategy, the population's labour market potential is not achieved due to high drop-out rates from higher and vocational education (Government of Estonia, 2021a). While drop-out has decreased in recent years, it is still high (the average drop-out rate during the first study year fell from 22.3% to 18.4% between 2016 and 2021 and the overall drop-out rate fell from 16.1% to 11.7% in the same period). Graduation within nominal time is one of the performance indicators that determine the amount of universities' funding. To prevent drop-out and increase graduation on time, the Education Ministry encourages universities to provide innovative teaching tools and pedagogies, student-centred approaches to learning, support services, in particular to newcomers, and flexible study arrangements that better allow students to combine work and studies.

Universities ask for public funding to increase to 1.5% of gross domestic product, from the current 1.1%. Public funding for universities has substantially decreased over the last decade (Bennetot Pruvot, Estermann, & Stoyanova, 2021). Since January 2022, universities have refused to sign their annual agreements with the state, asking for a substantial funding increase – an unprecedented situation. Government and higher education institutions are also discussing the indicators for the performance-based funding (20% of activity-based funding).

How to make higher education accessible to many, while ensuring high quality and low costs, is part of a wider debate. While the government does not envisage fundamental changes to the funding model, it is taking measures to create possibilities for universities to increase their revenues: in May 2022, it proposed to provide students with incentives to finish their degrees on time (Ministry of Education and Research, 2022g). Tuition fees can already be collected from students enrolled part-time or doing micro-credentials and for English-language

programmes. Some warn that this could lead to Estonian losing its importance as a research language, and that micro-credentials might be affordable only for some – even though flexible learning opportunities are urgently needed. The University of Tartu concluded that tuition should remain free, and that a large-scale, state-guaranteed, income-contingent student loan system should be introduced (state-guaranteed loans exist, but grants are more widespread) (Silm, Tiitsaar, & Valk, 2022). Already in 2019, the National Audit Office had concluded that the higher education funding model was unsustainable, and had called for a reform (Riigikontroll, 2019).

A PhD studies reform aims to offer attractive career paths to researchers and strengthen university-business cooperation.

In 2022, Parliament adopted a doctoral studies reform, amending the Higher Education Act and the Study Allowances and Study Loans Act. PhD students will no longer receive grants; they will sign job contracts as junior researchers, which entitles them to social protection. They can also study for a ‘transfer of knowledge doctoral degree’ if they work for a company that has a partnership with their university. Such degrees should strengthen university-business cooperation and allow researchers to continue to work for the company after graduating. Pursuing a PhD without a research contract remains possible too. The reform also made the terms and conditions of student loans at private banks more favourable for students (Ministry of Education and Research, 2022b).

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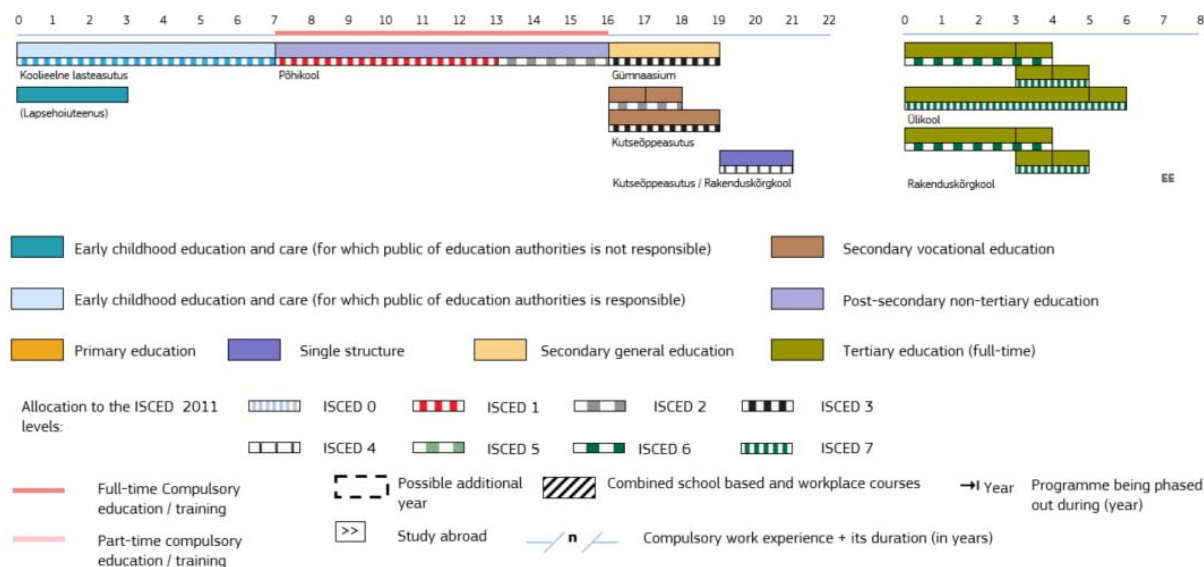
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Annex I: Key indicators sources

Indicator	Source
Participation in early childhood education	Eurostat (UOE), 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: Eurostat (LFS), edat_lfse_14 Data by country of birth: Eurostat (LFS), edat_lfse_02
Exposure of VET graduates to work based learning	Eurostat (LFS), edat_lfs_9919
Tertiary educational attainment	Main data: Eurostat (LFS), edat_lfse_03 Data by country of birth: Eurostat (LFS), edat_lfse_9912
Participation of adults in learning	Data for this EU-level target is not available. Data collection starts in 2022. Source: EU LFS.
Equity indicator	European Commission (Joint Research Centre) calculations based on OECD's PISA 2018 data
Upper secondary level attainment	Eurostat (LFS), edat_lfse_03
Public expenditure on education as a percentage of GDP	Eurostat (COFOG), gov_10a_exp
Public expenditure on education as a share of the total general government expenditure	Eurostat (COFOG), gov_10a_exp

Annex II: Structure of the education system



Source: European Commission/EACEA/Eurydice, 2022. The Structure of the European Education Systems 2022/2023: Schematic Diagrams. Eurydice Facts and Figures. Luxembourg: Publications Office of the European Union.

Please email any comments or questions to:
EAC-UNITE-A2@ec.europa.eu

Brussels, 18.11.2022
SWD(2022) 751 final

PART 8/28

COMMISSION STAFF WORKING DOCUMENT

Education and Training Monitor 2022

Accompanying the document

**Communication from the Commission to the European Parliament, the Council, the
European Economic and Social Committee and the Committee of the Regions**

on progress towards the achievement of the European Education Area

{COM(2022) 700 final} - {SWD(2022) 750 final}

Education and Training Monitor 2022

IRELAND



The Education and Training Monitor's country reports present and assess the main recent and ongoing policy development at all education levels in EU Member States. They provide the reader with more in-depth insight of the performance of countries with regard to the EU level targets agreed within the EEA. They are based on the most up-to-date quantitative and qualitative evidence available.

Section 1 presents a statistical overview of the main education and training indicators. Section 2 focuses on how the Member State has addressed or is addressing one of its education challenges. Section 3 covers early childhood education and care. Section 4 deals with school education policies. Section 5 covers vocational education and training and adult learning. Finally, Section 6 discusses measures in higher education.

The Education and Training Monitor's country reports were prepared by the European Commission's Directorate-General for Education, Youth, Sport and Culture (DG EAC), with contributions from the Directorate-General for Employment, Social Affairs and Inclusion (DG EMPL).

The document was completed on 30 September 2022
More background data at:
<https://op.europa.eu/webpub/eac/education-and-training-monitor-2022/en/>



1. Key indicators

Figure 1: Key indicators overview

			Ireland		EU	
			2011	2021	2011	2021
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% ²⁰	91.8% ¹³	93.0% ²⁰
Low achieving eighth-graders in digital skills	< 15%		:	:	:	:
Low achieving 15-year-olds in:	Reading	< 15%	17.2% ⁰⁹	11.8% ¹⁸	19.7% ⁰⁹	22.5% ¹⁸
	Maths	< 15%	20.8% ⁰⁹	15.7% ¹⁸	22.7% ⁰⁹	22.9% ¹⁸
	Science	< 15%	15.2% ⁰⁹	17.0% ¹⁸	18.2% ⁰⁹	22.3% ¹⁸
Early leavers from education and training (age 18-24)	< 9 %		11.1%	3.3% ^b	13.2%	9.7% ^b
Exposure of VET graduates to work-based learning	≥ 60 % (2025)		:	27.5% ^u	:	60.7%
Tertiary educational attainment (age 25-34)	≥ 45 %		48.6%	61.7% ^b	33.0%	41.2% ^b
Participation of adults in learning (age 25-64)	≥ 47 % (2025)		:	:	:	:
Other contextual indicators						
Equity indicator (percentage points)			:	11.8 ¹⁸	:	19.30 ¹⁸
Early leavers from education and training (age 18-24)	Native		10.1%	3.4% ^b	11.9%	8.5% ^b
	EU-born		19.7% ^u	:	25.3%	21.4% ^b
	Non EU-born		13.9%	:	31.4%	21.6% ^b
Upper secondary level attainment (age 20-24, ISCED 3-8)			87.1%	96.1% ^b	79.6%	84.6% ^b
Tertiary educational attainment (age 25-34)	Native		47.9%	58.7% ^b	34.3%	42.1% ^b
	EU-born		43.7% ^u	57.5% ^b	28.8%	40.7% ^b
	Non EU-born		60.3%	74.1% ^b	23.4%	34.7% ^b
Education investment	Public expenditure on education as a percentage of GDP		5.3%	3.1% ²⁰	4.9%	5.0% ²⁰
	Public expenditure on education as a share of the total general government expenditure		11.2%	11.3% ²⁰	10.0%	9.4% ²⁰

Sources: Eurostat (UOE, LFS, COFOG); OECD (PISA). Further information can be found in Annex I and at [Monitor Toolbox](#). 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; the equity indicator shows the gap in the share of underachievement in reading, mathematics and science (combined) among 15-year-olds between the lowest and highest quarters of socio-economic status; b = break in time series, u = low reliability, : = not available, 09 = 2009, 13 = 2013, 18 = 2018, 20 = 2020.

Figure 2: Position in relation to strongest and weakest performers



Source: DG Education, Youth, Sport and Culture, based on data from Eurostat (LFS 2021, UOE 2020) and OECD (PISA 2018).

2. A focus on key competences

Ireland has placed the focus on key competences and skills at the core of the lower secondary education reform. Bringing in a new 'Framework for Junior Cycle' (2015)¹ was the most significant development in school education implemented in Ireland over the last decade. The rationale behind the reform was to remedy the overall insufficient focus on skills, and how state examinations affected teaching (European Commission, 2022). The findings from the study commissioned to provide the evidence base for the reform highlighted a range of challenges. These included a mismatch between the types of active learning valued by students and the more teacher-centred methodologies they experienced at school, which also affected the school climate (Smyth, et al. 2007). Negative experiences at lower-secondary level subsequently affected student engagement and achievement in upper secondary education and post-school progression (Byrne and Smyth, 2010; McCoy et al., 2014).

The multi-layered reform introduced targeted changes to the curriculum and assessment, with an emphasis on skills, learning outcomes-based curricula, classroom-based assessment, and encouraging more learner-centred teaching and learning approaches. The six key skills that the reform brought in include: managing myself, staying well, communicating, being creative, working with others, and managing information and thinking. Working with digital technology forms part of each skill. Literacy and numeracy, which were first boosted by the 2011 literacy and numeracy strategy², are seen as foundation skills, developed horizontally across the curriculum³⁻⁴.

The reform was underpinned by significant investment in the professional development of teachers and school leaders⁵, as well as school self-evaluation. The reform also aimed to give schools greater autonomy over curriculum development and assessments to encourage creativity and their ability to respond to their needs. This result has so far been proven for the new English curriculum focused on developing students' communication skills and critical thinking (the National Council for Curriculum and Assessment - NCCA, 2019; Marcus-Quinn, A. 2019). The lockdown due to COVID-19 reportedly gave greater recognition and validity to the value of key competences among some groups of stakeholders in Ireland (European Commission, 2022).

Ireland continues to modernise its curricula, ensuring a sound evidence base and evaluation of policy reforms. The main changes proposed for the new primary school curricula⁶ are framed around: (i) greater autonomy and flexibility for schools as 'curriculum makers'; (ii) stronger connections between children's experiences from pre-school to post-primary school; (iii) an updated set of priorities for children's learning and development; and (iv) new pedagogical approaches and strategies, with assessment central to teaching. Following stakeholder consultations, the new primary curriculum framework is expected to be published in 2023.

In 2022, the Minister announced a vision for the redevelopment of upper-secondary education curriculum ('senior cycle'). The key changes will include new curriculum specifications embedding 21st century competences, enhanced teacher assessment, new subjects (e.g. climate action and sustainable development), and a greater emphasis on well-being (see Section 3). The proposal to reform the junior cycle was underpinned by research carried out by the

¹ <https://www.gov.ie/en/publication/aed00b-framework-for-junior-cycle/>

² <https://www.curriculumonline.ie/Home/Literacy-and-Numeracy/>

³ <https://ncca.ie/en/junior-cycle/framework-for-junior-cycle/>

⁴ [https://www.curriculumonline.ie/getmedia/def48e3f-68f9-42e4-95de-f30086321fd0/JSEC_Key_Skills_of-JC_English\).pdf](https://www.curriculumonline.ie/getmedia/def48e3f-68f9-42e4-95de-f30086321fd0/JSEC_Key_Skills_of-JC_English).pdf)

⁵ <https://jct.ie/home/home.php>

⁶ <https://ncca.ie/en/primary/primary-developments/primary-curriculum-review-and-redevelopment/>

Economic and Social Research Institute (ESRI)⁷ and the NCCA, and practice observations in schools made by the inspectorate (European Commission, 2022). A large-scale evaluation of the junior cycle from 2020 to 2024 is currently being conducted. The European Commission supports a pilot project to improve local community engagement in education policy development in Ireland through the Technical Support Instrument⁸.

Ireland has placed greater emphasis on foreign languages in school curricula, including in special schools. Under the strategy for foreign languages in education (2017-2026)⁹, primary school classes from third to sixth grade and special schools could participate in a new language sampler programme, enabling the teaching of either a modern foreign language or Irish Sign Language¹⁰. The government has also extended 'Say Yes to Languages', a primary languages sampler module for a further year, increasing the length of the module in 2022/23 from 6 to 8 weeks¹¹. The lower-secondary programme incorporates new specifications for language teaching, focusing on students' communication skills and cultural awareness. Schools can also introduce short courses in other languages. The draft primary curriculum framework also emphasises the teaching of foreign languages (NCCA, 2020). The new approach is expected to improve the comparatively poor foreign language skills of Irish students (McCoy et al., 2014).

Ireland promotes key competences and skills in lifelong learning also. The 2017-2026 STEM

education policy statement¹² aims to nurture STEM in learners from early years to post-primary. In 2021, Ireland adopted a 10-year strategy for adult literacy, numeracy and digital skills (Government, 2021c). In 2022, the OECD will review the national skills strategy for 2016-2025¹³ to examine how Ireland is equipped to meet current and future skills needs (Section 4).

3. Early childhood education and care

Participation in early childhood education and care (ECEC) remains high. In 2020, the estimated participation rate for children aged 3 and over continued to be 100%. The public pre-school programme¹⁴ is provided for free for 3 hours per day. Since 2019, the National Childcare Scheme (NCS) has granted significantly higher benefits to low-income parents towards the cost of ECEC and school-age childcare. In 2022, the age limit for the universal NCS benefits was raised from 3 to 15. Consequently, between 2019 and 2021, the net cost of childcare fell by over 20 pps for a two-earner couple and close to 30 pps for single parents (as counted for two children in full-time care). This is the steepest decrease in the EU (OECD, 2022). However, issues around parent participation and uptake in the NCS have been found among some vulnerable families (Frontier Economics, 2021).

Ireland has launched substantial reforms to improve the affordability and quality of ECEC. The 'First 5' (2019-2028) is the overarching strategy to improve ECEC quality, accessibility and affordability. The OECD review showed that the market-driven nature of the sector and the low level of public funding have resulted in low wages, poor working conditions for staff and high fees for parents (OECD, 2021b). In December 2021, Ireland published two reports on the funding model (Government, 2021a) and on the workforce

⁷ <https://www.esri.ie/>

⁸ <https://www.teachingcouncil.ie/en/news-events/latest-news/2021/eu-support-granted-for-ireland-to-develop-a-model-of-local-community-engagement-led-by-the-teaching-council.html>

⁹ <https://www.gov.ie/en/publication/52f94d-framework-for-consultation-on-a-foreign-languages-in-education-strat/>

¹⁰ <https://www.gov.ie/en/press-release/50f5e-minister-foley-announces-new-language-sampler-module-for-third-to-sixth-class-pupils-in-primary-and-special-schools/>

¹¹ <https://www.gov.ie/en/press-release/0e6c1-minister-foley-announces-extension-of-the-say-yes-to-languages-primary-languages-sampler-module-for-202223-and-invites-applications-from-primary-schools/>

¹² <https://www.gov.ie/en/policy-information/4d40d5-stem-education-policy/#stem-education-policy-statement-2017-2026>

¹³ <https://assets.gov.ie/24412/0f5f058feec641bbb92d34a0a8e3daff.pdf>

¹⁴ <https://www.earlychildhoodireland.ie/childcare-search/the-ecce-scheme/>

(Government, 2021b), the fundamental building blocks of the sector. They outline the key reform proposals that aim to transform the relationship between the state, the services and workers, shifting away from a predominantly private-sector model to a new hybrid model that will increasingly be publicly funded and managed. The workforce is to be gradually professionalised. In September 2022, Ireland launched the new funding model¹⁵, which is a step change in public management for the ECEC sector. The public investment will increase to EUR 221 million per year and the providers who have signed the contract with the state will freeze fees. The employment regulation orders aim to improve pay for 70% of ECEC workers, establishing a wage structure for staff, recognising their different qualifications and roles. Under a building blocks capital programme EUR 70 million will support ECEC and childcare infrastructure needs with an allocation of over 2023-2025. In the first half of 2022, the pandemic aggravated pre-existing ECEC staff retention issues.

An evaluation by the Department of Education Inspectorate has found that, overall, the quality of ECEC settings is good, however the individual needs of children should be better addressed. Following the evaluations conducted from September 2016 to December 2020 in settings delivering the Early Childhood Care and Education (ECCE) programme, the chief inspector's report¹⁶ concluded that the overall quality of provision for education in almost all settings is good or has improved. It suggests that there should be greater emphasis on children's individual strengths, needs, and interests, with particular attention for children with additional needs (DE, 2022a).

Though COVID-19 restricted ECEC activities, it also inspired solutions that may bring longer-term benefits. The periods when ECEC settings were closed and the stress associated

with their reopening constrained a wide range of pedagogical activities, and this had an impact on children's learning (Duignan and Kelly, 2021). Positively, it showed that the sector has a strong capacity for resilience and creativity, and outdoor activities increased thanks to the upgraded outdoor spaces. It is also expected that the increased use of online learning methods for educators will remain a feature of future continuing professional development resources (Wolfe and O'Byrne, 2021).

4. School education

Overall, Ireland performs well on basic skills, however widening inequality due to COVID-19 remains a concern for schools. According to the OECD's PISA results for 2018, Ireland scores above the EU average in student performance in maths and science, and close to the top in reading. Ireland has one of the lowest proportions of low achievers in the EU. The PISA results have shown for years the relatively strong performance of Ireland's lower-achieving students (Volante, et al., 2022). The proportion of students achieving scores at or below proficiency level 1 is significantly lower in Ireland than the EU average: at Level 1a¹⁷: 9.47% vs EU average of 12.98%.

Due to COVID-19, between January 2020 and mid-May 2021, pre-primary and primary schools in Ireland were shut for longer than the international average; secondary schools closed for fewer days (OECD, 2021c). Evidence from Ireland highlights that the pandemic had a disproportionate impact on disadvantaged students and that it affected more strongly their mental health, school engagement and social skills due to less favourable home learning environments (Hilliard, M., 2021; Ombudsman for Children¹⁸; Mohan et al, 2021; Murray et al., 2021). The efficiency of support measures, in particular the COVID-19 Learning and Support Scheme (CLASS) (INTO, 2021) is not yet known.

¹⁵ <https://www.gov.ie/en/press-release/61ae8-minister-ogorman-launches-together-for-better-new-funding-model-for-early-learning-and-care-and-school-age-childcare-as-core-funding-contracts-begin-for-4000-services/>

¹⁶ The ECEC sector in Ireland is also inspected by Tusla, the Child and Family Agency.

¹⁷ Level 1a: from 334.75 to less than 407.47 score points.

¹⁸ <https://www.oco.ie/news/the-ombudsman-for-children-publishes-annual-report-2021-resilience-tested/>

The low rate of early leavers from education and training dropped further in 2021, proving the effectiveness of Ireland's long-standing and recent policy measures.

Following the consistently low rate at around 5%, in 2021, it dropped to 3.3%. This is substantially below the EU-level target of 9% and around a third of the EU average (9.7%)¹⁹. Since 2011, the overall rate fell by 7.8 pps, more than at EU-level (3.5 pps). The decrease was particularly high among men (9.4 pps), and among women it fell by 3.6 pps in 2020, but then the rate has slightly increased recently (Figure 3). The rate among persons with disabilities is comparatively high at 10.7% (2018)²⁰. Ireland implements two well-established schemes to prevent early school leaving, which also proved valuable during the pandemic. Youthreach, co-funded by the European Social Fund (ESF) since its launch in 1988²¹,

provides vulnerable young people with opportunities for basic education, personal development, vocational training and work experience. The Delivering Equality of Opportunity in Schools (DEIS) programme provides additional resources and staff to schools to support students with disadvantaged socio-economic backgrounds. From September 2022, the programme will include an additional 273 primary and 37 post-primary schools. This entails an increase of EUR 32 million in spending, the biggest single investment in DEIS²².

Furthermore, national evidence shows that the transition rates from post-primary to higher education jumped from 62.1% in 2019 to 66.1% in 2020 (DE, 2021). This is most likely the result of additional places created in higher education during the pandemic, and the

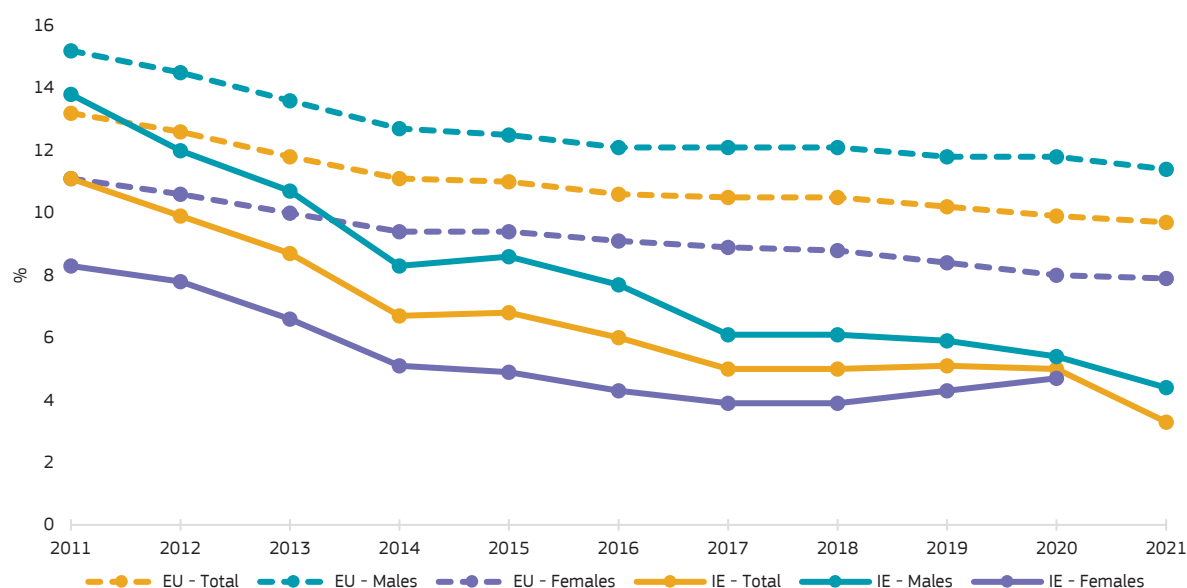
¹⁹ Eurostat, UOE: edat_ifse_02.

²⁰ EU-SILC UDB 2018, release 2020, version 1

²¹ <https://eufunds.ie/european-social-fund/what-do-we-fund/youthreach/>

²² <https://www.gov.ie/en/publication/a3c9e-extension-of-deis-to-further-schools/>

Figure 3: Early leavers from education and training in Ireland by sex, 2011-2021 (%)



Source: Eurostat (LFS), [edat_ifse_14].

lack of jobs. In addition, 24.2% of school leavers progressed to further education and training in 2019.

The reform of the upper secondary education ‘senior cycle’ will give students a wider range of pathways.

Following research commenced in 2016²³ and a public consultation, the Minister for Education announced on 29 March a vision to reform post-primary education – ‘Equity and Excellence for All’²⁴. The reform, which will be a key development for Ireland, is based on three tenets:

- i. empower students to meet the challenges of the 21st century;
- ii. ii. enrich the student experience and build on the strengths of the current system; and
- iii. iii. embed well-being and reduce student stress levels.

The new approach should provide a more diverse curriculum and a final assessment process, which will better support students in choosing a suitable path forward in academia, training or work. It also aims to reduce the traditional final written exams and introduce a minimum of 40% class-based continuous assessments. However, teachers’ representatives have raised concerns over the system’s capability to run these assessments²⁵.



Box 1: A new digital strategy for schools to 2027²⁶.

The new strategy, published in April, builds on the previous strategy (2015-2020), taking into account

²³ <https://ncca.ie/en/resources/senior-cycle-review-advisory-report/>

²⁴ <https://www.gov.ie/en/publication/f53c6-senior-cycle-reform/>

²⁵ <https://www.tui.ie/press-releases/tui-reiterates-its-insistence-on-state-certification-and-external-assessment-for-all-components-of-senior-cycle%20a0.14424.html>

²⁶ <https://www.gov.ie/en/publication/69fb88-digital-strategy-for-schools/>

the progress made, new developments in digital technologies and emerging priorities. The strategy will comprise a total investment of EUR 200 million for the primary and secondary school sectors. The main objectives have centred around three pillars:

- i) support to embed digital technologies in teaching, learning and assessment;
- ii) ii) ICT infrastructure; and
- iii) iii) policy, research and digital leadership. The objectives also cover inclusion, supporting curricular reform, online safety, technical support and work in areas, particularly emerging technologies, where further research is required. The first implementation plan will run from 2022-2024 and following a mid-term review, the second implementation plan will run from 2025-2027.

To support the digital inclusion of disadvantaged students, DEIS schools will receive double the amount of funding provided to non-DEIS schools for ICT infrastructure under the scheme via Ireland’s national recovery and resilience plan²⁷. The plan also supports the connectivity of schools.

5. Vocational education and training and adult learning

The review of Ireland’s national skills strategy 2016-2025 has been launched.

The project run by the OECD²⁸ is examining how Ireland is equipped to meet current and future demand for skills. It looks at how the higher education and further education and training and skills ecosystem as a whole is responsive to current and future labour market needs; how to strengthen lifelong learning, and how skills can drive innovation. Additionally, to pursue quality in

²⁷ <https://www.gov.ie/en/press-release/d9805-minister-foley-announces-issue-of-50-million-funding-to-primary-and-post-primary-schools-to-address-the-digital-divide-under-irelands-national-recovery-and-resilience-plan/>

²⁸ <https://www.gov.ie/en/press-release/36423-minister-harris-and-oecd-secretary-general-mathias-cormann-announce-plans-for-an-examination-of-irelands-skills-strategy/>

further education and training, since January 2021, Ireland has carried out a review of its Education and Training Boards, including a review of the main providers.

The SOLAS recovery skills response programme, co-funded by the Recovery and Resilience Facility, is a key investment in the social and economic recovery. The programme will roll out additional educational and training programmes under the 'Skills to Compete' initiative. The SOLAS green skills action programme will provide training on climate and low-carbon economy. The government launched the green skills for further education and training roadmap in March 2022, incorporating the green skills action programme with a commitment to providing 60 000 places to train in green skills and 4 550 places to train in retrofits and near zero energy buildings. Additionally, the new online portal (<https://www.smartchoices.ie/>) by SOLAS provides career and training guidance, including for early school leavers.

Ireland continues to invest in ongoing skills measures and in boosting adult learning. In 2021, participation in adult learning in the last four weeks was 13.6%, slightly above the EU average. The national adult literacy programme helped over 100 000 beneficiaries return to education and training or gain new qualifications over 2014-2019 (Box 2). In the 2022 budget, it allocated EUR 9 million to achieve the strategic priorities in further education and training, including implementing the 10-year adult literacy strategy (Government, 2021c). It allocated EUR 78 million for reskilling and upskilling, including a EUR 22 million green skills action programme, and the 'Building Bridges' project to improve pathways and outcomes for prisoners (70% of inmates have insufficient literacy skills). Furthermore, the Higher Education Authority (HEA) Bill 2022 includes a provision for the HEA to promote and support higher education institutions (HEIs) in providing lifelong and flexible learning. Ireland set the 2030 target of 64.2% of adults in training every year, above the EU target of 60%.

Ireland allocates additional funding to mitigate the negative impact of COVID-19. It committed EUR 34 million in its 2022 budget to continue supporting apprenticeships, including EUR 17 million to remedy the backlogs caused by COVID-19. Ireland also allocated EUR 6.85 million in funding for 2022 to mitigate educational disadvantages (launched in 2020). The fund places a strong focus on community education as a mechanism to continue to support and engage with disadvantaged learners.



Box 2: Adult literacy programme

The adult literacy programme aims to improve equal access to lifelong learning for all age groups in formal, non-formal, and informal settings. It also promotes flexible learning pathways by providing career guidance and validating acquired competencies. The investment is primarily aimed at the unemployed, particularly the long-term unemployed, disadvantaged groups, the under 35, people formerly employed in declining sectors, and adults with low literacy and numeracy skills.

It offers basic education programmes for adults, including:

- reading and writing
- communication skills
- applying numbers and tackling maths problems in everyday life
- creative thinking and problem-solving
- study skills.

Number of beneficiaries (2014-2019): 116 103.

Budget: EUR 52 953 352.23 from the European Social Fund + EUR 47 489 348.16 from national funding.

Results so far: 40% of participants went back to education or training, 23% gained a qualification and 2% were directly employed.

<https://www.gov.ie/en/service/90adb6-adult-literacy/>

6. Higher education

The tertiary educational attainment rate rose sharply again and the employment rate of recent graduates is catching up. In 2021, the tertiary attainment rate rose by 3.3 pps compared to 2020, reaching 61.7%, the second highest rate in the EU (average: 41.2%)²⁹. The proportion of STEM graduates is above the EU average (26.4% vs EU 24.9%), and the proportion of ICT graduates is the highest in the EU (8.6%)³⁰. Overall, during the pandemic, the higher education attainment rate rose by 6.3 pps since 2019. As the increase was slightly higher among women (by 1 pp.), the gender gap increased to 8.7 pps, reversing the positive trend recorded in the last 4 years but remained well under the EU average (11.1 pps) (Figure 4). The attainment rate among men at 57.4% remains the second highest in the EU. In 2021, the employment rate of recent graduates was 90%, marking a sharp increase by 2.6 pps compared to 2020 (EU 84.9%, an increase by 1.3 pps), but still lower than in 2019 (91%).

To foster equity in higher education, Ireland makes increasing the participation of disadvantaged groups a priority. Drawing on Census data, the percentage of 20-year-olds in disadvantaged areas who are students increased from 27% in 2006 to 44% in 2011, and to 47% in 2016. The number of students studying on a flexible basis (part-time and remote) continues to rise steadily, while the number of mature students (aged 23 and older) is dropping (DE, 2021). However, Irish persons with disabilities still have a 20% higher chance of having a low education than their non-disabled peers, and the disability education gap is large in Ireland (OECD, 2021d). In 2018, only 39.9% of persons with disabilities aged 30-34 held a higher education diploma³¹. The newly proposed funding framework³² cuts costs for students and families. In June, the Minister announced two initiatives, worth in total EUR 6 million, to support students with autism and students with an intellectual disability in accessing

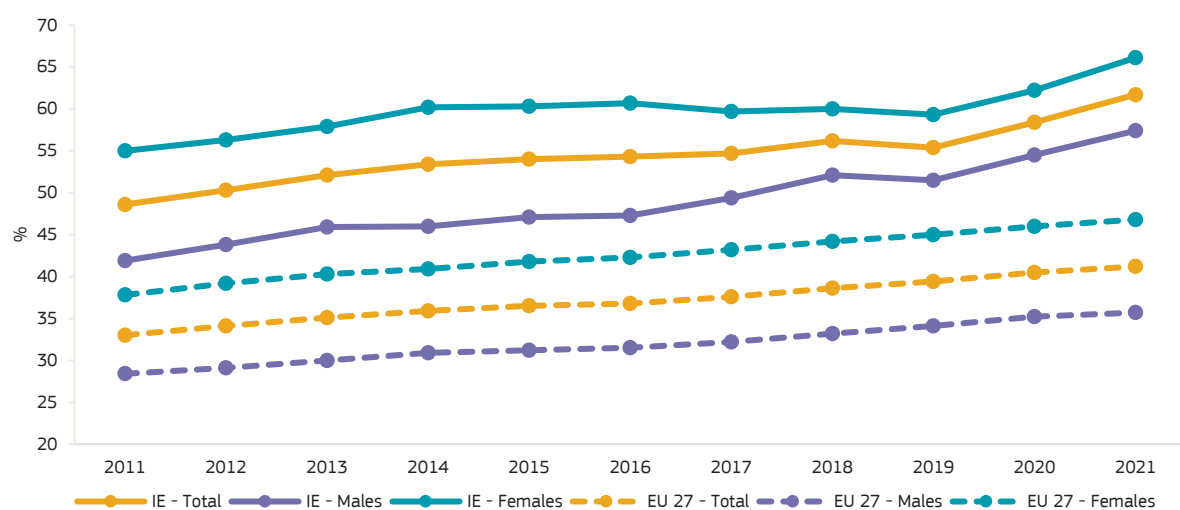
²⁹ Eurostat, UOE: edat_ifse_03.

³⁰ Eurostat, UOE: educ_ueo_grad02.

³¹ EU-SILC UDB 2018, release 2020, version 1

³² <https://www.gov.ie/en/press-release/11787-landmark-policy-funding-higher-education-reducing-cost-for-families/>.

Figure 4: Tertiary education attainment (25-34) in Ireland and in the EU by sex, 2011-2021 (%)



Source: Eurostat (EU-LFS), [edat_ifse_03].

third-level education. The national access plan (2022-2026)³³ (forthcoming) contains funding and support for students from disadvantaged socio-economic backgrounds, mature students, Irish travellers, Roma and students with special educational needs, including for the first time, students with intellectual disabilities.

The government has announced a policy to introduce a sustainable funding system and improve the quality and accessibility of higher education. The 'Funding the Future' framework (DFHERIS, 2022b) prioritises increased funding for student support, sets out options to make higher education funding sustainable and improve the quality of higher education, addresses skills gaps, and fosters the participation of under-represented groups. Under the new framework, student fees will be gradually reduced and student grants³⁴ will be increased; student loans have been ruled out to avoid indebting students. Investment will be increased by EUR 307 million coming from state investment, student contributions and employer contributions via the National Training Fund. This should fill a major funding gap, as identified by the government. Decreasing the student-to-academic staff ratio³⁵, improving staff employment conditions and rolling out a more robust and evidence-informed system strengthening accountability and performance measurement (a revised performance framework) should improve the educational outcomes of HEIs in Ireland. The government will address skills shortages, prioritising the skills for public services (healthcare workers, teachers, and staff working on implementation of the housing and climate policies). Greater links are planned between further and higher education and research sectors to provide a wider range of choices for learners, including adults. Some stakeholders, however, doubt that the proposed reforms will achieve the stated goals (University Times, 2022b). This policy

is in response to the Cassells report (2016), the report on funding higher education carried out under the European Commission's Technical

Support Instrument (2021), and an Independent Review of the Student Grant Scheme (Indecon, 2022)³⁶.

The new Bill aims to reform the legislative framework for higher education sector, providing a more defined role for the Higher Education Authority (HEA) and strengthening the institutional governance in higher education institutions. The Higher Education Authority Bill (Oireachtas, 2022) is going through the legislative process before enactment. Its overall aim is to provide a high quality, student-focused higher education system with appropriate oversight and accountability by the higher education institutions to the HEA and the State. The Bill also aims to improve policy development and planning in the sector. To strengthen institutional governance, the legislation reduces the size of the governing bodies of universities, provides for competency-based membership and a majority of external members and an external chairperson. It also provides for oversight by the HEA of higher education institutions and intervention if good governance is not implemented. Regarding the original version of the Bill, some stakeholders expressed concerns about limiting the autonomy of institutions, placing undue emphasis on monetary value, degrees and outputs (University Times, 2022a), and reduced student representation³⁷. The amendments to the Bill have sought to allay stakeholders' concerns about the changes.

A National Student and Researcher Helpdesk will support students and researchers

³³ <https://hea.ie/policy/consultation-new-national-plan-for-equity-of-access-to-higher-education-2022-2026/>.

³⁴ <https://susi.ie/>.

³⁵ Current student-staff ratio: 19.1 IE vs 15.3 EU (OECD, 2021a).

³⁶ <https://www.gov.ie/en/policy-information/49e56-future-funding-in-higher-education/>.

³⁷ <https://usi.ie/heabill/>; <https://universitytimes.ie/2022/09/independent-senators-usi-urge-harris-to-amend-hea-bill/>

fleeing the war in Ukraine³⁸. The helpdesk, which was created in May 2022, assisted Ukrainian third-level students and researchers who wished to continue their studies or research in Ireland. The helpdesk, hosted by Maynooth University, is funded by the Department of Further and Higher Education, Research, Innovation and Science.

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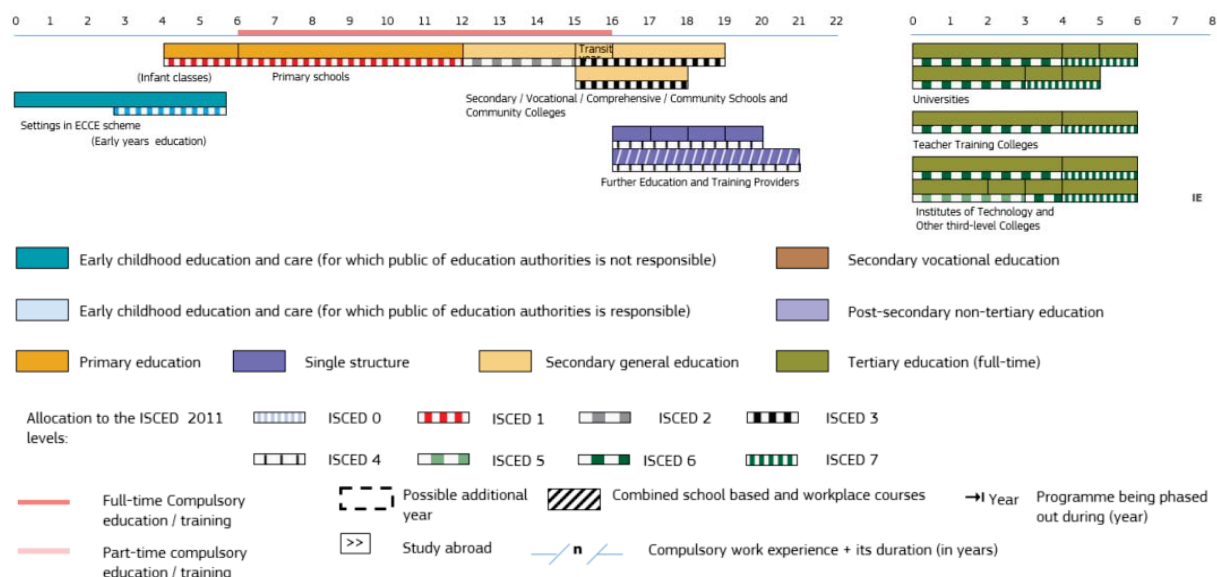
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Annex I: Key indicators sources

Indicator	Source
Participation in early childhood education	Eurostat (UOE), 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: Eurostat (LFS), edat_lfse_14 Data by country of birth: Eurostat (LFS), edat_lfse_02
Exposure of VET graduates to work based learning	Eurostat (LFS), edat_lfs_9919
Tertiary educational attainment	Main data: Eurostat (LFS), edat_lfse_03 Data by country of birth: Eurostat (LFS), edat_lfse_9912
Participation of adults in learning	Data for this EU-level target is not available. Data collection starts in 2022. Source: EU LFS.
Equity indicator	European Commission (Joint Research Centre) calculations based on OECD's PISA 2018 data
Upper secondary level attainment	Eurostat (LFS), edat_lfse_03
Public expenditure on education as a percentage of GDP	Eurostat (COFOG), gov_10a_exp
Public expenditure on education as a share of the total general government expenditure	Eurostat (COFOG), gov_10a_exp

Annex II: Structure of the education system



Source: European Commission/EACEA/Eurydice, 2022. The Structure of the European Education Systems 2022/2023: Schematic Diagrams. Eurydice Facts and Figures. Luxembourg: Publications Office of the European Union.

Please email any comments or questions to:
EAC-UNITE-A2@ec.europa.eu

Brussels, 18.11.2022
SWD(2022) 751 final

PART 9/28

COMMISSION STAFF WORKING DOCUMENT

Education and Training Monitor 2022

Accompanying the document

**Communication from the Commission to the European Parliament, the Council, the
European Economic and Social Committee and the Committee of the Regions**

on progress towards the achievement of the European Education Area

{COM(2022) 700 final} - {SWD(2022) 750 final}

Education and Training Monitor 2022

GREECE



The Education and Training Monitor's country reports present and assess the main recent and ongoing policy development at all education levels in EU Member States. They provide the reader with more in-depth insight of the performance of countries with regard to the EU level targets agreed within the EEA. They are based on the most up-to-date quantitative and qualitative evidence available.

Section 1 presents a statistical overview of the main education and training indicators. Section 2 focuses on how the Member State has addressed or is addressing one of its education challenges. Section 3 covers early childhood education and care. Section 4 deals with school education policies. Section 5 covers vocational education and training and adult learning. Finally, Section 6 discusses measures in higher education.

The Education and Training Monitor's country reports were prepared by the European Commission's Directorate-General for Education, Youth, Sport and Culture (DG EAC), with contributions from the Directorate-General for Employment, Social Affairs and Inclusion (DG EMPL).

The document was completed on 30 September 2022

More background data at:

<https://op.europa.eu/webpub/eac/education-and-training-monitor-2022/en/>



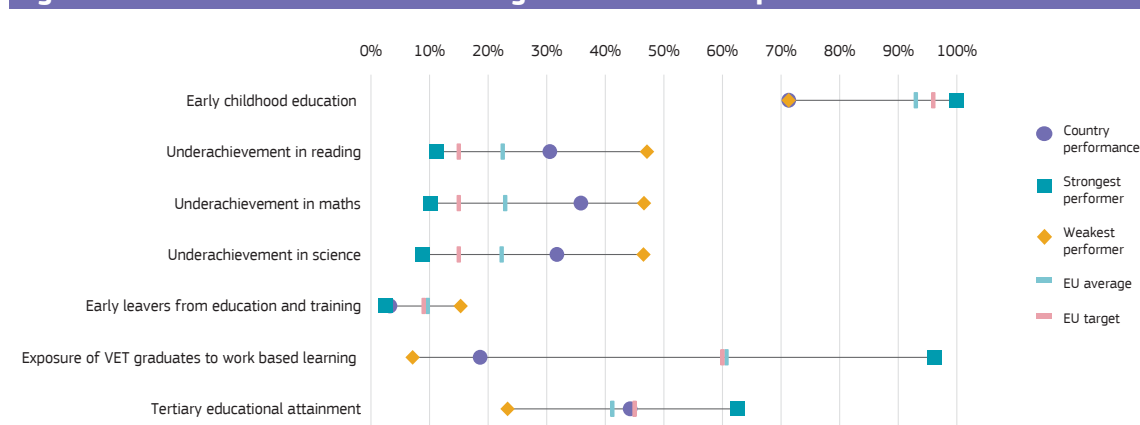
1. Key indicators

Figure 1: Key indicators overview

			Greece		EU	
			2011	2021	2011	2021
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}	71.3% ^{20, de}	91.8% ¹³	93.0% ²⁰
Low achieving eighth-graders in digital skills	< 15%		:	:	:	:
Low achieving 15-year-olds in:	Reading	< 15%	21.3% ⁰⁹	30.5% ¹⁸	19.7% ⁰⁹	22.5% ¹⁸
	Maths	< 15%	30.3% ⁰⁹	35.8% ¹⁸	22.7% ⁰⁹	22.9% ¹⁸
	Science	< 15%	25.3% ⁰⁹	31.7% ¹⁸	18.2% ⁰⁹	22.3% ¹⁸
Early leavers from education and training (age 18-24)	< 9 %		12.9%	3.2% ^b	13.2%	9.7% ^b
Exposure of VET graduates to work-based learning	≥ 60 % (2025)		:	18.6%	:	60.7%
Tertiary educational attainment (age 25-34)	≥ 45 %		32.3%	44.2% ^b	33.0%	41.2% ^b
Participation of adults in learning (age 25-64)	≥ 47 % (2025)		:	:	:	:
Other contextual indicators						
Equity indicator (percentage points)			:	25.0 ¹⁸	:	19.30 ¹⁸
Early leavers from education and training (age 18-24)	Native		9.1%	2.8% ^b	11.9%	8.5% ^b
	EU-born		26.1%	:	25.3%	21.4% ^b
	Non EU-born		48.5%	30.0% ^{bu}	31.4%	21.6% ^b
Upper secondary level attainment (age 20-24, ISCED 3-8)			83.9%	95.7% ^b	79.6%	84.6% ^b
Tertiary educational attainment (age 25-34)	Native		36.2%	46.0% ^b	34.3%	42.1% ^b
	EU-born		11.7%	34.7% ^b	28.8%	40.7% ^b
	Non EU-born		7.4%	20.0% ^b	23.4%	34.7% ^b
Education investment	Public expenditure on education as a percentage of GDP		4.5%	4.5% ²⁰	4.9%	5.0% ²⁰
	Public expenditure on education as a share of the total general government expenditure		8.2%	7.4% ²⁰	10.0%	9.4% ²⁰

Sources: Eurostat (UOE, LFS, COFOG); OECD (PISA). Further information can be found in Annex I and at [Monitor Toolbox](#). 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; the equity indicator shows the gap in the share of underachievement in reading, mathematics and science (combined) among 15-year-olds between the lowest and highest quarters of socio-economic status; b = break in time series, d = definition differs, e = estimated, u = low reliability, : = not available, 09 = 2009, 13 = 2013, 18 = 2018, 20 = 2020.

Figure 2: Position in relation to strongest and weakest performers



Source: DG Education, Youth, Sport and Culture, based on data from Eurostat (LFS 2021, UOE 2020) and OECD (PISA 2018).

2. A focus on inclusiveness and equity in education

About half of the disadvantaged pupils in Greece are low achievers, a sign that the quality and equity of education need to be addressed. Low participation in early childhood education and care, especially of disadvantaged children under 4, results in educational inequalities. These inequalities affect the children's future education prospects and development (diaNEOsis 2021). One in five students underperformed in all three subjects tested as part of the PISA 2018 survey – severe underachievement. As in other EU countries, educational outcomes are heavily influenced by socio-economic background. Almost half of the students in Greece from the lowest socio-economic quartile lack basic reading skills compared to only one in seven students from the highest quartile. Equally worrying, about half of students from a migrant background obtain low results compared to one in three students born in Greece. Migrant children's access to post-secondary and tertiary education also gives cause for concern. Only one in five people aged 25-34 and born outside the EU holds a tertiary education qualification (vs the EU average of 34.7%). The proportion of early school leavers is particularly low in Greece, but the risk of early school leaving was 7.8 times higher among young people born outside the EU (30%) than among those born in the EU. The pandemic's impact on the economy has also had a severe knock-on effect on the prospects of young adults, in particular the prospects of those who leave school early.

Educational outcomes of Roma pupils lag far behind those of their peers. Greece has a significant Roma population¹. The most recent Fundamental Rights Agency survey shows some improvement, but Roma pupils still face major challenges in education. Only 16% of them complete upper secondary education, compared to 95.7% of the total population. Around one third of

Roma children attend schools where all or almost all of their schoolmates are Roma (down from 48% in 2016)². National efforts are underway for in particular pupils from vulnerable social groups, to be integrated into the educational system. Between 2020 and 2022, Greece participated in an Erasmus+ project called 'Inclusive schools for Roma'. Encompassing capacity-building activities and education mediation, the project involved 200 teachers, 50 Roma education mediators and 20 schools.

Greece has the potential to create a strong and inclusive education system. It has qualified and very committed teachers, 15-year-old students with a strong sense of belonging to school (OECD, 2019) and one of the lowest early school leaving rates in the EU. All students follow a similar curriculum until the age of 16, and there is second-chance education for those who leave education and training early. Education is free, including the distribution of textbooks. Greece is one of the EU countries³ that give financial support to teachers in disadvantaged schools. However, monitoring and further improving the quality in education hinges on the full implementation of the schools' external evaluation and the evaluation of teachers that is currently underway. This could be especially beneficial for disadvantaged pupils. The country has average equity in education outcomes, as assessed in PISA 2015. Despite Greece's geography, only 3.5% of primary schools and 6% of secondary schools are classified as 'difficult to access' by the Ministry of Education and Religious Affairs (Ministry of Education) (Roussakis, 2017).

There is a strong political will to strengthen inclusiveness and equity in education. Greece's national authorities are making efforts to tackle the complex issue of inclusive education and equity in education at legislative, policy and implementation levels. The EU Technical Support Instrument of the European Commission (Education and Training Monitor 2021) is supporting Greece to implement a comprehensive

¹ Council of Europe average estimate 175 000 Roma, representing 1.55% of Greece's population (2012).

² National strategy and action plan for the social integration of Roma 2021-2030.

³ France, Greece, Hungary, Lithuania, Poland, Romania, Slovakia, Slovenia and Sweden (Education and Training Monitor 2022, Comparative report).

educational reform, putting inclusion at the heart of educational policy. The reform aims to meet the diverse needs of learners, including pupils with disabilities and special educational needs, refugees and students from low socio-economic backgrounds. A framework for inclusive education has been designed and inclusiveness and equity in education are covered in the different national policy papers. Numerous programmes are being implemented at all levels of education and vocational training by the Institute of Educational Policy (IEP), such as the Erasmus+ 'Inclusive schools for Roma', the UNICEF programmes 'Pathway to all children in education', and programmes for multilingual environments. The extension of pre-primary education by 2 years in all Greek municipalities in 2021/2022 was a positive step, as the foundations for equal opportunities are laid at the start of education. The establishment of 50 new model and experimental schools in the 2021/2022 school year has also paved the way towards accessible education for all.

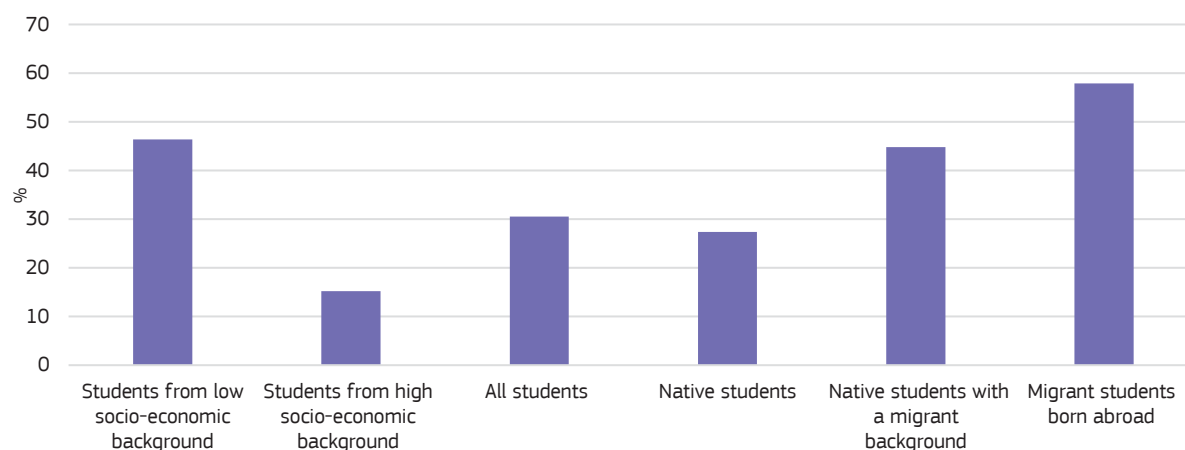
Greece invests in inclusive education and equity through EU funding.

The digital divide complicated matters during the pandemic. As in other EU countries⁴, in 2020 more than 20% of students in Greece from the bottom socio-economic quartile did not have a computer they could use for schoolwork (OECD, 2020a) (NESET, 2021). The EU Recovery and Resilience Facility (RRF) aims to address this gap and has already provided digital equipment to more than 500 000 pupils and students, subject to income criteria⁵ (European Commission, 2021). The scheme has recently been extended to teachers. The support provided includes the development of digital content accessible to all, equipment for all schools, support for the professional development of teachers, and digital services (European Commission, 2021). Greece allocates EUR 1 223 million to education and lifelong learning through the European Social Fund+ (ESF+). This amount is also allocated to supporting people with disabilities and special educational needs and people from vulnerable social groups. Some EUR 360 million from the European Regional Development Fund will improve access to inclusive

⁴ France, Spain, Italy, Ireland, Greece, Slovakia and Hungary.

⁵ Children from a migrant background, refugees and Roma are included in the programme.

Figure 3: Low-achieving students in reading by socio-economic and migrant background in Greece, PISA 2018 (%)



Source: OECD, PISA 2018.

education through infrastructure and equipment. Horizon 2020 also helps to tackle inequality and exclusion in schools (Cordis 2020).



Box 1: Good practice: Teach4integration programme

The Greek Ministry of Education has created a 400-hour teacher training programme in collaboration with the Institute for Educational Policy and UNICEF-Greece, helping over 1 600 teachers to manage linguistic and cultural diversity in schools. The programme is part of the 'All Children in School' initiative, developed in collaboration with the Ministry of Immigration and Asylum and funded by the European Commission.

The programme invests in developing the skills of teachers in order to promote integration and an inclusive culture in schools.

Training is offered in a variety of areas, such as the teaching of Greek as a second language to refugees and children from a migrant background, psychosocial support, and the use of digital tools.

The programme's main aim is to ensure that all refugee/migrant children have access to high quality and inclusive education.

Source: <https://www.teach4integration.gr/>

3. Early childhood education and care

Greece ranks last in the EU in participation in early childhood education and care (age 3+), but performs better for the 4+ age bracket. In 2020, only 71.3% of children aged 3 to the starting age of the compulsory primary education participated in early childhood education, well below the EU average of 93% and the EU-level target of 96% by 2030. This is largely because most children start attending school at age 4. In 2020, only one child in three participated in early childhood education at age 3, compared to the EU average of 87.8%. Significantly more children are in pre-school from

age 4+, the start of compulsory pre-primary education (86.5%). In 2020, Greece saw one of the most marked improvements⁶ in the EU, with an increase of 2.5 percentage points (pps) compared to 2019 (ages 3+ and 4+). This was mainly the outcome of the gradual lowering of the starting age for compulsory education to age 4 was completed during the 2021/2022 school year. Nevertheless, capacity constraints and teacher shortages persist. The Ministry of Education has attempted to anticipate these and ensure the effective functioning of schools in the 2022/2023 school year by appointing 25 000 teachers for all levels of compulsory education early on, including permanent appointments for special education teachers.

The establishment of a national council for pre-school education is a step towards an integrated approach to pre-school education and care. The national council⁷ was created in 2022 in line with the national framework for pre-school education of children 0-4 years old. It will monitor the quality of nurseries and kindergartens, the modernisation and optimal implementation of national programmes and their monitoring, and the training of specialised staff – to date 125 000 hours of teachers training provided –, as well as their assessment and appointment. A holistic strategy for ECEC from 0-6 years old, until young children enter primary education, is needed to ensure the quality of the education provided. Affordability for all should also be ensured.

4. School education

Greece has one of the lowest⁸ rates of early leavers from education and training in the EU. At 3.2% in 2021, the proportion of early school leavers is already far below the 2030 EU-level target of 9%. The rate in rural areas is only slightly higher than in urban areas, at 4.1% in 2021. Greece manages to maintain this low level, an indication that it handles the problem

⁶ Education and Training Monitor 2022, Comparative Report.

⁷ Joint Decision 30246 of the Ministries of Labour and the Interior, National Government Gazette B 1637/5.4.2022.

⁸ Croatia (2.4%), Slovenia (3.1%), Greece (3.2%) and Ireland (3.3%).

effectively. Policies facilitate transitions within education and training systems or provide alternative education and training pathways. They also help early school leavers re-enter the education system through second-chance education and career guidance. Proof of the effectiveness of Greece's policies is also that in 2021, 95.7% of 20 to 24 year-olds obtained at least upper secondary diplomas, making Greece the top performer in this area⁹.

Education for environmental sustainability (EES) is part and parcel of Greek legislation and new school curricula. During consecutive reforms, the national educational policy on EES has been harmonised with the UNESCO-led Global Education 2030 Agenda. Soft skills and life-science competencies in areas covered by Greek legislation¹⁰ – climate change, environmental awareness, sustainable development – have been incorporated into the new curricula. Those notions constitute an integral part of the innovative action in schools, the 'Skills Labs' (ETM 2021). The strategic plan for teacher training in ESD is part of teachers' mandatory initial training¹¹.

Pupils in the last years of primary and lower secondary education participated in the first national formative assessment tests last May. Greece organised¹² a programme of system-level evaluation of 12 000 pupils in Greek and mathematics. A representative sample of students and schools¹³ did the tests. The Ministry's aim was to assess the implementation of the new curricula and the learning outcomes of pupils at national, regional and school levels. This was mainly for policy design purposes and was done in order to

increase quality and mitigate disparities in education. Although referred to as 'Greek PISA' by the press, there is a significant difference compared to the international PISA tests, as the tests done in Greece provided an assessment of basic knowledge rather than a competence check. However, the test fills the gap in the systematic collection and analysis of data on the quality of education.

Steady steps to introduce teacher evaluation. Greece has only recently introduced the evaluation of schools and teachers, while across Europe the evaluation of schools has become increasingly important for monitoring the overall quality of education. Internal evaluation is in place since the 2020/2021 school year. A prerequisite for implementing teacher evaluation is the selection of education executives¹⁴. This includes the school principals for primary and secondary education, directors at regional and municipal level and education consultants. The Ministry is in the process of appointing 800 consultants out of 2 800 applicants. While the process has been hampered by delays, procedures seem to be back on track and teacher evaluation, at the top of the national political and policy agenda, is supposed to commence during the current school year.

Greece has brought itself into line with other Member States by introducing the 'item bank' system for the school-based assessment of pupils. Item banks (banks of examination questions) in education can be regarded as useful assets for increasing the quality of education. Half of the questions in the in-school examinations last school year, at the three levels of upper secondary education¹⁵, were from the item bank and were of graduated difficulty. The other half were set by the class teacher. The aim is to harmonise in-school exams throughout the country and to make the exams system more objective.

⁹ And in Croatia (96.9%) and Ireland (96.1%).

¹⁰ Ministerial Decision No F.7/79511/GD4 (OJG 2539 B/24.06.2020) 'Implementation of the pilot action Skill Laboratories in Primary and Secondary Schools'.

¹¹ GREECE Reporting on the Implementation of the UNECE Strategy for ESD (2017-2019), the United Nations Economic Commission for Europe (2018). National Implementation Reports ESD 2018, available at: <https://unece.org/environment-policy/education-sustainable-development/national-implementation-reports-esd-2018>.

¹² Law 4823/2021.

¹³ Big vs small schools/urban vs rural schools/regular vs model vs experimental schools.

¹⁴ Law 4823/2021.

¹⁵ General and vocational education schools.

Students in Greece receive limited training on how to detect biased information (OECD, 2021). One in two 15-year-old students in OECD countries reported being trained at school on how to recognise whether information is biased or not, with Greece coming in at 52% (Suarez-Alvarez, 2021). The capacity of 15-year-olds to distinguish facts from opinions also varies among OECD countries, with an average of 47% and Greece at 40.5%. The socio-economic background of students in Greece also comes into play here (Suarez-Alvarez, 2021). The pandemic made matters worse by increasing the use of digital means of obtaining information. The fallout of this is that it has become crucial to develop young people's digital literacy and critical thinking skills (OECD, 2021). By contrast, the proportion of 16 to 19-year-olds with basic or above-basic overall digital skills is high in Greece, at 89%, vs the EU average of 69% (DESI, 2022). The impact of the 'Skills Labs' introduced in 2020 in the Greek schools is to be assessed, as the intention is among others to enforce digital literacy and to develop skills including critical thinking.

The results of the Panhellenic university entrance exams for the 2020/2021 and 2021/2022 academic years show that a considerable learning loss occurred due to the pandemic. Contrary to the year before school closures, the university entrance exam results in summer 2020 showed a difference of 0.22 standard deviations (s.d.) and those of summer 2021 a difference of 0.405 s.d. These results seem to affect the most vulnerable parts of the population, such as poor people and immigrants (Lambropoulos et al., 2022).



Box 2: European Social Fund (ESF) project 'Centres for environmental education and sustainable development'

The aim of this project is to make students environmentally responsible and therefore to create environmentally conscious societies. So far, environmental education programmes for all

levels of education have been implemented. National and regional thematic networks have been set up to promote the achievement of the European Green Deal¹⁶ objectives. The key aim of the project is the collaboration of the centres for environmental education and sustainable development with schools and the community. Collaborations have also been set up with universities and technical institutes in research and educational activities.

The project is co-financed by the ESF under the operational programme 'Human Resources Development, Education and Lifelong Learning' for the 2014-2020 programming period. Around 50 000 students are taking part from 2020 to 2023.

The public budget for the project is EUR 4.8 million.

Source: <https://kpe.inedivim.gr/>

5. Vocational education and training and adult learning

Greece is undertaking reforms to improve the attractiveness and social perceptions of VET which have long been hampered. This will occur through better coordination and relevance with the labour market. The recently updated VET and adult learning legal framework¹⁷ has established a new system of governance and sustainable partnerships with coordinating bodies at national, regional and sectoral levels. The new governance bodies, such as the Central Council for Vocational Education and Training (KSEK) and the Central Scientific Committee (KEE), along with the Sectoral Skills Councils and the Production and Labour Market Association Councils (SSPAE) in the 13 regions of the country have been launched. Also, VET investments driven by the Strategic Plan for Vocational Education, Training, Lifelong Learning and Youth and the recently adopted

¹⁶ https://ec.europa.eu/info/strategy/priorities-2019-2024/european-green-deal_en

¹⁷ Introduced by Laws 4763/2020 and 4921/2022.

Strategy for Lifelong Skills Development¹⁸ have also set a quality upgrade of VET as a priority. The aim is to increase productivity and growth, tackle total and youth unemployment and improve the entire population's skills. Career progression opportunities in technical specialties – the keystone of VET – are also still hampered by a limited internal job market. The planned modernisation of the VET offer and its delivery, a key aspect of what needs to be done to improve matters, needs to be accelerated by updating job profiles. The aim is to help workers and companies better adapt to the new entrepreneurial environment and to help further develop quality-assured VET systems. The planned streamlining of different educational pathways can also address problems created by the existence of identical specialties in different learning paths.

In initial VET, curricula and educational materials are being upgraded. In 2020, 31.9% of upper secondary pupils were enrolled in VET programmes¹⁹, compared to the EU average of 48.7%. School to work transitions are facilitated by the apprenticeship class in VET schools. Funding for apprenticeships will continue to be provided through the ESF+. Combining an apprenticeship with on-the-job training for at least 50% of the duration of VET programmes and laboratory specialty courses is expected to create more opportunities for VET graduates to gain experience and improve their qualifications in real working conditions. In 2021, the exposure of recent VET graduates to work-based learning²⁰ was 16.7% (below the EU average of 60.7%). The establishment and expansion of model and experimental upper secondary vocational schools, with the collaboration of social partners and the local community, helps make VET more attractive by better linking it to labour market needs. Greater integration of green skills into the curriculum, and the provision of psychosocial support, are also expected to greatly improve the VET schools model. The creation of international partnerships

and the ALMA (Aim, Learn, Master, Achieve)²¹ initiative are particularly helpful in this regard. Generally speaking, structural reforms need to be accompanied by a mapping of gaps.

Establishing a lifelong learning culture is critical for ensuring greater participation in adult learning. Greece has set a target of 40% of adults in training every year by 2030. This is more than double the 2016 rate of 16%. The focus on the digital and green transitions is expected to be reinforced to further modernise VET and support the significant digital and green investments planned for the years ahead. The focus on digital skills and the mastering of technological applications for the economy has been strengthened with the recent Law 4921/2022. This law also envisages the establishment of individual learning accounts to increase adult participation in learning. Long-standing systemic deficiencies in the quality control of lifelong learning centres, which came to light during the pandemic, have been addressed with Law 4763/2020, introducing a new quality control standard and the certification of qualifications. To ensure the adequacy and quality of all adult learning, the expertise of adult educators is expected to be upgraded through digital training sessions and the training of trainers, evaluators, teachers and executives responsible for designing, organising and implementing programmes and managing lifelong learning centres. The recent reform of the VET system and the substantive infrastructure investments under the Recovery and Resilience Facility are expected to increase participation to VET schools such as in vocational training institutes' programmes and apprenticeship schemes for 18 to 24-year-olds. Paid internship schemes have also been developed. Lastly, the tracking of graduates needs to be systematically implemented to detect mismatches between qualifications and labour market needs.

¹⁸ Under the national recovery and resilience plan.

¹⁹ Eurostat, educ_uoe_enrs05.

²⁰ Eurostat, edat_ifs_9919.

²¹ European Commission, Employment, Social Affairs and Inclusion, [ALMA](#).

6. Higher education

Tertiary education attainment is high, but a significant gender gap persists, with 44.2% of young people aged 25-34 in Greece holding a tertiary education degree. This is higher than the EU average of 41.2% and close to the EU-level target of 45% by 2030. However, a significant gender gap in favour of women persists (-13.4 pps vs the EU average of -11.1 pps), with 59% of all graduates being women. Greece is one of the Member States with a high proportion of female science, technology, engineering and maths (STEM) graduates. In 2020, one in five female graduates was a STEM graduate (vs the EU average of 14.1%). At 38.4%, the proportion of female over all STEM graduates in Greece is also above the EU average of 33.2%. In 2020, women represented 34.3% of ICT graduates (EU: 20.8%) (OECD, 2020).

Greece aims to strengthen links between universities, research bodies and industry with the support of the RRF. In an effort to better connect education with research, and based on the conclusions of the HEInnovate review on the Greek higher education (OECD - EC 2021), industrial doctoral schemes have been introduced by law into the Greek higher education system²².

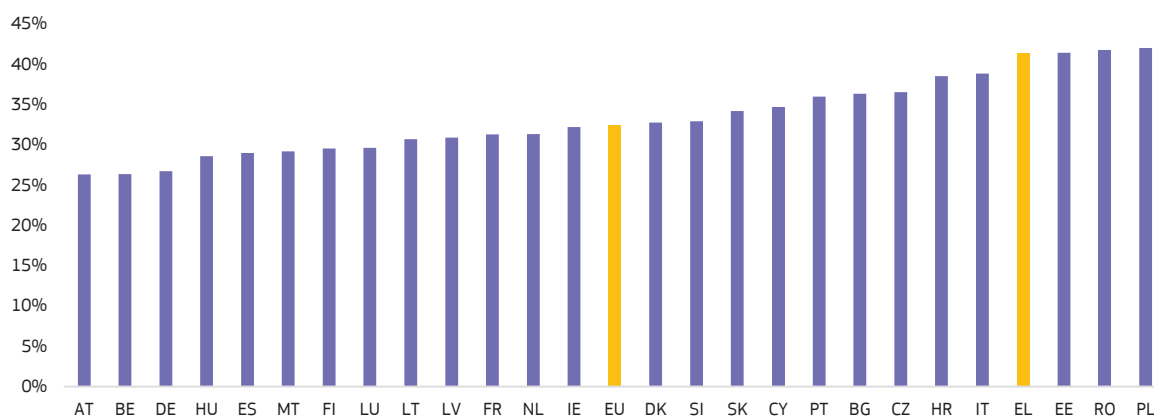
²² Law 4926/2022.

This is part of a major reform for Greece financed under the RRF called 'Strategy for excellence in universities and innovation'. Doctoral dissertations in basic or applied research will be conducted under a tripartite agreement between, for example, one university, one doctoral student and one industry or company based or operating in Greece. The research results should relate to the production of innovative products or services.

Greece is the only Member State that has not yet ratified the Lisbon Recognition Convention²³. Although this decision is within the limits of national competencies, the Convention remains the key legal instrument for the recognition of academic qualifications in the countries that have signed it. The Convention is also an important instrument for the Bologna Process that establishes the European Higher Education Area. The body for the academic recognition of titles and qualifications in Greece is the Hellenic National Recognition and Information Centre. On the basis of Law 4957/2022 adopted last July for higher education, the Ministry of Education has significantly simplified the recognition procedure, by making the condition for

²³ The Council of Europe, in cooperation with UNESCO, drafted the Convention on the Recognition of Qualifications concerning Higher Education in the European Region, more briefly referred to as the 'Lisbon Recognition Convention'. It was signed in Lisbon in 1997.

Figure 4: Female STEM tertiary graduates as a proportion of total STEM tertiary graduates, 2020 (%)



Source: Eurostat (UOE), [educ_uoe_grad02].

recognition inclusion in two registries created by the recognition body, one for recognised universities abroad and one for recognised qualifications. Greece also participated in the pilot programme 'European Qualifications Passport for Refugees', based on the Lisbon Convention.

A new law was adopted in July improving and modernising higher education²⁴. The law is structured around four pillars: 1) upgrading the quality of higher education institutions, 2) improving how they function, 3) forging closer links between them and society, and 4) modernising the Hellenic National Recognition and Information Centre. The law is aligned with the objectives of the European Education Area. It is also in line with Greece's commitment in its national recovery and resilience plan (RRP) to reform higher education. University Councils will be created as administrative bodies, sharing strategic and control responsibilities with the executive body, awarding autonomy to the HEIs. A new framework for the appointment of faculty members is being introduced to make it more meritocratic and transparent. The recruitment of visiting professors and researchers from abroad, a project in the Greek RRP, aims to make higher education institutions more international. Micro-credentials will help improve people's skills levels and the new law will enhance brain gain and attract new funding sources.

Performance criteria apply for 20% of universities' funding. For the first time during the current fiscal year and in accordance with Law 4653/2020, objective criteria have been linked to 80% of funding for higher education institutions and performance criteria to the remaining 20% (European Commission, 2020). For performance (20%), a set of criteria is applied to all higher education institutions for the improvement of basic academic activities, and the institutions choose another two criteria from the following: a) excellence in education, research and innovation, b) links with society and the labour market, and the use of the knowledge produced, c)

internationalisation, or d) an institution's environmental sustainability. This performance-based approach adds transparency to the funding process of the higher education institutions, highlighting their comparative advantages. Higher education has been underfunded for years in Greece. This year, public funding will be increased by EUR 14.5 million, to EUR 105 million.

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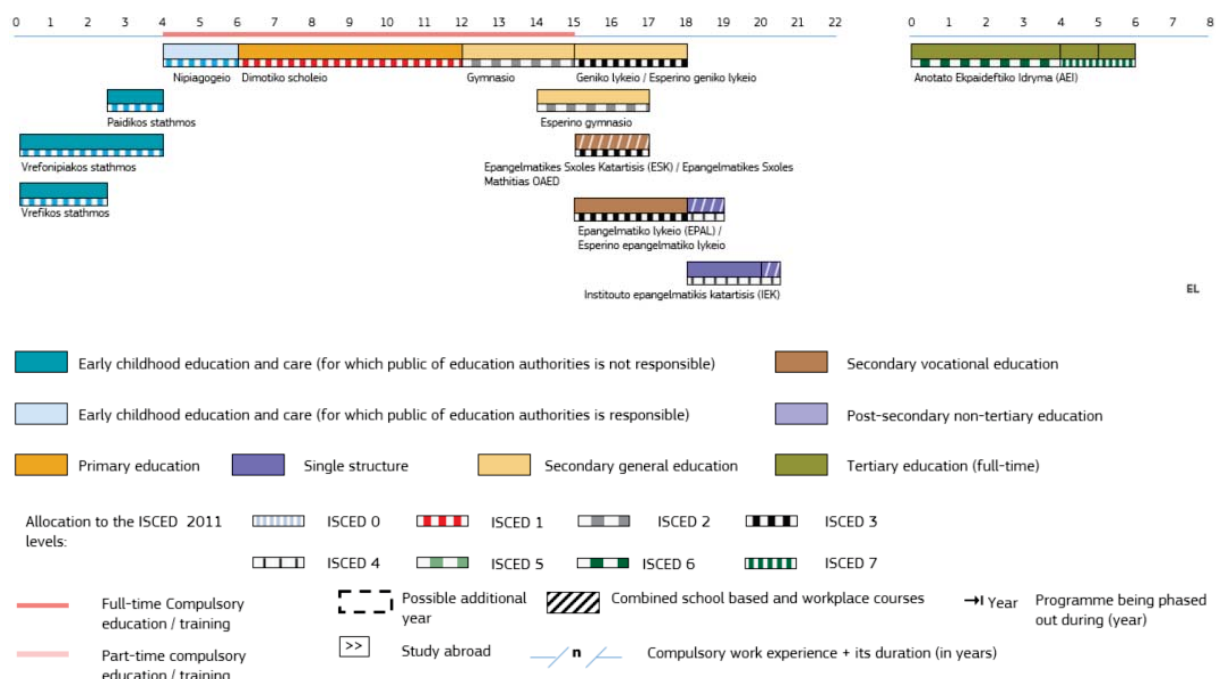
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Annex I: Key indicators sources

Indicator	Source
Participation in early childhood education	Eurostat (UOE), educ_uae_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: Eurostat (LFS), edat_lfse_14 Data by country of birth: Eurostat (LFS), edat_lfse_02
Exposure of VET graduates to work based learning	Eurostat (LFS), edat_lfs_9919
Tertiary educational attainment	Main data: Eurostat (LFS), edat_lfse_03 Data by country of birth: Eurostat (LFS), edat_lfse_9912
Participation of adults in learning	Data for this EU-level target is not available. Data collection starts in 2022. Source: EU LFS.
Equity indicator	European Commission (Joint Research Centre) calculations based on OECD's PISA 2018 data
Upper secondary level attainment	Eurostat (LFS), edat_lfse_03
Public expenditure on education as a percentage of GDP	Eurostat (COFOG), gov_10a_exp
Public expenditure on education as a share of the total general government expenditure	Eurostat (COFOG), gov_10a_exp

Annex II: Structure of the education system



Source: European Commission/EACEA/Eurydice, 2022. The Structure of the European Education Systems 2022/2023: Schematic Diagrams. Eurydice Facts and Figures. Luxembourg: Publications Office of the European Union.

Please email any comments or questions to:
EAC-UNITE-A2@ec.europa.eu

Brussels, 18.11.2022
SWD(2022) 751 final

PART 10/28

COMMISSION STAFF WORKING DOCUMENT

Education and Training Monitor 2022

Accompanying the document

**Communication from the Commission to the European Parliament, the Council, the
European Economic and Social Committee and the Committee of the Regions**

on progress towards the achievement of the European Education Area

{COM(2022) 700 final} - {SWD(2022) 750 final}

Education and Training Monitor 2022

SPAIN



The Education and Training Monitor's country reports present and assess the main recent and ongoing policy development at all education levels in EU Member States. They provide the reader with more in-depth insight of the performance of countries with regard to the EU level targets agreed within the EEA. They are based on the most up-to-date quantitative and qualitative evidence available.

Section 1 presents a statistical overview of the main education and training indicators. Section 2 focuses on how the Member State has addressed or is addressing one of its education challenges. Section 3 covers early childhood education and care. Section 4 deals with school education policies. Section 5 covers vocational education and training and adult learning. Finally, Section 6 discusses measures in higher education.

The Education and Training Monitor's country reports were prepared by the European Commission's Directorate-General for Education, Youth, Sport and Culture (DG EAC), with contributions from the Directorate-General for Employment, Social Affairs and Inclusion (DG EMPL).

The document was completed on 30 September 2022

More background data at:

<https://op.europa.eu/webpub/eac/education-and-training-monitor-2022/en/>



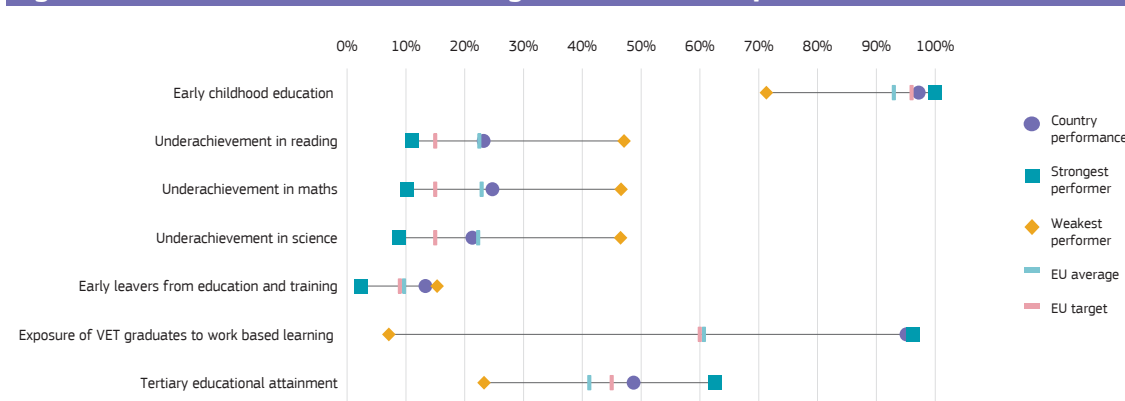
1. Key indicators

Figure 1: Key indicators overview

			Spain		EU	
			2011	2021	2011	2021
EU-level targets			2030 target			
Participation in early childhood education (from age 3 to starting age of compulsory primary education)	≥ 96 %		96.6% ¹³	97.2% ²⁰	91.8% ¹³	93.0% ²⁰
Low achieving eighth-graders in digital skills	< 15%		:	:	:	:
Low achieving 15-year-olds in:	Reading	< 15%	19.6% ⁰⁹	23.2% ¹⁸	19.7% ⁰⁹	22.5% ¹⁸
	Maths	< 15%	23.7% ⁰⁹	24.7% ¹⁸	22.7% ⁰⁹	22.9% ¹⁸
	Science	< 15%	18.2% ⁰⁹	21.3% ¹⁸	18.2% ⁰⁹	22.3% ¹⁸
Early leavers from education and training (age 18-24)	< 9 %		26.3%	13.3% ^b	13.2%	9.7% ^b
Exposure of VET graduates to work-based learning	≥ 60 % (2025)		:	95.1%	:	60.7%
Tertiary educational attainment (age 25-34)	≥ 45 %		40.3%	48.7% ^b	33.0%	41.2% ^b
Participation of adults in learning (age 25-64)	≥ 47 % (2025)		:	:	:	:
Other contextual indicators						
Equity indicator (percentage points)			:	16.2 ¹⁸	:	19.30 ¹⁸
Early leavers from education and training (age 18-24)	Native		23.1%	11.3% ^b	11.9%	8.5% ^b
	EU-born		39.2%	28.5% ^b	25.3%	21.4% ^b
	Non EU-born		41.6%	22.0% ^b	31.4%	21.6% ^b
Upper secondary level attainment (age 20-24, ISCED 3-8)			62.0%	78.8% ^b	79.6%	84.6% ^b
Tertiary educational attainment (age 25-34)	Native		45.3%	54.0% ^b	34.3%	42.1% ^b
	EU-born		28.8%	38.5% ^b	28.8%	40.7% ^b
	Non EU-born		21.6%	30.1% ^b	23.4%	34.7% ^b
Education investment	Public expenditure on education as a percentage of GDP		4.4%	4.6% ^{20,p}	4.9%	5.0% ²⁰
	Public expenditure on education as a share of the total general government expenditure		9.6%	8.8% ^{20,p}	10.0%	9.4% ²⁰

Sources: Eurostat (UOE, LFS, COFOG); OECD (PISA). Further information can be found in Annex I and at [Monitor Toolbox](#). 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; the equity indicator shows the gap in the share of underachievement in reading, mathematics and science (combined) among 15-year-olds between the lowest and highest quarters of socio-economic status; b = break in time series, u = low reliability, : = not available, 09 = 2009, 13 = 2013, 18 = 2018, 20 = 2020.

Figure 2: Position in relation to strongest and weakest performers



Source: DG Education, Youth, Sport and Culture, based on data from Eurostat (LFS 2021, UOE 2020) and OECD (PISA 2018).

2. A focus on education for environmental sustainability

Education for environmental sustainability is a key component of the Education Act. Under the reform of the Organic Law of Education (LOMLOE), adopted in December 2021, the topic is addressed both as a transversal component and in the subject of Civic and Ethical Values. The law also envisages the inclusion of sustainable development and global citizenship in the training programme of future teachers.

Action Plan on Environmental Education for Sustainability 2021-2025 (PAEAS)¹. The Plan, adopted in August 2021, is the result of an extensive consultation and participation process conducted since the end of 2019. It aims at: a) generating changes in curricula to include competence on sustainability; b) training of teachers related to sustainability; c) incorporating environmental aspects into school projects; and d) designing and implementing programmes and projects coordinated with education stakeholders, schools, and universities. The PAEAS 2022 Work Programme², approved by the Ministry of Ecological Transition and the Ministry of Education and Vocational Training, includes the following actions related to education: a) approval of new curricula in primary and secondary education (lower and upper); b) publication of guidelines on how to incorporate education for sustainable education into teaching methodologies; c) incorporating competence related to sustainable development into vocational education and training (VET) curricula; d) identifying new competencies concerning sustainable development in all professional sectors; e) updating and

creating new VET degrees on conservation and restoration of the environment; f) launching calls for innovation projects on sustainable education; g) training of teachers on sustainable development; h) running seminars on education for sustainable education (addressed to all citizens); i) promotion of the national network of networks of sustainable non-university educational centres (ESenRED schools towards sustainability online); and j) online publication of collections of good practices in education for sustainable development.



Box 1: Schools engaged in environmental and sustainable projects

Since 2018-2019, the public school Gaspar Remiro in Épila (Zaragoza, Aragon), in collaboration with a private company *Nómadas*, has been carrying out a waste composting project. All students (around 440) participated. This project is supported by the municipality through the EU LEADER programme and has been identified as a best practice by the Interreg Europe programme CECI (Citizen Involvement in Circular Economy Implementation).

In Castile and Leon, the Segovia City Council and the regional government promote the study of climate change in secondary schools, as part of the second regional strategy for environmental education. Almost 300 students have studied carbon footprints and how to reduce them.

In Andalusia, there are almost 100 schools that belong to the *Naturaliza* network, a project supported by the non-profit organisation *Ecoembes*. Collaborators include the regional governments of Madrid, Extremadura and Castile and Leon, and private organisations (FUAM, CICA, Bosquescuela, Asociación Española de Educación Ambiental). The project includes training for teachers, teaching resources and out-of-school activities.

More information available at:

Aragon:

https://www.youtube.com/watch?v=sU_4iXP5IYc;
<https://www.youtube.com/watch?v=dcI4ghSGDCw>;

Castile and Leon:

¹ https://www.miteco.gob.es/es/ceneam/plan-accion-educacion-ambiental/plandeacciondeeducacionambientalparalasostenibilidad2021-202508-21_tcm30-530040.pdf

² https://www.miteco.gob.es/es/ceneam/plan-accion-educacion-ambiental/programa-trabajo-2022-paeas_tcm30-534147.pdf

<https://medioambiente.jcyl.es/web/es/planificacion-indicadores-cartografia/estrategia-educacion-ambiental-20162020.html>;

Andalusia:

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<https://bosquescuela.com/>; <https://ae-ea.es/>.

3. Early childhood education and care

Spain aims to ensure quality and affordable, universal access to childcare for children aged 0-3. Participation of children above 3 years in early childhood education and care (ECEC) is the third highest in the EU (97.2%), surpassing the EU-level target of 96%. The participation rate of children below the age of 3 (55.3% in 2021) is also well above EU average (36.6%) and the Barcelona target (33%). Similarly to other EU countries, there was a drop in the participation rate of the younger age cohort in 2020, probably linked to the COVID-19 pandemic, but the trend seems to have recovered in 2021 (55.3%). In 2021-2022, there were around 435 000 children below age 3 attending the first cycle of ECEC (*educación infantil*). Of the 36 500 ECEC centres available, 53% are public kindergartens, around 30% private centres and the rest publicly funded private ECEC schools³ (MEFP, 2021). Although regional differences are narrowing, ECEC participation below age 3 ranges from 53.4% to 21.8% in 2020-2021. The National Recovery and Resilience Plan (RRP) includes the creation of 60 000 free public ECEC places for children below 3 in 2021-2023, with an allocated budget of EUR 670.1 million distributed among the Spanish regions⁴. To meet expected demand for free places, some regional governments (Madrid, Galicia, Andalusia and Murcia) are negotiating

agreements with Acade⁵, the association of private schools in Spain. Regional inequality in access to ECEC is due not only to the scarcity of free places but also to the lack of homogeneous criteria at national level that guarantee access to the most vulnerable. The LOMLOE states that the government will set some minimum requirements for ECEC (curricula, children per classroom ratio, and teachers' qualification). A proposal to amend the LOMLOE education law, aimed at guaranteeing free universal access to ECEC below age 3, regardless of the type of school, was approved by the Spanish Congress, and will be tabled for parliamentary discussion before the end of 2022. Under the proposal, the State should transfer to autonomous communities enough credits to guarantee the free socio-educational care service, both in public and private schools⁶.

A sound monitoring system of the quality of early childhood education and care is still to be established. While ECEC participation is overall high, challenges linked to unequal quality continue. Otero et al (2021) concludes that there is an urgent need to develop indicators to assess the quality of services and results of the two ECEC cycles (ages 0-3 and from 3 to compulsory education), with sound and reliable tools to achieve comparable results. The need for further territorial cooperation among autonomous communities is necessary, to ensure access to ECEC services, and their proper quality.

4. School education

A curriculum reform for primary and secondary education is being rolled out. In February-April 2022, several Royal Decrees were

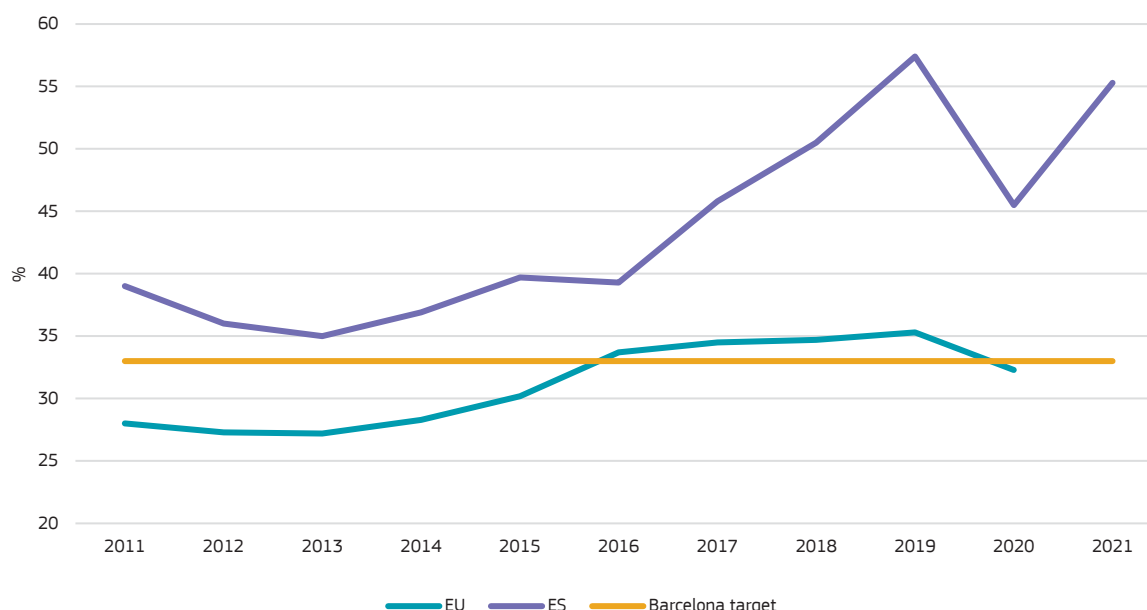
³ <https://www.educacionyfp.gob.es/dam/jcr:38b733ce-a07a-4b83-a911-dde297965023/notaresumen2021-22.pdf>

⁴ <https://www.educacionyfp.gob.es/dam/jcr:24dac4b0-2908-40df-a97a-c27243e67746/anexos-cmin.pdf>

⁵ <https://educacionprivada.org/>

⁶ https://www.congreso.es/notas-de-prensa?p_p_id=notasprensa&p_p_lifecycle=0&p_p_state=normal&p_p_mode=view&notasprensa_mvcPath=detalle&notasprensa_notalId=41169

Figure 3: Participation in formal childcare or education of pupils below 3, 2011-2021 (%)



Source: Eurostat (EU-SILC), [ilc_caindformal].

published updating the curriculum of primary⁷, lower secondary⁸ and upper secondary education⁹. The new curricula have been designed based on the adaptation of the Recommendation on Key Competences for Lifelong Learning¹⁰ to the Spanish education system and the different education levels. The primary education curriculum is based on eight key competences:

- i. linguistic communication;
- ii. multilingualism;
- iii. mathematics and science, technology and engineering;
- iv. digital;
- v. personal, social and learning to learn;
- vi. citizenship;

- vii. entrepreneurship; and
- viii. competence in cultural awareness and expression.

The curriculum for secondary education pays special attention to academic orientation and

educational inclusion. This is to prevent early school-leaving and to facilitate the achievement of learning outcomes for all students. The Royal Decree establishes curricular diversification programmes (where subjects are organised in a flexible and alternative way for those students with learning difficulties). As for the Royal Decree on upper secondary education, it sets up four independent tracks to be chosen by students: sciences and technology; humanities and social sciences; arts; and general. This last track is a new route designed for those students who are looking for a more global and flexible training, and allows a practically individualised organisation of this educational stage.

The educational community is divided regarding the new curriculum for lower secondary education. Some trade unions (CCOO, UGT) and parent associations (CEAPA) welcome the competence-based approach of the new

⁷ <https://www.boe.es/boe/dias/2022/03/02/pdfs/BOE-A-2022-3296.pdf>

⁸ https://www.boe.es/diario_boe/txt.php?id=BOE-A-2022-4975

⁹ <https://www.boe.es/boe/dias/2022/04/06/pdfs/BOE-A-2022-5521.pdf>

¹⁰ <https://education.ec.europa.eu/focus-topics/improving-quality/key-competences>

curriculum, and the more flexible methods to assess the academic performance of students. Other trade unions (CSIF) and parent associations (CONCAPA) are critical, claiming that the new regulation would not improve the quality of education as the curriculum would be more competence-based at the expense of content. They also question the more flexible promotion system. ANCABA, the association of full professors in high schools, denounces the new track *Bachillerato General*, may be perceived as an easily accessible upper secondary education (due to content of the subjects that students have to learn), but providing lower competences¹¹. The Ministry of Education has put forward a proposal of the curricular content for the 4 different upper secondary tracks¹².

The rate of early leavers from education and training continues to decrease. The ELET rate stood at 13.3% in 2021 (2.7 percentage points lower than in 2020), but still above EU average (9.7%). Nevertheless, large regional differences persist, ranging from 17.7% to 4.8%. In addition, 78.8% of the population aged 20-24 has reached at least upper secondary education level, that is 16.8 percentage points more than in 2011, and increasingly closer to the European average (84.3% in 2020). Research by Morentin-Encinas (2021) reveals that most students who finish lower secondary education continue to VET studies or upper (general) secondary education. However, 30% of students (official estimate around 16%) do not complete general lower secondary education (*enseñanza secundaria obligatoria*, ESO), and two thirds among these abandon the education system in the fourth grade of lower secondary education (the final grade of this educational stage). In parallel, over half of students leave basic VET, the alternative pathway. In conclusion, the education system faces difficulties in retaining students. The authors also point out that the decision to abandon school is

often linked to grade repetition. In the same vein, the research conducted by López-Rupérez et al. (2021) looked at associations between grade repetition and socio-economic and cultural status, and between graduation in compulsory secondary education. The findings reveal a large rate of grade repetition at 15 years of age, significant differences between territories, and a strong and negative causal link between repetition and graduation. Building on this evidence, the authors advocate for effective compensatory policies and well-founded proposals to reduce grade repetition in Spain. The European Commission, supports Spain, through a multi-country project with Portugal and Italy under the Technical Support Instrument, in improving the quality of their inclusive education policies.

Spain aims to improve working conditions for teachers by reducing the number of temporary contracts. The Government approved Royal Decree 270/2022¹³, which aims to reduce the high rate of teachers in public schools under temporary contracts (around 23% of all staff). The goal is to reduce the rate of interim teachers to below 8%. The new regulation envisages two extraordinary ways for interim teachers to become permanent staff. The first one is restricted for those who worked as interim teachers from 2017-2020 and it consists of a competitive exam and the appraisal of merits. A second entry procedure is for those teachers who had a temporary job prior to January 2016 and it is based exclusively on the appraisal of merits. Some trade unions (CSIF, UGT, STEs) opposed the new regulation and consider that this diversification of entry processes may hinder the reduction of the number of temporary teachers. Every year, around 28 000 new students enrol for undergraduate programmes to become a primary education teacher, and 20 000 to master's programmes for secondary education teachers.

¹¹ <https://www.magisnet.com/2021/10/el-bachillerato-general-puede-ser-segregador-advierten-los-docentes-de-esta-etapa/>

¹² <https://static.hoy.es/www/multimedia/202109/27/media/PropuestaESOBACH.pdf>

¹³ https://www.boe.es/diario_boe/txt.php?id=BOE-A-2022-6048

Almost EUR 285 million for educational digital competence is disbursed among the Spanish regions. In April 2022, the government approved the distribution of RRF funds among Spain's autonomous communities¹⁴. The distribution key is based on the number of university professors, the number of schools, and the dispersion of the population and insularity. The national RRP has a strong focus on digitalisation (European Commission, 2021). As part of the plan, around 700 000 teachers will participate in training related to digital skills. The funds will also finance the preparation of the digital school-level strategy in more than 22 000 schools. These funds are in addition to the almost EUR 12 million transferred to the autonomous communities in 2021 from EU funding programmes (structural funds, REACT-EU) to improve digital competence, almost EUR 150 million for the provision of portable devices and connectivity for students in need, the EUR 821 million for interactive digital classrooms, and almost EUR 19 million for the technical training of teachers in schools with interactive digital classrooms.

The integration of Ukrainian students in the Spanish education system follows a comprehensive contingency plan. Since the beginning of the war (*data available from beginning of May 2022*), over 28 000 displaced Ukrainian children (around 66% of total refugees) have been enrolled in school in Spain: 22% in early childhood education and care, 46% in primary, and 32% in secondary education. The Ministry of Education and Vocational Training (MEFP) created a working group within the sectorial conference (the coordination body between the Ministry and autonomous communities) and developed the comprehensive educational attention contingency plan for these students. This plan envisages the creation of school materials in both Spanish and Ukrainian and the admission of teachers from Ukraine to provide educational support in schools. MEFP is

also working on streamlining the procedures for homologation of titles and professional qualifications. In addition, the Ministry launched a call for 200 places for Ukrainian language assistants in Spanish educational schools who started to work in May 2022, in order to provide support to displaced students.

5. Vocational education and training and adult learning

Participation in vocational education and training remains fairly limited although it is increasing. In 2020, 36.6% of upper secondary pupils were enrolled in VET programmes¹⁵. While this rate is fairly low in comparison with the EU (average of 48.7%), there has been a marked increase in Spain in recent years, up from 33.5% in 2013. In 2021, 67.1% of recent VET graduates were employed¹⁶. While this rate remains below the EU average of 76.4%, it does represent a marked increase from the previous year (50.3% in 2020).

The new VET law puts focus on academia-business collaboration and professional accreditation. Organic Law 3/2022 on the organisation and integration of vocational training, entered into force on April 2022. It envisages new developments such as the consolidation of a modular single system integrating the two previous subsystems (initial and continuous VET). It also introduces dual VET in certain study grades and emphasises the relationship between training centres and companies. In addition, the new law sets a new model of accreditation of professional skills aimed at increasing the current percentage of population with formal professional accreditation. Among other things, the new law emphasises the role of professional guidance, internationalisation, and it enhances the quality

¹⁴ <https://www.educacionyfp.gob.es/prensa/actualidad/2022/04/20220405-fondosdigitalizacion.html>

¹⁵ Eurostat, educ_uoe_enrs05.

¹⁶ Eurostat, edat_lfse_24.

and evaluation system inspired in EU standards (EQAVET).

The National Catalogue of Professional Qualifications has been renewed. In line with the new VET Law, the Council of Ministers approved a new National Catalogue of Professional Qualifications aimed at adapting the training offer to the needs of companies in the fields of digitalisation, artificial intelligence, machine learning, and graphic design. It also approved the distribution of funds to regions as follows: EUR 193 million for the creation of new VET places and bilingual places; EUR 179.6 million for accreditation of 750 000 workers; EUR 50 million for the creation of a network of 50 centres of excellence; EUR 13.7 million for the technological conversion of classrooms; and EUR 6.6 million for entrepreneurship teaching.

Recent policy developments focus on promoting flexibility of adult education and continuity in the educational system. First, in November 2021, MEFP passed new legislation establishing equivalences between previous qualifications and the current education system to enable access to vocational training education¹⁷, easing transitions from the previous educational system to the new one and therefore promoting continuity. Second, in January 2022, MEFP increased flexibility in key adult learning areas in terms of the requirements to provide professional training offers linked to the National Catalogue of Professional Qualifications, and to advance in the expansion and flexibility of the vocational training offer¹⁸. In the context of the 2030 target for adult learning participation in a year, Spain set a national objective of 60%, the same as the EU target, about double the 2016 rate of 30.4%.

¹⁷ <https://www.boe.es/buscar/pdf/2021/BOE-A-2021-18189-consolidado.pdf>

¹⁸ <https://www.boe.es/buscar/pdf/2022/BOE-A-2022-1274-consolidado.pdf>

6. Higher education

A new law has been passed on university coexistence, laying down key principles in the operation of universities to ensure the exercise of freedoms and fundamental rights and guaranteeing equality¹⁹. Under the new law, all universities are required to have rules of coexistence, which incorporate mediation mechanisms as the preferred way to resolve conflicts. They must also have prevention and response measures against violence, discrimination or harassment. In addition, the universities must create a Coexistence Commission made up of representatives of students, academic (teaching and research) staff and administration and services staff. The Law on University Coexistence lays down a new system of offences and sanctions for students, with maximum guarantees and the possibility of replacing sanctions, in certain cases, with measures of an educational or remedial nature.

Reform of the Organic Law on University System. A proposed draft law for the new university act was approved by the government in June 2022²⁰ and is now under parliamentary discussion²¹. The draft law proposes to increase public spending to 1% of GDP (currently 0.7%) and reduce temporary employment of teaching and research staff from 40% to 20%. In addition, the proposal aims for the introduction of lifelong training degrees through various arrangements including micro-credentials, micro-degrees and other short-term programmes that may have academic recognition. It will also create a more predictable, shorter, and more stable academic career with three states - access, stabilisation and promotion - so that only 10 years should pass from the beginning of doctoral studies until

¹⁹ https://www.boe.es/diario_boe/txt.php?id=BOE-A-2022-2978

²⁰ <https://elpais.com/educacion/2022-05-09/subirats-deja-la-espinosa-reforma-de-las-universidades-en-manos-de-los-claustros.html>

²¹ https://www.congreso.es/public_oficiales/L14/CONG/BOCG/A/BOCG-14-A-111-1.PDF

stabilisation²². From 2016 to 2023, 50% of senior professors (*catedráticos*) and 20% of permanent-contract professors will be retired (almost 12 000 people). The law reform is part of the national RRP.

The number of scholarships increases but fails to cover the living costs for students.

The call to apply for a scholarship in all education levels for 2022/2023 closed mid-May – 4 months earlier than in previous years. This will allow students to know before the start of the new academic year whether they are eligible for a scholarship. In an effort to enhance educational opportunities, the amount allocated to scholarships increases year after year, and so does the number of beneficiaries. During the last 4 years²³, the amount allocated for education scholarships increased by 45%: from EUR 1.5 billion to EUR 2.15 billion. However, the debate on scholarship amounts should be accompanied by a debate on the efficiency of the scholarship scheme to overcome socio-economic disadvantages. Hernández Armentos and Pérez García (2021) propose to increase investment in scholarships by EUR 800 million to cover real and opportunity costs, especially for lower-income students. The EUA report *Public Funding Observatory 2020/2021*²⁴ reveals that public investment in Spanish university education decreased by 20.1% in the period 2008-2019, whereas student numbers decreased by 5% and academic staff numbers by 2%. Transfers from educational administrations (autonomous communities and central government) to universities was 8.1% less, whereas income from fees was 18% more than in the previous year.

Higher dropout rates in university studies happened in the first year, greatly influenced

²² https://www.universidades.gob.es/stfls/universidades/Prensa/ficheros/2022/09052022_Ministro_Universidades_presenta_LOSU.pdf

²³ <https://www.educacionyfp.gob.es/prensa/actualidad/2022/08/20220801-complementobecas.html>

²⁴ <https://efficiency.eua.eu/public-funding-observatory>

by the socio-economic characteristics of their family.

In 2021, tertiary education attainment in Spain was 48.7%, (1.3 percentage points more than in 2020), above the EU average (41.2%) and the EU-level target (45%). The Ministry of Universities reports²⁵, however, that 13% of students of Spanish nationality who entered the 2015/2016 academic year dropped out from undergraduate studies. This figure drops to 11% when it comes to students under 30 years of age. Another report on performance of university studies²⁶ found that one in five students abandons their undergraduate studies in the first year, and another 8% change their study field. The dropout rate from master's level is lower at around 10%. Moreover, of all students who drop out, more than half do so after the first year, which shows that the beginning of the degree is the most delicate moment in terms of continuity in studies. Dropping out can often be explained by individual factors and family circumstances. A relationship has also been found with the level of tuition fees, the age of students and their socio-economic background. To prevent dropouts, the Ministry of Universities has made progress in reducing tuition fees for bachelor's and master's degrees, and correcting imbalances between autonomous communities.

Variations in performance among regional university systems.

According to the CYD Foundation report on the situation of higher education in all autonomous communities²⁷, the highest student performance rates (measured on the basis of the ECTS credits²⁸ for which they enrolled and were granted) is found in Navarra,

²⁵ https://www.universidades.gob.es/stfls/universidades/ministerio/ficheros/Informe_Abandono_Universitario_completo_MFMS.pdf

²⁶ <https://www.universidades.gob.es/portal/site/universidades/menuitem.78fe777017742d34e0acc310026041a0?vgnextoid=c08855e937680710VgnVCM1000001d04140aRCRD>

²⁷ <https://www.fundacioncyd.org/publicaciones-cyd/universidades-espanolas-por-comunidad-autonoma-2021/>

²⁸ European Credit Transfer and Accumulation System

Catalonia and the Valencian Community (more than 88%). Extremadura, the Basque Country and Navarra stand out with the lowest dropout rate in the first year. A certain degree of field specialisation occurs in the regional university system. Some appear to be more specialised in social and legal sciences, engineering and architecture, arts and humanities, health, science, and science, technology, engineering, and mathematics (STEM). As regards job placement indicators, Catalonia registers the highest rate of activity and employment for higher education graduates, along with Navarra and the Basque Country (over 83.5% for all three). The highest unemployment rates are found in the Canary Islands and Andalusia (17.3% and 13.7% respectively). Regarding teaching staff profiles, participation of female teachers ranges from 40-47%, whereas the percentage of women appointed as senior professors (*catedráticos*) at public universities ranges from 15-29%.

Spain invests heavily in digital skills, with significant support from the national RRP.

According to DESI 2022²⁹, Spain ranks 10th at EU level on adult digital skills. The shares of the adult population having at least basic digital skills (64%) and above (38%) are higher than the EU average (54% and 26% respectively). The proportion of ICT specialists is close to the EU average (4.1% vs 4.5%), and the share of women is the same as the EU average (19%). One of the 10 objectives of the Digital Spain 2025 strategy³⁰ is to strengthen the digital skills of people across Spain by 2025, with particular focus on workers. Under this strategy, Spain adopted in January 2021 the National Plan for Digital Skills³¹ to promote the development of digital skills in the population. This plan is aligned with the Digital Decade 2030 targets for 80% of the EU adult

population to have basic digital skills and for 20 million ICT specialists to be employed. Spain's national RRP is one of the largest and most ambitious on digital. Particular focus is given to digitalising businesses, including SMEs, strengthening the digital skills of people across Spain, improving digital connectivity across the country's territory, continuing the digitalisation of public services, supporting digital-related R&D and the deployment of digital technologies.



Box 2: Labour insertion of adults aged over 45 through guidance and upskilling measures

The project *Programa 45+* provides direct support to unemployed people aged 45 to 60, with tailored education and training activities that better adapt to the requirements of companies, to ultimately increase their employability. It consists of a tailored training path aimed at improving digital and professional expertise. The programme is structured in four phases:

- Phase I: Guidance. A career counsellor defines the participant's profile based on a personal interview (professional qualification, level of competence, training in professional activity). The most appropriate training path is then identified.
- Phase II: Training in digital or professional skills (in person or online).
- Phase III: Brokering or intermediation. The Chamber supports the employability of the participant in the labour market.
- Phase IV: Hiring incentives for companies that hire unemployed workers aged 45-60.

In 2020-2022, this project was carried out under the ESF multi-regional programme POEFE. With a budget of almost EUR 14 million (EUR 10 million from ESF), the project has implemented 3 788 training events and generated 1 259 jobs (year 2021). By 2022 (ongoing), there have been 8 266 actions in career guidance, 6 798 in digital skills training, and 3 796 in labour intermediation.

More information available at:
<https://www.camara.es/formacion-y-empleo/programa-45-mas>

²⁹ <https://ec.europa.eu/newsroom/dae/redirection/document/88720>

³⁰ https://portal.mineco.gob.es/RecursosArticulo/mineco/ministerio/ficheros/210204_Digital_Spain_2025.pdf

³¹ <https://portal.mineco.gob.es/RecursosArticulo/mineco/ministerio/ficheros/210902-digital-skills-plan.pdf>

STEM graduates have very good prospects for work opportunities.

The proportion of STEM graduates has decreased since 2015 while it seems that they have good employment opportunities. In 2020, STEM graduates represented 20.8% of the total (25.4% in 2015). Although 56% of total university students are women, they only represent 26% of total engineering students. The same low proportion occurs on staff composition: women account for only 26% of engineering teachers and 20% of professors. According to the CEDEFOP skills forecast³², by 2030, STEM field sectors and occupations will rank among the top in terms of future employment with the highest annual growth rate: ICT technicians (2.2%) and science and engineering professionals (1.9%), above the EU average. The average insertion rate in the labour market of recent graduates (those who started in 2015-2016) is 75.4% (ranging from 69% to 85% across regions)³³, being much higher

for ICT (87.1%) and engineering, industry and construction (79.1%). ICT and engineering professionals are also those having one of the highest shares of workers with permanent contracts (91% and 80% respectively). Fundacion CYD also reports³⁴ that ICT, engineering, industry and health graduates have more chances to find a job that matches their qualification, and with better salaries and stability, compared with graduates in arts, humanities and services.

Measures to host Ukrainian refugees in the university system.

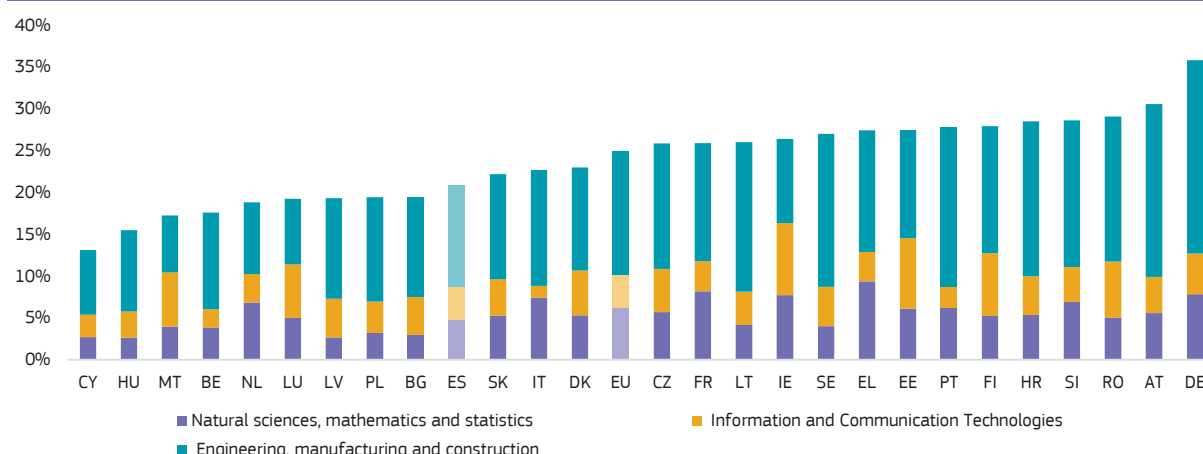
The Ministry of Universities, in collaboration with other ministries, presented before the end of March 2022 the *University-Shelter Action Plan* for people affected by the conflict in Ukraine. Based on this, universities in Spain will host students, researchers and administration and service personnel affected by the conflict in Ukraine.

³² <https://www.cedefop.europa.eu/en/tools/skills-forecast>

³³ <https://www.universidades.gob.es/portal/site/universidades/menuitem.78fe777017742d34e0acc310026041a0?vgnnextoid=b747122d36680710VgnVCM1000001d04140aRCRD>

³⁴ <https://www.fundacioncyd.org/calidad-de-la-insercion-laboral-de-los-graduados-universitarios/>

Figure 4: STEM tertiary graduates as a proportion of total graduates in 2020, (%)



Source: Eurostat (UOE), [educ_uoe_grad02].

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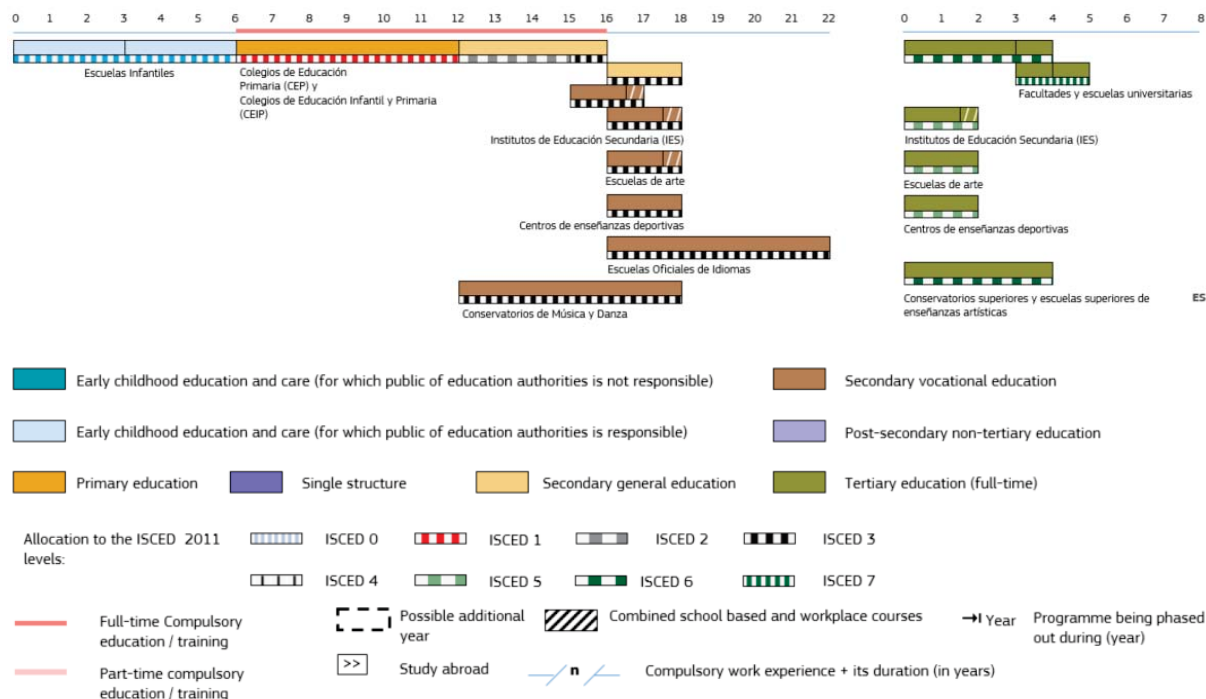
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Annex I: Key indicators sources

Indicator	Source
Participation in early childhood education	Eurostat (UOE), 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: Eurostat (LFS), edat_lfse_14 Data by country of birth: Eurostat (LFS), edat_lfse_02
Exposure of VET graduates to work based learning	Eurostat (LFS), edat_lfs_9919
Tertiary educational attainment	Main data: Eurostat (LFS), edat_lfse_03 Data by country of birth: Eurostat (LFS), edat_lfse_9912
Participation of adults in learning	Data for this EU-level target is not available. Data collection starts in 2022. Source: EU LFS.
Equity indicator	European Commission (Joint Research Centre) calculations based on OECD's PISA 2018 data
Upper secondary level attainment	Eurostat (LFS), edat_lfse_03
Public expenditure on education as a percentage of GDP	Eurostat (COFOG), gov_10a_exp
Public expenditure on education as a share of the total general government expenditure	Eurostat (COFOG), gov_10a_exp

Annex II: Structure of the education system



Source: European Commission/EACEA/Eurydice, 2022. The Structure of the European Education Systems 2022/2023: Schematic Diagrams. Eurydice Facts and Figures. Luxembourg: Publications Office of the European Union. Notes: Escuelas oficiales de idiomas offer language courses that may last for 11 years. Some of the education provision of Conservatorios can be recognised/validated in full-time mainstream education programmes and contribute to the obtaining of Bachillerato certificate Bachiller artístico.

Please email any comments or questions to:
EAC-UNITE-A2@ec.europa.eu



Brussels, 18.11.2022
SWD(2022) 751 final

PART 11/28

COMMISSION STAFF WORKING DOCUMENT

Education and Training Monitor 2022

Accompanying the document

**Communication from the Commission to the European Parliament, the Council, the
European Economic and Social Committee and the Committee of the Regions**

on progress towards the achievement of the European Education Area

{COM(2022) 700 final} - {SWD(2022) 750 final}

Education and Training Monitor 2022

FRANCE



The Education and Training Monitor's country reports present and assess the main recent and ongoing policy development at all education levels in EU Member States. They provide the reader with more in-depth insight of the performance of countries with regard to the EU level targets agreed within the EEA. They are based on the most up-to-date quantitative and qualitative evidence available.

Section 1 presents a statistical overview of the main education and training indicators. Section 2 focuses on how the Member State has addressed or is addressing one of its education challenges. Section 3 covers early childhood education and care. Section 4 deals with school education policies. Section 5 covers vocational education and training and adult learning. Finally, Section 6 discusses measures in higher education.

The Education and Training Monitor's country reports were prepared by the European Commission's Directorate-General for Education, Youth, Sport and Culture (DG EAC), with contributions from the Directorate-General for Employment, Social Affairs and Inclusion (DG EMPL).

The document was completed on 30 September 2022

More background data at:

<https://op.europa.eu/webpub/eac/education-and-training-monitor-2022/en/>



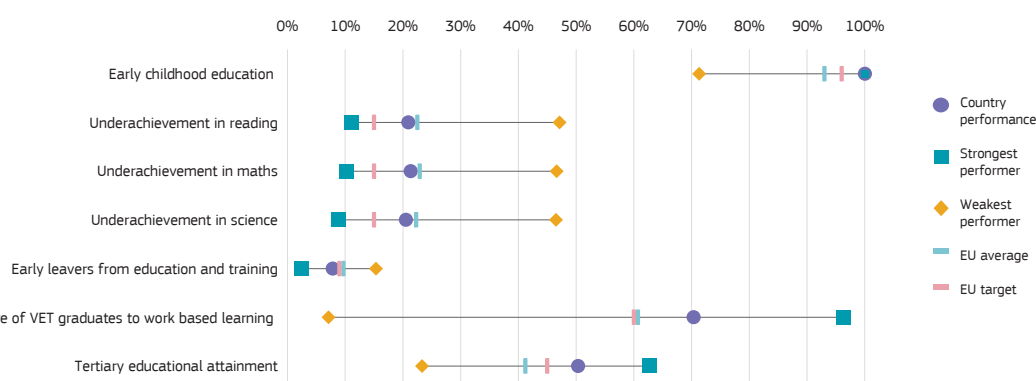
1. Key indicators

Figure 1: Key indicators overview

			France		EU	
			2011	2021	2011	2021
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% ^{20, p}	91.8% ¹³	93.0% ²⁰
Low achieving eighth-graders in digital skills	< 15%		:	43.5% ¹⁸	:	:
Low achieving 15-year-olds in:	Reading	< 15%	19.8% ⁰⁹	20.9% ¹⁸	19.7% ⁰⁹	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	18.2% ⁰⁹	22.3% ¹⁸
Early leavers from education and training (age 18-24)	< 9 %		12.3%	7.8% ^b	13.2%	9.7% ^b
Exposure of VET graduates to work-based learning	≥ 60 % (2025)		:	70.3%	:	60.7%
Tertiary educational attainment (age 25-34)	≥ 45 %		42.8%	50.3% ^b	33.0%	41.2% ^b
Participation of adults in learning (age 25-64)	≥ 47 % (2025)		:	:	:	:
Other contextual indicators						
Equity indicator (percentage points)			:	20.9 ¹⁸	:	19.30 ¹⁸
Early leavers from education and training (age 18-24)	Native		11.5%	7.5% ^b	11.9%	8.5% ^b
	EU-born		22.4%	12.8% ^{bu}	25.3%	21.4% ^b
	Non EU-born		22.7%	12.2% ^b	31.4%	21.6% ^b
Upper secondary level attainment (age 20-24, ISCED 3-8)			83.6%	89.7% ^b	79.6%	84.6% ^b
Tertiary educational attainment (age 25-34)	Native		44.1%	50.7% ^b	34.3%	42.1% ^b
	EU-born		35.8%	45.1% ^b	28.8%	40.7% ^b
	Non EU-born		33.9%	47.5% ^b	23.4%	34.7% ^b
Education investment	Public expenditure on education as a percentage of GDP		5.5%	5.5% ^{20, p}	4.9%	5.0% ²⁰
	Public expenditure on education as a share of the total general government expenditure		9.7%	8.9% ^{20, p}	10.0%	9.4% ²⁰

Sources: Eurostat (UOE, LFS, COFOG); OECD (PISA). Further information can be found in Annex I and at [Monitor Toolbox](#). 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; the equity indicator shows the gap in the share of underachievement in reading, mathematics and science (combined) among 15-year-olds between the lowest and highest quarters of socio-economic status; b = break in time series, p = provisional, u = low reliability, : = not available, 09 = 2009, 13 = 2013, 18 = 2018, 20 = 2020.

Figure 2: Position in relation to strongest and weakest performers



Source: DG Education, Youth, Sport and Culture, based on data from Eurostat (LFS 2021, UOE 2020) and OECD (PISA 2018).

2. A focus on equity in education

Pupils' educational outcomes depend to a large extent on their socioeconomic background. International studies have

repeatedly shown that, in France, socioeconomic background determines educational performance to a greater extent than in other countries (OECD, 2019a). France ranked fourth in the EU on how strongly socioeconomic status predicts performance in reading (it explains 17.5% of the variation in reading scores). In maths, too, there are large performance gaps between advantaged and disadvantaged students (DEPP, 2022a). Access to early childhood education and care below the age of 3 is highly dependent on parents' socioeconomic background (see section 3). The French Court of Auditors concluded that the promise of the education system to reduce socioeconomic inequality has not been fulfilled (Cour des Comptes, 2021b). In June 2022, the Council of the EU recommended France to '[raise] the share of people with basic skills [by] improving

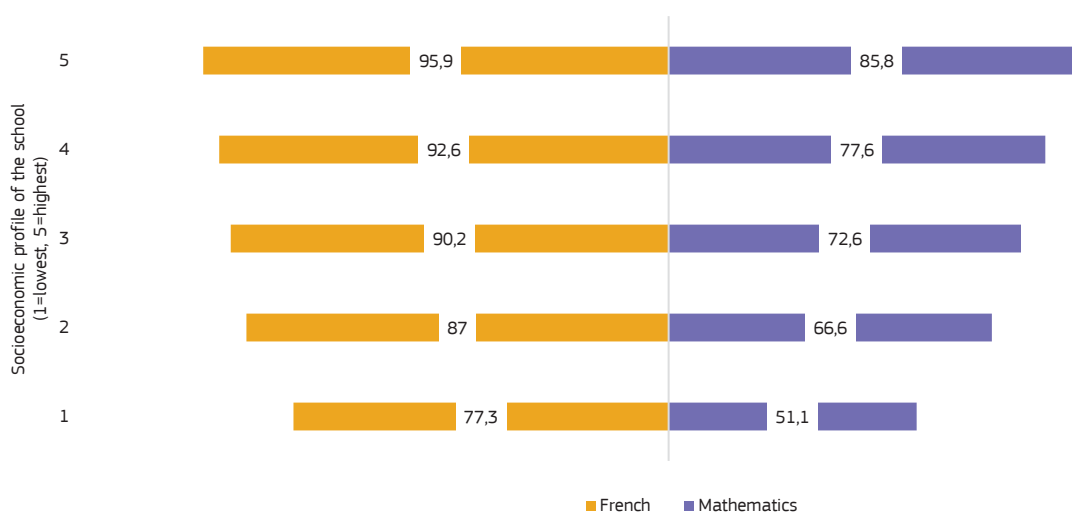
the learning outcomes of all students, in particular by adapting resources and methods to the needs of disadvantaged students and schools and by improving the working conditions and continuous training of teachers' (Council of the European Union, 2022).

From early childhood education and care to higher education, the French government is taking measures to address inequality. France

concentrates mainly on measures relying on geographical demarcation (priority education zones), combined with schemes emphasising individual motivation and merit. These latter schemes (partly supported by the Recovery and Resilience Facility) include the mentoring programme *Cordées de la réussite*, boarding schools (*Internats d'excellence*) and support to enter highly selective higher education institutions (like the newly created *Cycle Pluridisciplinaire d'Études Supérieures*¹).

¹ <https://www.enseignementsup-recherche.gouv.fr/fr/le-cycle-pluridisciplinaire-d-etudes-superieures-cpes-nouveaute-parcoursup-2022-84197>

Figure 3: Percentage of pupils having a satisfactory or very good level of knowledge and skills according to the social status of the school, 2021



Source: DEPP [Note d'Information n° 22.04]. Notes: Schools are classified according to socioeconomic quintiles (from 1-lowest to 5-highest). The classification is based on the professions and social status of the parents of pupils. Pupils were tested at the beginning of lower secondary school (sixième).

These schemes often target disadvantaged young people directly or encourage their participation in these programmes. Recently, additional measures focused on the early years: the mandatory school age was lowered to 3 and class sizes were substantially reduced in certain grades and schools (see section 2). During the COVID-19 pandemic, France kept schools open or partially open for much longer than other countries, with potentially positive effects. Early research suggests that inequality and underperformance were only temporarily aggravated by the pandemic, but returned to pre-pandemic levels soon after schools reopened (DEPP, 2022a). Different schemes are in place to reduce the socioeconomic gaps in performance, such as support with homework and summer schools (*Devoirs faits*, *Vacances apprenantes*) and the 200 *Cités éducatives* in disadvantaged areas supporting young people aged 0-25.

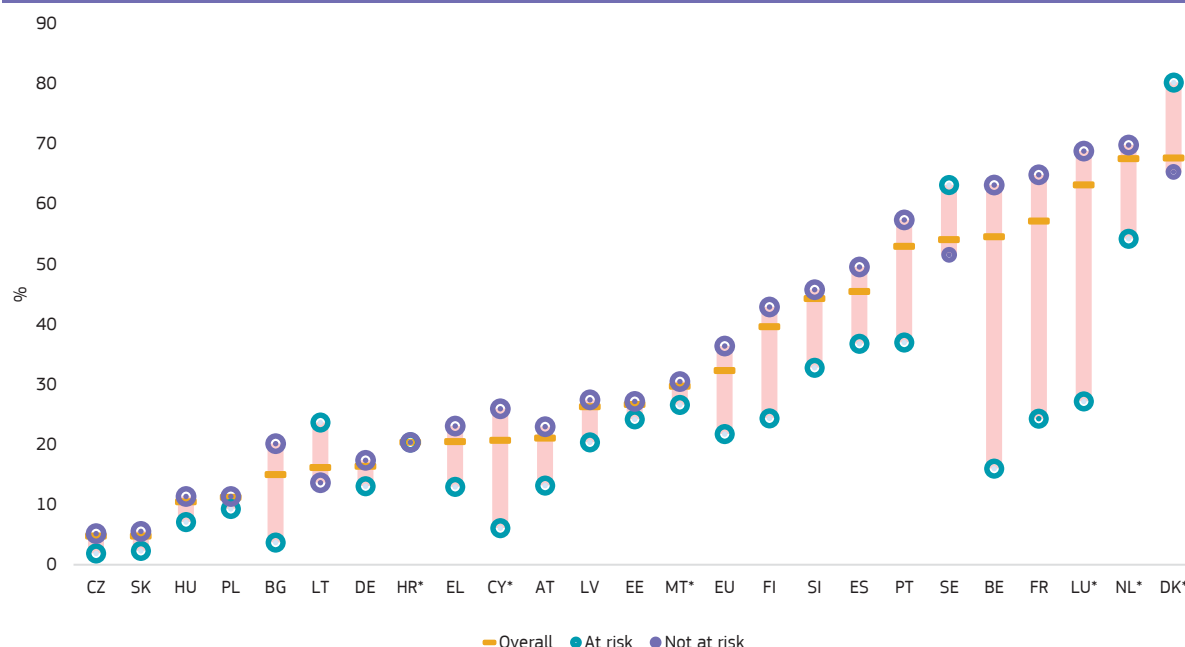
Nevertheless, finding the right policy mix remains a challenge. Directing additional funding at certain geographical areas, such as education priority zones, has some caveats. Disadvantaged groups outside these areas might not be covered and stigma effects tend to increase segregation. Schools in priority areas might become less attractive for teachers; consequently, they might have less experienced or qualified staff (Bakelants, Nicaise, Vandevooort, & Verelst, 2020). This finding is consistent with other studies indicating that, also in France, less experienced teachers often work at disadvantaged schools (OECD, 2022). Researchers found that funding based on pupils' profiles might produce fewer adverse effects and that systems combining earmarked and free allocation of funds are most efficient (Bakelants, Nicaise, Vandevooort, & Verelst, 2020). However, schools have little autonomy to manage funds locally. The French Court of Auditors also highlighted school autonomy as an important lever for achieving more equality, when coupled with responsibility and accountability (Cour des Comptes, 2021b). While school autonomy remains very limited, policy pilot projects do take place: in Marseille, 59 schools were selected to receive greater autonomy regarding pedagogy and recruitment.

This pilot project is planned to be implemented nationwide.

3. Early childhood education and care

Children below 3 increasingly participate in early childhood education and care, but significant socioeconomic disparities exist. In 2020, 57.2% of children below 3 participated in formal childcare or education (above the EU average of 32.3%), 6.4 percentage points (pps) more than in 2019. As the participation of children at risk of poverty and exclusion has increased faster (+9.5 pps) than that of children without such a risk (+6 pps), the gap between the two groups of children is among the highest in the EU, at 40.6 pps (see figure 4). Support for low-income families is available; however, the support system can be complex to understand (CESE, 2022). Around 80% of families below the poverty threshold do not use childcare services, even though their children could reap the highest benefits of high-quality childcare (Cnaf et. al., 2021). Children of Ukrainian families under temporary protection can benefit from a place free of charge, depending on availability. A staff training plan will be funded in 2022 (*plan de formation Enfance=Égalité*) to help childcare staff acquire knowledge in areas where inequality might manifest itself, such as language development, nutrition or prevention of stereotypes (Ministère des Solidarités et de la Santé, 2022).

Figure 4: Participation of children below 3 years in formal childcare or education by AROPE, 2020 (%)



Source: Eurostat (EU-SILC), special extraction. Notes: * = Data with low reliability; Data for IE and IT not available. At risk of poverty or social exclusion, abbreviated as AROPE, corresponds to the sum of persons who are either at risk of poverty, or severely materially and socially deprived or living in a household with a very low work intensity.

Parents can struggle to find a place in the childcare of their choice, while a legal entitlement to a place is being discussed.

According to official estimates, 200 000 additional childcare places are needed in France. Between 2018-2022, 30 000 places were supposed to be opened (Government of France & Cnaf, 2018), but only 40% of those were created. According to estimates, almost a quarter of parents do not obtain a place in their preferred type of childcare, especially if they opted for a crèche (as opposed to more individual types of care) (Damon & Heydemann, 2021). In France, unlike in some European countries², parents have no legal entitlement to a place for their children below 3, despite limited possibilities of paid parental leave. The expert commission on the child's first 1 000

days, put in place by the French government in 2019, recommended introducing both a legal entitlement and a 9-month parental leave (Ministère des Solidarités et de la Santé, 2020). Political discussions on a legal entitlement continue, but without any results yet. However, under conditions and depending on availability of places, children who are 2 years old on the first day of school may be admitted to pre-primary school.

Staff shortages and qualifications remain important issues. The COVID-19 pandemic aggravated existing childcare staff shortages, as working conditions became more difficult and turnover increased. In some cases, existing childcare capacities cannot be fully used due to a lack of staff (CESE, 2022). As local authorities play an important role in organising childcare, the Association of French Mayors raised an alert about staff shortages, stating that more places in initial staff training needed to be created, and that qualification requirements should not be

² A legal entitlement for children below 3 exists in DK, DE, EE, LV, SI, FI, SE, NO (European Commission/EACEA/Eurydice, 2019).

lowered (Association des maires de France, 2022). In November 2021, the French government created a working group to find short- and long-term solutions to staff shortages and to enhance the attractiveness of childcare professions³. So far, suggestions include: better anticipating current and future staff needs and ensuring enough places in initial training; increasing salaries and better monitoring of working conditions; improving continuous training; and creating smooth transitions between the different types of professions within early childhood education and care (Comité de filière 'petite enfance', 2022).

A reform package aims to address challenges in the sector. Reforms adopted in 2021 further define the roles and responsibilities of different types of childcare institutions, including of their heads and staff (French Republic, 2021). The provisions also address staff shortages by allowing childcare institutions to temporarily run above their capacity (at 115% under certain conditions). Some staff unions fear that such provisions will worsen the image of the profession and the quality of childcare (Collectif Pas de bébés à la consigne, 2022). A government proposal (Government of France, 2022) to promote childcare professions to people having difficulties in accessing the labour market (such as the long-term unemployed) was met with scepticism among some professionals (FNEJE, 2022).

For children above 3, enrolment in pre-primary school is mandatory and almost universal. With a participation rate of virtually 100% since 2015, France is leading the enrolment statistics in the EU, together with Ireland. Since 2019, enrolment is mandatory as the school age was lowered to 3. The French Senate Culture

Committee stated that this reform needs to be accompanied by additional measures focused on improving quality, as participation was already almost universal. The Committee suggested to concentrate on staff training and the evaluation of the conditions and quality of care (Billon, Brisson, & Monier, 2022).

4. School education

Early school leaving continues the downward trend of the last decade. At 7.8% in 2021, the early school leaving rate was lower than the EU average (9.7%). However, only girls reached the EU-level target of below 9% (6.1%), but not yet boys (9.6%). This gender gap of 3.5 pps is in line with the EU average (boys: 11.4%, girls: 7.9%).

Performance in maths is of concern in particular due to major inequalities. To a larger extent than in other subjects, maths teaching fails to compensate for pupils' socioeconomic differences and to convey a high level of knowledge, even to the top performers (DEPP, 2021a). The overall performance of French pupils in the 2019 *Trends in International Mathematics and Science Study* was the lowest in all participating 22 EU Member States, and was highly dependent on pupils' socioeconomic background. In addition, only 41% of the most advantaged students reached a high performance level, compared with 61% across the OECD. At the same time, instruction time for maths in primary schools is the second highest in the EU and remains comparatively high also in lower secondary school (European Commission/EACEA/Eurydice, 2022a)⁴. This raises doubts on the quality and effectiveness of maths teaching.

³ Childcare stakeholders, such as unions, employer organisations, regional authorities and other organisations are represented. <https://solidarites-sante.gouv.fr/ministere/acteurs/instances-rattachees/article/comite-de-filiere-petite-enfance>

⁴ Instruction time for mathematics per notional year at ISCED level 1 (primary schools) in 2020/2021 was 180 hours, second only to Portugal with 251 hours. Most other EU countries provide between 100-150 hours of maths per year.

Teacher shortages and the implementation of reforms put further pressure on maths teaching, while efforts to monitor pupils' performance are ongoing.

Following the 2018 baccalaureate reform, maths became a voluntary subject at general upper secondary school (*lycée*) for those pupils not specialising in sciences. Given the high share of pupils who quit maths, this part of the reform has been withdrawn: from 2022/23, 1.5 weekly hours of maths will be added to the core curriculum of students not specialising in sciences. At the same time, following the 2021 national teaching profession entry exam (*Capes*) for maths, not all open posts could be filled.⁵ Regular national tests taken by all pupils in certain grades help to diagnose pupils' difficulties and to measure the performance of the education system. A report on the 2018 national action plan on maths⁶ concluded that the plan's goals are not yet reached (pupils' learning outcomes have not yet significantly improved), but participation in continuous training for teachers has increased (IGÉSR, 2022) – also thanks to a national training strategy at primary school level which privileges interactive ways of learning, such as exchanges with peers.

The national Court of Auditors made recommendations to improve the school system, and pointed to the low efficiency of education spending.

The Court questioned the efficiency of public education spending: educational performance has deteriorated in recent decades, whereas spending per pupil has increased (Cour des Comptes, 2021b). They suggested to concentrate on school autonomy and on teachers to improve the school system's outcomes and reduce inequality. Concretely, the auditors recommended giving headteachers more decision-making power, also vis-à-vis their staff, for example regarding recruitment and evaluation.

As a rule, schools are mainly executing bodies with little room for manoeuvre, or sometimes do not have the tools to use existing decision-making powers. The Court also thought it crucial to better recognise tasks outside of teaching. Although vital for the school and pupils' success, these tasks are not sufficiently reflected in the hours worked, except, to some extent, in priority education.

A first round of school evaluations was carried out nationwide.

Since 2020, all schools are evaluated externally every 5 years, combined with a self-evaluation. After the first evaluation round in 2020/2021, the School Evaluation Council recommended schools to make better use of already existing data (e.g. on performance, absenteeism or grade repetition) to improve pedagogical choices and pupils' outcomes, as well as to examine the different factors for educational inequality. It recommended local authorities (*académies*) to encourage innovation and experimentation in schools and generally found that schools need a greater margin of manoeuvre to act on their recommendations (Conseil d'Évaluation de l'École, 2022).

The reduction of class sizes in disadvantaged public pre-primary and primary schools continued.

The reduction of class sizes was progressively rolled out from 2017. It is now completed for first and second grades in primary schools in priority education zones (*REP* and *REP+*), while class sizes of the last pre-primary year (*grande section de maternelle*) will continue to be reduced until 2023. The Education Ministry's statistical department found that this reduction did not lead to larger classes elsewhere, such as in grades at the same school not concerned by the measure, or in schools outside priority areas (such as in rural areas). Since 2020, class sizes are limited to 24 pupils at all schools in France, in the three mentioned grades, which also helps to avoid adverse effects. In rural areas, demographic decline is the main driver behind smaller classes (DEPP, 2022b).

Flanking measures could enhance the class size reform's effectiveness.

The French Senate raised the question as to whether the improvements in learning outcomes justify the

⁵ Repères et références statistiques 2022, fiche 8.28

⁶ <https://www.education.gouv.fr/21-mesures-pour-l-enseignement-des-mathematiques-3242>

reform's high costs. The Senate's report also recalled that pupils need support when returning to normal class sizes in the third year of primary and that a significant number of additional teachers are needed (Billon, Brisson, & Monier, 2022). Next to class size, teaching pedagogies and practices need to stay in the focus: teachers need training on how to provide differentiated learning opportunities.

The need for improving the continuous training of teachers is recognised and a reform has been put in place. The 2019 school reform obliges all teachers to participate in continuous training, which is less developed in France than in other countries (OECD, 2019b). As from January 2022, new training centres for education staff opened their doors (*écoles académiques de la formation continue*). The objective is to develop training by better taking into account the needs of education staff (administrative staff, teachers, health personnel etc.) The training offer will gradually be expanded during 2022. Through its Technical Support Instrument, the European Commission supports the Education Ministry in setting up and monitoring the new training centres.



Box 1: A digital solution for inclusion

An app for special educational needs (*livret numérique de parcours inclusif*) aims, for each pupil concerned, to gather all information about specific support measures they need, and to share this information with the various professionals involved (teachers, medical staff, social workers, etc.) as well as with their families. The objective is to make the support for vulnerable pupils with learning difficulties more effective and to reduce educational inequality. The tool should contribute to breaking institutional silos, clarifying responsibilities and ensuring a more customised and consistent support to each child. The European Commission's Technical Support Instrument supports the development and deployment of the app with EUR 500 000 between 2022 and 2024.

5. Vocational education and training and adult learning

Following the COVID-19 pandemic, the French government has significantly invested in vocational education and training (VET). It provided hiring subsidies for apprenticeship and work-study contracts and supported enrolled VET students. In 2021, 733 200 new apprenticeship contracts (+38% compared with 2020) and 120 600 work-study contracts (+7% compared with 2020) were signed^{7, 8}. These investments, partly funded by the French recovery and resilience plan, contributed to a significant increase in the number of students in the VET system. From a comparative perspective, the share of upper secondary pupils enrolled in VET⁹ was relatively low (39.3% in 2020, compared with an EU average of 48.7%).

First evaluations show that more qualified people benefited more from the investments than the most vulnerable groups. The Court of Auditors highlighted that mostly students and people in a less vulnerable situation on the labour market benefited from the investments in the apprenticeship system (Cour des Comptes, 2022). Despite the positive short- to medium-term impact of these investments, close monitoring and further evaluation of these measures will remain important. The revamped national youth guarantee instrument (*contrat d'engagement jeune*), which aims to support young people's access to education, training or employment, may also contribute to improving their access to the VET system.

⁷ <https://dares.travail-emploi.gouv.fr/publication/lapprentissage-en-2021>

⁸ <https://dares.travail-emploi.gouv.fr/publication/le-contrat-de-professionnalisation-en-2021>

⁹ Eurostat [educ_uoe_enrs05]

Following the 2018 reform of the apprenticeship system, the financial support mechanisms have changed.

In 2019, the newly created *France Compétences* took over the governance of the apprenticeship and lifelong learning systems. Since January 2020, the training centres for apprentices (*centre de formation des apprentis*) receive financial support based on a cost per contract defined at the level of occupational branches. This important change had an impact on the functioning of the apprenticeship system. Despite a majority of centres reporting a positive impact of the reform, some of them faced economic difficulties in 2020, and one third of them stressed the insufficient level of the financial support per contract (France Compétences, 2021). Notably due to the impact of COVID-19 and to the measures adopted to shield French firms from the pandemic, the goal of balancing the budget of *France Compétences* for 2022 has not been reached. Additional public financial support was granted to support the apprenticeship system, including support from the Recovery and Resilience Facility. The government plans to introduce measures to balance the budget of *France Compétences* (see below).



Box 2: A rural campus for young learners: teaching transversal digital skills

The campus Territoires communs run by the organisation La Smalah is located in a rural area in Nouvelle Aquitaine. It provides learning opportunities and psychosocial support to people between 18 and 35 who are neither in employment nor in education or training (NEET). Between 2021-2023, the European Social Fund is contributing EUR 290 000 to the training course Numérique et territoire at the rural campus, teaching transversal digital skills that are needed locally in many professions. The aim is that participants, after the training, sign an employment or apprenticeship contract or set up their own business.

<https://www.territoires-communs.fr/>

In comparison with the EU, France performs relatively well in terms of access to lifelong learning.

Some 11% of adults participated in training in 2021, however, this rate was only 4.2% for low-qualified adults (lower secondary education at most), in line with the EU average¹⁰. The COVID-19 crisis had a negative impact on overall access to upskilling and reskilling¹¹. In the framework of the 2030 target for adult learning participation in a year (a new indicator for which data will be only available next year), France set a national objective of 65%, above the EU target of 60%. Considering the lower employment rate of low-qualified adults (52.3% in 2021 vs 53.7% in 2019)¹², helping them access upskilling and reskilling opportunities is essential in the aftermath of COVID-19. Thus, evaluating and improving the quality and labour market relevance of upskilling and reskilling measures remains important.

¹⁰ Eurostat [trng_lfs_02]

¹¹ Eurostat [trng_lfs_02]

¹² Eurostat [lfsi_educ_q]

The roll-out of large-scale learning opportunities continued, but participation of low-qualified adults and access to qualifications need to improve. Since its launch in 2018, the Skills Investment Plan had supported over one million training courses by the end of 2020. In 2021 and 2022, a similar number is expected to be funded. Despite these significant investments, low-qualified adults remain disadvantaged in accessing upskilling and reskilling opportunities, and they tend to benefit less from training leading to qualifications. Participants often indicated a lack of suitable guidance during and after the training courses, particularly during the COVID-19 crisis (DARES, 2021b). Similarly, the upskilling and reskilling scheme *FNE-Formation* has mainly benefited the more advantaged categories of workers, as previous evaluations of the Court of Auditors showed, pointing to the need to focus on low-qualified adults (Cour des Comptes, 2021a). Significant investments in the lifelong learning system have been implemented through the recovery and resilience plan, including the adaptation of *FNE-Formation* to support the training of workers placed in partial activity. The outcome and impact of this adaptation remain to be assessed.

The uptake of individual learning accounts (ILA) increased rapidly since the 2018 reform. Statistics point to an increased uptake by workers in non-managerial positions (DARES, 2021a). Data on access of low-qualified adults to training through ILA are currently not available. A report on the reform's impact recommended to limit the costs of ILA for *France Compétences* to help balance its budget (Inspection générale des finances & inspection générale des affaires sociales, 2020). These recommendations include introducing a financial contribution by employees when buying training through their ILA and setting a ceiling regarding the level of costs paid for it. Considering the impact of the COVID-19 crisis on the financial perspectives of *France Compétences*, measures should be taken to ensure the system's sustainability.

6. Higher education

Tertiary education attainment is high, but some disparities exist. Over 50% of 25-34-year-olds held a higher education diploma in 2021, with both men (46%) and women (54.2%) reaching the EU-level target of 45%. The gender gap is rather low in a European comparison. However, the rural-urban gap, at 22.2 pps, is slightly above the EU average (21.8 pps). In 2021, 83.7% of recent higher education graduates aged 20-34 were employed, slightly below the EU average (84.9%).

Various initiatives aim to make access to the most selective higher education institutions more equal. The share of disadvantaged students at the most prestigious higher education institutions (*grandes écoles*) is still low: 9% in 2016-2017 vs 20% of higher education students overall (IPP, 2021). A report published by the *Grandes Écoles* presents their efforts to open up to a socially and geographically more diverse public: to different degrees, they concentrate on outreach to secondary schools (for example through tutoring programmes for disadvantaged pupils), adaptation of selection practices, accompanying of disadvantaged students throughout their studies, and raising awareness on the benefits of social diversity among all students (Conférence des Grandes Écoles, 2022). In 2019, the French government took the decision to replace the prestigious *École nationale d'administration* (ENA) by the *Institut national du service public* (INSP), which opened its doors in January 2022. The new institute takes specific measures to make the student body more diverse, such as an overhaul of entry exams with a view to help disadvantaged students succeed.

Investment in higher education is linked to equity targets. Higher education expenditure has remained roughly stable between 2013-2018, with 1.23% of GDP in 2018, compared with an EU average of 1.19% (European Commission/EACEA/Eurydice, 2022b). EUR 7.8 billion are planned to be invested in higher education, research and innovation from *France Relance*, which is also planned to be supported by

the EU's Recovery and Resilience Facility. Some measures particularly aim at improving students' experience at university and supporting their living costs, such as increasing admissions in higher education, ecological renovation of buildings, digitalisation of higher education, boosting state-guaranteed student loans as well as tutoring and outreach programmes (MESRI, 2021). France is one of the few EU countries (together with Italy) where public funding for higher education institutions is linked to achieving equity targets, such as widening access for students with low socioeconomic status, disabilities or special educational needs, and from particular geographical areas, like French overseas territories (European Commission/EACEA/Eurydice, 2022b).

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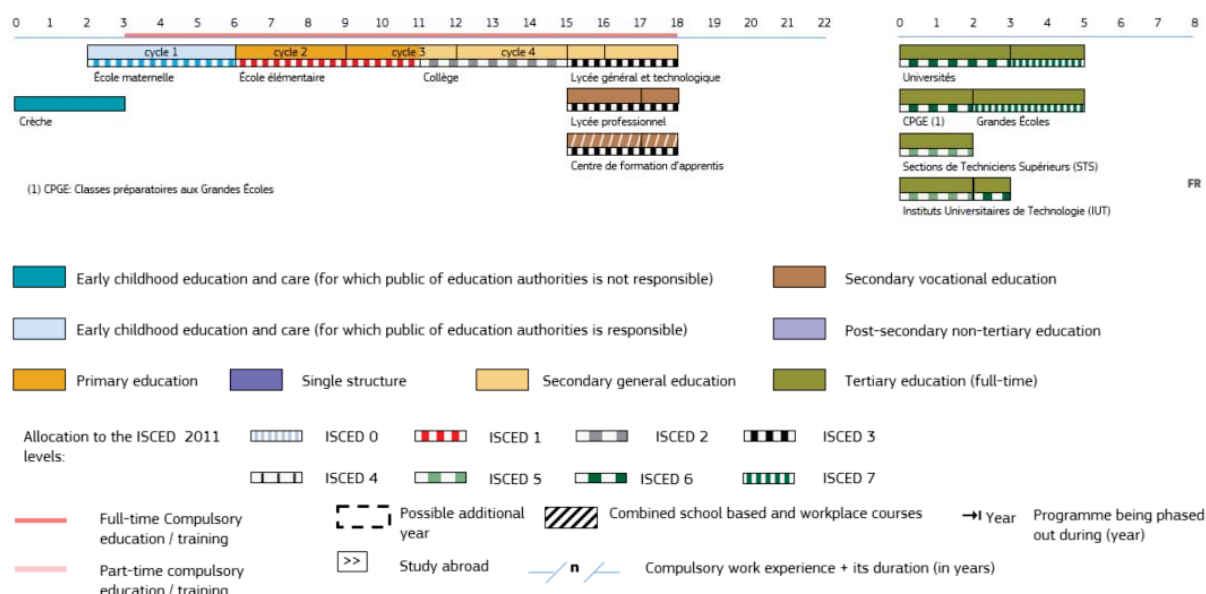
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Annex I: Key indicators sources

Indicator	Source
Participation in early childhood education	Eurostat (UOE), 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: Eurostat (LFS), edat_lfse_14 Data by country of birth: Eurostat (LFS), edat_lfse_02
Exposure of VET graduates to work based learning	Eurostat (LFS), edat_lfs_9919
Tertiary educational attainment	Main data: Eurostat (LFS), edat_lfse_03 Data by country of birth: Eurostat (LFS), edat_lfse_9912
Participation of adults in learning	Data for this EU-level target is not available. Data collection starts in 2022. Source: EU LFS.
Equity indicator	European Commission (Joint Research Centre) calculations based on OECD's PISA 2018 data
Upper secondary level attainment	Eurostat (LFS), edat_lfse_03
Public expenditure on education as a percentage of GDP	Eurostat (COFOG), gov_10a_exp
Public expenditure on education as a share of the total general government expenditure	Eurostat (COFOG), gov_10a_exp

Annex II: Structure of the education system



Source: European Commission/EACEA/Eurydice, 2022. The Structure of the European Education Systems 2022/2023: Schematic Diagrams. Eurydice Facts and Figures. Luxembourg: Publications Office of the European Union. Notes: ISCED 4 education covers less than 2% of the total number of students (all levels). Since September 2020, training has become compulsory for students aged between 16 and 18. Young people are able to fulfil this compulsory training by several means: schooling, apprenticeship, training courses, civic service, and support system or social and professional integration measures.

Please email any comments or questions to:
EAC-UNITE-A2@ec.europa.eu

Brussels, 18.11.2022
SWD(2022) 751 final

PART 12/28

COMMISSION STAFF WORKING DOCUMENT

Education and Training Monitor 2022

Accompanying the document

**Communication from the Commission to the European Parliament, the Council, the
European Economic and Social Committee and the Committee of the Regions**

on progress towards the achievement of the European Education Area

{COM(2022) 700 final} - {SWD(2022) 750 final}

Education and Training Monitor 2022

CROATIA



The Education and Training Monitor's country reports present and assess the main recent and ongoing policy development at all education levels in EU Member States. They provide the reader with more in-depth insight of the performance of countries with regard to the EU level targets agreed within the EEA. They are based on the most up-to-date quantitative and qualitative evidence available.

Section 1 presents a statistical overview of the main education and training indicators. Section 2 focuses on how the Member State has addressed or is addressing one of its education challenges. Section 3 covers early childhood education and care. Section 4 deals with school education policies. Section 5 covers vocational education and training and adult learning. Finally, Section 6 discusses measures in higher education.

The Education and Training Monitor's country reports were prepared by the European Commission's Directorate-General for Education, Youth, Sport and Culture (DG EAC), with contributions from the Directorate-General for Employment, Social Affairs and Inclusion (DG EMPL).

The document was completed on 30 September 2022

More background data at:

<https://op.europa.eu/webpub/eac/education-and-training-monitor-2022/en/>



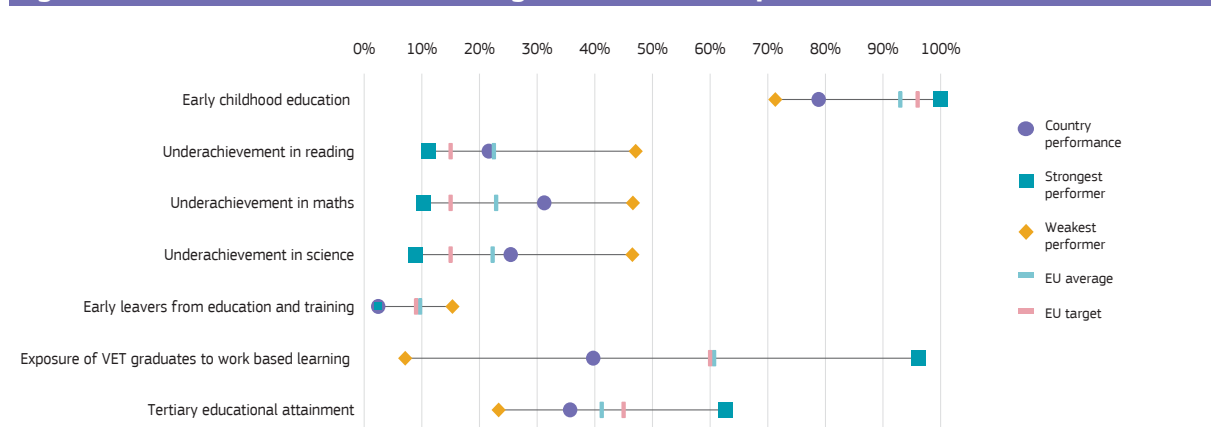
1. Key indicators

Figure 1: Key indicators overview

			Croatia		EU	
			2011	2021	2011	2021
EU-level targets			2030 target			
Participation in early childhood education (from age 3 to starting age of compulsory primary education)	≥ 96 %		67.6% ¹³	78.8% ²⁰	91.8% ¹³	93.0% ²⁰
Low achieving eighth-graders in digital skills	< 15%		35.9% ¹³	:	:	:
Low achieving 15-year-olds in:	Reading	< 15%	22.4% ⁰⁹	21.6% ¹⁸	19.7% ⁰⁹	22.5% ¹⁸
	Maths	< 15%	33.2% ⁰⁹	31.2% ¹⁸	22.7% ⁰⁹	22.9% ¹⁸
	Science	< 15%	18.5% ⁰⁹	25.4% ¹⁸	18.2% ⁰⁹	22.3% ¹⁸
Early leavers from education and training (age 18-24)	< 9 %		5.0%	2.4% ^{bu}	13.2%	9.7% ^b
Exposure of VET graduates to work-based learning	≥ 60 % (2025)		:	39.7%	:	60.7%
Tertiary educational attainment (age 25-34)	≥ 45 %		24.4%	35.7% ^b	33.0%	41.2% ^b
Participation of adults in learning (age 25-64)	≥ 47 % (2025)		:	:	:	:
Other contextual indicators						
Equity indicator (percentage points)			:	13.3 ¹⁸	:	19.30 ¹⁸
Early leavers from education and training (age 18-24)	Native		4.9%	2.2% ^{bu}	11.9%	8.5% ^b
	EU-born		:	:	25.3%	21.4% ^b
	Non EU-born		:	:	31.4%	21.6% ^b
Upper secondary level attainment (age 20-24, ISCED 3-8)			94.9%	96.9% ^b	79.6%	84.6% ^b
Tertiary educational attainment (age 25-34)	Native		24.8%	34.9% ^b	34.3%	42.1% ^b
	EU-born		33.8% ^u	49.6% ^{bu}	28.8%	40.7% ^b
	Non EU-born		13.9% ^u	46.1% ^b	23.4%	34.7% ^b
Education investment	Public expenditure on education as a percentage of GDP		4.6%	5.4% ²⁰	4.9%	5.0% ²⁰
	Public expenditure on education as a share of the total general government expenditure		9.4%	10.0% ²⁰	10.0%	9.4% ²⁰

Sources: Eurostat (UOE, LFS, COFOG); OECD (PISA). Further information can be found in Annex I and at [Monitor Toolbox](#). 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; the equity indicator shows the gap in the share of underachievement in reading, mathematics and science (combined) among 15-year-olds between the lowest and highest quarters of socio-economic status; b = break in time series, u = low reliability, : = not available, 09 = 2009, 13 = 2013, 18 = 2018, 20 = 2020.

Figure 2: Position in relation to strongest and weakest performers



Source: DG Education, Youth, Sport and Culture, based on data from Eurostat (LFS 2021, UOE 2020) and OECD (PISA 2018).

2. A focus on demography

Croatia's population is fast decreasing. The 2021 population census puts its population at 3 888 500 inhabitants, 9.5% smaller than 10 years ago and 18.7% smaller than 30 years ago (895 700 fewer inhabitants in total), due to emigration and a declining birth rate. The government is developing a Strategy for Demographic Revitalisation of the Republic of Croatia by 2031, with education as one of the focus areas¹.

Demographic developments create additional challenges in education. Croatia's less developed areas are the most affected, with Vukovar-Srijem County having lost 19.5% of its population in the last 10 years. These areas also offer weaker access to education. They have insufficient infrastructure, a lack of teachers, charge too high fees in early childhood education and care (ECEC) (Education and Training Monitor 2021 and 2020), and have unequal availability of secondary school programmes (Matković, Šabić, 2022). Accessing higher education is also difficult due to the distance to higher education institutions (HEIs) and insufficient student housing². Improving access to education can therefore help to demographically revitalise these areas. Population decline also affects the student population: between 2013/2014 and 2021/2022, the population of primary school pupils in Croatia decreased by 5.25% and of secondary school pupils by 19.2% (by up to 36% in rural areas). As a result, there

are schools with a small number of pupils, while in others infrastructure is insufficient for the number of pupils and teaching is organised in shifts (for 60% of primary and 66% of secondary school pupils). To ensure that the new ECEC infrastructure appropriately addresses the needs, the government has developed a database with the mapping of ECEC facilities³ and tied to it criteria for awarding resources for their construction and reconstruction⁴. An assessment of infrastructure investment needs, done with the help of the World Bank, will also form the basis for the construction and renovation of primary schools to make all-day schooling possible. The construction and upgrading of secondary schools will be based on the comprehensive analysis of secondary education needs (CID Annex, 2021, pp. 173-176.), including the effects of demographical changes, the possibilities of increasing the share of pupils in general secondary schools, and labour market relevance.

3. Early childhood education and care

Participation in ECEC is low, especially for disadvantaged groups. The participation of children under 3 in formal childcare in 2020 was only 20.4%, but its increase by 4.7 percentage points (pps) from 2019 was the second largest increase in the EU. Participation between 3 and the beginning of

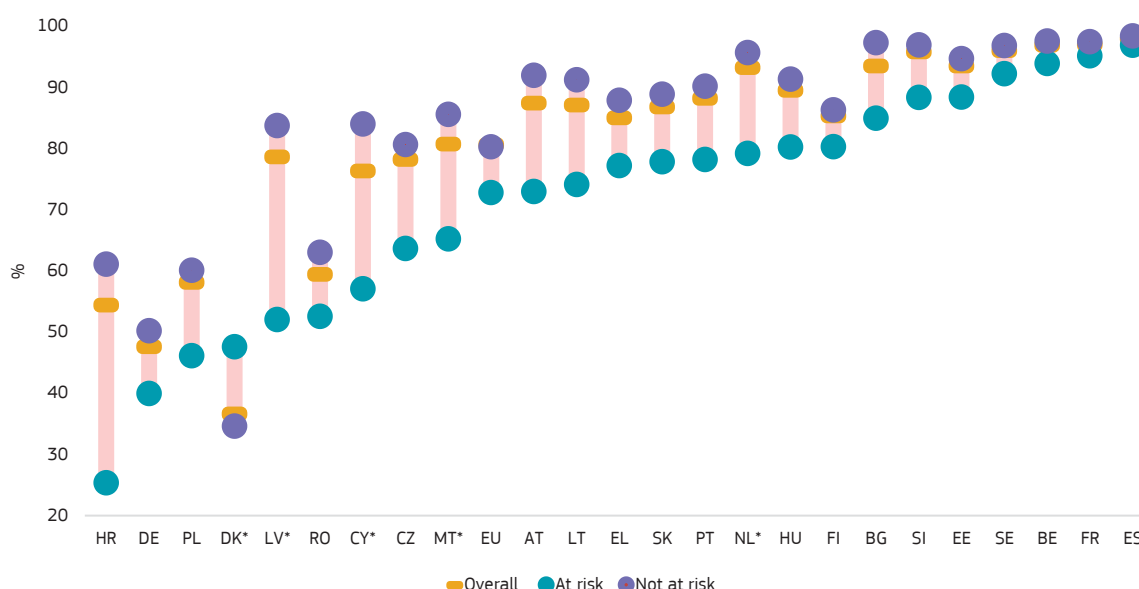
¹ https://demografijaimladi.gov.hr/UserDocsImages/Brochure/KOMUNIKACIJSKA%20STRATEGIJA_STRATEGIJE%20DEMOGRAFSKE%20REVITALIZACIJE%20RH_2021.pdf

² Eurostudent, 2018: 34.7% of students whose parents have the lowest education did not receive accommodation, lowering their chances of successful studying.

³ <https://app.powerbi.com/view?r=eyJrJoiODU5NDNhY2EtN2Q4Zi00MzA2LWE4ODYtZTNIOTljMzQ0ZGQ4IiwidCI6IjJjMTFjYmNjLWl3NjEtNDVhY2E1hOWY1LTRhY2c3ZTk0ZTFkNCIsImMiOiJh9>
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⁴ <https://mzo.gov.hr/UserDocsImages/dokumenti/EUfondovi/Nacionalni-plan-oporavka-2021-2026/Prva-izmjena-dokumentacije/Upute-za-prijavitelje-SZPIEU-C3.1.%20R1-11.1-NPOO-1-izmjena.pdf>

Figure 3: Participation of children in formal childcare or education between 3 and the minimum mandatory school age by AROPE, 2020 (%)



Source: Eurostat (EU-SILC), special extraction. Notes: * = Data with low reliability; Data for IE, IT, LU not available. The AROPE rate is the share of the total population at risk of poverty or social exclusion.

compulsory primary education is 78.8%, 0.6 pps less than in 2019⁵ and substantially below the 93% EU average and 96% EU-level target. It is much lower for disadvantaged groups (e.g. only 24% for Roma children (FRA, RS 2021)). At 35.7 pps, the gap between children who are at risk of poverty or social exclusion (AROPE) and children who are not is the highest in the EU⁶. Displaced children from Ukraine are offered ECEC upon parents' request if the spatial conditions, organisation and financial capabilities of ECEC providers allow it (MZO, 2022). The Croatian Association of ECEC Teachers is putting together a book using symbols, with translation into Ukrainian and Croatian, to aid communication in ECEC. The share of children with developmental difficulties in regular ECEC is 7.7%⁷.

The Croatian recovery and resilience plan (RRP) supports large-scale infrastructure investments to increase participation in ECEC. In recent years, Croatia has been investing in ECEC using EU funds for infrastructure and other measures to improve participation (European Commission, 2021). In 2021, around EUR 15 million were invested in ECEC infrastructure. The planned RRP funding for ECEC infrastructure is aiming to create 22 500 new places and help increase participation to 90% by 2026. As the RRP also states, the availability of ECEC for each child would require the reduction of regional differences in the quality and cost of pre-school education, enough teachers, the upgrading of existing nurseries and the construction of new kindergartens (RRP, 2021, p. 870.). In April 2022, the Ministry of Education published a new database with data on ECEC that will enable better monitoring of the situation and progress towards meeting the needs and targets in this area⁸.

⁵ Eurostat, [educ_uoe_enra21].

⁶ Eurostat (EU-SILC), special extraction.

⁷ <https://app.powerbi.com/view?r=eyJrJoiODU5NDNhY2EtN2Q4Zi00MzA2LWE4ODYtZTNiOTljMzQ0ZGQ4IiwidCI6IjJjMTFjYmNjLWI3NjEtNDVhYi1hOWY1LTRhYzY3ZTQ0ZTFkNCIsImMiOiJh9>

⁸ <https://app.powerbi.com/view?r=eyJrJoiODU5NDNhY2EtN2Q4Zi00MzA2LWE4ODYtZTNiOTljMzQ0ZGQ4IiwidCI6IjJjMTFjYmNjLWI3NjEtNDVhYi1hOWY1LTRhYzY3ZTQ0ZTFkNCIsImMiOiJh9>

Targeted measures are planned to improve disadvantaged children's and Roma participation in ECEC.

In line with the EU Roma strategic framework for equality, inclusion and participation for 2020-30, in June 2021 Croatia adopted the National Plan for the Inclusion of Roma 2021-27 (NPUR) and set national targets. Its 2027 ECEC target is to increase Roma participation in ECEC from 23% to 54% (NPUR, 2021, p. 60). Roma participation in ECEC, negatively affected by the distance to the nearest ECEC facility, varies regionally, with participation lowest in central Croatia (80% of 3-6-year-olds living over 3km away from the nearest ECEC facility) (Klasnić et. al., 2020). Besides increasing ECEC infrastructure, measures will be taken to reduce segregation by co-financing participation fees, providing transport to ECEC facilities for children in isolated or segregated areas, and promoting participation in ECEC (AP-NPUR, 2021, pp. 22-27). Similar measures are planned to increase the participation of children from low socio-economic backgrounds: areas without ECEC facilities given priority in creating new facilities; state financing to help municipalities with lower fiscal capacity cover maintenance costs; and European Social Fund+ subsidies to reduce the parental contribution for socially disadvantaged children (RRP, 2021).

Measures to tackle the shortage of ECEC teachers and legislative changes targeting participation might also affect quality.

According to the RRP, 5658 additional ECEC teachers would be needed to reach the target on inclusion of children from the age of 3 to compulsory school in ECEC by 2030. This would require increased enrolment in ECEC teacher training programmes, and additional immediate measures (RRP, 2021). On 13 May 2022, Croatia amended the ECEC Act. The amendments establish a national network of ECEC facilities that

should contribute to the monitoring and planning of ECEC capacities and an electronic ECEC enrolment system. They also oblige municipalities to provide a place in ECEC 1 year before school entry. ECEC providers are required to provide an attendance certificate, which becomes mandatory for enrolment in primary schools, making obligatory attendance more enforceable. The amendments also contain a provision allowing primary school teachers to be recruited as ECEC teachers. They would need to complete a re-qualification programme at a higher education institution (HEI) within 2 years, and work alongside a qualified ECEC teacher until then. Critical reactions to the amendments (including protests of ECEC teachers and parents) have raised their concern that the changes for increasing ECEC participation may diminish the quality of ECEC.

4. School education

Continuing comprehensive education reform is important for improving pupils' basic skills.

The basic skills of 15-year-olds in 2018 PISA cycle were low: 21.6% of them underperformed in reading, 31.2% in maths and 25.4% in science, all much higher than the 15% EU-level target and for maths and science among the highest in the EU. Comprehensive education reform, originally envisioned in the 2014 Strategy of Education, Science and Technology⁹, is being continued through the RRP. The RRP aims to provide funding for infrastructure investments to increase the number of schools, required for changing to teaching in one shift and for introducing all-day schooling. A related reform, begun in May 2022, introduces national exams in primary schools. Until now the only national exam has been the State Matura at the end of secondary education. In 2021/2022, national exams were introduced in 81 sample primary schools in 8th grade. In 2022/2023 they will be introduced in 5th grade, to test pupils' knowledge at the beginning and end of lower secondary

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<https://app.powerbi.com/view?r=eyJrIjojMTc2YWVhMzYtYTEzMi00YzkyOLWE3MDktZWJkMjQyYTBiYzJlIiwidCI6IjJMTFjYmNjLWI3NjEtNDVkyi1hOWY1LTRhYzc3ZTk0ZTFkNCIsImMiOjh9>.

⁹ <https://mzo.gov.hr/istaknute-teme/odgoj-i-obrazovanje/vrednovanje-i-osiguranje-kvalitete-usustavu-odgoja-i-obrazovanja/141>.

education in order to improve monitoring and education outcomes¹⁰. Eventually, all 5th and 8th grade primary school pupils will be taking these exams.

Pupils have low civic competencies and do not trust political institutions. The Institute for Social Research periodically examines students' political literacy and values in their final secondary school year. Compared to the 2015 cycle the 2021 cycle shows weaker understanding of basic political terms (e.g. only 57.7% know what the constitution is), though overall political knowledge has slightly increased. Socio-political attitudes of young people are somewhat more democratic. However, pupils' trust in political institutions and the legal system is low (only 16.8% trust the government), as it is in sources of information. Political knowledge strongly depends on the type of secondary school, reflecting many schools' continued lack of civic education (Baketa et al., 2021). Civic education was introduced nationally in 2019 as a mandatory transversal subject in primary and secondary schools. From 2022/2023 some towns and regions will introduce it as an optional subject in primary and/or secondary schools (Zagreb¹¹, Pula¹², Primorsko-goranska county). These local initiatives follow the opinion of 2020 report of the Ombudsman for Children stating that civic education as a transversal subject is not enough¹³.

Early leaving from education and training is low, but much higher among Roma. The 2021 share of early leavers from education and training (2.4%), the lowest in the EU (9.7%), has increased 0.2 pps since 2020. The risk of leaving education

and training early is higher for socio-economically disadvantaged and Roma pupils. According to the 2021 Roma Survey, only 39% of Roma aged 20-24 have completed at least upper secondary education (vs 96.9% of the general population), and there is a marked gender gap (women 33%, men 45%). The National Plan for the Inclusion of Roma 2021-27¹⁴ and its action plan¹⁵ contain a measure to improve Roma educational attainment through various actions at lower education levels and several financial assistance actions and incentives at secondary school level. The city of Zagreb also has a scholarship programme for Roma secondary school pupils and higher education students. In 10 years, the number of beneficiaries has increased from 6 to 86 (14 of whom are higher education students), a testament to its success¹⁶.

One third of pupils do not get a meal at school. According to national statistical data, at the end of 2019/2020, 34% of public primary schools did not offer school meals¹⁷, although all children at risk of poverty have the right to free school meals. Research of the initiative 'Every Child has a Right to a School Meal' shows a 17% increase in the number of pupils who needed a free school meal in 2021 due to COVID-19 and the earthquakes. School principals (85%) confirm the need for free school meals, but say local funding is insufficient.

E-enrolment is enabled for all education levels. Since March 2022 e-enrolment in most educational institutions has been available on the government e-services portal e-Građani. E-enrolment, part of the digital transformation of

¹⁰ <https://www.ncvvo.hr/nacionalni-ispiti/>

¹¹ <https://www.zagreb.hr/grad-zagreb-ce-skolama-ponuditi-dva-programa-uz-gr/176856>

¹² <https://www.glasistre.hr/pula/ove-godine-se-pokrece-predmet-gradanski-odgoj-i-obrazovanje-u-svih-11-osnovnih-skola-na-području-pule-768065>

¹³ https://www.sabor.hr/sites/default/files/uploads/sabor/2021-03-31/123003/IZVJ_PRAVOBRANITELJICA_ZA_DJECU_2020.pdf

¹⁴ <https://pravamanjina.gov.hr/UserDocsImages/NPUR%202021-2027/Nacionalni%20plan%20za%20uklju%C4%8Divanje%20Roma.pdf>

¹⁵ <https://pravamanjina.gov.hr/UserDocsImages/NPUR%202021-2027/Akcijski%20plan%20za%20provedbu%20NPUR-a%20za%202021.%20i%202022..pdf>

¹⁶ <https://www.edusinfo.hr/aktualno/iz-obrazovanja/50274>

¹⁷ <https://podaci.dzs.hr/2021/hr/9955>

the education system, automatically gathers the necessary documents from various institutions. As part of the e-Schools project, local computer networks have been designed at 1328 of 1511 school locations, and e-services put in place to enhance teaching and school governance. A study of teachers' self-efficiency in the use of information and communication technology suggests that older female teachers should be given targeted support (Šabić et al., 2022).

Maths teachers are scarce. According to the 2020 Employment Service survey, Croatia lacks 294 maths teachers, while the number of university maths students remains low. Almost 15% of primary school maths teachers are not adequately qualified. In July 2021, the Parliamentary Committee for Education and Science recommended taking several actions to address the lack of science, technology, engineering and maths (STEM) (specifically maths) teachers, notably to establish a national scholarship system for students studying to become STEM teachers, to increase the number of instruction hours in STEM subjects in schools, and increase teachers' salaries to make the profession competitive by 2026.

Displaced children from Ukraine are being immediately integrated into schools and given assistance. They are immediately enrolled in schools according to their abilities, final grades, certificates, and previously attended secondary school' programme¹⁸, and given preparatory classes in parallel (70 lessons, with the possibility of extension). Some attend Ukrainian classes online. The Croatian Agency for Education has given teachers guidelines on how to inform pupils about the situation in Ukraine and to help them help Ukrainian children to integrate and overcome trauma (AZOO, 2021a and AZOO, 2021b). Croatian Academic and Research Network (CARNET) is distributing laptops to schools for students from Ukraine to enable their participation in distance learning lessons from Ukrainian schools.

¹⁸ <https://mzo.gov.hr/vijesti/ukljucivanje-djece-i-ucenika-izbjeglica-iz-ukrajine-u-odgojno-obrazovni-sustav-republike-hrvatske-4826/4826>



Box 1: Targeted COVID-19 support for 286 Roma students

UNICEF Croatia, the Ministry of Science and Education, the Office for Human Rights and the Rights of National Minorities, the Roma Youth Association of Croatia and seven primary and lower secondary schools provided targeted support for Roma pupils with increased risk of dropout due to irregular schooling caused by the earthquakes and COVID-19. In 2021, eleven mentors helped 286 Roma pupils to improve their learning routines, strengthen positive learning experiences, improve their educational outcomes and lift their educational aspirations. None of the pupils who received the mentors' support repeated a grade or dropped out of school. The Roma mentors had a support network led by two university professors and a Roma advisor.

5. Vocational education and training and adult learning

Croatia is taking measures to make vocational education and training (VET) more relevant to the labour market. The share of students in upper secondary vocational education¹⁹ is one of the largest in the EU (69.3% vs the EU average of 48.7% in 2021). However, the employment rate of recent VET graduates (69.9%)²⁰ is lower than the EU average (76.4%). The 2021 employment rate of low-skilled workers (42.1%) lags considerably behind those of medium-skilled (67.1%) and high-skilled workers (84.1%)²¹. This indicates a high level of skills

¹⁹ Eurostat [educ_uae_enrs05]

²⁰ Eurostat [edat_lfse_24]

²¹ LFSA_ERGAED 20- 64

mismatches²², contributing to severe labour shortages. To improve the quality of VET, in June 2022 Croatia adopted amendments to the VET Act (ZID ZSO, 2022) aiming to strengthen the model of dual education by regulating work-based learning. They regulate the establishment of cooperation between vocational schools and employers, including the rights and responsibilities of both mentors and students. To make the skills acquired in VET schools more relevant to the labour market, ESF and ESF+ funds new vocational curricula based on the occupational and qualification standards in line with the Croatian Qualifications Framework (CROQF).

The analysis of secondary education needs provides data for policy measures. It was conducted to support measures to increase the share of students enrolled in general secondary education programmes, reduce the share of students enrolled in surplus vocational programmes and align vocational programmes with labour market needs (CID Annex, 2021). It will identify county-level inequalities: much needed given the highly pronounced social stratification in secondary education (e.g. three-year vocational schools are mostly attended by children from lower socio-economic backgrounds, while students from families of highly educated parents are more likely to attend grammar schools). There are regional inequalities in access to work-based learning in vocational programmes, which is generally low (39.7% vs 60.7% EU in 2021).

The participation rate in adult education in the last 4 weeks, at 5.1%, remains

significantly lower than the EU average of 10.8%. In December 2021, the Croatian Parliament adopted the new Adult Education Act (ZOO, 2021), aimed at improving the quality of the educational programmes implemented and enabling the recognition of previous non-formally and informally acquired knowledge and skills. A quality assurance system for adult education is also being developed through the implementation of the Programme for the International Assessment of Adult Competencies (PIAAC), the development of quality assurance models, and the introduction of self-evaluation and external evaluation of adult education institutions. Quality assurance will also be implemented by aligning formal adult education programmes with the CROQF to fully meet the needs of the labour market and provide a skilled workforce. To further promote lifelong learning, many campaigns were organised in 2021, offering various activities and attracting a variety of stakeholders. Croatia has set a 2030 target of 55% of adults a year in training, more than doubling the 2016 rate of 26.9%.

Learning vouchers were introduced on 1 April 2022. They can be used by both employed and unemployed people for reskilling and upskilling, with a particular emphasis on developing green and digital skills. Over the next 4 years, 30 000 people should benefit from the scheme, which also aims to target vulnerable groups in the labour market. Currently 51 accredited institution offers 39 programmes, including the newly developed curriculum for basic skills. The voucher system addresses the very big skills gaps in the Croatian labour market. Its effectiveness will be externally assessed after a certain period of implementation. Based on this system the ESF+ will broaden the offer of vouchers as well as introduce building blocks for potential implementation of Individual Learning Accounts in the future. In the meantime, foreign workers could fill labour and skills shortages. This may require improvements in the system of recognition of foreign qualifications.

²² The macroeconomic skills mismatch shows the relative dispersion of employment rates across population groups with different educational attainment levels: low (ISCED 0-2), medium (ISCED 3-5) and high (ISCED 6 and above). It compares the composition of employment (as a proxy for labour demand) with that of the working age population (as a proxy for supply) in terms of educational qualifications. Macroeconomic skills mismatches are high if the employment rates of low- and/or medium-skilled workers are low compared to those of high-skilled workers, while the former also make up a significant share of the working age population.

6. Higher education

Tertiary educational attainment (TEA) is below the EU average and shows significant gaps. In 2021 TEA was 35.7%, far below the EU average of 41.2% and EU-level target of 45%. Above EU average gaps are present between genders (16.6 pps vs EU 11.1 pps), foreign and native born, and along the urban and rural lines (24.4 pps vs EU 21.8 pps). The TEA of foreign-born (47.1%) is much higher than that of native-born (34.9%), even for people from non-EU countries (46.1%).

The choice of studies is greatly affected by gender and socio-economic background. Women are much more likely to study education (81%), arts and humanities (68%) and social sciences (72%). Only 30% study engineering and 22% information and communication technology (ICT). Socio-economic background influences the choice of studies more than secondary school results, except for the two STEM faculties, where the choice primarily depends on the achievement (Puzić et al., 2021).

Recent graduates' employment rate is low and even lower for women. In 2021, the employment rate of recent tertiary graduates was 80.9%, 3.7 pps higher than in 2020, but still one of the lowest in the EU (the EU average is 84.9%). Research done by the Higher Education Agency shows that while women complete higher education (HE) with a higher average grade than men (4.06 vs 3.83), they have more difficulty finding a job (58.8% find it vs 62.5% of men), have lower incomes and are less satisfied with their job. Most unemployed respondents graduated from biotechnical sciences (24%) and humanities (23.8%). Technology graduates have the highest incomes and humanities or interdisciplinary studies graduates the lowest. The number of graduates working in their profession is decreasing, from 78% in 2017 to 64% in 2018/2019 (Glunčić, 2022).

Share of STEM graduates is high and growing, even more so for female graduates. The share of ICT graduates is also above the EU average (4.7% vs EU 3.9% in 2020) and has

increased by 0.6 pps since 2015. In 2020, Croatia had a high share of STEM graduates in the total number of graduates (28.5% vs EU 24.9%), up by 4.6 pps from 2015. Women are also more likely to choose STEM studies: 18.1% (vs the EU average of 14.1%) of all female graduates were STEM graduates in 2020, and women made up 38.6% of all STEM graduates (vs the EU average of 32.5%)²³, although there are no specific incentives for them. The share of female STEM graduates has increased by 2.6 pps since 2015, the highest increase in the EU, making Croatia one of the best performers in 2020 (11% vs EU 8.1%). Since 2017/2018, Croatia has awarded 3 400 STEM scholarships annually, co-financed by the ESF, to 5.83% of all students. However, a national evaluation shows that the rise in interest in STEM had started before and that the scholarship scheme did not really affect the beneficiaries' choice of studies or their completion. The evaluation concludes that a slightly different focus, e.g. on students of STEM studies who are socio-economically disadvantaged or at risk of dropout, or additional measures in secondary education, might produce better results (MRMSOSP, 2021).

The internationalisation of higher education is low, but efforts for improvement are ongoing. While the outward mobility rate in 2019/2020 was at the EU level (4.2%), inward degree mobility rate (2.9%) was the third lowest in the EU. Only 3% of students in 2019/2020 were from abroad (vs the EU average of 8.1%)²⁴, with 46.8%²⁵ of them from Bosnia and Herzegovina. Croatia has ratified the Global Convention on the Recognition of Qualifications in Higher Education²⁶, and has increased significantly its number of studies in English to improve internationalisation. A new Act on Recognition and Assessment of Foreign Education Qualifications, containing also provisions on automatic recognition, entered into force in June 2022. The ENIC/NARIC office has

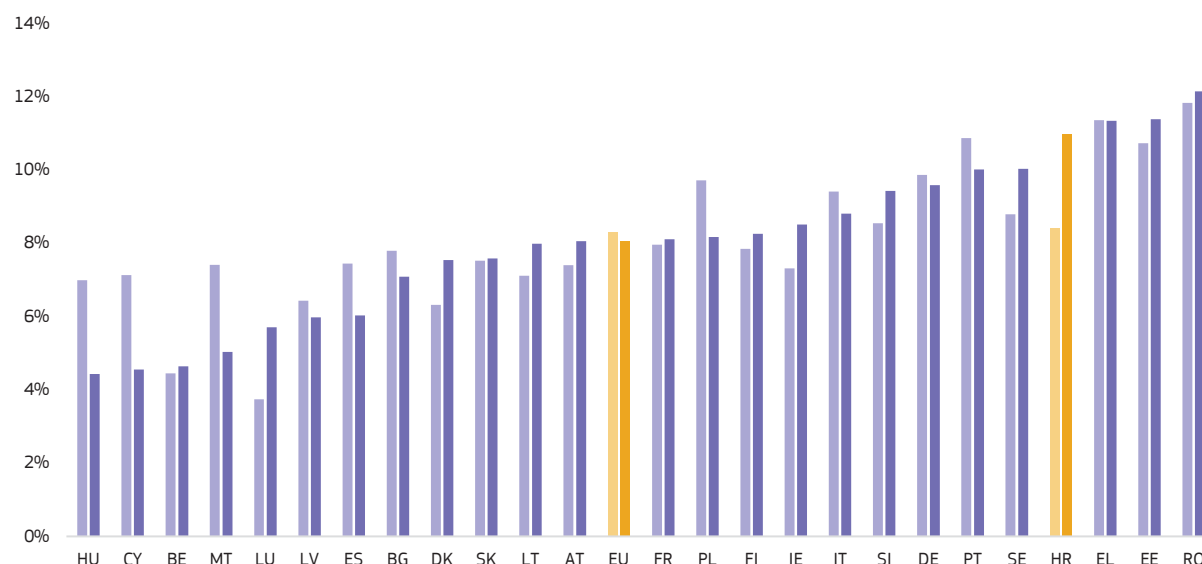
²³ Eurostat [educ_uoe_grad02].

²⁴ Eurostat [educ_uoe_mobs03].

²⁵ Eurostat [educ_uoe_mobs02].

²⁶ https://narodne-novine.nn.hr/clanci/medunarodni/2021_10_7_50.html

Figure 4: Female STEM graduates as a proportion of total tertiary graduates in 2015 and 2020 (%)



Source: Eurostat (UOE), [educ_uoe_grad02].

created a webpage for Ukrainian refugees with information on the recognition procedures for enrolling in HE, continuing their studies or entering the labour market. If they have the necessary documents, they can start the recognition procedure; if not, the new Act on Recognition stipulates the assessment procedure resulting in a background document. Currently 36 HEIs receive students from Ukraine²⁷.

The repair of educational infrastructure damaged by the earthquakes is starting.

After a significant delay using the Solidarity Fund to repair infrastructure damaged by the earthquakes, two calls for tenders were published for the repair of HEIs, with the 2nd also including schools and preschools. The first call will provide for the repair of 27 HEIs and research institutions. The second is still being contracted.



Box 2: State scholarships for students of lower socio-economic status

To ensure equal access to higher education (HE), 10 000 state scholarships are to be annually awarded to students from a low socio-economic background or with disabilities over a period of 5 academic years (50 000 in total during May 2017 – December 2022, of which 29 000 financed from ESF). Postgraduate students with disabilities and in alternative care without other financial support are also eligible for these scholarships. The aim is to make higher education more socially inclusive and increase its completion rate. The share of students who are awarded scholarships and complete their studies or are enrolled in the 4th year of them is much higher (21.15%) than that of students with similar characteristics who do not receive such support. The conditions for obtaining a scholarship are specified in the Ordinance on the Conditions for and Manner of Exercising the Right to a State Scholarship based on Socio-economic Status. So far, 49 196 scholarships have been awarded.

<https://mzo.gov.hr/istaknute-teme/odgoj-i-obrazovanje/visoko-obrazovanje/drzavne-stipendije/drzavne-stipendije-za-studente-nizeg-socio-ekonomskog-statusa/1563>

²⁷ <https://www.azvo.hr/en/enic-naric-office/ukrajina>

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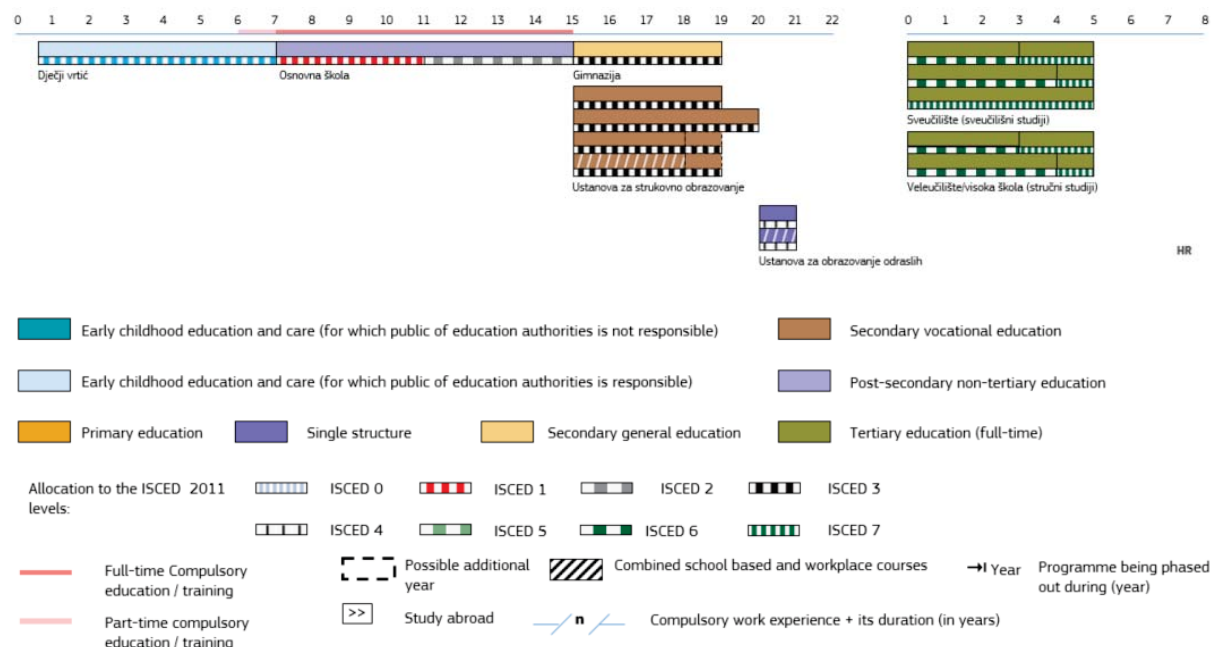
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Annex I: Key indicators sources

Indicator	Source
Participation in early childhood education	Eurostat (UOE), educ_uae_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: Eurostat (LFS), edat_lfse_14 Data by country of birth: Eurostat (LFS), edat_lfse_02
Exposure of VET graduates to work based learning	Eurostat (LFS), edat_lfs_9919
Tertiary educational attainment	Main data: Eurostat (LFS), edat_lfse_03 Data by country of birth: Eurostat (LFS), edat_lfse_9912
Participation of adults in learning	Data for this EU-level target is not available. Data collection starts in 2022. Source: EU LFS.
Equity indicator	European Commission (Joint Research Centre) calculations based on OECD's PISA 2018 data
Upper secondary level attainment	Eurostat (LFS), edat_lfse_03
Public expenditure on education as a percentage of GDP	Eurostat (COFOG), gov_10a_exp
Public expenditure on education as a share of the total general government expenditure	Eurostat (COFOG), gov_10a_exp

Annex II: Structure of the education system



Source: European Commission/EACEA/Eurydice, 2022. The Structure of the European Education Systems 2022/2023: Schematic Diagrams. Eurydice Facts and Figures. Luxembourg: Publications Office of the European Union. Notes: Start of primary education (ISCED 1) depends on child's birthday. Children born between January and April start primary school in calendar year in which they turn 6; those born from April to December when they are 7 years old.

Please email any comments or questions to:
EAC-UNITE-A2@ec.europa.eu

Brussels, 18.11.2022
SWD(2022) 751 final

PART 13/28

COMMISSION STAFF WORKING DOCUMENT

Education and Training Monitor 2022

Accompanying the document

**Communication from the Commission to the European Parliament, the Council, the
European Economic and Social Committee and the Committee of the Regions**

on progress towards the achievement of the European Education Area

{COM(2022) 700 final} - {SWD(2022) 750 final}

Education and Training Monitor 2022

ITALY



The Education and Training Monitor's country reports present and assess the main recent and ongoing policy development at all education levels in EU Member States. They provide the reader with more in-depth insight of the performance of countries with regard to the EU level targets agreed within the EEA. They are based on the most up-to-date quantitative and qualitative evidence available.

Section 1 presents a statistical overview of the main education and training indicators. Section 2 focuses on how the Member State has addressed or is addressing one of its education challenges. Section 3 covers early childhood education and care. Section 4 deals with school education policies. Section 5 covers vocational education and training and adult learning. Finally, Section 6 discusses measures in higher education.

The Education and Training Monitor's country reports were prepared by the European Commission's Directorate-General for Education, Youth, Sport and Culture (DG EAC), with contributions from the Directorate-General for Employment, Social Affairs and Inclusion (DG EMPL).

The document was completed on 30 September 2022

More background data at:

<https://op.europa.eu/webpub/eac/education-and-training-monitor-2022/en/>



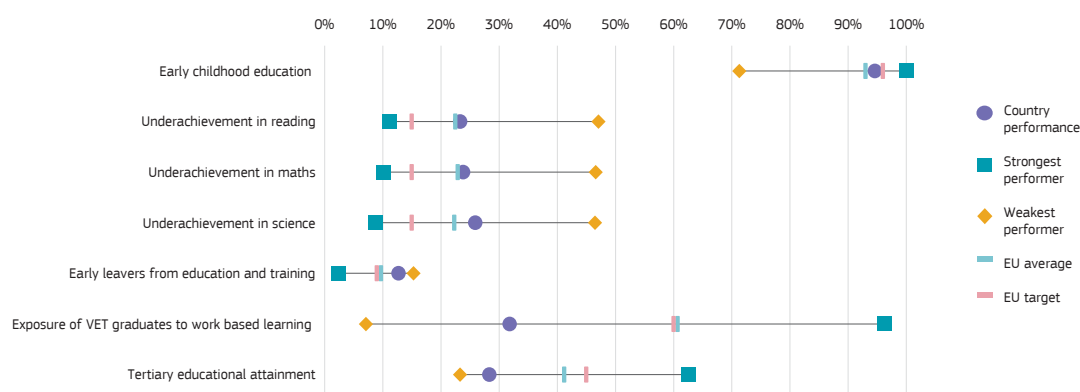
1. Key indicators

Figure 1: Key indicators overview

			Italy		EU	
			2011	2021	2011	2021
EU-level targets			2030 target			
Participation in early childhood education (from age 3 to starting age of compulsory primary education)	≥ 96 %		97.3% ¹³	94.6% ²⁰	91.8% ¹³	93.0% ²⁰
Low achieving eighth-graders in digital skills	< 15%		:	:	:	:
Low achieving 15-year-olds in:	Reading	< 15%	21.0% ⁰⁹	23.3% ¹⁸	19.7% ⁰⁹	22.5% ¹⁸
	Maths	< 15%	24.9% ⁰⁹	23.8% ¹⁸	22.7% ⁰⁹	22.9% ¹⁸
	Science	< 15%	20.6% ⁰⁹	25.9% ¹⁸	18.2% ⁰⁹	22.3% ¹⁸
Early leavers from education and training (age 18-24)	< 9 %		17.8%	12.7% ^b	13.2%	9.7% ^b
Exposure of VET graduates to work-based learning	≥ 60 % (2025)		:	31.8%	:	60.7%
Tertiary educational attainment (age 25-34)	≥ 45 %		21.1%	28.3% ^b	33.0%	41.2% ^b
Participation of adults in learning (age 25-64)	≥ 47 % (2025)		:	:	:	:
Other contextual indicators						
Equity indicator (percentage points)			:	18.4 ¹⁸	:	19.30 ¹⁸
Early leavers from education and training (age 18-24)	Native		15.3%	10.7% ^b	11.9%	8.5% ^b
	EU-born		30.5%	21.5% ^b	25.3%	21.4% ^b
	Non EU-born		43.4%	34.7% ^b	31.4%	21.6% ^b
Upper secondary level attainment (age 20-24, ISCED 3-8)			77.3%	83.5% ^b	79.6%	84.6% ^b
Tertiary educational attainment (age 25-34)	Native		22.9%	31.5% ^b	34.3%	42.1% ^b
	EU-born		11.5%	13.2% ^b	28.8%	40.7% ^b
	Non EU-born		11.5%	12.6% ^b	23.4%	34.7% ^b
Education investment	Public expenditure on education as a percentage of GDP		4.1%	4.3% ²⁰	4.9%	5.0% ²⁰
	Public expenditure on education as a share of the total general government expenditure		8.3%	7.5% ²⁰	10.0%	9.4% ²⁰

Sources: Eurostat (UOE, LFS, COFOG); OECD (PISA). Further information can be found in Annex I and at [Monitor Toolbox](#). 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; the equity indicator shows the gap in the share of underachievement in reading, mathematics and science (combined) among 15-year-olds between the lowest and highest quarters of socio-economic status; b = break in time series, : = not available, 09 = 2009, 13 = 2013, 18 = 2018, 20 = 2020.

Figure 2: Position in relation to strongest and weakest performers



Source: DG Education, Youth, Sport and Culture, based on data from Eurostat (LFS 2021, UOE 2020) and OECD (PISA 2018).

2. A focus on early school leaving

Despite continued improvement, early school leaving remains a significant challenge for Italy's education system. Early school leaving is on a declining trend, but remains among the highest in the EU, particularly in the south and among the foreign-born population. The proportion of early leavers from education and training (ELET) in the 18-24 age group was 12.7% in 2021, down from 13.1% the previous year, confirming the downward trend seen over the past decade. While below the national target of 16%, the ELET rate remains well above the EU average of 9.7% and far short of the new EU-level target of below 9%.

Early school leaving varies widely across regions. The rate ranges from 9.6% in the northeast to 15.3% in the south, with a peak of 21.2% in Sicily. Boys are more likely than girls to leave school early (14.8% vs 10.5%), with a wider than-average gender gap (4.3 pps. vs 3.5 pps. for the EU average). At over 30%, the rate of early school leaving among foreign-born 18-24 year-olds is three times as high as that of Italian-born people (10.7%), considerably higher than the EU average of 21.2%.

One of the main issues in the debate on early school leaving is the true scale of the phenomenon. The national institute for the evaluation of the education system, INVALSI, introduced the concept of 'hidden' or 'implicit' early school leaving (*dispersione implicita*). It indicates the share of students who at the end of upper secondary education have not achieved the corresponding learning objectives – and therefore face the same limited employment and social prospects as early school leavers¹. The latest round of INVALSI testing² found that in 2022, this

share fell slightly compared to 2021 (from 9.8% to 9.7%) across the country, with the greatest improvements recorded in some southern regions³.

The government is investing in reducing and preventing early school leaving in the framework of its national recovery and resilience plan (RRP). Italy's RRP allocates EUR 1.5 billion to projects that aim to reduce geographical imbalances in learning outcomes⁴. At national level, the first disbursement of EUR 500 million under this scheme was authorised by the education minister in June 2022. The funds will be used to finance projects involving students in the 12-18 age group in 3 198 schools selected on the basis of indicators for drop-out rate and socio-economic context. An expert working group appointed by the ministry defined general indications and guidelines for the schools involved. The projects include personalising learning paths in low-performing schools, bringing in targeted support for school leaders, mentoring and training for at least 50% of teachers, and extending school teaching time by running targeted projects.

In parallel, the government is reforming the system of orientation and guidance in the transition from lower to upper secondary school. If properly implemented, a more effective orientation system could help reduce early school leaving and improve learning outcomes. Evidence suggests that students who choose not to follow the orientation advice offered at the end of lower secondary school are almost twice as likely to fail their first year of upper secondary school compared to those who do (Fondazione Agnelli 2021).

¹ In 2021, over a fifth of Italian 15-24 year-olds (21.9%) were not in education, employment or training, well above the EU average of 12.3% (Eurostat).

² INVALSI national tests measure the competences of students in grades 2, 5, 8, 10 and 13 in Italian, maths

and English. Over 2.4 million students took part in the 2022 round of testing.

³ Puglia (-4.3 pp) and Calabria (-3.8 pp).

⁴ Source: *ItaliaDomani Piano nazionale di ripresa e resilienza* <https://italiadomani.gov.it/Interventi/investimenti/intervento-straordinario-finalizzato-alla-riduzione-dei-divari-territoriali-nei-cicli-I-e-II-della-scuola-secondaria-di-secondo-grado.html>

Funding under the recovery and resilience plan is also being used to build innovative schools, designed to serve the whole community. An ad hoc committee composed of architects and education experts provided guidelines for designing school buildings that are environmentally sustainable and innovative in the use and distribution of learning spaces. The new schools should be designed and used as cultural hubs for local communities, to help strengthen social cohesion in deprived areas. 213 new schools are to be built across the country, over 40% of them in the south.



Box 1: Community education pacts

Italy's 'community education pacts' were brought in under the 2020/21 plan for schools. They are agreements between schools, local authorities, public and private institutions and the third sector, designed to involve and empower the community in the project by forging a strong connection with the local area. Initially implemented largely to support the safe reopening of schools after the pandemic (for instance by making available extra spaces such as parks, libraries, theatres and museums for curricular and extra-curricular activities), the pacts are proving instrumental in combating educational poverty and reducing early school leaving. The pacts strengthen the role of the school as a social and community laboratory and learning hub, strongly rooted in the local area. They expand the education offer and learning opportunities. The pacts encourage the active participation of young people and their families, promoting paths of active citizenship and solidarity. The education pacts also support the opening of schools throughout the day to provide a meeting place open to all. Partial data collected by the Ministry of Education's agency INDIRE in 12 regions in 2021 listed 459 community education pacts financed by the Ministry of Education, and 71 education/cooperation pacts between small schools and the community.

3. Early childhood education and care

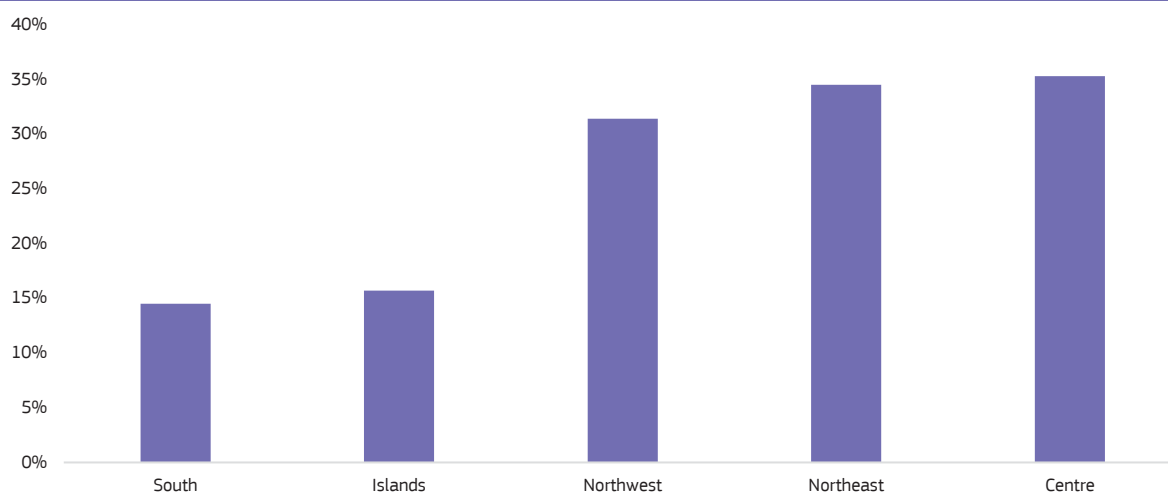
Participation in early childhood education (ECEC) is almost universal for 3-6 year-olds, but enrolment of younger children is low.

94.6% of 3-6 year-olds were enrolled in ECE in 2020, above the EU average of 93% and not far below the EU-level target of 96% by 2030. The rate of enrolment of children below 3 rose slightly from 25.5% in the 2018/2019 school year to 26.9% in 2019/2020 (Istat, 2021). This is due to an increase in supply as well as to a reduction in the number of children below 3, caused by falling birth rates. The most significant increase in places was in the south and islands (up by 4.9% and 9.1% respectively, against a 1.5% increase nationally) (Istat, 2021). The increase in the south is the result of government measures adopted over the years to help bridge the gaps across the country⁵. However, wide gaps persist in the supply of childcare, both between the north and the south and between large cities and smaller municipalities (Figure 3).

Women's employment status plays a determining role in access to childcare services. 32.4% of families in which the mother works use childcare services, against 15.1% of families in which only the father works. Families in which only one parent works may have difficulty accessing private childcare services, due to the relatively high fees, and public childcare services, because the access criteria applied by the municipalities tend to prioritise families in which both parents work.

⁵ Early childhood education services are among the priorities for action under the PACs (action plans for cohesion) launched in 2012 by the Ministry for Development and Cohesion, in agreement with the European Commission. The subsequent national action plan for 0-6 integrated education system (Legislative Decree 65/2017) has allocated additional resources for early childhood services, especially for southern regions.

Figure 3: ECEC places per 100 children aged 0-2 (school year 2019/2020)



Source: Istat

The government is taking steps to expand the ECEC offer in the framework of the RRP.

So far, 2 190 projects have been financed (1.857 for childcare facilities and integrated ECEC poles for 0-6 year-olds and 333 pre-primary schools for 3- to 6-year-olds), for an investment of EUR 3 billion. Over 55% of the total funding was allocated to southern regions. Building new structures and renovating existing ones is a precondition for expanding the use of childcare services. However, the low attendance rate is also due to factors such as high fees, socio-economic background (university-educated parents are more likely to enrol their children in childcare) and general educational poverty contexts. All these factors will need to be addressed if the country is to make progress on this front and achieve the government's target of 33% by 2026.

The COVID-19 pandemic has had an impact on childcare services. According to a survey by Istat and the University of Venice Ca' Foscari, 29% of public facilities and 45% of private facilities report a decline in enrolments (with a resulting decrease in income from fees). They also needed to face extraordinary costs (88% of respondents) and an increase in management costs (85%), in most cases 'considerable' or 'very considerable'. Schools took several measures to enable a safe reopening in the 2020/2021 school year. These

include reorganising available spaces (93% of respondents), training educators (92%), staggered entry and exit times (79%), setting up new communication channels with families (72%), purchasing new educational materials (58%) and hiring new staff (51%). A few structures modified their opening hours (27%), 18% were able to acquire additional spaces, and fewer than 10% reduced the number of sections, staff or services (e.g. canteen). Despite the health concerns by parents and staff, demand remained relatively high. Over 80% of available places were taken up both in September 2020 and in April 2021.

4. School education

School education in Italy produces mixed results in terms of basic skills proficiency, with significant differences between regions and types of schools. Compared to 2015, the performance of 15-year-olds in Italy in the 2018 OECD Programme for International Student Assessment (PISA) remained broadly stable in mathematics and reading but worsened in science, in line with international trends. The percentage of low performers is close to the EU average in reading and maths, but higher in science. There are significant geographical variations, with students in the north of the country scoring well above the EU average in reading, and students in

the south and islands significantly below. In a system characterised by early tracking, performance also varies according to type of school: students in upper general education (licei) obtain a much higher score (521 points) than those in technical and vocational institutes (458 and 395 points respectively). Differences between regions and schools are also reflected in the distribution of top- and low-performing students (PISA 2018).

Italy appears to have stemmed the decline in learning outcomes caused by COVID-19 school closures but there are no clear signs of improvement yet. After the learning loss recorded in 2021, the results of the 2022 round of standardised national testing⁶ remained largely stable for Italian and maths, and improved for English. The results confirmed wide geographical disparities, which tend to widen with school level. On average, the differences in performance between schools throughout Italy decreased somewhat, but in Italian, English and particularly in mathematics there are more pronounced differences in results between schools and between classes in the southern regions. This indicates that primary education in the south is not able to ensure equal opportunities for all pupils, with clear negative repercussions on subsequent school grades. More generally, the strong influence of family background on learning achievement throughout the country is an indication that school education does not adapt sufficiently to different learning needs and cannot compensate for socio-economic disadvantage.

The government has set up a fund to compensate for learning losses caused by the pandemic. State schools can request funding to put on free cultural and sporting activities, summer camps and learning support to make up for the teaching hours lost over the past two

years. The budget is EUR2 million for 2022 (EUR 667 000) and 2023 (EUR 1 333 000).

The government has adopted a number of new measures and reforms of the education system. Coding and digital teaching were included in teachers' training programmes as priorities starting from the 2022/2023 school year. Fresh legislation brings in computer programming (as a subject and integrated into other subjects) and specifies the further development of digital skills in primary and secondary education. The 'School 4.0' plan - innovative schools, new classrooms and laboratories' allocates over EUR 2.1 million from the Recovery and Resilience Facility to transform 100 000 classrooms into innovative learning environments and build laboratories for the digital professions of the future in all upper secondary schools. The plan acts in synergy with the EUR 900 million EU structural funds currently being implemented for wiring school buildings and the digitisation of schools. The Ministry of Education has also selected 3 500 projects to improve education on sustainability and biodiversity, earmarking EUR 155 million from European funding, REACT-EU. 2 885 primary schools will receive a grant of EUR 25 000 each to create vegetable and botanical gardens, while 645 secondary schools will receive EUR 133 000 to create labs on the green transition.

Italy is reforming the initial training and recruitment of teachers in order to improve the quality of education. New legislation introduces a specific initial training for aspiring secondary school teachers⁷. In addition to a Master's degree, aspiring teachers will need to acquire 60 ECTS in teaching (in practice one year, including internships) and pass a qualification exam with a written test and oral test including a simulated lesson. Qualified teachers will still need to pass a national competition, to be held annually, and, if successful, be hired for a probation year. At the end, after a final test and

⁶ Standardised testing is run yearly by the INVALSI evaluation institute. Students in grades 2, 5, 8, 10 and 13 are tested in Italian, maths and English (except grades 2 and 10 who are only tested in Italian and maths).

⁷ A specific degree in *Scienze della formazione primaria* already exists for ECE and primary teachers.

conclusive evaluation, the employment contract becomes permanent. Once fully implemented, the new system could improve teaching quality. In the short term, though, the choice to apply more lenient requirements to participate in the public competition to temporary teachers could delay the effectiveness of the reform.

The reform introduces some performance-related salary increases for teachers. In 2022 the government decided to introduce one-off bonus (equal to between 10% and 20% basic salary) to be granted to a limited number of teachers who successfully complete a three-year training course, starting from the 2023/2024 school year. The size of the bonus and the number of potential beneficiaries will be set annually, based on available funds. Further legislation⁸ introduces a permanent pay rise for a set number of teachers (max. 8 000 a year for the 2032/2033, 2033/2034, 2034/2035 and 2035/2036 school years) who successfully complete three consecutive three-year training courses. This will entail a permanent salary increase of EUR 5 650 a year. The details of the new system will be defined through collective bargaining.

Following Russia's invasion of Ukraine, over 27 000 Ukrainian children were enrolled in schools in Italy, with the vast majority enrolled in primary and pre-primary. By the end of the 2021/2022 school year, 27 506 Ukrainian pupils were enrolled in schools in Italy. The majority⁹ were aged between 3 and 13, as older children generally preferred following the online lessons provided by the Ukrainian education ministry. In March, the Italian education ministry issued guidelines and recommendations to schools on how best to integrate Ukrainian students and made available teaching materials on a website. It also made available EUR 1 million to enable schools to provide bilingual learning materials,

linguistic and cultural mediation and psychological support. Italy's national operational programme '*Per la scuola*' allocates an additional EUR 50 million national and ESF funding to this type of initiative. Italy guarantees to all foreign minors the completion of compulsory schooling and the right to education at the same conditions as Italian citizens, regardless of immigration status. Currently, non-Italian pupils make up around 10% of the student population.



Box 2: ESF project '*Apprendimento e socialità*'

The aim of the ESF project '*Apprendimento e socialità*' (Learning and sociality) is to expand and support the summer training offer for the 2020-2021 and 2021-2022 school years. In 2021, almost 5 500 projects were organised in schools over the summer period, complementing the government's own national school plan. The projects combined activities designed to improve basic skills and narrow the digital divide with initiatives promoting students' social interaction and group life. The initiative was repeated in 2022.

Budget: EUR 300 million.

5. Vocational education and training and adult learning

Italy is implementing a number of reforms of the vocational education system with support from EU funds. The National programme for new skills adopted in December 2021 envisages common standards for vocational training, including customised training, accessibility, skills recognition, and schemes to meet labour market needs. It also addresses the aspect of skill needs forecasting and increases the use and dissemination of results, also via an active role for companies. Italy's overall strategy of cohesion policy action envisages action to

⁸ Law n. 142 of 21.09.2022.

⁹ Breakdown by education level: pre-primary: 6 148, primary: 12 713, lower secondary: 6 086, upper secondary: 2 500.

better match the education and training system to labour market needs, by reforming the system and by training teachers and trainers, providing dual training, apprenticeship and traineeships.

The government has taken steps to boost adult learning. The National programme for the 'guarantee of employability of workers' (GOL), adopted in November 2021, provides a series of tools and measures to help people (re)integrate into the workplace. GOL, which is funded by the RRF, will fund training for at least 800 000 people (300 000 of them in digital skills) over a 5-year period (2021-25). Italy adopted the National strategic plan for the upskilling and reskilling of the adult population in 2021 with the aim to create an enhanced coordination infrastructure between the various national policies and measures in this sector. It put in place new areas for action for the first three-year implementation period (2021/23). The plan has three strategic activity areas that aim to increase chances of bridging the skills gap for the majority of the adult population: intercepting, reaching out to and guiding individuals; qualifying and upskilling human capital; intermediating and synchronising skills supply and demand. Italy set a 2030 target of 60% of adults in learning every year, which would be a massive significant increase from the 33.9% rate in 2016.

6. Higher education

The proportion of young adults with a tertiary educational qualification remains below the EU average for both Italian- and foreign-born young people. In 2021, 28.3% of 25-34 year-olds had a tertiary educational qualification, well below both the EU average of 41.2% and the EU-level target of 45% by 2030. Women are more likely to hold a tertiary qualification than men (34.4% vs 22.3%), in line with the rest of the EU but with a slightly wider gender gap (12.1 pps As compared to 11.1 pps). The tertiary educational attainment rate is particularly low among the foreign population, whether EU-born (13.2%) or born outside the EU (12.6%), reflecting a substantial difficulty in attracting highly qualified people.

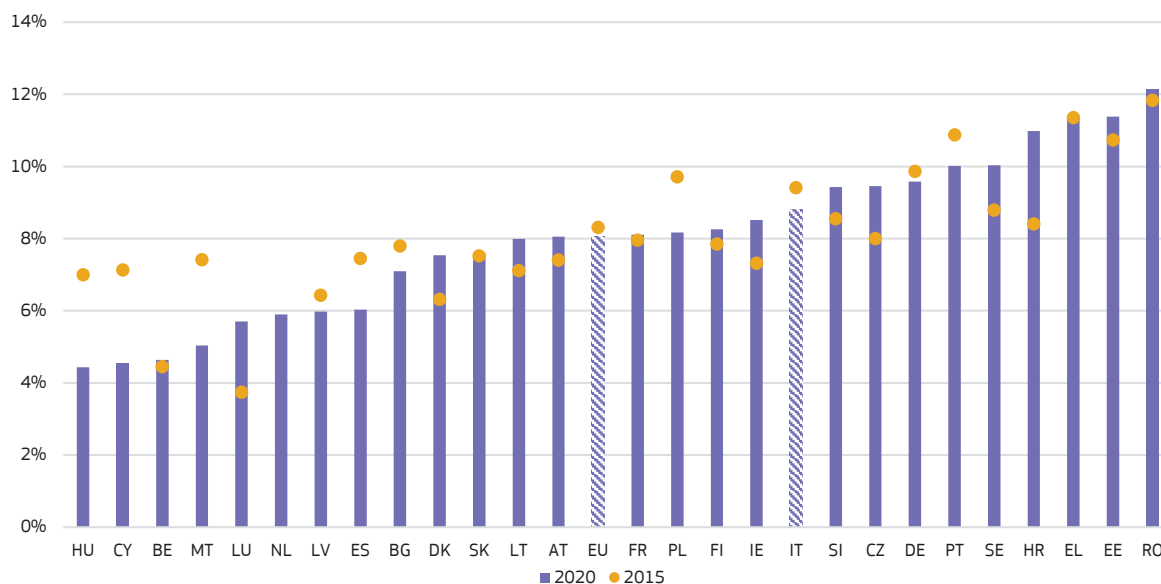
The share of STEM graduates remains comparatively low. Italy ranks 25th out of 27 EU countries for human capital in the 2022 Digital Economy and Society Index (DESI). In 2020, 22.7% of all graduates had a STEM qualification, fewer than in 2019 (24.5%) and below the EU average (24.9%). The share of graduates in information and communication technologies is particularly low, at just 1.4% compared to the EU average of 3.9%. Less than a fifth are women. Women make up more than half of tertiary graduates (58.4%), but only 8.8% has a STEM degree. This is fewer than in 2015 but slightly above the EU average of 8.1% (Figure 4). On a more positive note, the proportion of women among STEM graduates is significantly higher than the EU average (38.9% vs EU 32.4%)¹⁰.

While a tertiary degree constitutes an advantage on the labour market, transition into employment remains difficult. The employment rate of recent tertiary graduates has risen steadily over the past years, reaching 67.5% in 2021. But while it is considerably higher than the employment rates for VET and general upper school graduates¹¹, it remains well below the EU average of 84.5%. Low demand from a productive sector characterised by small and medium-sized firms contributes to graduates' poor employment prospects.

¹⁰ At bachelor's level, women constitute the vast majority of students in the fields of education and training (93.1%), linguistic (85.1%), psychological (81.5%), medical-health (75.6%) and art and design studies (71.8%). Conversely, they are underrepresented in fields such as ICT (13.7%) and industrial and information engineering (26.6%). A similar distribution is found at Master's level: there is a strong prevalence of women in the areas of education and training (92.7%), linguistic (85.8%) and psychological studies (81.9%) and art and design (74.4%); though it remains limited in ICT (18.5%).

¹¹ VET: 53.9%, general: 33.8%.

Figure 4: Female STEM graduates as a proportion of total tertiary graduates in 2015 and 2020 (%)



Source: Eurostat (UOE), [educ_uoe_grad02].

Italy is making progress in developing the non-academic tertiary sector. In July 2022, the government adopted a reform of the ITS (*Istituti tecnici superiori*) system, making them an integral part of the tertiary vocational education system. Alongside the traditional 2-year diplomas (EQF level 5), the new ITS Academies will offer 3-year courses leading to an EQF Level 6 qualification, equivalent to a Bachelor's degree. The objective is to double the number of ITS students (currently fewer than 20 000) and graduates (currently about 5 000 by 2026 (European Commission, 2021). This could help increase tertiary attainment rates and raise graduate employment rates, given the better employment prospects offered by ITS diplomas¹².

Recent reforms are expected to increase flexibility and make tertiary education

curricula more innovative. In 2021, the government adopted a reform of university degree groups, encouraging the creation of cross-disciplinary paths and the development of innovative professional profiles. It also adopted a reform of PhD programmes, promoting the involvement of enterprises in University research programmes and applied research through industrial PhDs.

The National Agency for the evaluation of Universities (ANVUR) has completed the third round of assessment for research and public engagement (VQR). The resulting ranking will serve as the basis for allocating one third of the budget to state universities and research centres. Based on the VQR assessment, the ministry of universities and research has launched the second round of the *dipartimenti di eccellenza* initiative for 2023-27. The selected departments will be awarded an average of EUR 1.5 million over the next five years. The funds can be used to hire new staff, acquire better equipment and run new programmes.

¹² According to Indire's recent national monitoring (2022), 80% of ITS graduates are employed within one year of graduating, 91% of whom in occupations consistent with their training.

Bringing in performance-based funding has had a positive impact on Italian research activity, especially in terms of international recognition (Bratti et al, 2021). However, the policy has been criticised as contributing to widening the disparities in funding across regions, given the limited number of southern universities with departments of excellence. Rankings, both for quality (AVA) and research (VQR), have an impact on student choices especially at Master's level (Biancardi et al, 2019, Bratti and Verzillo, 2019). This results in increasing flows of students from the south to the north of the country. Mobile students tend to be higher-achieving and tend to come from more advantaged backgrounds, which translates into a drop in income from tuition fees for some southern universities attended by a higher proportion of students from lower-income families¹³. Demographic decline is likely to exacerbate the situation due to a reduction in the overall number of students.

The government is making large-scale investments in research projects under the Recovery and resilience plan. Plans include setting up five new national research centres on frontline topics (simulations and calculations using high-speed computers; agritech; genetic medicine and RNA drugs; sustainable mobility; biodiversity); research projects on 'Ecological systems for local innovation', designed to fund up to 12 systems with EUR 100 million each. The centres need to meet multiple requirements in terms of quotas (40% women, 40% assigned to southern universities, each project including at least 250 new postdocs). Of the 15 proposals submitted, six are from southern universities. Also envisaged are 7 500 additional PhD scholarships, two thirds of which are reserved for partnerships with private companies in order to encourage the hiring of newly trained skilled young workers. A further 1 000 are expected to develop projects in partnership with public administrations to introduce innovative projects. This could help

reverse the brain drain Italy has experienced over the past years (European Commission, 2020). However, such a large increase in PhD students (the current intake is around 10 000 year) poses the risk that the average quality of applicants will fall, unless Italy starts recruiting a larger share of foreign candidates.

7. References

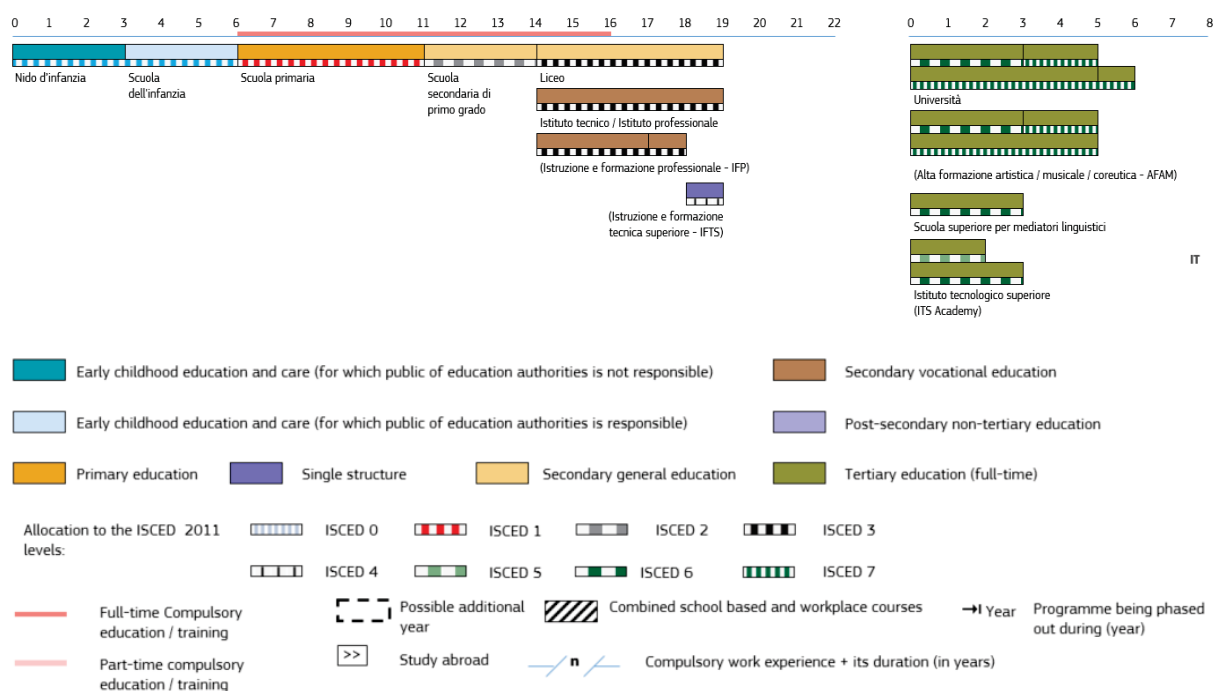
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¹³ Tuition fees are based on income.

Annex I: Key indicators sources

Indicator	Source
Participation in early childhood education	Eurostat (UOE), 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: Eurostat (LFS), edat_lfse_14 Data by country of birth: Eurostat (LFS), edat_lfse_02
Exposure of VET graduates to work based learning	Eurostat (LFS), edat_lfs_9919
Tertiary educational attainment	Main data: Eurostat (LFS), edat_lfse_03 Data by country of birth: Eurostat (LFS), edat_lfse_9912
Participation of adults in learning	Data for this EU-level target is not available. Data collection starts in 2022. Source: EU LFS.
Equity indicator	European Commission (Joint Research Centre) calculations based on OECD's PISA 2018 data
Upper secondary level attainment	Eurostat (LFS), edat_lfse_03
Public expenditure on education as a percentage of GDP	Eurostat (COFOG), gov_10a_exp
Public expenditure on education as a share of the total general government expenditure	Eurostat (COFOG), gov_10a_exp

Annex II: Structure of the education system



Source: European Commission/EACEA/Eurydice, 2022. The Structure of the European Education Systems 2022/2023: Schematic Diagrams. Eurydice Facts and Figures. Luxembourg: Publications Office of the European Union. Notes: In 2022, the law no. 99 has reformed the Istituto tecnico superiore (ITS). The name was changed to Istituto tecnologico superiore (ITS Academy). In addition to 2-year ISCED 5 courses, they now offer 3-year ISCED 6 programmes.

Please email any comments or questions to:
EAC-UNITE-A2@ec.europa.eu

Brussels, 18.11.2022
SWD(2022) 751 final

PART 14/28

COMMISSION STAFF WORKING DOCUMENT

Education and Training Monitor 2022

Accompanying the document

**Communication from the Commission to the European Parliament, the Council, the
European Economic and Social Committee and the Committee of the Regions**

on progress towards the achievement of the European Education Area

{COM(2022) 700 final} - {SWD(2022) 750 final}

Education and Training Monitor 2022

CYPRUS



The Education and Training Monitor's country reports present and assess the main recent and ongoing policy development at all education levels in EU Member States. They provide the reader with more in-depth insight of the performance of countries with regard to the EU level targets agreed within the EEA. They are based on the most up-to-date quantitative and qualitative evidence available.

Section 1 presents a statistical overview of the main education and training indicators. Section 2 focuses on how the Member State has addressed or is addressing one of its education challenges. Section 3 covers early childhood education and care. Section 4 deals with school education policies. Section 5 covers vocational education and training and adult learning. Finally, Section 6 discusses measures in higher education.

The Education and Training Monitor's country reports were prepared by the European Commission's Directorate-General for Education, Youth, Sport and Culture (DG EAC), with contributions from the Directorate-General for Employment, Social Affairs and Inclusion (DG EMPL).

The document was completed on 30 September 2022

More background data at:

<https://op.europa.eu/webpub/eac/education-and-training-monitor-2022/en/>



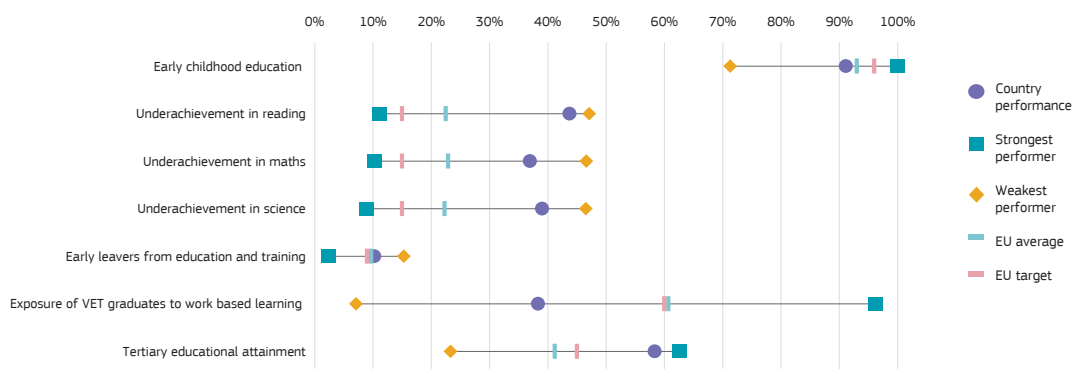
1. Key indicators

Figure 1: Key indicators overview

			Cyprus		EU	
			2011	2021	2011	2021
EU-level targets			2030 target			
Participation in early childhood education (from age 3 to starting age of compulsory primary education)	≥ 96 %		69.4% ¹³	91.1% ²⁰	91.8% ¹³	93.0% ²⁰
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	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	18.2% ⁰⁹	22.3% ¹⁸
Early leavers from education and training (age 18-24)	< 9 %		11.3%	10.2% ^b	13.2%	9.7% ^b
Exposure of VET graduates to work-based learning	≥ 60 % (2025)		:	38.3% ^u	:	60.7%
Tertiary educational attainment (age 25-34)	≥ 45 %		50.5%	58.3% ^b	33.0%	41.2% ^b
Participation of adults in learning (age 25-64)	≥ 47 % (2025)		:	:	:	:
Other contextual indicators						
Equity indicator (percentage points)			:	25.4 ¹⁸	:	19.30 ¹⁸
Early leavers from education and training (age 18-24)	Native		7.3%	3.9% ^b	11.9%	8.5% ^b
	EU-born		18.3%	20.5% ^{bu}	25.3%	21.4% ^b
	Non EU-born		24.3%	31.4% ^b	31.4%	21.6% ^b
Upper secondary level attainment (age 20-24, ISCED 3-8)			87.6%	89.7% ^b	79.6%	84.6% ^b
Tertiary educational attainment (age 25-34)	Native		58.8%	69.4% ^b	34.3%	42.1% ^b
	EU-born		36.0%	38.7% ^b	28.8%	40.7% ^b
	Non EU-born		34.9%	36.9% ^b	23.4%	34.7% ^b
Education investment	Public expenditure on education as a percentage of GDP		6.3%	5.9% ²⁰	4.9%	5.0% ²⁰
	Public expenditure on education as a share of the total general government expenditure		14.9%	13.0% ²⁰	10.0%	9.4% ²⁰

Sources: Eurostat (UOE, LFS, COFOG); OECD (PISA). Further information can be found in Annex I and at [Monitor Toolbox](#). 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; the equity indicator shows the gap in the share of underachievement in reading, mathematics and science (combined) among 15-year-olds between the lowest and highest quarters of socio-economic status; b = break in time series, u = low reliability, : = not available, 09 = 2009, 13 = 2013, 18 = 2018, 20 = 2020.

Figure 2: Position in relation to strongest and weakest performers



Source: DG Education, Youth, Sport and Culture, based on data from Eurostat (LFS 2021, UOE 2020) and OECD (PISA 2018).

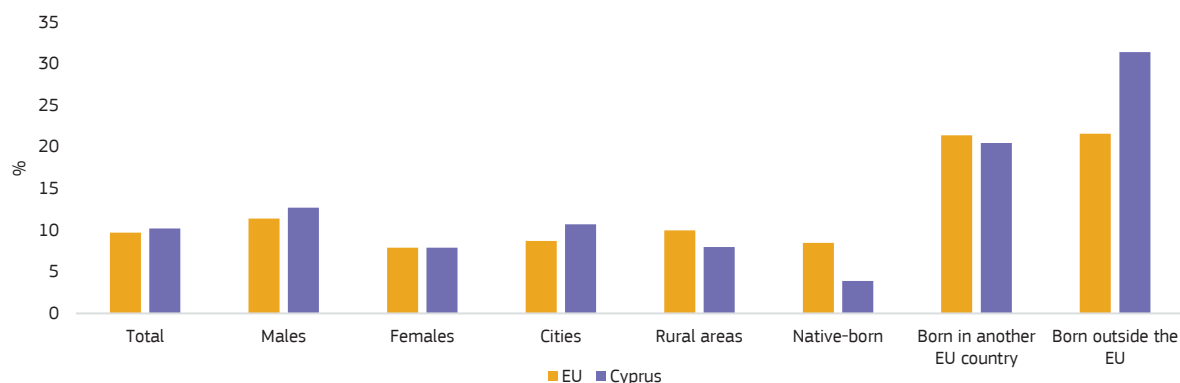
2. A focus on inclusive education and early leaving from education and training

Early leaving from education and training (ELET) has increased since 2015, affecting especially foreign-born young people. With one of the EU's highest asylum application-to-inhabitant ratio, integrating asylum seekers into the education system is not easy. The proportion of young people (18-34) among recently arrived asylum seekers is especially high (62% in 2018). The early leaving rate (27.9%), much higher among foreign-born young people (EU average 21.5%), shows a worsening trend (+1.3 percentage points (pps) since 2020). By contrast, the rate of native-born early leavers was 3.9% in 2021 vs the EU average 8.5%. The highest proportion of early leavers in 2021 was reported in urban areas (10.7%): an increase of 6.9 pps from 2015 (3.8%). About two thirds of early leavers are boys. Support for students at risk of dropping out of secondary education is provided as an integrated project under the EU's Technical Support Instrument (TSI) and early warning systems are in place. However, data collection is

insufficient and the method most used relies on school-by-school reporting (Donlevy V. et al., 2019). There are targeted support measures for pupils from a migrant background, supported by the European Social Fund (ESF+) through the DRASE+ project 'School and social integration actions' (European Commission, 2021). The Ministry of Education, Culture, Youth and Sports (Ministry of Education) also helps teachers to manage linguistic and cultural diversity in schools.

The Ministry of Education supports pupils with disabilities or other special educational needs (SEN). A planned policy framework reform will be based on a TSI project and its recommendations. The main purpose is to support the academic and social development of pupils with disabilities or other special educational needs to help them integrate into mainstream classes. In the 2019/2020 school year, 5 679 SEN students studied in Cypriot classes in pre-primary and primary education and 4 711 SEN students in general secondary education and secondary vocational education and training (VET). Special education and support in mainstream classes and in addition to regular schooling is provided for children from age 3 until they complete their studies (including VET and higher education).

Figure 3: Early leavers from education and training in Cyprus 2021 (%)



Source: Eurostat (EU-LFS), [edat_lfse_02]; [edat_lfse_14]; [edat_lfse_30]. Note: Data for Cyprus on rural areas and ESL born in another EU country are low reliable.

Where necessary, the appropriate infrastructure is also being developed in schools.

The low level of basic skills among pupils in Cyprus indicates socio-economic disparities.

PISA 2018 indicated that Cyprus has a high proportion of low achievers in reading, maths and science and a low proportion of top performers compared to other EU countries. Almost two out of three students from the lowest socio-economic quartile are low achievers in reading (vs 36.4% EU average). In the top socio-economic quartile, one out of three students is a low achiever, one of the EU's highest proportions. At 25.4 pps, the difference in the proportion of low achievers between low and high socio-economic status is high (EU: 19.3 pps). There is also a significant gender gap in reading, with girls outperforming boys by 47 score points on average. Compounding this, there is the risk that the pandemic will have a long-lasting negative effect on learning outcomes. Targeted social inclusion campaigns in schools are ongoing and curricula have been revised at all education levels to support the acquisition of skills and competences (Donlevy, V. et al., 2019).

Cyprus is among the few EU Member States¹ whose higher education strategy focuses exclusively on the social dimension, equity, inclusion and diversity. Equal opportunities to access higher education is the strategy's bedrock. In higher education, the State Student Welfare Service's scholarship schemes give students financial aid based on socio-economic criteria and academic excellence. Free online education is provided by the Open University of Cyprus free for undergraduate programmes.

¹ Croatia, Cyprus, the Netherlands, Austria, Finland.



Box 1: Good practice: Inclusive education and early leavers from education and training

The European Commission helped Cyprus in 2021, under its Technical Support Instrument (TSI), to improve the engagement of students at risk of dropping out of school. The project was implemented by the Ministry of Education, Culture, Youth and Sports.

The support provided consisted of the following.

- i) An analysis of the reasons students disengage from and drop out of secondary education, and of the policy measures in place to address these reasons.
- ii) A set of policy recommendations to improve the engagement of secondary students who have difficulties and to re-engage those who left education and training early.
- iii) An action plan for effectively implementing those policy recommendations.

The action plan gave the Cypriot authorities guidance on how to provide differentiable and equitable educational opportunities for students struggling in school and students who have dropped out. It will help to further reduce early school leaving.

Source: https://ec.europa.eu/info/news/commission-supports-cyprus-address-students-disengagement-and-early-school-leaving-2021-mar-30_en

3. Early childhood education and care

Despite coordinated efforts, accessible and affordable early childhood education and care (ECEC) remains a challenge. At 91.1%, participation in early childhood education from age 3 to the starting age for compulsory primary education is below the EU average (93%) and the EU-level target for 2030 (96%) (European Commission, 2020). Public spending on early childhood education remains among the lowest in the EU. Cyprus relies heavily on informal settings or private institutions (OECD 2021), especially for children under 4. Through the 'Thalia 2021-2027' ESF+ (European Social Fund) programme, the European Structural and Investment Funds aim to

expand capacities and provide a greater amount of affordable ECEC (European Commission, 2022). Affordability is important, with net childcare costs in Cyprus being high: over one third of median female earnings (OECD 2021).

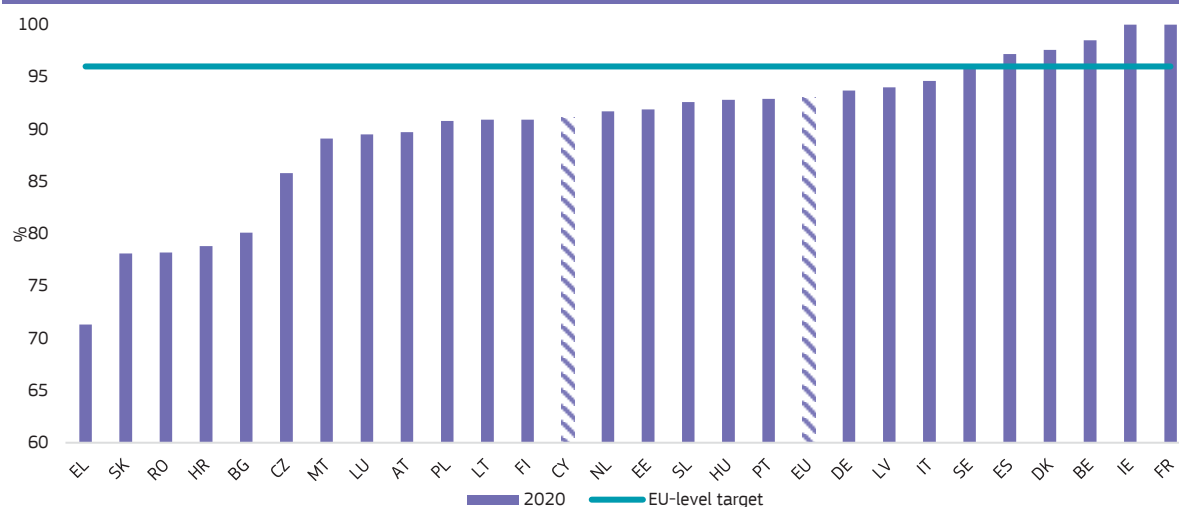
The extension of free compulsory pre-primary education from age 4 will be implemented in three stages until 2026 under the EU Recovery and Resilience Facility. During the first stage, compulsory education will be extended for 2 months. During the second stage, it will be extended for 4 months. The last stage will see it extended by 8 months by June 2026. The lowering of the compulsory schooling age will be accompanied by subsidies for disadvantaged families. Prompt implementation of ECEC reform, together with the dedicated ESF+ funds, could enhance ECEC access and affordability. However, efforts remain fragmented and a more integrated approach would be necessary from 0-6 years, focusing on quality and educational methods at all stages of ECEC. The necessary national strategy for ECEC and its accompanying action plan are included in the Cyprus' national recovery and resilience plan and are expected to be concluded in 2024. The

Commission supports Cyprus on this reform through the EU Technical Support Instrument (European Commission, 2021). This gives the authorities time to introduce comprehensive solutions for quality, affordable and accessible ECEC for all.

4. School education

A new system of centralised semester exams will be put into practice from the 2022/2023 school year onwards. The new centralised exams will be extended to all levels of lower and upper secondary education, including VET. For twelfth-graders (18 years old), the exams give access to the school leaving certificate (Apolytirion). Monitoring and analysis of the results will support the quality of teaching and the improvement of learning outcomes (Ministry of Education). For this, an evaluation mechanism to analyse exam results is necessary (Christoforidou and Kyriakides, 2021) and has been put in place. Nevertheless, teachers' experience in using such instruments for formative assessment is lacking and dedicated training is needed.

Figure 4: Pupils in ECE from age 3 to the starting age for compulsory primary education, 2019 and 2020 (%)



Source: Eurostat (UOE) [educ_uoe_enra21].

Most candidate teachers failed the exam they needed to pass to be appointed.

In Cyprus, teaching graduates need to pass an additional exam to be appointed. These exams took place in November 2021 and resulted in a high failure rate. The success rate for pre-primary teachers was the highest, with only 42.42% of candidates scoring above the pass mark (10 out of 20).

For primary education the success rate was even lower: only 1 out of 5 candidates scored above the pass mark.

Candidate secondary teachers' success rate varied according to subject. For example, candidate maths teachers' scores were particularly low, while 9 out of 10 biology teachers scored above the pass mark. To support already employed teachers' professional development, activities are being organised dedicated to teacher training as part of each school's improvement plan².

Pupils in the first grade of primary education were tested on their understanding of, and their ability to produce written texts in, Greek.

PISA 2018 revealed that the proportion of low achievers in reading was particularly high in Cyprus (43.7% vs 22.46% EU average). In addition, 25.7% of pupils are low achievers in all three subjects tested (reading, science and maths), compared to the EU 13% average. The aim of the programme is to observe and analyse pupils' basic skills in the first year of primary education in order to adapt teaching methods accordingly. The programme was developed by the directorate of primary education of the Ministry of Education and the Centre for Educational Research and Evaluation (CERE) of the Cyprus Pedagogical Institute (CPI). However, the analysis has not yet finished.

Multilingualism is also being promoted in Cypriot schools as part of the creation of the European Education Area.

In 2020, Cyprus was among the EU countries with the lowest proportion

of upper secondary students learning two or more foreign languages (38% vs 49% EU average). During the 2021/2022 school year, besides English, taught in all Cypriot schools, compulsory French lessons started, in the 11th grade of six upper secondary schools and the 10th and 11th grades (16 to 17 years old) of four technical and vocational schools. From the 2022/2023 school year, compulsory teaching of French is expanded to all grades of lower and upper secondary education. In parallel, since September 2021, a free pilot certification programme in French is being offered to students in public schools³. A second pilot is already running in 25 upper secondary schools for the certification of competence in English⁴.

The use of information and communication technology (ICT) in education is on the rise in Cyprus.

This is the most the case at lower secondary level, where ICT is a compulsory subject, with one of the highest number of annual hours (135) allocated to it in the EU (European Commission, 2020). The various measures put in place in this area during the COVID-19 lockdowns improved matters. The RRF and the ESF+ also support Cyprus in this area. The country has many 16-19-year-olds with basic or above basic overall digital skills: 82% compared to 69% EU average (2021).

Education for environmental sustainability is a key aspect of Cypriot education.

Environmental education is an integral part of the new primary and secondary curricula. The aim is to create a long-lasting awareness in schools of the need to address global warming, climate change, energy and urban development (Ministry of Education). Schools can also join the network of environmental education centres. One-off actions are also being organised, such as seminars on specific topics, participation in EU projects⁵ or environmental awareness-raising campaigns.

² In addition to any other kind of training teachers take part in.

³ DELF *scolaire*, A1, A2, B1 of the Common European Framework of Reference for Languages (CEFR).

⁴ Levels B1 and B2 of the CEFR.

⁵ Example: Schools as Living Labs (SALL).

Education for environmental sustainability is part of professional development courses for teachers at all levels. Cyprus is at the process to revise its national strategy for education for sustainable development under the framework of education for the environment, sustainable development and green transition 2030.

Schools' energy efficiency will be improved under the Recovery and Resilience Facility (RRF) and Horizon 2020. At least 405 public school buildings, representing 55% of Cypriot schools, will be upgraded under the RRF energy efficiency programmes. The investment concerns the installation of photovoltaic systems in school buildings (Ministry of Energy, Commerce and Industry). Photovoltaic panels have already been installed in 114 public schools (European Commission, 2020). As a result, over 70% of Cypriot schools will use renewable energies. The aim is to achieve a reduction of at least 30% in energy consumption. From an educational perspective, the projects will raise pupils' environmental awareness. Cyprus is also developing innovative energy efficiency approaches in 25 public schools through Horizon 2020. The buildings will be transformed into almost zero energy consumption buildings and long-standing heating, air conditioning and lighting problems will be addressed. The project aims to activate EUR 7.5 million in public and private investments and develop a long-term energy renovation strategy for all public school buildings. In parallel, a framework for energy upgrades will be established based on environmental, energy and socio-economic criteria.

5. Vocational education and training and adult learning

VET will continue to be supported by the ESF+ and the RRF. Cyprus' VET sector remains relatively small, with only 16.8% of upper secondary pupils enrolled in VET in 2021 (compared to 48.7% on average in the EU). Exposure to work-based learning is also fairly limited (38% in 2021, compared to 60.7% in the

EU). Recent VET graduates' employment prospects have improved though, reaching 74.6% in 2021, close to the EU average of 76.4%. EU support for VET will come from the co-funded Ministry of Education project 'Upgrading of Technical and Vocational Education'. The overall objective is to further develop and improve VET, by providing the necessary knowledge, skills and competences to address labour market challenges. The project's indicative actions and initiatives include:

- the development and introduction of new study programmes;
- the purchase of technical equipment;
- the organisation of promotional campaigns;
- the provision of high-quality professional training for VET teachers;
- the development of a national monitoring system to track VET graduates;
- the construction of new technical schools.

In addition, the Cypriot national recovery and resilience plan includes the construction of two model technical schools which will provide students and educators with a modern well-equipped environment for learning increasing the capacity, quality and attractiveness of vocational education and training (VET) in Cyprus. Since 2019, three new second-chance VET schools have opened. Efforts are also being made to improve curricula for evening secondary schools by aligning them with those of morning schools. During the 2021/2022 school year, the compulsory teaching of French was introduced in the 1st and 2nd grades (15 and 16 years old) of four technical and vocational schools.

Cyprus has developed a National Qualifications Framework (NQF) for all qualification levels. The NQF has been cross-referenced to the European Qualification Framework (EQF) and it is intended to keep it up to date according to European developments. A distinct part of the NQF is the System of Vocational Qualifications (SVQ), developed by the Human Resource Development Authority of Cyprus. It is dedicated to the recognition of vocational skills based on a series of standards of

vocational qualifications created for specific professional sectors.

A new Lifelong Learning Strategy was adopted for the period 2021-2027. The Ministry of Education's intention in adopting the strategy is to increase the participation of adults in lifelong learning by improving the quality of adult education, establishing incentives for participation and eliminating barriers, improving outreach and awareness, and developing programmes for non-job-related learning. The accompanying actions include:

- the development by 2022 of a framework for the adult education sector, including explanations of relevant concepts, functions, processes and quality assurance criteria for programmes and trainers;
- the continuous supervision of the strategy to ensure its relevance and usefulness;
- the promotion of mechanisms for the validation and recognition of learning outcomes;
- a comprehensive segmentation and needs analysis, to be conducted every 3 years;
- guidelines on upskilling and reskilling pathways;
- programmes for developing basic and digital skills;
- the promotion of distance learning programmes;
- a communication strategy and general campaigns to raise awareness of the importance of lifelong learning.

The strategy states that lifelong learning should be accessible and relevant to all adults and strike a balance between academic subjects, job-related development, socio-emotional fulfilment, civic education and well-being, while helping adults to develop life skills.

The Human Resource Development Authority provides opportunities for flexible knowledge development and upskilling. This will occur based on labour market needs, including through the introduction of individual learning accounts (ILAs) and micro-credentials. ILAs will give eligible groups of employed and unemployed people credits to acquire new knowledge and

skills, and/or upgrade existing knowledge and skills. Through ILAs, a wide range of training programmes will be offered as part of the Human Resource Development Authority's multi-company training programmes, particularly on the green and blue economies and for the development of digital skills. The introduction of ILAs, part of Cyprus' 'Thalia 2021-2027' programme, will be co-funded by the ESF+. Micro-credentials are qualifications that demonstrate learning outcomes and certify skills acquired through short learning experiences. They may be particularly useful for people who wish to develop professionally by making use of their knowledge without completing a complete tertiary education programme.

The adoption of the 'E-Skills Action Plan 2021-2025' will enable the development of digital skills and the continuous upskilling of all population groups. It falls within the competence of the Deputy Ministry of Research, Innovation and Digital Policy and was financed through the RRF. The action plan includes:

- a platform comprising a self-assessment tool and a directory of personalised suggestions for upskilling classes;
- programmes for professionals in the public sector;
- upskilling/reskilling opportunities for the workforce in general;
- investments in equipment and connectivity;
- the development of a communication strategy to raise awareness and promote lifelong learning and a digital culture.



Box 2: ESF+ project: Upgrading of Technical and Vocational Education and Training

This project is being implemented by the Directorate of Secondary Technical and Vocational Education and Training (STVET) of the Ministry of Education, Culture, Sports and Youth during the European Structural and Investment Funds (ESIF)

2014-2020 programming period. The project will contribute to an attractive, flexible and high-quality system of technical and vocational education and training. For the project, the Cypriot authorities are mainly developing new programmes, new secondary technical and vocational education and training specialities and new curricula, and offering career guidance services and in-service training for students and trainees. The project is expected to increase the rate of participation in secondary technical and vocational education and training, increase the number of students completing secondary education and post-secondary education and to increase the employment rate of secondary technical and vocational education and training graduates.

Public budget: EUR 15.9 million.

Source:

<https://mdet.moec.gov.cy/index.php/el/erga/programmatiki-2014-2020/17-2014-2020/116-anaptyxi-mtee>

6. Higher education

Cyprus' tertiary educational attainment (58.3% in 2021 vs 45% EU-level target) is one of the highest in the EU, but the labour market relevance of education needs to be increased. There is also a significant gender gap, with male tertiary educational attainment around 16 pps lower than female. There is also a wide gap of 31.9 pps between people born in and outside Cyprus. So far, interaction between academia and the business sector has been limited and graduates' pathways after leaving higher education have not been analysed. In order to better link higher education to labour market needs and improve comparability with other EU countries' labour markets, the department of higher education (DHE) of the Ministry of Education, Sport and Youth is developing a graduate tracking mechanism with RRF funding. To this end, an employers' skills survey is being designed.

The number of STEM graduates falls short of the labour market demand. There were 13.1% STEM graduates among all higher education

graduates in 2020, the second lowest proportion in the EU (EU average 24.9%). In Cyprus, the most popular study areas are education, business, administration and law. This is in sharp contrast to the European Employment Services' forecasts for the best employment prospects for 2021 for jobs requiring a high level of education. At the top of the EURES lists are technical services, consultants and programmers, ICT specialists, medical staff and engineers. In 2020, of a total of 10 403 tertiary education graduates, only 7.7% had studied engineering, manufacturing and construction, 2.7% ICT and another 2.7% natural sciences, maths and statistics. There were 4.6% female STEM graduates among all graduates in 2020, almost half the EU average of 8.1%. This is a drop of 2.6 pps since 2015, one of the highest drops in the EU during this period. The proportion of total STEM graduates out of total graduates in Cyprus dropped from 2015 to 2020 by 4.3 pps. Despite this very low number of STEM graduates overall, one out of three STEM graduates is a woman (34.8% in 2020), a good score compared to the EU average of 32.5%. The Ministry of Education has introduced STEM programmes across primary and secondary education in order to encourage the participation of students in STEM programmes. This initiative aims at increasing the number of students in STEM programmes in the country's higher education institutions.

The Ministry of Education is improving the internationalisation of higher education institutions. The aim is to make Cyprus an international education and research hub. The department of higher education of the Ministry of Education is in the process to promote higher education and attract students to study in Cyprus for example through participation in international fairs. Educational agreements and memoranda of understanding (MoUs) support efforts for internationalisation. Agreements⁶ on the mutual academic recognition of higher education qualifications and MoUs⁷ have been concluded

⁶ With Germany, Italy, Romania, Russia, China, Armenia and Jordan.

⁷ With China, Kuwait, UAE, Japan, Oman, Iran and Qatar.

with a number of countries. In addition, three higher education institutions, the University of Cyprus⁸, the Cyprus University of Technology⁹ and the Frederick University¹⁰ have succeeded in participating in European Universities Alliances. A national working group was formed within the Ministry of Education in order to make the most of new opportunities afforded by European higher education initiatives. The main challenges to be addressed are the joint European degree label and the institutionalised EU cooperation instruments to explore the feasibility of European legal status for alliances of higher education institutions.

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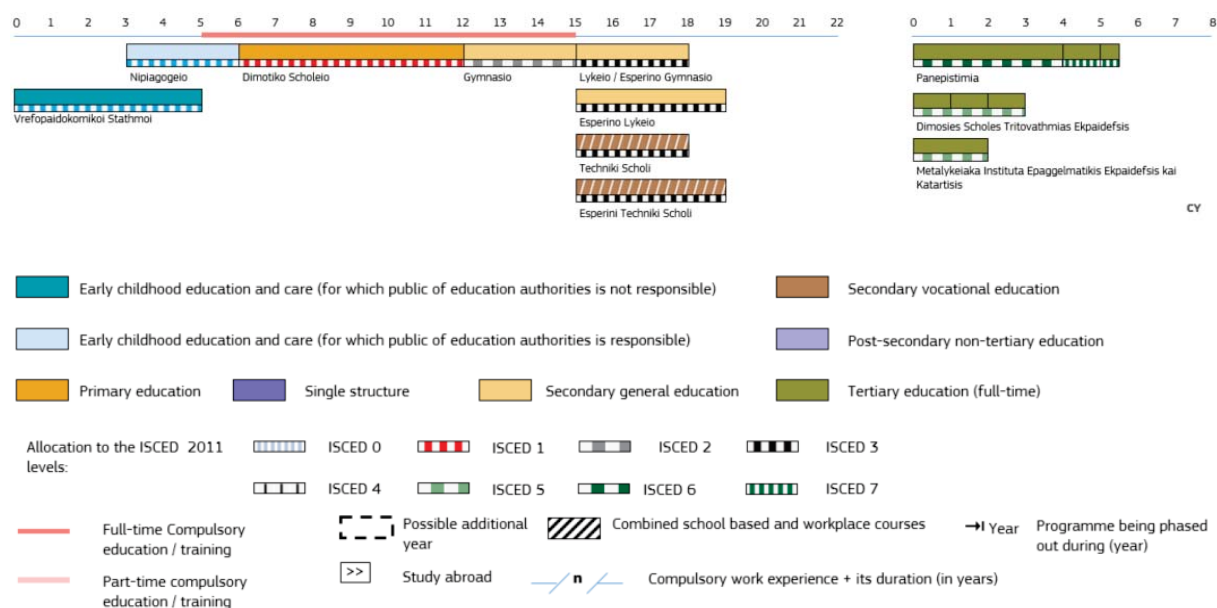
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Annex I: Key indicators sources

Indicator	Source
Participation in early childhood education	Eurostat (UOE), educ_uae_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: Eurostat (LFS), edat_lfse_14 Data by country of birth: Eurostat (LFS), edat_lfse_02
Exposure of VET graduates to work based learning	Eurostat (LFS), edat_lfs_9919
Tertiary educational attainment	Main data: Eurostat (LFS), edat_lfse_03 Data by country of birth: Eurostat (LFS), edat_lfse_9912
Participation of adults in learning	Data for this EU-level target is not available. Data collection starts in 2022. Source: EU LFS.
Equity indicator	European Commission (Joint Research Centre) calculations based on OECD's PISA 2018 data
Upper secondary level attainment	Eurostat (LFS), edat_lfse_03
Public expenditure on education as a percentage of GDP	Eurostat (COFOG), gov_10a_exp
Public expenditure on education as a share of the total general government expenditure	Eurostat (COFOG), gov_10a_exp

Annex II: Structure of the education system



Source: European Commission/EACEA/Eurydice, 2022. The Structure of the European Education Systems 2022/2023: Schematic Diagrams. Eurydice Facts and Figures. Luxembourg: Publications Office of the European Union.

Please email any comments or questions to:
EAC-UNITE-A2@ec.europa.eu

Brussels, 18.11.2022
SWD(2022) 751 final

PART 15/28

COMMISSION STAFF WORKING DOCUMENT

Education and Training Monitor 2022

Accompanying the document

**Communication from the Commission to the European Parliament, the Council, the
European Economic and Social Committee and the Committee of the Regions**

on progress towards the achievement of the European Education Area

{COM(2022) 700 final} - {SWD(2022) 750 final}

Education and Training Monitor 2022

LATVIA



The Education and Training Monitor's country reports present and assess the main recent and ongoing policy development at all education levels in EU Member States. They provide the reader with more in-depth insight of the performance of countries with regard to the EU level targets agreed within the EEA. They are based on the most up-to-date quantitative and qualitative evidence available.

Section 1 presents a statistical overview of the main education and training indicators. Section 2 focuses on how the Member State has addressed or is addressing one of its education challenges. Section 3 covers early childhood education and care. Section 4 deals with school education policies. Section 5 covers vocational education and training and adult learning. Finally, Section 6 discusses measures in higher education.

The Education and Training Monitor's country reports were prepared by the European Commission's Directorate-General for Education, Youth, Sport and Culture (DG EAC), with contributions from the Directorate-General for Employment, Social Affairs and Inclusion (DG EMPL).

The document was completed on 30 September 2022

More background data at:

<https://op.europa.eu/webpub/eac/education-and-training-monitor-2022/en/>



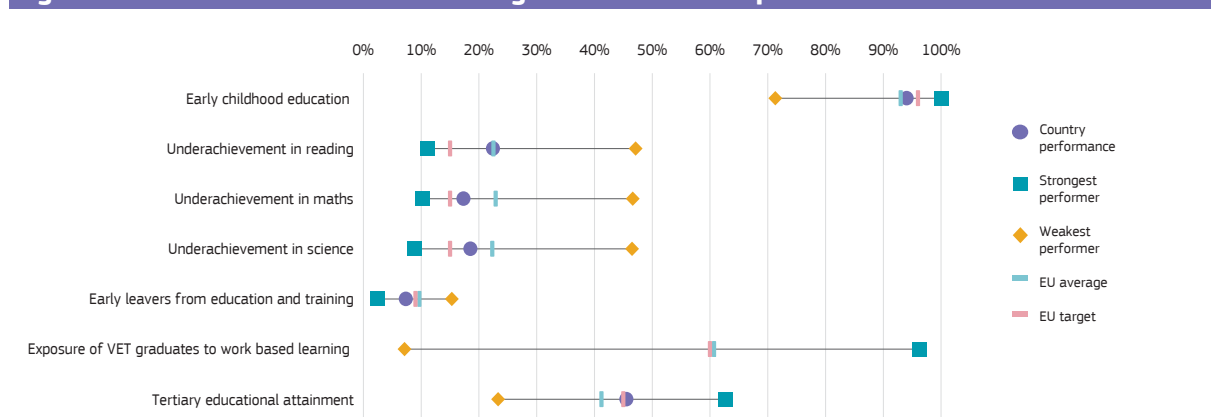
1. Key indicators

Figure 1: Key indicators overview

			Latvia		EU	
			2011	2021	2011	2021
EU-level targets			2030 target			
Participation in early childhood education (from age 3 to starting age of compulsory primary education)	≥ 96 %		91.3% ¹³	94.0% ²⁰	91.8% ¹³	93.0% ²⁰
Low achieving eighth-graders in digital skills	< 15%		:	:	:	:
Low achieving 15-year-olds in:	Reading	< 15%	17.6% ⁰⁹	22.4% ¹⁸	19.7% ⁰⁹	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	18.2% ⁰⁹	22.3% ¹⁸
Early leavers from education and training (age 18-24)	< 9 %		11.6%	7.3% ^b	13.2%	9.7% ^b
Exposure of VET graduates to work-based learning	≥ 60 % (2025)		:	: ^u	:	60.7%
Tertiary educational attainment (age 25-34)	≥ 45 %		35.1%	45.5% ^b	33.0%	41.2% ^b
Participation of adults in learning (age 25-64)	≥ 47 % (2025)		:	:	:	:
Other contextual indicators						
Equity indicator (percentage points)			:	11.3 ¹⁸	:	19.30 ¹⁸
Early leavers from education and training (age 18-24)	Native		11.8%	7.2% ^b	11.9%	8.5% ^b
	EU-born		:	: ^{bu}	25.3%	21.4% ^b
	Non EU-born		: ^u	: ^{bu}	31.4%	21.6% ^b
Upper secondary level attainment (age 20-24, ISCED 3-8)			80.6%	87.0% ^b	79.6%	84.6% ^b
Tertiary educational attainment (age 25-34)	Native		35.0%	44.7% ^b	34.3%	42.1% ^b
	EU-born		: ^u	: ^{bu}	28.8%	40.7% ^b
	Non EU-born		35.6%	65.8% ^b	23.4%	34.7% ^b
Education investment	Public expenditure on education as a percentage of GDP		6.0%	5.9% ²⁰	4.9%	5.0% ²⁰
	Public expenditure on education as a share of the total general government expenditure		14.2%	13.8% ²⁰	10.0%	9.4% ²⁰

Sources: Eurostat (UOE, LFS, COFOG); OECD (PISA). Further information can be found in Annex I and at [Monitor Toolbox](#). 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; the equity indicator shows the gap in the share of underachievement in reading, mathematics and science (combined) among 15-year-olds between the lowest and highest quarters of socio-economic status; b = break in time series, u = low reliability, : = not available, 09 = 2009, 13 = 2013, 18 = 2018, 20 = 2020.

Figure 2: Position in relation to strongest and weakest performers



Source: DG Education, Youth, Sport and Culture, based on data from Eurostat (LFS 2021, UOE 2020) and OECD (PISA 2018).

2. A focus on digital education and skills

The Latvian government is stepping up efforts to raise digital skills and increase digitalisation across society, including in education. The Latvian 2021-2027 Digital transformation guidelines adopted in July 2021 set out an overarching strategy for the country's digital transformation. The guidelines cover internet access, ICT education and skills, modern and efficient public administration, and e-services and digital content for society. In the 2022 DESI index, Latvia ranks 18th for human capital among the 27 EU countries, up two positions compared to 2021. According to the index, 51% of the population aged 16 to 74 have at least basic digital skills and 24% have above-basic digital skills, as compared to EU averages of 54% and 26% respectively (European Commission, 2022). The figure is considerably higher for younger people: 81% of 16-19-year-olds have at least basic digital skills, well above the EU average of 69%¹.

The new competence-based curriculum and the experience acquired during the COVID-19 emergency are driving the digitalisation of education. The revised general education curriculum – Skola2030 – refers to digital literacy as a transversal skill to be integrated throughout the general education cycle, highlighting coding and algorithmic thinking skills. Throughout their education, students learn to use digital technologies in computing, design and technology, advanced coding, or specialised courses in digital design or robotics. According to the new curriculum, digital tools must be used in schools at all levels. Examples include: (i) the use of the Digital European Language Portfolio from grade 1 onwards to develop pupils' self-directed learning skills; and (ii) using digital map services and online databases, creating visual models and doing field work (Latvian terrain surveys) to develop natural science skills. Under Skola2030, Latvia has, since

September 2021, been implementing the integrated modular e-learning management system 'skolo.lv'. The new system provides: (i) improved learning content; (ii) increased access to digital teaching aids and tools for schools; and (iii) improved data exchange and support for teachers for learning and teaching. Between 2020 and 2021, 2 040 teachers started a course to improve their digital skills; 1 921 of them have already completed it. In 2022, the government adopted legislation introducing and regulating remote learning as an integral part of formal education. The new law envisages the use of remote learning from the third grade onwards. It aims to provide learners with a differentiated, personalised and interdisciplinary learning and study process.

The Ministry of Education and Science (MoES) has signed a memorandum with public and private partners to boost digital infrastructure in schools. The 'Powerful internet for every Latvian school' project aims to provide both schools and pupils with ICT tools, including computers, modernised intranets and improved internet connections. Another initiative is the multi-stakeholder partnership agreement "A Computer for Every Child", involving the government and ICT partners. The first public procurement, launched in August 2021, purchased up to 30 000 computers for basic school pupils. More than 100 schools have improved their internet connections with donated equipment. Partners include Riga Technical University, the Latvian Association of Local and Regional Governments, Latvian State Radio and Television Centre and a number of prominent business companies. 'Powerful internet for every Latvian school' currently involves 563 out of 616 Latvian schools.

The introduction of specific digital technologies for learning runs parallel with pilot projects implemented by private sector companies, sometimes in cooperation with the government. The project with the widest reach so far is the START IT social education project, which teaches coding and programming skills

¹ Eurostat, ISOC_SK_DSKL_I21.

to children and adults. According to START IT, around 24 000 pupils and teachers are using its online platform.

3. Early childhood education and care

Participation in early childhood education and care (ECEC) is almost universal for children aged between 3 years and the starting age of compulsory education. 94% of 3-6-year-olds were enrolled in ECE in 2020, slightly more than the EU average of 93%, though still below the EU-level target of 96% by 2030. Girls are slightly more likely to be enrolled in ECE than boys (94.6% vs 93.4%). The number of children in private establishments is growing – they were attended by 11.1% of children. Compared to the 2019/2020 school year, the number of preschool education establishments rose from 634 to 643, due to the opening of 9 new private establishments, the number of which increased from 138 to 147. Over a period of 10 years, the number of private preschool education establishments in Riga has tripled.

The share of children below 3 enrolled in formal childcare remains low. In 2020, 26.3% of children below 3 were enrolled in formal childcare, down from 28.3% in 2019.² The COVID-19 pandemic is likely to have been a factor in the drop in enrolments. The proportion of children below 3 enrolled in childcare has been increasing in recent years (it was 15% in 2009), but remains below both the EU average of 35.3% and the Barcelona target of 33%. Latvia's Education Law stipulates that all children are legally entitled to a place in ECEC from the age of 18 months.

² Source: Eurostat – EU-SILC survey . Online data code : [ilc_caindformal]

The switch to Latvian as the sole language of instruction from September 2023 could exacerbate teacher shortages. Amendments to the Education Law stipulate that from 1 September 2023, preschool education and grades 1, 4 and 7 of basic education should be carried out only in the official language³. According to government figures, the changes would apply to 17% of teachers and 24% of pupils in pre-primary and primary education (see also Section 4). At the beginning of the 2020/2021 school year, in 82.3% of the preschool education establishments, the language of instruction was Latvian, and in 16.9% Russian⁴.

4. School education

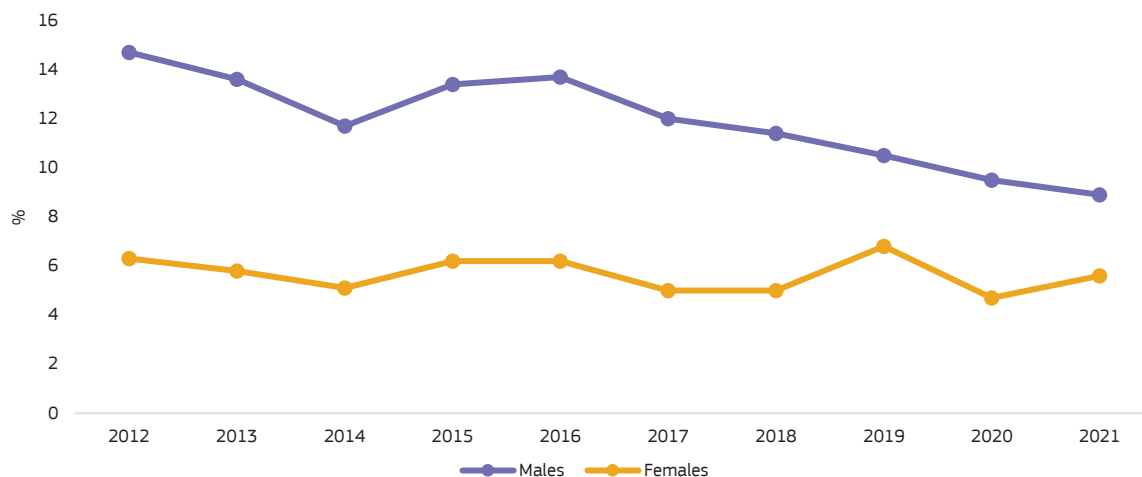
The proportion of early leavers from education and training (ELET) is well below the EU average, and shows a marked reduction in gender disparities. In 2021, the ELET rate in the 18-24 age group was 7.3%, below both the EU average of 9.7% and the EU-level target of 9% by 2030. Over the years, the male ELET rate has been falling steadily and at a much faster pace than the female rate, which has been fluctuating somewhat over the years (Figure. 3). This has resulted in a marked reduction in the gender gap, which is now below the EU average (3.3 pps as compared to the EU average of 3.5 pps)⁵. The ELET rate is considerably higher in rural areas (10.1% vs EU 10%) than in cities (6.1% vs EU 8.7%), reflecting geographical disparities in learning outcomes.

³ The switch should be completed for all grades by 1 September 2025.

⁴ Source: Central Statistical Bureau of Latvia.

⁵ In 2021, the ELET rate was 8.9% for males and 5.6% for females. In 2015, the figures were 13.4% and 6.2% respectively.

Figure 3: Early leavers from education and training by sex, 2012-2021 (%)



Source: Eurostat (EU-LFS), [edat_lfse_14].

Latvia's education system is broadly equitable, but with wide disparities between urban and rural areas. Some features of the education system favour equity, such as the comparatively longer duration of compulsory education⁶, delayed tracking⁷, and the low share of pupils repeating a year. At 9.2%, the proportion of underachievers (in all three tested subjects combined) is lower than the EU average (13%). Socio-economic status exerts a comparatively limited influence on educational performance: 15.2% of students from a low socio-economic background are underachievers, as opposed to 23.5% in the EU as a whole. The gap between underperforming students from a low socio-economic background and those from a high socio-economic background is also smaller than the EU average (11.3 pps vs 19.3 pps). As regards basic skills, 15-year-olds' performance in the 2018 OECD Programme for International Student Assessment (PISA) in reading, mathematics and science was broadly stable compared with 2015 and continues to outperform the EU average. However, Latvia shows a wide gender gap in

reading, where 29.4% of boys are low achievers, compared with 15.7% of girls (OECD, 2019).

Regional inequalities in terms of access to quality education and a fragmented education system remain the main challenges in Latvia's education sector. Since the school network is still too big for Latvia's small population of school-age children, many schools struggle to hire teachers as they cannot offer competitive salaries based on a full-time workload. Learning outcomes in schools in small towns and in rural areas are on average lower than in the capital Riga.

Renewing an increasingly ageing teaching workforce is proving difficult. Latvia's teachers are among the oldest in the EU. In 2020, over half (52.5%) of all schoolteachers were 50 or older, and only 21.4% were under 40, as compared to EU averages of 39.2% and 29.5% respectively. The first interactive online map of teacher vacancies⁸ in the country was launched in order to publicise available teaching posts more widely (previously it was only possible to see available vacancies by municipality). The switch to Latvian as the sole language of instruction should

⁶ Education is compulsory in Latvia from age 5 to 16, including preschool education, which is compulsory for 5-6-year-olds.

⁷ Tracking (i.e. sorting students into different educational pathways) begins at age 16.

⁸ Esi skolotājs, vakances (Be a teacher, vacancies) <https://esiskolotajs.lv/vakances/>

be completed by 1 September 2025. Effective supporting measures will be key to its smooth implementation, particularly for those teachers who are not yet fully proficient in Latvian. The government is planning to provide teachers with language training courses, as well as support for working in a linguistically heterogeneous environment. The government will also participate in the costs of extracurricular education programmes for minority language and cultural history.

The government continues its efforts to consolidate the school network. To encourage municipalities to cooperate, the government approved a new financing principle for schools (based on the number of students per municipality, and no longer on the number of students in each given school), combined with new minimum quality criteria for schools to continue to receive state funding. The quality criteria include school accreditation (quality assurance) results and each school's centralised testing results, calculated as an index based on the number of students in each age group in the municipality. This is expected to encourage municipalities, as founders of educational institutions, to optimise the school network and to improve teacher/student ratios. The model makes it possible to increase the remuneration of municipal teachers by increasing the salary rate, and to ensure a full workload for teachers, who are otherwise often induced to combine teaching hours in several schools to achieve a viable salary. This could help raise the attractiveness of the teaching profession, thus aiding the renewal of the teaching workforce.

Latvia's schools welcomed many Ukrainian displaced children and teachers following Russia's war of aggression against Ukraine. By the end of the 2021/2022 school year, Latvian schools had accommodated more than 4 000 Ukrainian children, over half of them in the capital Riga⁹. Ukrainian teachers with appropriate

qualifications were invited to apply for positions to teach Ukrainian students. Subsequently, they were also deployed as teachers of foreign languages in Latvian general education institutions. Latvia's National Education Centre has set up a database of Ukrainian teachers in Latvia.

The war is taking a toll on students' emotional well-being. Schools find themselves needing to address rising levels of anxiety among their students, many of them already struggling with the consequences of two years of social isolation due to COVID-19. Teachers are carrying out explanatory work and providing psychological support to students. To address the Russian war of aggression against Ukraine in teaching, the MoES organised five 60-minute online lectures with researchers for students in years 9-12. An increase in bullying, is exacerbating an already difficult situation¹⁰. The MoES is exploring and trying new approaches to reducing bullying in cooperation with schools, families and other stakeholders¹¹.

5. Vocational education and training and adult learning

The government is reforming the vocational education and training (VET) system to make it more flexible and fit for labour market

1 354 of whom were enrolled in minority school programmes, 1 501 in Latvian language programmes and 6 in a 'different category' school. The remaining 1 329 Ukrainian children were enrolled in pre-primary education: 395 in minority programmes, 929 in Latvian programmes, and 5 in other categories. Most Ukrainian children of both pre-primary and general education age (2 065) are learning in Riga (source: MoES).

¹⁰ In 2018, the proportion of Latvian 15-year-olds who reported being bullied at least a few times a month was the highest in the EU at 35.5% (OECD PISA).

¹¹ E.g. MoES (2021) Aizvadīta diskusija 'Etniskais mobings skolās – īstermiņa un ilgtermiņa risinājumi' (Round table discussion 'Ethnic mobbing in schools – short-term and long-term solutions' <https://www.izm.gov.lv/lv/jaunums/aizvadita-diskusija-etniskais-mobings-skolas-istermina-un-ilgtermina-risinajumi>

⁹ By the end of May 2022, 4 190 Ukrainian displaced children were enrolled in Latvian schools. Out of this total, 2 861 attended general education (grades 1-9),

needs. The reform aims to improve VET's attractiveness and flexibility by reorganising it in centres of excellence in the categories of technical schools, art competence centres, professional schools, and professional lifelong learning centres. It also increases flexibility in obtaining qualifications by accumulating, transferring and recognising partial qualifications, including by introducing micro-credentials. In 2022, Latvia started to implement VET graduate tracking, a long-standing challenge for VET policy planning. The national statistics bureau is preparing the first tracking for graduates of 2019. Other improvements underway include developing qualifications in line with the European Qualifications Framework, and continuing the VET curriculum reform, with the introduction of green and digital skills modules in VET school curricula.

These changes are expected to increase VET student numbers, currently still below the EU average. In 2020, 39.3% of secondary students were enrolled in VET schools, below the EU average of 48.7%. However, employment rates of recent VET graduates are catching up with those of general education graduates. In 2021, employment of recent VET graduates was 73.5%, compared to the significantly lower 56.9% of graduates from general education. The long-term effects of the COVID-19 pandemic remain to be seen as VET schools were severely impacted by lockdowns and remote learning, resulting in less time for practical experiences in work-based learning, and higher drop-out rates.

Latvia is reforming its adult learning system, but progress is slow. Throughout the COVID-19 pandemic and the ongoing recovery, adult learning activities have been mainly delivered by the Public Employment Service (PES). The PES continued to expand its online and distance learning opportunities for unemployed people and people at risk of unemployment. The Future Skills initiative was piloted in September 2021, and offers international (massive open online courses, Coursera) and national online trainings in cooperation with the private sector and higher education institutions. It has been recognised as a successful initiative and has been extended into

2022. However, reaching the low skilled and other disadvantaged groups remains a challenge in Latvia, which became more evident during the pandemic. For example, participants in the Future Skills initiative have mostly medium and high education backgrounds (54%). The education guidelines for 2021-2027 aim to increase participation in adult learning (in the last 4 weeks) to 8% by 2024 and to 12% by 2027. Other objectives include: (i) improving links between higher and professional education; (ii) introducing skills funds and individual learning accounts; and (iii) strengthening work-based learning, and the recognition of qualifications and skills. The Latvian national 2030 target is the same as the EU target: 60% of adults participating in learning every year.



Box 1: Improving access to career support for learners in general and vocational education institutions

The aim of this European Social Fund project is to improve career guidance and support for students in general and vocational education institutions, and to make VET education more attractive. Project activities include: (i) developing and publishing a set of informative and methodological guidelines for implementing career support in general and vocational education institutions; (ii) training for teachers involved in implementing specific support – career consultants and career support specialists in matters of implementation of career support measures, (iii) organising national professional skills competitions – SkillsLatvia, EuroSkills and WorldSkills – for students of vocational education institutions, including organising professional skills demonstration events to increase the attractiveness of vocational education; and (iv) providing career support measures – career information, career education and career consultation activities – to students. So far, 430 institutions have received European Social Fund support for career education and career development.

Budget: EUR 23 618 650.92

Website: <https://www.viaa.gov.lv/lv/darbibas-virzieni->

6. Higher education

The proportion of young adults with a tertiary educational qualification is high and growing. In 2021, 45.5% of Latvian 25–34-year-olds had a tertiary educational qualification, well above the EU average of 41.2% and up from 44.2% in 2020. This means that Latvia has reached the EU-level target of 45% by 2030.

The gender gap has shrunk somewhat compared to 2020 but remains significant. While over half of Latvian women (55.4% in 2021 vs 55.3% in 2020) have a tertiary degree, a little more than a third of men do (36.2% in 2021 vs 33.8% in 2020). At 19.2 pps (21.5 pps in 2020), the gender gap in tertiary educational attainment is one of the widest in the EU, and almost twice the EU average of 11.1 pps (10.8 pps 2020).

Tertiary graduates tend to cluster in cities, to a larger-than-average extent. In 2021, 56.5% of city dwellers had a tertiary educational qualification, while only 29.7% of the rural population did. This is a common phenomenon reflecting economic and employment dynamics across the EU. However, it appears to be more marked in Latvia, with a gap of 26.8 pps as compared to an EU average of 21.8 pps. The tertiary educational attainment rate is also higher among the foreign-born population, at 63.5% against 44.7% for Latvian-born people. This is in marked contrast to the rest of the EU, where the opposite tends to be the case¹².

¹² The EU average tertiary educational attainment rate is 36.2% for foreign-born people and 40.7% for native-born people.

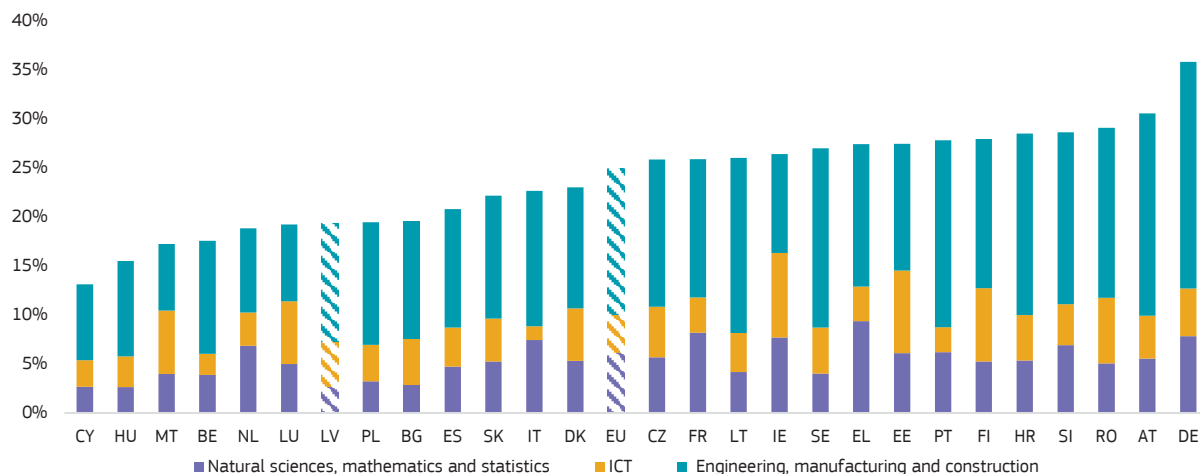
The employment rate of recent (1–3 years) tertiary graduates¹³ grew by almost 5 pps in 2021 to 90% and remains higher than the EU average of 84.9%, albeit still 6.6 pps below the levels seen before the COVID-19 pandemic. By contrast, the employment rates of upper secondary graduates¹⁴, both general and vocational, are lower than the EU average (56.9% and 73.5% respectively, compared to the EU average of 61.9% and 76.4%), pointing to a significant employment advantage for tertiary graduates.

The share of STEM graduates remains comparatively low. In 2020, 19.3% of all graduates had a STEM qualification, slightly fewer than in 2015 (20.5%) and well below the EU average of 24.9% (Figure 4). At 6%, the share was particularly low for women (compared to an EU average of just over 8%). On a positive note, though the share of ICT graduates appears to be stagnating, Latvia still fares better than the EU average, with 4.6% against 3.9%. Its share of female ICT specialists stands at 23%, against 19% at EU level. In 2019, women represented 23% of new entrants to engineering, manufacturing and construction programmes and 20% in ICT programmes in Latvia. In contrast, they represented 90% of new entrants to the field of education, a sector traditionally dominated by women (OECD, 2021). The government has been promoting STEM subjects by gradually increasing the proportion of publicly financed study places in STEM fields and reducing it in social sciences, to steer demand towards study fields linked to high added-value economic sectors.

¹³ ISCED levels 5–8.

¹⁴ ISCED levels 3–4.

Figure 4: STEM tertiary graduates as a proportion of total graduates in 2020, (%)



Source: Eurostat (UOE), [educ_uoe_grad02].



technological innovations. The project was initiated by LMT (a telecom operator), the Employers' Confederation of Latvia and the RTU to address Latvia's skills shortages in STEM areas.

Box 2: The STEAM Lyceum

As part of the government drive to raise interest in scientific disciplines among secondary school students, Latvia has launched the STEAM Lyceum, a virtual class that aims to help upper secondary school students improve their knowledge of math, chemistry and physics, and to promote interest in these subjects. Latvia's National Centre for Education (VISC) is in charge of implementing the project, in cooperation with Riga Technical University (RTU) and the University of Latvia (LU). The VISC will carry out needs mapping and content coordination, the RTU will be involved in content and methodology planning for secondary school courses in physics, mathematics and chemistry, and the LU will be involved in developing methodological tools in physics for teachers and in directing strategic partnerships with industries. The STEAM Lyceum will be a structured knowledge site, developed in synergy with Skola2030 and other projects and initiatives. The project aims to improve the quality of chemistry and mathematics teaching in Latvian secondary schools to raise the numbers of STEM graduates. It will also provide retraining opportunities for professionals who want to update their knowledge to the latest

The government is taking steps to make higher education more accessible by increasing student support. Extra funding of EUR 2.5 million will enable a 40% increase in student grants, from the current EUR 99 per month to EUR 140 per month. In addition, in autumn 2021 the government set up a new fund for students from large families. Eligible students, from both state and private HEIs, receive a grant of EUR 160 per month. An additional EUR 3.6 million has been allocated for this purpose in the 2022 budget.

The higher education reform is progressing according to plan, but it is too early to assess its effects. New amendments to the Law on higher education institutions reduce the administrative burden and specify the rules for higher education institutions. To improve data-based decision-making in the field of higher education, the amendments specify the information on higher education institutions' activities that must be submitted to the MoES. This should make it possible to better assess: (i)

their compliance with the type of higher education institution; and (ii) fulfilment of tasks assigned to state higher education institutions. It should also make it possible to collect the information needed for education quality monitoring and financial planning. The new governance model for higher education institutions introduced in 2021, which includes setting up managing boards, is being implemented with support from EU structural funds. In addition, the Recovery and Resilience Facility will be used to develop higher education institutions' research capacity and to consolidate the higher education sector.

A new model of academic careers is being developed with support from the World Bank.

One of the key principles of the new model is that academic teaching positions are linked to research requirements (previously Latvia has had two parallel career systems for academic teaching and research). The legal basis for the new model should be completed by the end of 2022.

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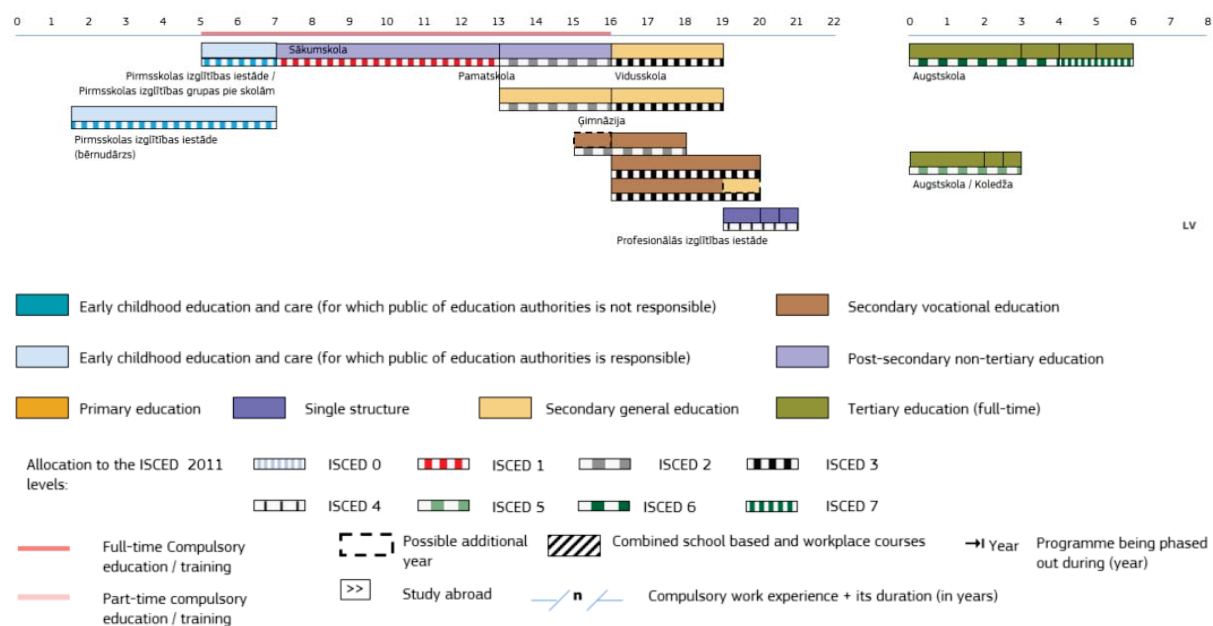
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Annex I: Key indicators sources

Indicator	Source
Participation in early childhood education	Eurostat (UOE), 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: Eurostat (LFS), edat_lfse_14 Data by country of birth: Eurostat (LFS), edat_lfse_02
Exposure of VET graduates to work based learning	Eurostat (LFS), edat_lfs_9919
Tertiary educational attainment	Main data: Eurostat (LFS), edat_lfse_03 Data by country of birth: Eurostat (LFS), edat_lfse_9912
Participation of adults in learning	Data for this EU-level target is not available. Data collection starts in 2022. Source: EU LFS.
Equity indicator	European Commission (Joint Research Centre) calculations based on OECD's PISA 2018 data
Upper secondary level attainment	Eurostat (LFS), edat_lfse_03
Public expenditure on education as a percentage of GDP	Eurostat (COFOG), gov_10a_exp
Public expenditure on education as a share of the total general government expenditure	Eurostat (COFOG), gov_10a_exp

Annex II: Structure of the education system



Source: European Commission/EACEA/Eurydice, 2022. The Structure of the European Education Systems 2022/2023: Schematic Diagrams. Eurydice Facts and Figures. Luxembourg: Publications Office of the European Union.

Please email any comments or questions to:
EAC-UNITE-A2@ec.europa.eu

Brussels, 18.11.2022
SWD(2022) 751 final

PART 16/28

COMMISSION STAFF WORKING DOCUMENT

Education and Training Monitor 2022

Accompanying the document

**Communication from the Commission to the European Parliament, the Council, the
European Economic and Social Committee and the Committee of the Regions**

on progress towards the achievement of the European Education Area

{COM(2022) 700 final} - {SWD(2022) 750 final}

Education and Training Monitor 2022

LITHUANIA



The Education and Training Monitor's country reports present and assess the main recent and ongoing policy development at all education levels in EU Member States. They provide the reader with more in-depth insight of the performance of countries with regard to the EU level targets agreed within the EEA. They are based on the most up-to-date quantitative and qualitative evidence available.

Section 1 presents a statistical overview of the main education and training indicators. Section 2 focuses on how the Member State has addressed or is addressing one of its education challenges. Section 3 covers early childhood education and care. Section 4 deals with school education policies. Section 5 covers vocational education and training and adult learning. Finally, Section 6 discusses measures in higher education.

The Education and Training Monitor's country reports were prepared by the European Commission's Directorate-General for Education, Youth, Sport and Culture (DG EAC), with contributions from the Directorate-General for Employment, Social Affairs and Inclusion (DG EMPL).

The document was completed on 30 September 2022

More background data at:

<https://op.europa.eu/webpub/eac/education-and-training-monitor-2022/en/>



1. Key indicators

Figure 1: Key indicators overview

			Lithuania		EU	
			2011	2021	2011	2021
EU-level targets			2030 target			
Participation in early childhood education (from age 3 to starting age of compulsory primary education)	≥ 96 %		83.4% ¹³	90.9% ²⁰	91.8% ¹³	93.0% ²⁰
Low achieving eighth-graders in digital skills	< 15%		45.1% ¹³	:	:	:
Low achieving 15-year-olds in:	Reading	< 15%	24.4% ⁰⁹	24.4% ¹⁸	19.7% ⁰⁹	22.5% ¹⁸
	Maths	< 15%	26.3% ⁰⁹	25.6% ¹⁸	22.7% ⁰⁹	22.9% ¹⁸
	Science	< 15%	17.0% ⁰⁹	22.2% ¹⁸	18.2% ⁰⁹	22.3% ¹⁸
Early leavers from education and training (age 18-24)	< 9 %		7.4%	5.3% ^b	13.2%	9.7% ^b
Exposure of VET graduates to work-based learning	≥ 60 % (2025)		:	48.7%	:	60.7%
Tertiary educational attainment (age 25-34)	≥ 45 %		48.2%	57.5% ^b	33.0%	41.2% ^b
Participation of adults in learning (age 25-64)	≥ 47 % (2025)		:	:	:	:
Other contextual indicators						
Equity indicator (percentage points)			:	20.4 ¹⁸	:	19.30 ¹⁸
Early leavers from education and training (age 18-24)	Native		7.4%	5.3% ^b	11.9%	8.5% ^b
	EU-born		:	: ^{bu}	25.3%	21.4% ^b
	Non EU-born		: ^u	: ^{bu}	31.4%	21.6% ^b
Upper secondary level attainment (age 20-24, ISCED 3-8)			87.7%	91.9% ^b	79.6%	84.6% ^b
Tertiary educational attainment (age 25-34)	Native		48.2%	57.5% ^b	34.3%	42.1% ^b
	EU-born		: ^u	: ^{bu}	28.8%	40.7% ^b
	Non EU-born		: ^u	59.9% ^{bu}	23.4%	34.7% ^b
Education investment	Public expenditure on education as a percentage of GDP		5.6%	5.2% ²⁰	4.9%	5.0% ²⁰
	Public expenditure on education as a share of the total general government expenditure		13.1%	12.0% ²⁰	10.0%	9.4% ²⁰

Sources: Eurostat (UOE, LFS, COFOG); OECD (PISA). Further information can be found in Annex I and at [Monitor Toolbox](#). 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; the equity indicator shows the gap in the share of underachievement in reading, mathematics and science (combined) among 15-year-olds between the lowest and highest quarters of socio-economic status; b = break in time series, u = low reliability, : = not available, 09 = 2009, 13 = 2013, 18 = 2018, 20 = 2020.

Figure 2: Position in relation to strongest and weakest performers



Source: DG Education, Youth, Sport and Culture, based on data from Eurostat (LFS 2021, UOE 2020) and OECD (PISA 2018).

2. A focus on equity in education

Lithuania's education system is marked by an urban-rural divide.

Participation in early childhood education tends to be lower in rural areas, and student outcomes are marked by a significant urban-rural gap (European Commission, 2020). The early school leaving rate is almost four times higher in rural areas (8.2% in 2021) than in urban areas (2.2%¹) and the tertiary attainment rate for people aged 25–34 is much lower (43.6% vs 70.6% in 2021). A significant urban-rural gap also exists in the level of digital skills². This partly reflects broader socio-economic disparities, which are stronger in Lithuania than on EU average, and have been increasing over the past two decades³. The positive effects of Lithuania's rapid economic convergence are mainly felt by the two largest cities – Vilnius and Kaunas – while other towns and municipalities do not attract enough investment. Only four out of 60 municipalities have registered population growth over the past decade, namely the two largest cities and the resorts along the Baltic coast (OECD, 2020b). A lack of access to quality social services, including education, makes rural areas less attractive and widens the rural-urban divide. It increases migration to bigger cities, creating a risk of overpopulation there. In schools in Vilnius, Kaunas and Klaipėda, pupils are enrolled in overcrowded classes⁴, and demand for early childhood education and care (ECEC) is not fully met (European Commission, 2020).

Socio-economic factors play a key role in educational disparities.

Students in rural areas

perform worse than those in urban areas in the OECD Programme for International Student Assessment (PISA), but would actually outperform them if they had the same socio-economic profile (Echazarra, A., and Radinger, T., 2019). The Lithuanian school system can currently not compensate for the socio-economic disparities at individual, school and municipal level. Schools enjoy great autonomy. In combination with school accountability, it can help improve student achievement

European Commission/EACEA/Eurydice, 2020). Insufficient accountability bears the risk of differences in the quality of education provision and, consequently, negatively affects equity. In Lithuania, the use of academic performance criteria for school admissions at lower secondary level is not compulsory, but school heads report using academic performance in practice⁵. Unequal approaches to setting school and programme admission criteria can exacerbate differences between schools and increase segregation (European Commission/EACEA/Eurydice, 2020). The 2018 PISA report shows that Lithuanian disadvantaged pupils are more likely to be concentrated in the same schools (OECD, 2019c). Student performance is closely related to socio-economic background in Lithuania (European Commission, 2020); admissions based on academic performance risk perpetuating the stratification of students not only by ability, but also by socio-economic background. Grouping pupils by ability is a common practice in lower secondary schools that risks increasing the performance gap between students from disadvantaged and more affluent backgrounds. Overcrowding of public schools in the bigger cities due to internal migration also plays a role in the dramatic expansion of the number of students enrolled in private schools, which increased by 49.2% between 2015 and 2020 (EU: 4.7%). The share of primary and secondary school students (ISCED 1–3) attending private schools is relatively low as it stood at 4.4% in 2020, but according to

¹ This figure has a low reliability and should be treated with caution.

² In 2021, the level of digital skills in Lithuania was the lowest among people living in rural areas (43% had basic or above basic digital skills), rising to 46% for those living in towns and suburbs, and peaking at 55% for those living in cities. Eurostat, isoc_sk_dskl_i21.

³ https://ec.europa.eu/info/publications/partnership-agreement-lithuania-2021-2027_en

⁴ Information provided by the Ministry of Education, Science and Sport.

⁵ According to the 2018 PISA report, 20% of 15-year-olds are in schools where academic performance is always considered for admission to lower secondary level.

the 2018 PISA report, students in private schools perform better than those in public schools (European Commission, 2020).

Socio-economic differences also impact access to tertiary education. State-funded study places are allocated based on the results of school leaving exams. This merit-based approach does not effectively support the participation of students from vulnerable groups in higher education, especially in universities, as they often cannot compete with their peers' academic achievements. In 2020, only 17% of upper secondary students from low-income families entered tertiary education, compared to 68% from high-income families (OECD, 2021). Students from vulnerable groups who cannot receive public funding are more likely to abandon their plans to pursue university education, and opt for colleges or other alternatives. Study loans are unattractive for many (STRATA, 2020a).

3. Early childhood education and care

Participation in early childhood education keeps increasing. In 2020, 90.9% of 3-6-year-olds participated in early childhood education, below the EU average of 93% (Figure 3). The rate has increased by 3.4 pps since 2015 and further increases are expected due to the planned measures to increase access and participation (European Commission, 2021). Participation in formal childcare before the age of 3 dropped by 10.4 pps between 2019 and 2020, standing at 16.2%⁶, below the EU average of 32.4%⁷. This

disruption was probably due to the outbreak of the COVID-19 pandemic.

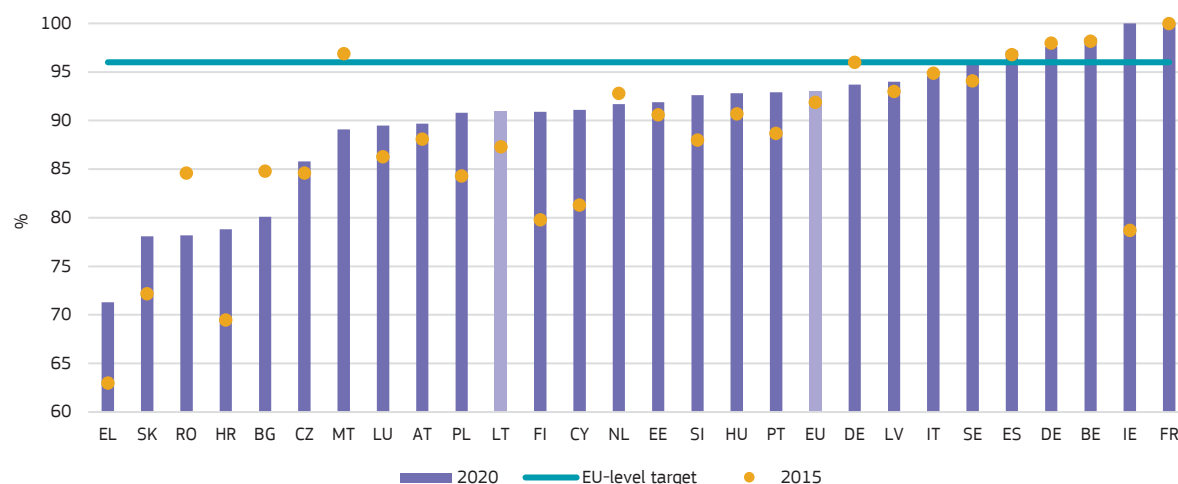
Planned investment may help Lithuania to better ensure equal enrolment in early childhood education and care (ECEC) across the country. Increasing access to ECEC requires: (i) tackling provision imbalances in Lithuania (European Commission, 2020); (ii) increasing the number of teachers; and (iii) improving their working conditions. For 2021-2027, Lithuania has planned further investment in kindergartens from national budget and EU funds. This investment will address infrastructure gaps identified by the Ministry of Education, Science and Sport in the first half of 2022, as envisaged in the national recovery and resilience plan. The arrival of Ukrainian displaced children has exacerbated the problem of limited ECEC provision in urban areas. To react quickly to the higher demand for places, the government has further increased the number of children in preschool and pre-primary groups, and the salaries of teachers working in these bigger groups depending on the number of Ukrainian children. These changes are valid until August 2023.

Measures to improve the quality of ECEC are underway. A methodology for self- and external evaluation of the quality of pre-primary and preschool institutions was piloted in 2021. This was the first step in developing a more comprehensive quality monitoring system (European Commission, 2021; OECD, 2017). The assessed areas were: (i) child welfare; (ii) educational content and environment; (iii) educational strategies; (iv) assessment of achievements; and (v) cooperation with children's families. The results of the pilot showed that

⁶ The data were collected between January and May 2020.

⁷ National statistics do not show such a decline in participation.

Figure 3: Participation in early childhood education of pupils from age 3 to the starting age of compulsory primary education, 2015 and 2020 (%)



Source: Eurostat (UOE), [educ_uoe_enra21].

external evaluations provide the opportunity to assess the quality of the service provided and the effectiveness of pedagogical practices. In 2022 the Minister of Education, Science and Sport approved the guidelines for the organization and implementation of the external quality assessment for schools implementing preschool and/or preprimary curricula. By the order of the Minister of Education, Science and Sport an updated pre-primary education curriculum has been approved and will be implemented as of September 2023⁸. Pre-school guidelines have to be prepared until the same date. ECEC staff will be encouraged to adapt the educational content and their teaching practices to children's learning needs. Providing ECEC staff and school leaders with professional development opportunities will be key to making these changes effective.

4. School education

School curricula and the student assessment system are being reformed. In 2018, Lithuania started to work on a new competence-based curriculum to improve student learning outcomes, which are slightly below the EU average (European Commission, 2020, and Figure 1). The new

curriculum is planned to be implemented from the 2023/2024 school year at primary and secondary level. Preparatory work has involved training teachers and school leaders, as they are key stakeholders of the implementation process. The reform will be accompanied by changes in the assessment system, which is currently focused on subject matter knowledge rather than cross-cutting skills (OECD, 2022). It is proposed to introduce intermediate tests on pupils' achievements in the last two grades, whose results will be included in the final school leaving mark. The objective is to provide stronger incentives for students to invest earlier and more comprehensively in the secondary curriculum instead of focusing disproportionately on the two subjects of the final exam (OECD, 2013). Intensive teacher training is being organised to support student assessment. Strengthening the use of assessment results by teachers and school leaders and in regular school monitoring and evaluation could help achieve better student outcomes and a more effective use of school resources. Although municipalities have been encouraged to report on school quality and progress since 2013, only 4 out of 60 municipalities published annual reports between 2017 and 2020 (Ministry of Education, Science and Sport, 2021b).

⁸ <https://www.e-tar.lt/portal/lt/legalAct/1a764050239511edb4cae1b158f98ea5>



Box 1: Supporting school principals as leaders as part of the curriculum reform in Lithuania

With the support of the EU's Structural Reform Support Programme, Lithuania has worked to increase school principals' ability to play a pivotal role in improving teaching quality in their schools as part of the ongoing reform. The shift to a competence-based curriculum will require changes in teaching practices, for instance, 30% of the curriculum will be at the discretion of teachers, to achieve more enquiry-based learning and support from school leaders and structures of leadership in schools. School principals will have to encourage teachers to take part in specific, and school-based professional development activities on the new curriculum. The project provided Lithuania with recommendations for the curriculum reform to bring about the desired changes, including: (i) identifying future training and development needs of school leaders, teachers and municipal decision-makers; (ii) investing in specific formats of professional development, such as school-based coaching, upskilling on digital education, and a Master level qualification on school and curriculum leadership (iii) further aligning policies on school leadership and teachers' career progression with the curriculum reform.

More information available at:
<https://www.britishcouncil.lt/programmes/supporting-school-principals-leaders-curriculum-reform-lithuania>

Steps are being taken to address teaching shortages. The ageing of the teaching workforce and the low number of education graduates entering the profession are among the factors causing the low supply of teachers (European Commission, 2019). At the same time, planned measures such as introducing universal preschool education, extending the duration of pre-primary education, and developing inclusive education

(European Commission, 2021) will increase the demand for teachers. This is being addressed by offering scholarships to students in their final year who sign a 3-year employment contract with a school or a municipality, and to those studying psychology. In addition, the government is planning to expand funding and opportunities for in-service teachers to obtain an additional specialisation to teach a second subject. In 2021, the Ministry of Education, Science and Sport also made the qualification requirements for teachers more flexible to allow motivated professionals who do not have a teacher qualification to work as a teacher.

Improving working conditions may help increase the low perception of the teaching profession.

To do so, Lithuania is considering reviewing the career model. At present, teachers can voluntarily apply to get into one of the higher qualification categories, namely senior teacher, teacher-methodologist and teacher-expert, enabling them to take up higher responsibilities and receive higher salaries. However, financial incentives are limited, and functions do not vary among the various levels. In recent years, teacher remuneration has been increased, which can also help attract new teachers and make the profession more attractive. The reorganisation of the school network (European Commission, 2021) may also have a positive impact on teacher workload and salaries. A teacher's salary depends also on the number of lessons taught, which implies that teachers working in small municipalities with a low number of classes tend to have fewer hours and need to travel more to get a higher salary (Ministry of Education, Science and Sport, 2021b). The school reorganisation may help address this issue by reducing the number of small schools. To make the profession more attractive, the relevance and fragmentation of continuous professional development system is yet to be improved to be better adapted to the teachers' and students' needs (Ministry of Education, Science and Sport, 2021a) and to the latest knowledge of educational sciences. Between 2021 and 2027, Lithuania plans to invest resources from the European Structural and Investment Funds to improve quality of education

studies by strengthening education research and increasing enrolment in doctoral studies in education.

Addressing education inequalities at school level is a key priority.

Addressing regional disparities, including those in access to quality education, is at the core of investment planned for 2021-2027 with EU funds including the RRF. Investment is planned for the purchase of science laboratories and tools and for the further development of the current all-day school programme⁹. In Lithuania, all-day schools are settings in which children are provided with educational activities after official school hours to improve the inclusion of children from vulnerable backgrounds. The Millennium School programme envisaged in the recovery and resilience plan (European Commission, 2021) may help to provide equal opportunities for all children irrespective of their living place and to improve overall academic achievements. The programme promotes networking between municipalities and schools that choose to apply for it. All children from the surrounding region will be able to use the facilities and courses provided at these schools. The schools admitted to the programme cannot select students and must present a 5-year programme to increase school quality and inclusiveness. Monitoring the implementation of the programme and steering the process at central level are key to ensuring that all municipalities are benefiting from the programme.

Lithuania is investing in the integration of special needs students into mainstream schools.

As of 2024, all schools must ensure access for children with special needs and provide them with the necessary assistance (European Commission, 2021). In 2021, the National Education Agency carried out the first external evaluation of inclusive education in 30 schools to improve the design of measures for effective inclusive education in mainstream schools. One of the findings of the evaluation is that teaching

practices are not adapted¹⁰. The Millennium School programme will help achieve this objective by providing funding to improve the physical environment of schools in line with the principles of universal design, and by strengthening teachers' skills in working with pupils with special needs. In 2021-2027, Lithuania plans to strengthen the provision of educational assistance by setting up regional advisory centres. The purpose is to provide schools and parents with guidance to better assess the educational needs and to adapt didactics in the whole territory.



Box 2: Preparing schools for inclusive education

The European Social Fund project 'Smart and Learning Children of Kaunas district' aims to increase the inclusion of pupils with special educational needs into mainstream schools in Kaunas.

The 2020-2022 project develops and pilots an innovative model for providing education, social and health services to children of all ages. To support children, a multidisciplinary team is available, but also workshops, stress management seminars, art and music therapy sessions. The project also aims to develop an interactive platform to provide support and guidance material to professionals and parents.

5. Vocational education and training and adult learning

Reforms in the area of vocational education and training (VET) envisaged in the recovery and resilience plan are expected to bring improvements. Lithuania has completed the launch of the National Platform on Progress in

⁹ https://ec.europa.eu/info/publications/partnership-agreement-lithuania-2021-2027_en

¹⁰ <https://www.svietimonaujienos.lt/isorinio-vertinimo-tendencijos-itraukciai-mokyklose-stiprinti/>

Vocational Education and Training, encompassing social partners, the educational community and public authorities. The platform advises the Ministry of Education, Science and Sport on the consolidation of the VET network. By September 2022, the Ministry has optimised at least 20% of the current VET network. In 2022, the number of VET institutions was reduced from 56 to 44. The platform will also advise the Ministry on various other issues, such as updates of the VET curriculum and professional standards (at least 95 new or updated VET programmes by 2026), training of VET trainers, and professional development (at least 1 000 trainers by 2026).

Lithuania continues to develop a new career guidance model. Career guidance will be compulsory for all students from the first to the final grade in all schools including vocational education schools, and will be provided by career specialists, who will work based on a standardised programme. The Ministry adopted the qualification requirements for career specialists, and works on the development of the necessary training. The aim was that career specialists who meet new qualification started working in schools from 1 September 2022; however, the transition period for current specialists not meeting the qualification requirements may take longer.

Measures are underway to improve the quality and the attractiveness of vocational education. Compared to the EU average, enrolment in VET is fairly low (24.7% of upper secondary pupils in 2020, compared to an EU average of 48.7%). Recent VET graduates' employment rate (69.8% in 2021) is also below the EU average (76.4%). In 2021, Lithuania started external monitoring of VET institutions using the new quality monitoring system. In the 2020-2021 school year, an external evaluation of 12 vocational education institutions was carried out with European Social Fund support, 8 more institutions will be evaluated in 2022. In January 2022, renewed rules on assessment of acquired VET skills entered into force. They provide for an electronic assessment of theoretical knowledge, whereas the assessment of practical skills will take place in sectoral practical training centres.

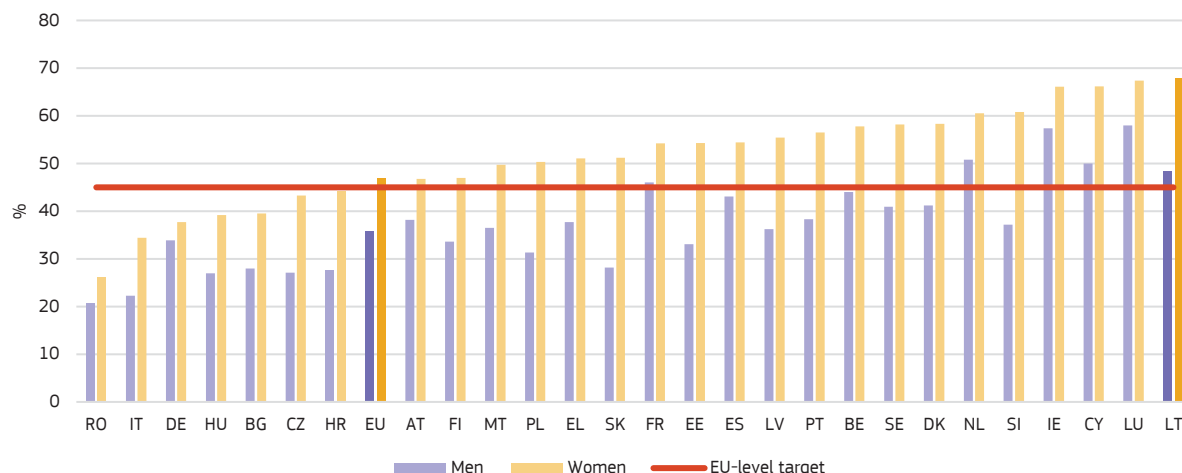
Lithuania continues to work on delivering the main reform in the area of adult learning. As defined in the RRP, the legislative proposal for a one-stop-shop lifelong learning model, accompanied by an IT system based on individual learning accounts, is being prepared to be submitted to the Parliament. The harmonised description of the IT system and its functionalities is being finalised. The IT system will facilitate the collection of all adult education offers that correspond to the established quality criteria. This will help learners to find courses, and education providers to offer courses. The system of individual learning accounts will help to fund courses for various social groups of learners. This is expected to increase the level of participation in adult education. Lithuania aims to have 21 600 people (aged 18-65) who have completed quality-assured training (at least 40% of which dedicated to digital skills) in the lifelong learning framework by 2026. In relation to the 2030 target for adult learning participation in 1 year, Lithuania has committed to achieve 53.7% by 2030, more than doubling the 25% rate of 2016.

Lithuania developed a learning support scheme, as envisaged in the recovery and resilience plan. The scheme will support both unemployed and employed who seek to obtain high value-added qualifications and skills. According to the recovery and resilience plan, 19 350 participants will obtain skills and qualifications in high value-added areas (10 000 of them in digital skills).

6. Higher education

A high proportion of young people in Lithuania have attained tertiary education. In 2021, tertiary attainment among those aged 25-34 was 57.5%, among the highest of all EU countries and well above the EU average (41.2%). A relatively high proportion of tertiary educated young adults in Lithuania have a bachelor's degree as their highest qualification, in part because many graduate from colleges, which offer 3-year vocationally oriented bachelor's degrees (OECD, 2017). However, the high tertiary education rate is also the result of high emigration

Figure 4: Tertiary attainment rate (25-34) by sex, 2021



Source: Eurostat (EU-LFS), [edat_lfse_03].

of lower-educated young people, which masks declining enrolments in tertiary education since 2011 in line with population decline (OECD, 2021). Gender differences in tertiary attainment rate are among the highest in the EU, with women (67.9% vs 46.8% at EU level) being much more likely to hold a tertiary degree than men (48.4% vs 35.7% at EU level) (Figure 4). However, over the total ICT graduates the share of women was lower than the EU average in 2020 (17.8% vs 20.8%).

Introducing multiple pathways to higher education and strengthening career guidance may help improve equity in access to higher education. Besides academic and financial barriers (see Section 2), also a lack of information may play a role in making academic choices: students from low socio-economic backgrounds feel less informed about the conditions for joining universities compared to high socio-economic background students. Career guidance services are often not available to the same standard throughout Lithuania (OECD, 2021), and career planning specialists are not yet skilled enough to advise on further studies or future career choices (STRATA, 2020b). Advantaged schools are more able to provide better guidance (OECD, 2019). Effective counselling in all upper secondary schools could help choose between post-secondary VET, professionally oriented colleges or universities. Between 2015 and 2020, the number of state-funded places was increased, with limited

impact on equity (STRATA, 2020a)¹¹. As of 2024, up to 10% of state-funded places will support access of vulnerable students. On the contrary, policy measures to increase enrolments of disadvantaged students could target fields experiencing skills shortages or/and of strategic importance to also improve higher education's responsiveness to labour market needs. As of September 2022, colleges provide short-cycle tertiary studies in the fields of computer engineering, systems programming and tourism, which is a good step in this direction. It may provide an attractive pathway to higher education for students from low socio-economic backgrounds and for VET secondary graduates who tend to be more attracted by vocational and/or short studies than their peers from high socio-economic backgrounds. Making the provision of career guidance mandatory (see above) may be a way of promoting social mobility and making more informed decisions also taking into account labour market trends.

Ongoing reforms pave the way for quality improvements. Academic excellence and labour market relevance of tertiary institutions are relatively low (OECD, 2022). With around 40 institutions, the network of tertiary education is scattered, featuring much overlap and duplication

¹¹ According to STRATA (2020a), in 2020 the share of students from medium and low socio-economic background who received a state-funded place is four and a half times lower than the percentage of those from high socio-economic background.

across institutions and lacking critical mass to reach excellence. The alignment of admission requirements for state-funded and non-state-funded tertiary education institutions (which used to be lower for non-state-funded institutions) is to come into effect in 2024. This, together with the measures envisaged for the school leaving exam, which aim to raise the achievements of tertiary students (see Section 4), may help improve the situation (European Commission, 2020; STRATA 2020a). Lithuania is using funding arrangements in favour of quality and efficiency improvements (European Commission, 2020). The reform of the funding formula for tertiary education – which will be in force as of 2024 – plans to allocate a share of public funding according to performance targets (5 % in 2024, 10 % in 2025 and 20% from 2026). These will include study effectiveness, internationalisation, graduates' careers and other quality metrics. As of 2023, colleges and the government will be able to sign contracts to get additional funding for mergers and other strategic objectives such as the development of research and/or study activities. Mergers will be in line with the plan prepared by the Centre for Quality Assessment in Higher Education. The revision of the mission of universities and colleges envisaged in the amended Law on research and studies could help further improve quality and incentivise differentiation between higher education institutions. The effectiveness of these reforms will depend on the rigorous use of the methodology to evaluate study quality.

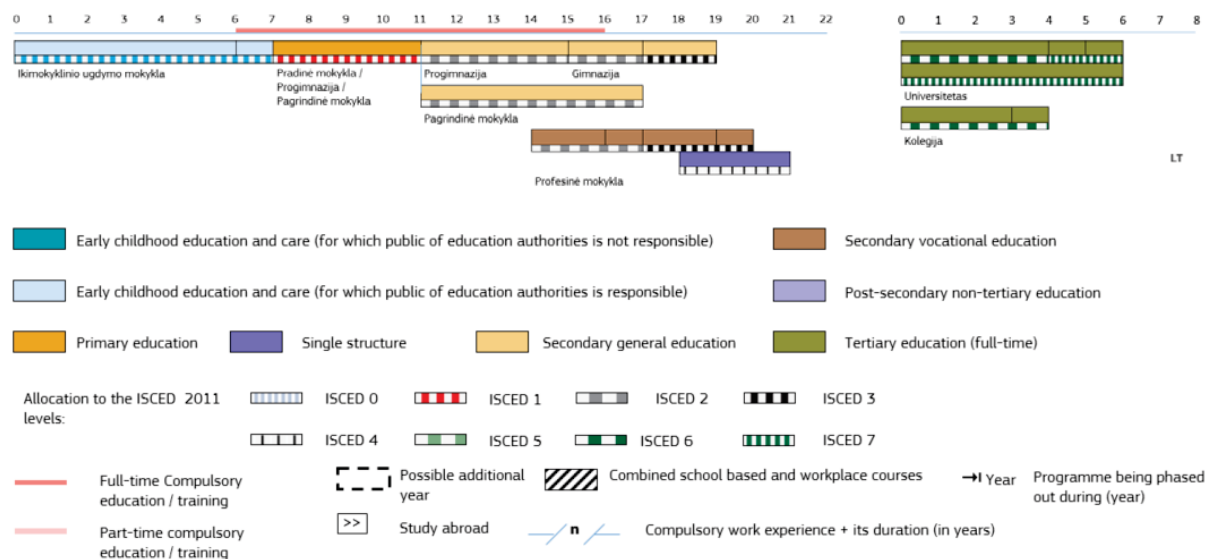
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Annex I: Key indicators sources

Indicator	Source
Participation in early childhood education	Eurostat (UOE), 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: Eurostat (LFS), edat_lfse_14 Data by country of birth: Eurostat (LFS), edat_lfse_02
Exposure of VET graduates to work based learning	Eurostat (LFS), edat_lfs_9919
Tertiary educational attainment	Main data: Eurostat (LFS), edat_lfse_03 Data by country of birth: Eurostat (LFS), edat_lfse_9912
Participation of adults in learning	Data for this EU-level target is not available. Data collection starts in 2022. Source: EU LFS.
Equity indicator	European Commission (Joint Research Centre) calculations based on OECD's PISA 2018 data
Upper secondary level attainment	Eurostat (LFS), edat_lfse_03
Public expenditure on education as a percentage of GDP	Eurostat (COFOG), gov_10a_exp
Public expenditure on education as a share of the total general government expenditure	Eurostat (COFOG), gov_10a_exp

Annex II: Structure of the education system



Source: European Commission/EACEA/Eurydice, 2022. The Structure of the European Education Systems 2022/2023: Schematic Diagrams. Eurydice Facts and Figures. Luxembourg: Publications Office of the European Union. Notes: *Gimnazija* might cover primary education programme (ISCED 1) and basic educational programmes.

Please email any comments or questions to:
EAC-UNITE-A2@ec.europa.eu

Brussels, 18.11.2022
SWD(2022) 751 final

PART 17/28

COMMISSION STAFF WORKING DOCUMENT

Education and Training Monitor 2022

Accompanying the document

**Communication from the Commission to the European Parliament, the Council, the
European Economic and Social Committee and the Committee of the Regions**

on progress towards the achievement of the European Education Area

{COM(2022) 700 final} - {SWD(2022) 750 final}

Education and Training Monitor 2022

LUXEMBOURG



The Education and Training Monitor's country reports present and assess the main recent and ongoing policy development at all education levels in EU Member States. They provide the reader with more in-depth insight of the performance of countries with regard to the EU level targets agreed within the EEA. They are based on the most up-to-date quantitative and qualitative evidence available.

Section 1 presents a statistical overview of the main education and training indicators. Section 2 focuses on how the Member State has addressed or is addressing one of its education challenges. Section 3 covers early childhood education and care. Section 4 deals with school education policies. Section 5 covers vocational education and training and adult learning. Finally, Section 6 discusses measures in higher education.

The Education and Training Monitor's country reports were prepared by the European Commission's Directorate-General for Education, Youth, Sport and Culture (DG EAC), with contributions from the Directorate-General for Employment, Social Affairs and Inclusion (DG EMPL).

The document was completed on 30 September 2022

More background data at:

<https://op.europa.eu/webpub/eac/education-and-training-monitor-2022/en/>



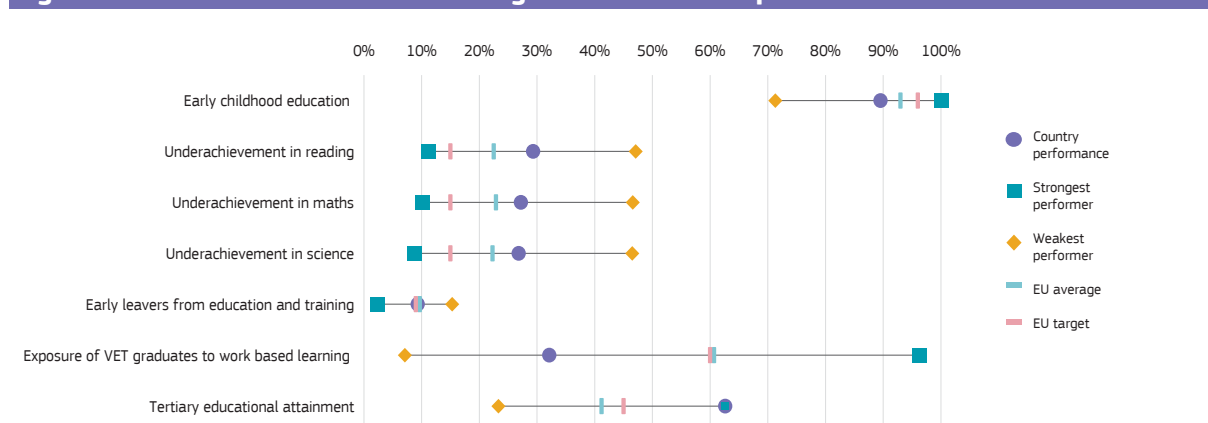
1. Key indicators

Figure 1: Key indicators overview

			Luxembourg		EU	
			2011	2021	2011	2021
EU-level targets			2030 target			
Participation in early childhood education (from age 3 to starting age of compulsory primary education)	≥ 96 %		89.9% ¹³	89.5% ²⁰	91.8% ¹³	93.0% ²⁰
Low achieving eighth-graders in digital skills	< 15%		:	50.6% ¹⁸	:	:
Low achieving 15-year-olds in:	Reading	< 15%	26.0% ⁰⁹	29.3% ¹⁸	19.7% ⁰⁹	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	18.2% ⁰⁹	22.3% ¹⁸
Early leavers from education and training (age 18-24)	< 9 %		6.2%	9.3% ^b	13.2%	9.7% ^b
Exposure of VET graduates to work-based learning	≥ 60 % (2025)		:	32.1%	:	60.7%
Tertiary educational attainment (age 25-34)	≥ 45 %		46.6%	62.6% ^b	33.0%	41.2% ^b
Participation of adults in learning (age 25-64)	≥ 47 % (2025)		:	:	:	:
Other contextual indicators						
Equity indicator (percentage points)			:	26.9 ¹⁸	:	19.30 ¹⁸
Early leavers from education and training (age 18-24)	Native		5.5%	7.0% ^b	11.9%	8.5% ^b
	EU-born		7.3% ^u	13.0% ^b	25.3%	21.4% ^b
	Non EU-born		:	16.4% ^{bu}	31.4%	21.6% ^b
Upper secondary level attainment (age 20-24, ISCED 3-8)			73.3%	76.6% ^b	79.6%	84.6% ^b
Tertiary educational attainment (age 25-34)	Native		41.9%	53.5% ^b	34.3%	42.1% ^b
	EU-born		52.4%	70.9% ^b	28.8%	40.7% ^b
	Non EU-born		44.5%	64.5% ^b	23.4%	34.7% ^b
Education investment	Public expenditure on education as a percentage of GDP		5.0%	5.0% ²⁰	4.9%	5.0% ²⁰
	Public expenditure on education as a share of the total general government expenditure		12.0%	10.5% ²⁰	10.0%	9.4% ²⁰

Sources: Eurostat (UOE, LFS, COFOG); OECD (PISA). Further information can be found in Annex I and at [Monitor Toolbox](#). 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; the equity indicator shows the gap in the share of underachievement in reading, mathematics and science (combined) among 15-year-olds between the lowest and highest quarters of socio-economic status; b = break in time series, u = low reliability, : = not available, 09 = 2009, 13 = 2013, 18 = 2018, 20 = 2020.

Figure 2: Position in relation to strongest and weakest performers



Source: DG Education, Youth, Sport and Culture, based on data from Eurostat (LFS 2021, UOE 2020) and OECD (PISA 2018).

2. A focus on non-formal early childhood education and care

Common standards have been introduced to harmonise quality across the non-formal education sector. Non-formal education complements school education by developing children's language and motor skills, social competence and creativity in a playful manner. It covers three age groups in Luxembourg: young children under 4, school-going children aged 4-12, and adolescents and young people aged 12-30. There are over 800 service providers in non-formal education: mini-nurseries for young children; education and care providers for children aged 4-12 and over 500 childminders. In 2016, the Youth Act established a national reference framework for non-formal education in all nurseries, day-care facilities, youth centres and certified childminders (*assistant parental*). This was a major advance in the development of non-formal education, giving it well-defined objectives and quality standards for children's development. These were updated in 2021, enabling regional experts from the National Youth Service to monitor quality.

Funding for early childhood education and care (ECEC) is conditional on contractual status and quality standards' being met. As of 2017, all providers must comply with the reference framework to be eligible for the state co-financing childcare voucher scheme (*chèque-service accueil*). This includes activities to familiarise children aged 1-4 with Luxembourgish and French. Childcare vouchers give parents reduced rates at nurseries, after-school centres, mini-nurseries and day-care centres. In the non-formal sector, providers can be contracted (municipalities and non-profit organisations) or non-contracted (for-profit organisations). Both types of providers are eligible for co-financing, but only contracted providers receive additional government funding.

Luxembourg has significantly increased its support for day-care services by making them free for primary school children as of 2022/2023. This will apply to day-care facilities (*maisons relais*¹ and *foyers scolaires*²) and certified childminders (*assistants parentaux*). These will be free for all children during school weeks from Monday to Friday, 7 AM to 7 PM; day care will be fee-paying during school holidays only. Families can use childcare vouchers for time outside these hours or periods. To improve education quality, continuing professional development for staff in non-formal education has been extended and made free for up to 24 hours of training a year from 2022. In addition, professional guidance for managers of day-care facilities has been drawn up and specific training sessions for technical and administrative staff has been developed.

To improve provision, the government launched a review of its non-formal education sector. This covers ECEC for children before the compulsory school-going age of 4, and services for school-aged children during out-of-school hours. The review, conducted by the OECD and supported by the European Commission, focused especially on quality assurance and workforce development (OECD, 2022). It found that initial education requirements for staff are low compared to other countries, with only 60% of staff required to have an ISCED 3 qualification in social or educational sciences, whereas for formal ECEC all teachers need to have a Bachelor's in educational sciences. The OECD advised Luxembourg to:

- improve the monitoring of process quality;
- ensure that investments are allocated efficiently to different types of ECEC;
- consider developing ECEC-specific initial teacher education programmes

¹ Also called a drop-in centre.

² A day-care centre offering non-formal educational activities for children aged 3 to 12 after school and during school holidays.

- strengthen coordination across departments responsible for formal and non-formal childcare in the Ministry of Education, Children and Youth to make the two systems more complementary.

3. Early childhood education and care

Participation in ECEC under age 3 is high, but from age 3 it is below the EU average. Nearly two thirds (63.2%) of children below age 3 are cared for by professionals. This is one of the highest formal childcare rates in the EU. From age 3, 89.5% of children participate in ECEC, below the EU average (93.0%) and the EU-level target (96%) for 2030.

Improving access to and the quality of ECEC may help close development gaps. In the last 15 years, Luxembourg has invested heavily in extending access to ECEC and non-formal day-care facilities, nearly tripling the number of places and doubling the availability of childminders (Neumann 2018). Compulsory education starts with 2 years of pre-school from age 4, which can be supplemented with an optional year from age 3. Childcare vouchers give parents reduced rates at nurseries, after-school centres, mini-nurseries and day-care centres. In 2019, the childcare system was extended to include a new type of institution, mini-nurseries. These are small day-care centres for children aged up to 12 that look after a maximum of 11 children.

4. School education

Luxembourg was one of the EU countries with the shortest full school closures during the pandemic. The loss of teaching days during school closures was kept to a minimum. Between January 2020 and May 2021, primary schools were closed for 48 days and secondary schools for 34, compared to 78 days and 92-101 days on average across OECD countries (OECD, 2021). To ensure continuity, a hybrid approach was adopted from pre-primary to upper secondary education, with a mixture of online classes and assignments

students had to do by themselves at home. Since 2020, free summer catch-up courses for pupils in need of them have helped mitigate learning losses. A survey among parents linked to the 2020 national competence tests has shown that pupils from more affluent socio-economic backgrounds had more family learning support, while pupils from a disadvantaged or from a Portuguese language background received more support from their teachers and classmates. This suggests that teachers have adapted their support to pupils' needs, by giving support primarily to pupils with more learning difficulties (Fischbach et al., 2021).

During the first year of the pandemic, school outcomes remained stable on average, but disadvantaged pupils were more affected.

Based on the results of the national competence tests (*Epreuves Standardisées*), the University of Luxembourg analysed the pandemic's effect on learning outcomes. In pre-primary and primary education, competence scores remained stable, except for a substantial decline in German. The same was observed in lower secondary education, especially among pupils from less fortunate socio-economic backgrounds, deepening existing inequalities. German is the main teaching language in Luxembourg, so this deterioration is also likely to have repercussions for most other subjects. The most vulnerable groups appeared to be pupils from disadvantaged backgrounds and those whose home language is not one of the three teaching languages. According to the 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 primary class size of 15 pupils in public schools – compared to the OECD average of 21 – Luxembourg was in a good position to reopen its schools while maintaining a safe distance of 1 to 2 metres between pupils and staff (OECD, 2020).

Teacher shortages are being addressed by lateral entrants and contractual staff.

Since 2018, the government has been recruiting Bachelor's graduates in areas linked to primary education (psychology, languages, sports, etc.). After successfully completing on-the-job training of about 250 hours, candidates may become

primary school teachers under the same conditions as Bachelor's educational sciences graduates. Luxembourg also uses staff who have not passed an open competition to become permanent: the proportion of such teachers is 29% in general upper secondary schools and 27% in VET (QP, 2022).

The growing school population is becoming increasingly 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 2021/2022 school year, pupils with Luxembourgish as their first language were the minority in primary (33.1%) and secondary education (36.3%) (MENJE, 2022a). Only 83.5% of pupils follow the national curriculum; others follow a European or international curriculum in public (5.1%) or private schools (11.4%). This cultural and linguistic diversity poses particular challenges for the school system.

The rate of early leavers from education and training (9.3%) is close to the EU-level target (below 9%). This figure should be treated with caution because of the limited sample size. According to national data, the proportion of young people aged 16-24 who left education and training without completing upper secondary education increased to 8.4% in 2020/2021, surpassing the level in any year since 2016/2017 (MENJE, 2022b). This includes young people who left the national school system but enrolled in a foreign or private school later on. Most young people are aged between 16 and 18 when they drop out of school. This is the period for choosing from different educational paths. Pupils in the general track choose between general (*général*) or vocational education (*régime professionnel*) whereas pupils in the academic track (*classique*) choose their subject specialization (MENJE, 2022). The proportion of boys who drop out is almost double that of girls (63% v 37%). In 2020/2021 80% of pupils who dropped out had repeated a year at least once (Figure 3). The repetition rate remains high: by the end of primary education (age 12) 21% of pupils have repeated at least 1 school year (MENJE, 2022c). In terms of

distribution across the different sectors of secondary education, most young people dropped out of VET (31%) or the lower track of general secondary education (20%). According to a survey by the National Youth Service (MENJE, 2021), young people who have left education without a qualification are three times more likely not to participate in education, employment or training between ages 20 and 34 than their peers who continued or completed secondary education. In 2021, the proportion of 15-29-year-olds not in education, employment or training (NEET) was 8.8% (EU average: 13.1%)³.

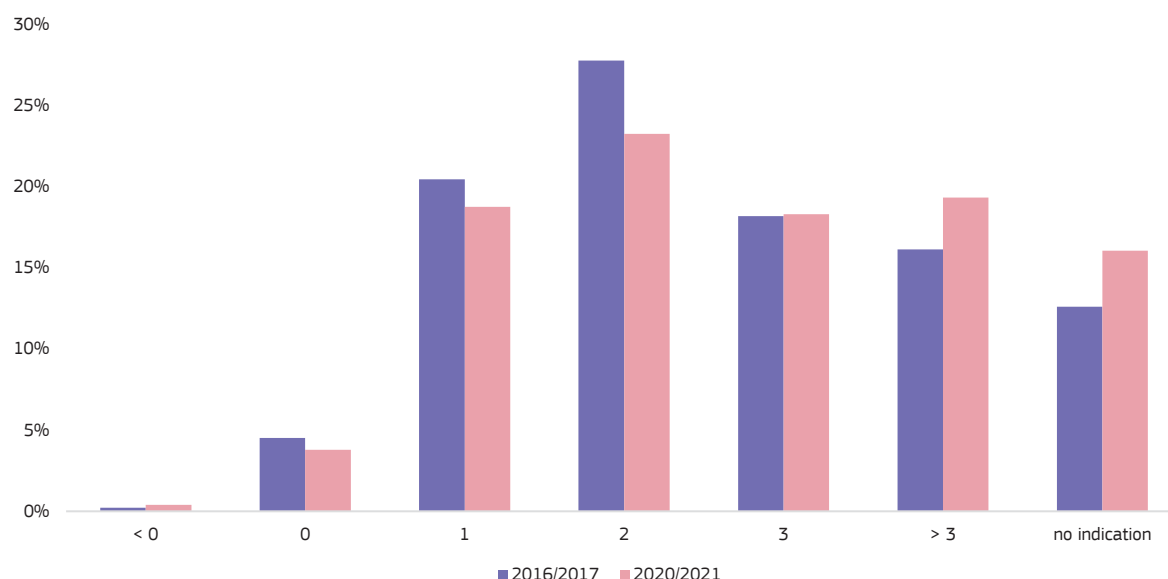


Box 1: Luxembourg combats early school leaving by personalised support and guidance

Preventively, the National Youth Service (SNJ) offers workshops for secondary schools in or outside school to help pupils plan their career and make them accountable for their choices. It also identifies young people who have dropped out and contacts them individually to offer them guidance. These young people are then informed of possible training and job offers. If a return to school or transit to work cannot be envisaged right away, the SNJ can propose participation in a 3-12 month voluntary programme, during which young people are accompanied. This has increasingly been taken up, with more than 450 agreements signed in 2020/2021. The National Youth Service also organises various workshops, training sessions and short 'discovery' traineeships in companies. The number of participants is increasing rapidly, having reached more than 3 000 in 2020/2021.

³ [EDAT_LFSE_18]

Figure 3: Drop-out by number of grade repetitions in 2016/2017 and 2020/2021 (%)



Source: Ministère de l'Éducation Nationale, de l'Enfance et de la Jeunesse

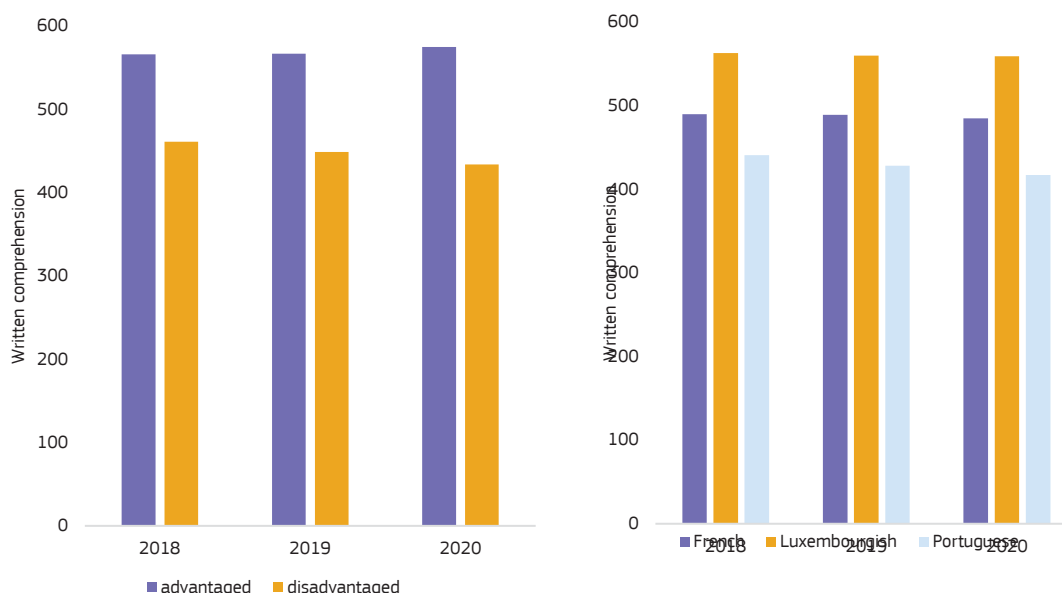
National and international surveys show marked disparities in basic skills. Pupils' basic skills, already below the EU average, are closely linked to socio-economic status. In 2018, Luxembourg's average competence levels, as measured by the OECD Programme for International Student Assessment (PISA), were significantly lower than the EU average in all three areas tested. Advantaged students scored 122 points above their disadvantaged peers, the largest such gap observed across all EU countries. The national competence tests show that at the time of starting school, pupils have the essential basic skills to begin acquiring formal literacy, even though significant differences in these initial skills could be identified (Hornung et al., 2021). In the first year of primary of the national school system German is introduced not as a second or third language, but one the pupils can instinctively understand, with a direct cognitive transfer from Luxembourgish to German expected. By the start of year 3 in primary school, at age 8, there is an exacerbation of skills disparities, with many pupils' performance falling markedly in German reading comprehension and maths, particularly pupils from a disadvantaged background or those whose first language is neither German nor Luxembourgish.

Pupils' performance is heavily influenced by their ability to cope with the trilingual education system. The spoken language in the national school system at primary level is Luxembourgish, while pupils learn to read and write in German and all subjects (except French) are taught in German. The main teaching language in technical secondary education remains German, with maths taught in French in the upper grades, and French the language of the final exam. In year 4 of academic secondary education, the teaching language switches from German to French for all subjects. This is hard for everyone, but especially for pupils who do not speak Luxembourgish at home. Scientific evidence⁴ suggests that reading and numeracy

⁴ Between 1985 and 2001, Thomas and Collier examined the records of 700 000 students from language minorities, speaking dozens of home languages, in five school systems. They found that the strongest predictor of success at upper secondary level in the dominant (English) language education system was the number of early years of instruction students had received in their first language. UNESCO has also published several case studies on the long term positive effects of first language based bilingual education

<https://unesdoc.unesco.org/ark:/48223/pf0000161121>.

Figure 4: Evolution of writing comprehension in German in year 3 of primary school, depending on socio-economic status and linguistic background, between 2018 and 2020



Source: LUCET 2021. Note: Pupils' achievements are standardised so that the mean value of the respective reference cohort is always 500 and the standard deviation 100 (Fischbach et al., 2014).

develop best when acquired in the first language. To make schooling more accessible, a pilot project will be launched in four primary schools as of 2022/2023, where pupils will start learning first in French, then continue in German. The level of skills to be acquired will remain the same; it is the order of teaching languages that will change. If the pilot is successful and extended to more schools, French-speaking pupils may fare better throughout their schooling.

Luxembourg has taken measures to close the inequality gap between pupils. Afterschool facilities (*maisons relais*) will be free on schooldays for all children as of 2022/2023. All pupils will also receive a free lunch at school. In 2018, nine support centres for children with special educational needs were established, where pupils can receive targeted support in addition to the support they get in primary or secondary education. Luxembourg has also decided to make music education free for all children as of 2022/2023.

European schools offer a linguistic alternative to the national system.

Luxembourg's sixth accredited European school⁵ opened in September 2022. The total number of pupils in the European schools is 3 400. Pupils may choose English, French or German as a main language. Luxembourgish is taught twice a week until the third year of secondary school, while foreign languages such as Italian and Portuguese are offered as optional subjects. Public international schools, open for free to any pupil, are an accessible alternative for pupils whose first language is not Luxembourgish, for example.

Digital sciences have been introduced in secondary education. Since the 2020/2021 school year, coding has been incorporated into maths classes in teaching cycle 4 (ages 10 to 11) and since 2021/2022 has been taught in all

⁵ A European school is a type of international school with a multilingual and multicultural pedagogical approach, with the European Baccalaureate as the secondary school leaving qualification.

subjects in teaching cycles 1 to 3 (ages 4 to 9). In secondary education, computer science became a new subject in 2021/2022, including coding and computational thinking. Since 2021/2022, 18 secondary schools – about half of all secondary schools – have been taking 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, 2021b). As part of the strategy to improve digital education, the National Teacher Training Institute offers new continuing professional development courses to primary and secondary school teachers.

Ukrainian children are integrated into education in three stages. Between the start of the war against Ukraine and June 2022, Luxembourg received almost 1 300 pupils (MENJE, 2022d). At primary level, 461 pupils joined regular primary schools or reception classes in public international schools. At secondary level, an overwhelming majority of pupils – over 800 – joined the six European schools, in English-speaking reception classes organised specifically for Ukrainian pupils. When pupils are ready, they can join regular international classes. According to their age and progress, they will also start learning French or German. To take better care of displaced children, people speaking Ukrainian are being recruited. They can intervene in lessons, with the teacher's guidance, to support the children, for example by providing translations or explanations in Ukrainian. Pupils in the final year of the Ukrainian education system will be able to sit the Ukrainian multi-subject online university entry test in September. Young people who have already graduated from secondary school in Ukraine can prepare for an entry diploma to higher education (*Diplôme d'accès aux études supérieures*) in English, which gives them access to European tertiary education.

5. Vocational education and training and adult learning

Vocational education and training (VET) and adult education remain attractive. In 2020, 61.6% of all learners in upper secondary education were enrolled in VET⁶. While data should be treated with caution because of the small size of the sample, VET still has good employment prospects despite a strong decrease in the employment rate of recent VET graduates⁷ in 2021: 77% (EU average: 76.4%) versus 95.4% in 2018 and 100% in 2019. The temporary apprenticeship bonus, introduced to tackle the risk of a lack of apprenticeship posts due to the COVID-19 crisis, was extended until October 2021. Luxembourg had a high overall rate of participation in adult learning in 2021 (17.9% v 10.8% in the EU), notably among unemployed people (34.4% in 2021 versus 12.7% in the EU). However, participation is still uneven, with only 8.9% of older workers in 2021 and 6.8% of low-skilled people (versus 24.6% of high-skilled people) in adult learning. Strengthening the quality and inclusiveness of education and training is crucial for Luxembourg to address labour shortages and contribute to reaching the EU 2030 headline skills and employment targets.

64% of adults have at least basic digital skills (54% at EU level) (European Commission, 2022). People in Luxembourg also score above the EU average in 'above basic digital skills' and 'at least basic software skills'. ICT graduates in the total pool of graduates are also above the EU average (5% versus 3.9%), but Luxembourg continues to experience a significant shortage of ICT specialists, considerably above the EU average. For ICT, 'Baccalaureate+2' is the minimum level 95.9% of companies require (FEDIL, 2022). In September 2021, Luxembourg published its new strategy 'National Action for

⁶ [educ_uoe_enrs05]

⁷ [edat_lfse_24]

Digital Inclusion' (Ministry for Digitalisation, 2021) and launched a digital learning hub in May 2022. Current and upcoming strategies and plans are putting emphasis on digital skills with the full involvement of social partners and stakeholders. The goals of the Future Skills (the training part of the initiative, included in the recovery and resilience plan) were met between October 2020 and December 2021 for the total number of participating jobseekers and those over 45 years old.

The implementation of the national skills strategy is under preparation. The related ongoing OECD study on Luxembourg's labour market and the resulting qualifications needs will help design the national skills strategy and implement a training action plan in 2022/2023. In 2021, the Ministry of Labour and the public employment service also conducted several sectoral studies on occupations and skills in demand (as part of the Future Skills initiative), in cooperation with employers' federations. It is a strong response to the need to monitor and anticipate skills demands in Luxembourg in a context of potential skills mismatches and growing labour shortages.

Guidance and support services for adult education improved in 2021. The new 'one-stop shop' for lifelong learning in the *Maison de l'Orientation* (House of Guidance) gives information to every adult seeking training, whatever their objective and nature of the training they seek. Other measures, announced in the Coalition Agreement in 2019, are still at an early stage, such as the introduction of individual learning accounts and the creation of an accreditation agency to promote the quality of life-long learning and transparency in the vocational training market.



Box 2: European Social Fund project Basic Digital Skills 2022

The aim of this European Social Fund project is to train jobseekers with little or no computer skills. Many workers in Luxembourg have adapted to the rapid changes in IT, but others – especially older workers – have not had the opportunity to acquire such skills and now face difficulties in a completely changed job market. The programme aims to help these jobseekers by demystifying the complexity of computer tools, helping them acquire the basic skills to use computer tools, present themselves on professional social media and understand the impact of using the tools, and develop their learning skills through practical exercises. As a common thread in this training programme, each participant is asked to write his or her CV and cover letter in electronic format.

At the end of the training, the participant benefits from an individual debriefing session to highlight the benefits of the programme, review progress, and identify future actions and needs.

Budget: EUR 120 400, of which the European Social Fund co-finance EUR 60 200.

<https://fonds-europeens.public.lu/fr/projets-cofinances/fse/2014-2020/1123.html>

6. Higher education

Tertiary educational attainment and graduate employment rates are among the highest in the EU, with 62.6% of the population aged 25-34 holding a tertiary degree (EU: 41.2%), the highest in the EU. The proportion of highly skilled women in this age group exceeds that of men by 15.1 percentage points (EU: 11.1). The rate is significantly higher among the migrant population (69.1%, compared to 53.5% of people born in Luxembourg). Study programmes at the University of Luxembourg are bilingual, trilingual (French, German, English) or entirely in English. With a high proportion of international students, Luxembourg may have been worse affected by the travel restrictions linked to the pandemic than other countries (OECD, 2020).

The proportion of ICT graduates is high, but still not keeping up with demand.

According to the European Commission's 2021 Digital Economy and Society Index, Luxembourg's proportion of ICT specialists and graduates is higher than the EU average, but there is still a shortage of ICT specialists. This may impede the digitalisation of economy. The proportion of ICT specialists among graduates is 5.0% (EU: 3.9%). In 2021, Luxembourg was the third country in the EU where the proportion of ICT specialists in the workforce was highest (6.7%). One out of five (19.7%) ICT workers was a woman, slightly above the EU average (19.1%).

Graduates' employment rates improved in 2021, but have still not reached the level before the pandemic.

The employment rate of recent tertiary graduates in 2021 improved somewhat, to reach 87.0% (vs EU average 84.9%), but remains considerably lower than in 2019 (94.2%). Among recent graduates, holders of a tertiary diploma were more often in employment than VET graduates (by 10 percentage points). Young people were hit particularly hard by COVID-19: their unemployment rate increased by 7.9 percentage points within a year, reaching 25.1% in the first quarter of 2021. Having a tertiary degree carries not only an employment premium, but also a considerable earnings advantage, as 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 (OECD, 2021).

New study programmes were introduced at the University of Luxembourg in 2021-2022.

These include a Bachelor's programme for aspiring music teachers, a multidisciplinary Master's programme in data science, digital transformation in finance (as part of the Master's in science in finance and economics) and digital procurement (part of the Master's in logistics and supply chain management). Following the launch of the Bachelor's in medicine in 2020, the university is also expanding its range of medical studies with

three new medical specialisations in general medicine, oncology and neurology.

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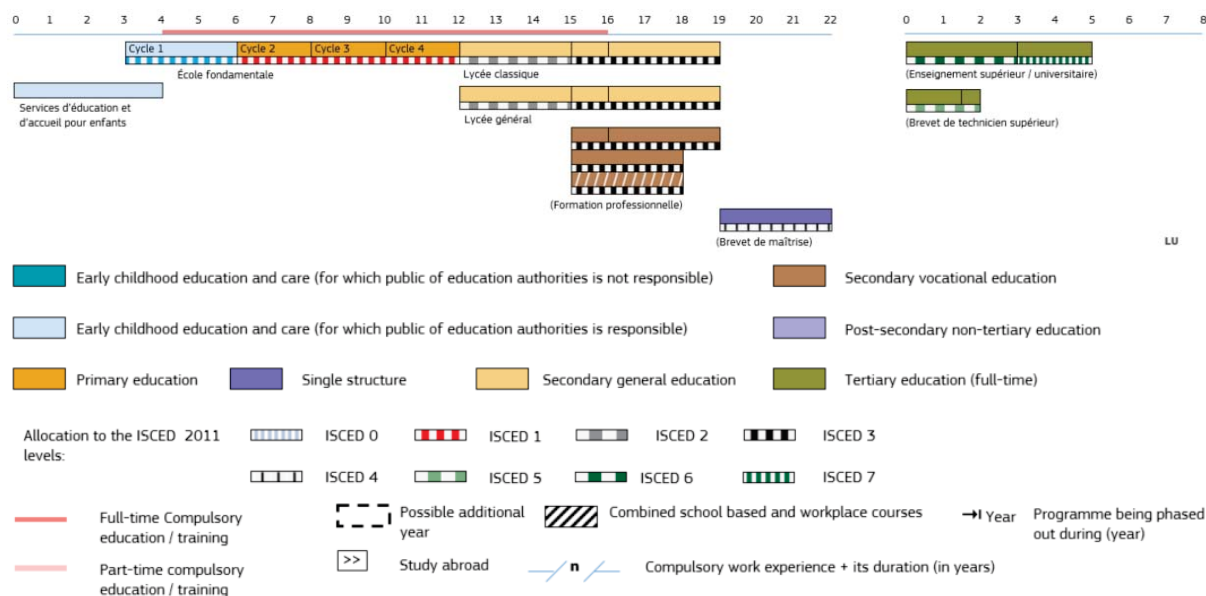
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Annex I: Key indicators sources

Indicator	Source
Participation in early childhood education	Eurostat (UOE), 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: Eurostat (LFS), edat_lfse_14 Data by country of birth: Eurostat (LFS), edat_lfse_02
Exposure of VET graduates to work based learning	Eurostat (LFS), edat_lfs_9919
Tertiary educational attainment	Main data: Eurostat (LFS), edat_lfse_03 Data by country of birth: Eurostat (LFS), edat_lfse_9912
Participation of adults in learning	Data for this EU-level target is not available. Data collection starts in 2022. Source: EU LFS.
Equity indicator	European Commission (Joint Research Centre) calculations based on OECD's PISA 2018 data
Upper secondary level attainment	Eurostat (LFS), edat_lfse_03
Public expenditure on education as a percentage of GDP	Eurostat (COFOG), gov_10a_exp
Public expenditure on education as a share of the total general government expenditure	Eurostat (COFOG), gov_10a_exp

Annex II: Structure of the education system



Source: European Commission/EACEA/Eurydice, 2022. The Structure of the European Education Systems 2022/2023: Schematic Diagrams. Eurydice Facts and Figures. Luxembourg: Publications Office of the European Union. Notes: Luxembourg also has three international schools streams: *Enseignement germano-luxembourgeois*, *Enseignement européen* and *Enseignement britannique*.

Please email any comments or questions to:
EAC-UNITE-A2@ec.europa.eu

Brussels, 18.11.2022
SWD(2022) 751 final

PART 18/28

COMMISSION STAFF WORKING DOCUMENT

Education and Training Monitor 2022

Accompanying the document

**Communication from the Commission to the European Parliament, the Council, the
European Economic and Social Committee and the Committee of the Regions**

on progress towards the achievement of the European Education Area

{COM(2022) 700 final} - {SWD(2022) 750 final}

Education and Training Monitor 2022

HUNGARY



The Education and Training Monitor's country reports present and assess the main recent and ongoing policy development at all education levels in EU Member States. They provide the reader with more in-depth insight of the performance of countries with regard to the EU level targets agreed within the EEA. They are based on the most up-to-date quantitative and qualitative evidence available.

Section 1 presents a statistical overview of the main education and training indicators. Section 2 focuses on how the Member State has addressed or is addressing one of its education challenges. Section 3 covers early childhood education and care. Section 4 deals with school education policies. Section 5 covers vocational education and training and adult learning. Finally, Section 6 discusses measures in higher education.

The Education and Training Monitor's country reports were prepared by the European Commission's Directorate-General for Education, Youth, Sport and Culture (DG EAC), with contributions from the Directorate-General for Employment, Social Affairs and Inclusion (DG EMPL).

The document was completed on 30 September 2022

More background data at:

<https://op.europa.eu/webpub/eac/education-and-training-monitor-2022/en/>



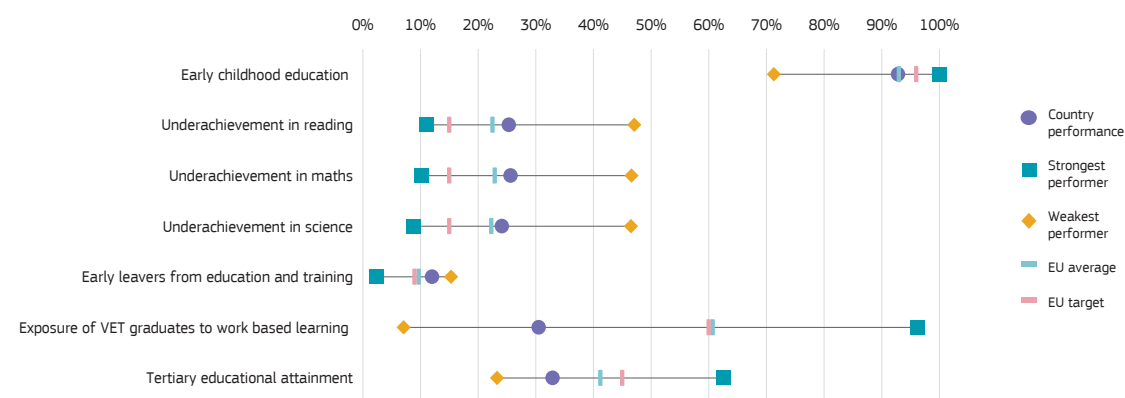
1. Key indicators

Figure 1: Key indicators overview

		Hungary		EU	
		2011	2021	2011	2021
EU-level targets		2030 target			
Participation in early childhood education (from age 3 to starting age of compulsory primary education)	≥ 96 %	88.3% ¹³	92.8% ²⁰	91.8% ¹³	93.0% ²⁰
Low achieving eighth-graders in digital skills	< 15%	:	:	:	:
Low achieving 15-year-olds in:	Reading	17.6% ⁰⁹	25.3% ¹⁸	19.7% ⁰⁹	22.5% ¹⁸
	Maths	22.3% ⁰⁹	25.6% ¹⁸	22.7% ⁰⁹	22.9% ¹⁸
	Science	14.1% ⁰⁹	24.1% ¹⁸	18.2% ⁰⁹	22.3% ¹⁸
Early leavers from education and training (age 18-24)	< 9 %	11.4%	12.0% ^b	13.2%	9.7% ^b
Exposure of VET graduates to work-based learning	≥ 60 % (2025)	:	30.5% ^u	:	60.7%
Tertiary educational attainment (age 25-34)	≥ 45 %	28.2%	32.9% ^b	33.0%	41.2% ^b
Participation of adults in learning (age 25-64)	≥ 47 % (2025)	:	:	:	:
Other contextual indicators					
Equity indicator (percentage points)		:	28.7 ¹⁸	:	19.30 ¹⁸
Early leavers from education and training (age 18-24)	Native	11.4%	11.8% ^b	11.9%	8.5% ^b
	EU-born	:	:	25.3%	21.4% ^b
	Non EU-born	:	:	31.4%	21.6% ^b
Upper secondary level attainment (age 20-24, ISCED 3-8)		82.7%	84.5% ^b	79.6%	84.6% ^b
Tertiary educational attainment (age 25-34)	Native	28.0%	32.7% ^b	34.3%	42.1% ^b
	EU-born	35.7%	36.3% ^b	28.8%	40.7% ^b
	Non EU-born	37.1% ^u	43.3% ^b	23.4%	34.7% ^b
Education investment	Public expenditure on education as a percentage of GDP	5.0%	4.7% ²⁰	4.9%	5.0% ²⁰
	Public expenditure on education as a share of the total general government expenditure	10.3%	9.2% ²⁰	10.0%	9.4% ²⁰

Sources: Eurostat (UOE, LFS, COFOG); OECD (PISA). Further information can be found in Annex I and at [Monitor Toolbox](#). 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; the equity indicator shows the gap in the share of underachievement in reading, mathematics and science (combined) among 15-year-olds between the lowest and highest quarters of socio-economic status; b = break in time series, u = low reliability, : = not available, 09 = 2009, 13 = 2013, 18 = 2018, 20 = 2020.

Figure 2: Position in relation to strongest and weakest performers



Source: DG Education, Youth, Sport and Culture, based on data from Eurostat (LFS 2021, UOE 2020) and OECD (PISA 2018).

2. A focus on teachers

The shortage of teachers is increasingly challenging. Research shows a positive link between teacher quality and student performance. However, most EU countries, including Hungary, face teacher shortages – particularly in high-demand subjects and hard-to-staff schools and areas – and difficulties in attracting new candidates to the profession (European Commission, 2022). Despite the economic uncertainty linked to the COVID-19 pandemic and unlike in other countries, Hungarian pre-primary and primary education teachers belonged to the occupation groups showing the steepest decline: between March 2020 and May 2021, their number fell by more than 3 500, or 3% (Kónya & Krekó, 2021). The teaching workforce is ageing: in 2020, 46% of teachers were aged 50 or older¹. There is also a shortage of support staff: on average, Hungary has 1 support person for 17 teachers, while the OECD average is 1 support person for 12 teachers. This increases the burden on teachers, who also need to deal with pupils with special educational needs, or psychological and socio-economic problems, among other things.

Low salaries and high workload are key factors in teacher shortages. Competitive salaries that are on a par with the remuneration paid to people with similar education levels working in comparable occupations strengthen the ability of school systems to attract and retain teachers (European Commission, 2022). Teacher salaries in Hungary are the lowest among the EU countries that are OECD members. They are equivalent to only 58–66% of the salaries of other tertiary graduates, depending on educational level. In December 2021, a government decree was published by which teachers would receive a 20% wage supplement from 2022. However, this supplement is not part of the basic salary, so it does not count towards pension rights. The measure was taken while teacher unions were holding strike talks with the government without being able to reach an agreement. Trade unions

were requesting a more substantial pay rise and to reduce the weekly teaching hours to 22. In January 2022, they organised a 2-hour warning strike. This led to court cases as the unions and the government could not agree on what services should be maintained during strikes. The government issued a decree listing these, which according to the trade unions would make any further strikes in public education practically impossible.

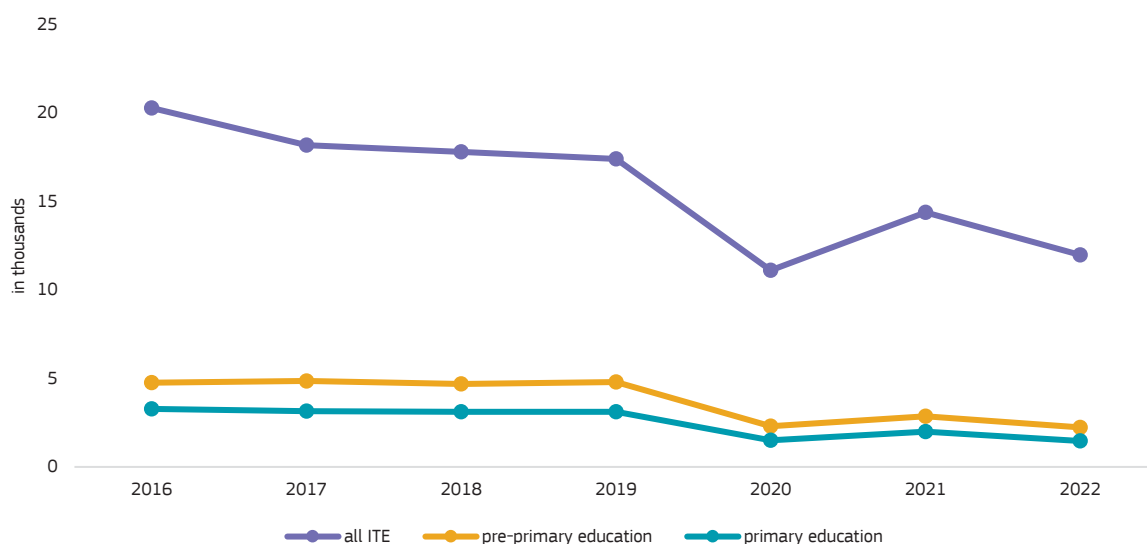
Initial teacher education cannot meet the demand for teachers. Applications for initial teacher education ITE have dropped strongly over the past 3 years (Figure 2). The decline is particularly significant for preschool and primary education. Drop-out rates are high in initial teacher education and less than half of teacher graduates actually enter the profession. In primary education, the proportion of small schools (with fewer than 150 pupils) is particularly high (49.5%) (Lannert et al., 2021). Small schools need to maintain full teaching staff regardless of the number of children, resulting in an 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 (Varga, 2022).

The Klebelsberg scholarship programme aims to attract more candidates to initial teacher education. In 2013/2014, the scheme was launched for secondary education; it was later extended to cover special education and primary education. Beneficiaries commit themselves to teaching in a state school in one of three counties they indicate, for a time corresponding to the length of their studies. Since 2018, 1 292 young graduates have been recruited this way. In 2022, the scheme was extended to include schools run by churches and foundation-based universities. A number of higher education institutions, including church-run ones, are also offering scholarships and other support to attract applicants to initial teacher education programmes.

Initial teacher education has been restructured with lower training and output requirements. As of 2022/2023, initial teacher

¹ [educ_uoe_perp01].

Figure 3: Number of initial teacher education applications between 2016 and 2022



Source: Felvi database, standard procedure.

education for lower and upper secondary teachers will be a uniformly 5-year course. The scope of the course will be reduced, and to strengthen the practical aspects, placements will be provided from the beginning of the programme, instead of at the end. An optional 1-year master's course can qualify teachers for preparing pupils for the advanced-level upper secondary education leaving exam, a requirement for entry to any university. An integrated science teacher training programme will also be launched. The outcome standards and requirements have been revised to ensure that universities only prepare students in the spirit of the revised national core curriculum.

3. Early childhood education and care

Participation in early childhood education and care (ECEC) corresponds to the EU average. From the age of 3, 92.8% of children participate in ECEC (EU average: 93.0%), 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 kindergarten (KSH, 2020). ECEC services are increasingly being taken over by churches and, to some extent, private providers. Over the past decade, the number of children attending kindergartens has fallen by 5%. Participation of children under the age of 3 is low: in 2019, only 16.9% attended childcare (EU average: 35.7%). This is partly linked to the availability of a family allowance for parents staying at home with their children until the age of 3, and partly to the scarcity of nursery places. In 2021, almost 53 000 nursery places were available for children below the age of 3. However, for almost 56 000 children (21%), no place could be provided in their own settlements (KSH, 2022).

The centralised decision on children's school maturity may lead to learning disadvantages. A 2019 amendment to the Act on national public education changed the rules for enrolling children in primary school. Previously, children who were not mature enough for primary school could be allowed by the kindergarten head to stay in kindergarten for another year. Under the new regulations, parents must apply for such an extension 8 months before the start of the school year, after which the education authority must issue an expert decision. The commissioner for fundamental rights of Hungary considered the

new process unlawful, arguing, among other things, that the application deadline is too early and the electronic application process discriminates against disadvantaged families (Ombudsman, 2021). The Parents' Voice community carried out a survey among parents who applied to the education authority to request an extra year of kindergarten for their children (Parents' Voice, 2022). The outcomes of the survey indicate that although most applications (over 90%) are eventually accepted, the criteria used to assess applications differ from one county to another, leading to significant differences in the results. Another concern is that schooling immature children can lead to long-lasting learning difficulties. Research shows that 23% of Hungarian 6-year-olds cannot distinguish all speech sounds yet, which largely increases the risk of developing dyslexia (Zajdó, 2017).

4. School education

The 2018 OECD Programme for International Student Assessment (PISA) survey showed that education outcomes are below the EU average. At the age of 15, mean levels of basic skills are significantly below the EU averages and have declined 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 strengthen pupils' key competences. As of 2022, new features have been introduced into the national competence test: in addition to tests in reading, maths and foreign languages, students also take a science test.

Early school leaving has not improved over the past decade. In 2021, the rate of early leavers from education and training was 12.0% (against an improving EU average of 9.7% and the EU-level target of 9%). The rate is higher in the least developed districts and among Roma (62.7% v 9.9% among non-Roma) (MNTFS, 2022). Data on participation in education show that lowering the

compulsory school age from 18 to 16 in 2012/2013 had a significant negative impact on school attendance (KRTK-KTI, 2021). While the reform aimed to facilitate the labour market entry of young people wishing to leave secondary school early, it did not improve the probability of their employment. Instead, the reform increased the probability of being neither in school nor in employment for 16-18-year old drop-outs.

Performance gaps appear early and are exacerbated by the selective school system.

The 2015 and 2019 TIMSS² results show that performance gaps between pupils emerge early (by grade 4) and belong to the highest in Europe. The rate of disadvantaged pupils in secondary education is extremely unequal across school types. According to available data, this rate is very high in vocational training schools (*szakképző iskola*) (12.96%), lower in vocational secondary schools (*technikum* and *szakgimnázium*) (2.86%) and very low in general upper secondary schools (*gimnázium*) (1.35%) (OH, 2021). This concentration of disadvantaged pupils in certain schools and school types, and pressing teacher shortages make it difficult to retain pupils in education and give them the personalised support they would need. In addition, in many countries, including Hungary, it is often the least experienced and least skilled teachers who are teaching the students with greater needs, which exacerbates academic achievement gaps based on students' socio-economic background. In vocational education and training, two alternative pathways have been launched to support students with learning difficulties, whose impact remains to be seen. Hungary also has the largest urban-rural gap in education outcomes, before accounting for socio-economic status, of all OECD countries (OECD, 2019). There is evidence that tracking policies, either between tracks (academic, vocational) or between schools, reduce education equity, and they have mixed effects on efficiency.

² The Trends in International Mathematics and Science Study is organised every 4 years by the International Association for the Evaluation of Educational Achievement.



Box 1: Conditions for digital education were found to have been improved

The State Audit Office examined the experience of digital education and how children's right to education was ensured during school closures (ÁSZ, 2021). They found that the spread of broadband internet access had improved the conditions for digital education, but teachers' digital competence had not been strengthened significantly. There were significant differences in schools' and teachers' practices, pupils' family backgrounds, and parents' skills, which affected both access to and the quality of education. Teachers' use of multiple platforms made it difficult to participate in digital education, requiring pupils to learn and use up to half a dozen systems in parallel. In May 2020, a survey on teachers' readiness to switch to digital education found that the use of digital tools in education is still very limited. More than half of respondents assessed their preparation to digital education by their initial education as very weak (DOS, 2020). In spring 2022, the government announced that 560 000 notebooks for students and 55 000 notebooks for teachers would be distributed in a phasing-in system starting from grades 5 and 9 over the next 4 years, worth around HUF 200 billion (EUR 490 million). As part of the revision of the national core curriculum, the former IT subject has been restructured. The new digital culture subject has a broader focus, including internet etiquette, online harassment and privacy.

Public data on the number of Ukrainian pupils in Hungarian public education is scarce. By the end of August, over 2,4 million people have crossed in to Hungary directly from Ukraine or via third countries, but only 29 170 of them had applied for temporary protection (UNHCR, 2022). More than 107 000 people had been granted temporary residence. However, it is difficult for several reasons to determine how many Ukrainian citizens are in Hungary. Many of them have dual Ukrainian-Hungarian nationality, do not need to register and are therefore not recognised as refugees; others do not apply for a refugee status but travel onwards. Ukrainians up

to age 16 who either have Hungarian citizenship or have applied for a refugee status, are subject to compulsory schooling. The state school of their place of residence is obliged to admit them to regular education in Hungarian. In September 2022, the total number of children from Ukraine attending education and training in public education institutions was 4,093: 749 in kindergartens and 3,344 in schools. They are spread over 1,247 kindergartens and schools. In addition to access to schooling, both Hungarian- and Ukrainian-speaking children can participate in a 5-hour-per-week remedial or language learning support session in the afternoons, in addition to basic educational services. Schools providing remedial courses receive a monthly subsidy of HUF 130 000 (EUR 319) per pupil. However, schools do not receive any additional professional support apart from free textbooks for learning Hungarian.

5. Vocational education and training and adult learning

Progress has been made in setting up a vocational education and training (VET) graduate tracking mechanism. The Vocational Graduate Tracking System has been developed on the e-KRETA web platform to obtain more information on the further learning and employment of VET graduates. It consists of three pillars: integrated databases, regular administrative data collection, and surveys.



Box 2: European Social Fund project 'Reducing the number of early school leavers in vocational education and training' (2014-2020 Economic Development and Innovation Programme)

The aim of this project was to reduce the number of drop-outs from VET and to improve basic skills in VET. The vocational centres involved drew up and launched the implementation of institutional development plans. These included competence

testing of pupils entering vocational schools (grade 9), small group activities, and mentoring to support basic skills development and improving the sense of belonging to the school. Schools also benefited from digital infrastructure development and in-service teacher training activities.

Between 2016 and 2022, some 374 VET institutions participated. According to the project evaluation, the share of drop-outs had declined in most schools by 2019. However, it raised again in 2020, linked to the school closures.

Budget: EUR 7.2 million.

Finding dual training places in companies is challenging for VET students. Nearly half of upper secondary pupils are enrolled in VET³ (49.7% in 2020 v 48.7% EU average). Less than 1% of small to medium-sized enterprises offer places for dual training. According to the 2019 VET 4.0 strategy, this is due to the high administrative burden related to apprenticeship contracts, a lack of qualified staff, and a lack of modern infrastructure. To address these challenges, sectoral training centres equipped with state-of-the-art infrastructure are set up – using EU funding – which will be co-owned by vocational centres and small to medium-sized enterprises.

Professional final examination results at technical colleges may be considered for higher education admission. As from the 2021/2022 academic year, pupils participating in the 5-year VET programme at technical colleges can choose to have only the results of the final professional examination taken into account for the calculation of their higher education admission scores, and not their general upper secondary school leaving examination (*matura*) results. The general competence content of VET programmes is significantly lower than in general upper secondary education. Therefore, it is more difficult for technical college students to score well in the *matura*. The new VET-related admission criteria option aims to support technical college pupils' progression to higher education in the same professional field. As part of the VET reform,

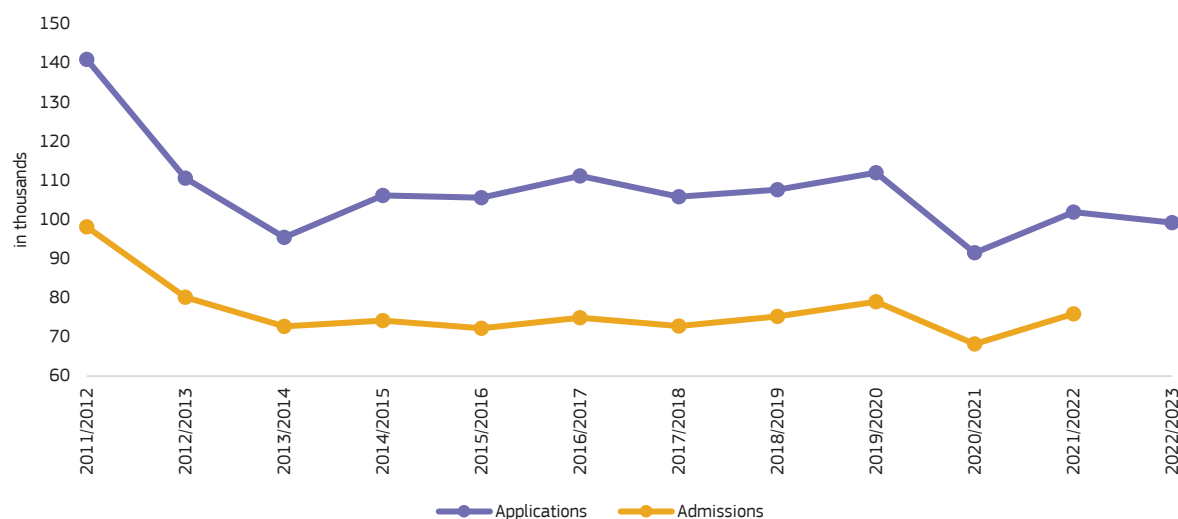
digital competence standards were included in the training standards and outcome requirements of each VET qualification and they have been referenced to the levels of the DigComp framework.

Adult participation in learning, especially for digital skills, needs further support. Only 5.9% of adults participated in training in a four-week period prior to when they were asked in 2021, compared to the 10.8% EU average. Participation rates of low-skilled and unemployed adults are even lower. 49% of individuals have at least basic digital skills, compared to the EU average of 54% and the Digital Decade target of 80% by 2030 (DESI, 2022). To boost adult learning, various aspects of the 2019 vocational and adult learning reform are being rolled out. In 2022, a new adult training database was published, listing all adult courses and course providers. The database could gain from searchable, harmonised and comparable information on training outcomes.

The financing of adult learning has been changed. In 2021, the public employment services training system was replaced by a job-search incentive allowance. The new scheme offers a more limited financial coverage, which may negatively impact low-skilled workers and jobseekers, whose participation is already low. In May 2021, state-subsidised adult learning study loans were launched. This interest-free scheme has two components: a loan to cover the study fee and a loan to cover any expenses related to the training. In December 2021, the requirements of the first component were tightened while the second component was abolished due to misuse. Loans for shorter trainings and an exemption from repayment on completion for disadvantaged target groups could make the offer more attractive. Hungary is also examining the feasibility of setting up individual learning accounts. Preparations will start in autumn 2022 as part of a Technical Support Instrument project and piloting is planned to be carried out under the Economic Development and Innovation Programme for 2021-2027.

³ [educ_uoe_enrs05]

Figure 4: Number of applications/admissions to higher education in the general procedure between 2011/2012 and 2021/2022, in thousands



Source: felvi.hu

6. Higher education

The number of tertiary graduates cannot meet the growing demand for a highly skilled workforce. At 32.9%, Hungary has one of the lowest rates of the population aged 25-34 holding a tertiary degree (against an EU average of 41.2% and the EU-level target of 45%). The share of highly skilled women in this age group exceeds that of men by 12.2 percentage points, above the EU average. The employment rate of recent tertiary graduates (91.1%) exceeds the EU average (84.9%). 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 low tertiary attainment rate is partly linked to high drop-out rates, which are highest in IT, technical and science programmes. More than one third of bachelor's studies are finished without a degree (OH, 2020). This is partly because an intermediate level foreign language exam used to be a requirement for the diploma (Józsa, 2020). In 2020 and 2021, this requirement was suspended due to the pandemic. As of 2022, higher education institutions may decide if they prescribe a foreign language exam for obtaining a diploma. This may increase graduation numbers.

The decline in applications can probably be linked to stricter admission criteria since 2020. In 2022/2023, some 99 192 people applied for higher education; 2 689 fewer than last year and 13 000 fewer than 3 years ago (Figure 4). The number of applicants fell by 45 000 between 2011 and 2013, when self-financing places were introduced⁴ and the entry scores for several popular programmes were raised. After this, the number stabilised at around 107 000 with minor fluctuations. In 2020, the number of applicants fell sharply due to stricter entry requirements: a higher passing score and the advanced-level *matura*. A deeper analysis of the data shows that the decline cannot be explained merely by demographic developments and concerns primarily the segments of higher education most affected by the stricter entry requirements (Vit & Holb, 2022). Application numbers fell more in countryside institutions than in the capital, and

⁴ The 2011 Law on higher education lays down two financing options for studying in higher education: either using a state scholarship or paying for it oneself. For each higher education institution, the government lays down the maximum number of students. Students need to exceed a threshold score in the admission test to be eligible for a state scholarship.

regional data show deepening territorial inequalities (Polónyi, 2020).

Few disadvantaged people make it to higher education. The share of socio-economically disadvantaged pupils passing the *matura* and applying for tertiary education is only 3% (Varga, 2021). The VET scholarship scheme offers the highest grants in the 3-year vocational secondary track, which does not lead to *matura*, thus offering a short-term advantage for a non-academic, narrow learning path. Disadvantaged pupils may benefit from the Arany János programme for gifted pupils and those eventually entering tertiary education from the Útravaló (Pathfinder) scholarship schemes and the Roma talent support colleges. The proportion of students with disabilities remains below 1% and disabled university students continue to face serious barriers to their studies (Petri & Markos, 2021). Although the situation of students with disabilities in higher education has generally improved over the past decade, accessibility to universities remains poor, which means that students with disabilities often have problems accessing seminars, the library or compulsory practical training sites. The lack of personal assistance is also a major barrier for disabled students. There is no service in the social security system to provide students with the personal assistance they need, whether it is getting dressed in the morning, getting to class or taking notes in class.

Scarcity of accommodation is another barrier to studies. In recent years, rents have doubled in Budapest and increased by at least 50% in other large university cities. Nationwide, there are 54 000 dormitory places, for almost 300 000 students. A survey shows that 69% of students share an accommodation with others and 23% have a dormitory place (Eurostudent, 2021). Meanwhile, the number of foreign students is increasing, the vast majority of whom are provided with places in halls of residence by the universities. The construction of the Chinese Fudan University campus in Budapest met with strong protests because it would take place on land earlier designated for the planned Student City

with dormitories, whose 12 000 places would be relocated and reduced to a third.

Hungary invests heavily in attracting foreign students and in international cooperation.

Legislative changes have been introduced to reduce barriers for Hungarian universities to participate in the European University Initiative and to facilitate cooperation in joint degree programme development. The Stipendium Hungaricum and more recently the Diaspora Scholarship schemes have been running for years at a considerable expense, providing scholarships for foreigners – mostly from outside Europe – and students of Hungarian origin to study in Hungary. HUF 33 billion (EUR 93 million) was earmarked for the Stipendium Hungaricum in 2020. The number of international students increased 2.4 times between 2010 and 2020, and reached 17.4% of all students in 2020/2021.

Most state universities have been transformed into trust funds.

By 2022, all but six universities underwent a model change by which they came under the control of trust funds set up by the government. In October 2021, the government signed public task financing contracts with the trust funds, setting out the level of public support and the performance indicators expected from the universities in return. The grant contracts set out performance indicators per year for 6 years in advance, such as the drop-out rate, the length of the job search period after graduation, or the level of cooperation with businesses. Over the years, much of the funding will gradually become performance-based. Each trust fund also receives a yearly grant of HUF 400-600 million (EUR 0.98-1.47 million) to cover the operating costs of the boards of trustees. An important governance issue is that there are no rules either on the functioning of the boards of trustees or on the relationship between the government (which is responsible for running sectoral policies) and the boards of trustees (as the funders of universities). Thus the boards have all decision power in the universities' key areas without being accountable for their own operation and decisions either to the government or the academic body of the university.

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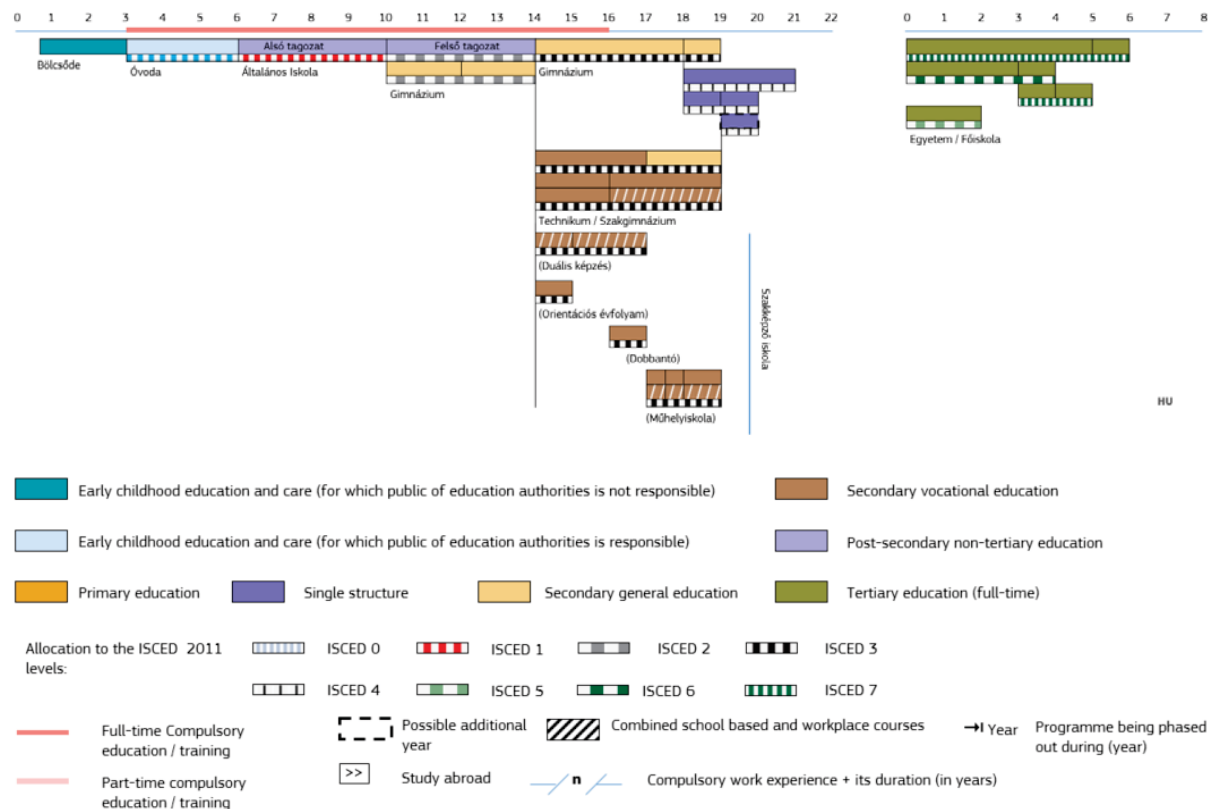
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Annex I: Key indicators sources

Indicator	Source
Participation in early childhood education	Eurostat (UOE), 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: Eurostat (LFS), edat_lfse_14 Data by country of birth: Eurostat (LFS), edat_lfse_02
Exposure of VET graduates to work based learning	Eurostat (LFS), edat_lfs_9919
Tertiary educational attainment	Main data: Eurostat (LFS), edat_lfse_03 Data by country of birth: Eurostat (LFS), edat_lfse_9912
Participation of adults in learning	Data for this EU-level target is not available. Data collection starts in 2022. Source: EU LFS.
Equity indicator	European Commission (Joint Research Centre) calculations based on OECD's PISA 2018 data
Upper secondary level attainment	Eurostat (LFS), edat_lfse_03
Public expenditure on education as a percentage of GDP	Eurostat (COFOG), gov_10a_exp
Public expenditure on education as a share of the total general government expenditure	Eurostat (COFOG), gov_10a_exp

Annex II: Structure of the education system



Source: European Commission/EACEA/Eurydice, 2022. The Structure of the European Education Systems 2022/2023: Schematic Diagrams. Eurydice Facts and Figures. Luxembourg: Publications Office of the European Union. Notes: every student under 18 who has completed compulsory education, but dropped out afterwards without completing any other courses has to continue her/his education and training until the acquisition of at least one partial VET qualification.

Please email any comments or questions to:
EAC-UNITE-A2@ec.europa.eu

Brussels, 18.11.2022
SWD(2022) 751 final

PART 19/28

COMMISSION STAFF WORKING DOCUMENT

Education and Training Monitor 2022

Accompanying the document

**Communication from the Commission to the European Parliament, the Council, the
European Economic and Social Committee and the Committee of the Regions**

on progress towards the achievement of the European Education Area

{COM(2022) 700 final} - {SWD(2022) 750 final}

Education and Training Monitor 2022

MALTA



The Education and Training Monitor's country reports present and assess the main recent and ongoing policy development at all education levels in EU Member States. They provide the reader with more in-depth insight of the performance of countries with regard to the EU level targets agreed within the EEA. They are based on the most up-to-date quantitative and qualitative evidence available.

Section 1 presents a statistical overview of the main education and training indicators. Section 2 focuses on how the Member State has addressed or is addressing one of its education challenges. Section 3 covers early childhood education and care. Section 4 deals with school education policies. Section 5 covers vocational education and training and adult learning. Finally, Section 6 discusses measures in higher education.

The Education and Training Monitor's country reports were prepared by the European Commission's Directorate-General for Education, Youth, Sport and Culture (DG EAC), with contributions from the Directorate-General for Employment, Social Affairs and Inclusion (DG EMPL).

The document was completed on 30 September 2022

More background data at:

<https://op.europa.eu/webpub/eac/education-and-training-monitor-2022/en/>



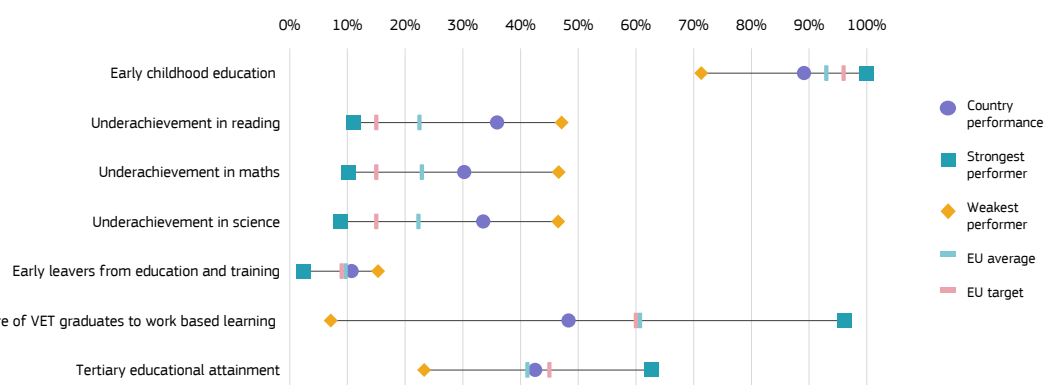
1. Key indicators

Figure 1: Key indicators overview

			Malta		EU	
			2011	2021	2011	2021
EU-level targets			2030 target			
Participation in early childhood education (from age 3 to starting age of compulsory primary education)	≥ 96 %		99.4% ¹³	89.1% ²⁰	91.8% ¹³	93.0% ²⁰
Low achieving eighth-graders in digital skills	< 15%		:	:	:	:
Low achieving 15-year-olds in:	Reading	< 15%	36.3% ⁰⁹	35.9% ¹⁸	19.7% ⁰⁹	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	18.2% ⁰⁹	22.3% ¹⁸
Early leavers from education and training (age 18-24)	< 9 %		18.8% ^b	10.7% ^b	13.2%	9.7% ^b
Exposure of VET graduates to work-based learning	≥ 60 % (2025)		:	48.3%	:	60.7%
Tertiary educational attainment (age 25-34)	≥ 45 %		26.2% ^b	42.5% ^b	33.0%	41.2% ^b
Participation of adults in learning (age 25-64)	≥ 47 % (2025)		:	:	:	:
Other contextual indicators						
Equity indicator (percentage points)			:	25.4 ¹⁸	:	19.30 ¹⁸
Early leavers from education and training (age 18-24)	Native		18.9% ^b	9.4% ^b	11.9%	8.5% ^b
	EU-born		:	:	25.3%	21.4% ^b
	Non EU-born		:	21.1% ^{bu}	31.4%	21.6% ^b
Upper secondary level attainment (age 20-24, ISCED 3-8)			78.9% ^b	88.7% ^b	79.6%	84.6% ^b
Tertiary educational attainment (age 25-34)	Native		25.4%	40.7% ^b	34.3%	42.1% ^b
	EU-born		:	50.1% ^b	28.8%	40.7% ^b
	Non EU-born		37.2%	45.5% ^b	23.4%	34.7% ^b
Education investment	Public expenditure on education as a percentage of GDP		5.6%	5.9% ²⁰	4.9%	5.0% ²⁰
	Public expenditure on education as a share of the total general government expenditure		13.5%	12.8% ²⁰	10.0%	9.4% ²⁰

Sources: Eurostat (UOE, LFS, COFOG); OECD (PISA). Further information can be found in Annex I and at [Monitor Toolbox](#). 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; the equity indicator shows the gap in the share of underachievement in reading, mathematics and science (combined) among 15-year-olds between the lowest and highest quarters of socio-economic status; b = break in time series, u = low reliability, : = not available, 09 = 2009, 13 = 2013, 18 = 2018, 20 = 2020.

Figure 2: Position in relation to strongest and weakest performers



Source: DG Education, Youth, Sport and Culture, based on data from Eurostat (LFS 2021, UOE 2020) and OECD (PISA 2018).

2. A focus on early leaving from education and training

Early leaving from education and training (ELET) is a multifaceted issue and many factors can explain Malta's situation.

Although the rate is still above the EU average (10.7.0% vs 9.7% in 2021), it has decreased by 10.7 pps since 2010¹ with one of the highest percentage drop rates in the EU. Research shows that the interplay of a number of complex factors in the individual situation of each student contributes to the risk of early leaving from education and training. In the Maltese context, favourable labour market conditions in recent years for low-qualified people may have motivated young people to leave education early (Guio, et al. 2018, Ministry for Education and Employment, 2012). This may have been especially the case for students from a low socio-economic background, and boys, who tend to be more attracted by the labour market opportunities (Guio et al. 2018). In 2010, the ELET rate for boys was much higher than for girls (28.3% vs 14.1%). Since then, it has decreased more significantly for boys (-16.3 pps) than for girls (-4.8pps) also due to changes in the labour market. In the past, more low-skilled occupations filled by men were available in the Maltese labour market² (Ministry for Education and Employment, 2012). At the same time, the high level of underachievement of

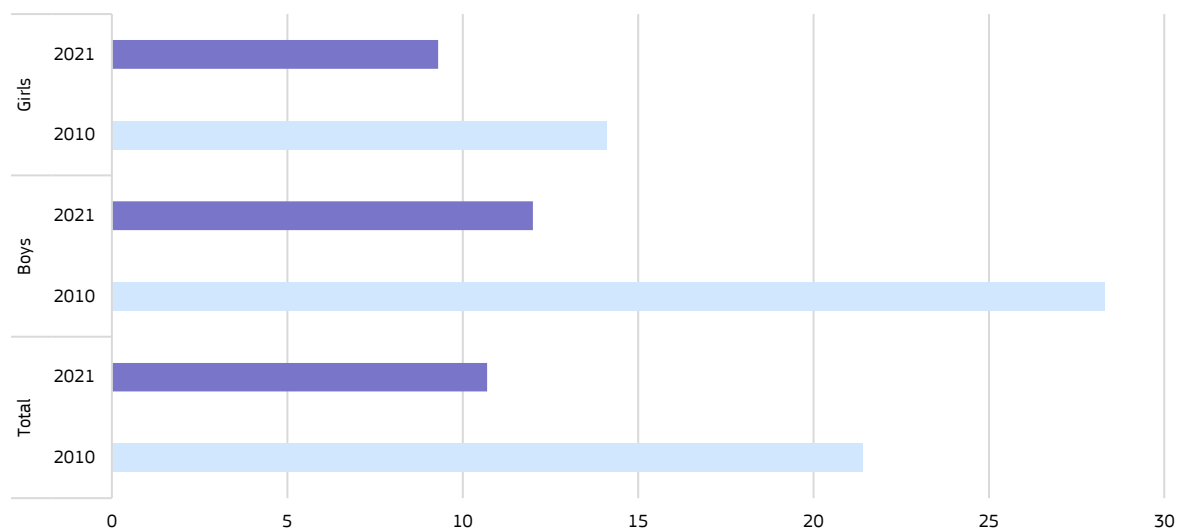
Maltese 15-year-olds and the low level of student well-being (European Commission, 2021) coincides with the high Maltese ELET rate. International research confirms a higher risk of being an early school leaver in the case of high underachievement and low student well-being (Korhonen et al., 2014). An increasing proportion of foreign-born pupils (European Commission, 2021), who require additional help to catch up and to be integrated in school, may also explain high rates of early school leaving in recent years and the gap between Malta-born and foreign-born pupils. A high rate of absenteeism in the past may also have contributed to a higher incidence of ELET. Other causes may be found in school and class environments (Ministry for Education and Employment, 2012 and, 2017). Bullying is an issue which concerns all types of schools and students in Malta (European Commission, 2021) and is one of the reasons for dropping out of education (Ministry for Education and Employment, 2017). The provision of guidance in secondary schools tended to be biased towards the academic path in the past (Ministry for Education and Employment, 2012 and, 2017). This may also have negatively affected decisions on remaining in education and training by less engaged students. Further evidence-based research may help investigate national specificities of the phenomenon, facilitating more targeted actions to support children early on and to address gaps in current provision. The data warehouse project envisaged in the national recovery and resilience plan (European Commission, 2021), which will collect various data about students from the beginning to the end of their educational path, may help in this sense.

Malta has achieved significant improvements in decreasing its ELET rate since 2010. In recent years, several efforts have been made to tackle early leaving from education and training and further decrease the rate in the short- and medium-term. An early school

¹ See also the [NSO press release 168/2021](#) to better understand how the revision of the current educational system and the entry requirements at different levels, which have led to a reclassification by which attainment at ISCED 2 and 3 level is determined, may have influenced the ELET rate and the change of figures between 2020 and 2021. In this regard, those having finished a secondary level of education and obtained at least two O-levels or equivalent have been classified to ISCED 3 rather than ISCED 2.

² Employed male early school leavers represented 76.1% (51% at EU level) of total male early school leavers in 2010 against 57.3% (37%) in the case of girls. This also suggests that there were many employment opportunities for male early school leavers.

Figure 3: Early leavers from education and training, 2010 and 2021 (%)



Source: Eurostat, (EU-LFS), [edat_lfse_14].

leaving unit within the Ministry for Education has been set up to ensure a more coordinated approach to the ELET challenge. Malta has strengthened vocational education and training as it can provide pupils with an alternative to the more academically oriented, traditional school programmes. Vocational subjects have been offered to secondary students since 2011 and, as of 2019, through the 'MyJourney' reform, secondary school students are being offered applied learning subjects as part of an alternative learning programme. In the previous programming period 2014-2020, with the support of European Structural and Investment Funds, vocational education and training infrastructure and courses in compulsory and post-secondary education were redesigned to make them more attractive and relevant to the labour market. Psychosocial services for students and their parents and teacher trainings on ELET and social inclusion have been strengthened throughout the past decade and national evidence shows positive trends on bullying for the past two years. Several second-chance education programmes have been developed for those who disengaged from education or who did not successfully complete the secondary education certificate (e.g. revision

classes, foundation programmes, GEM16+³, and targeted measures such as Embark for Life and Pathways). The free childcare scheme launched in 2014 for all parents and guardians working or studying full-time is another example of a prevention measure at system level to reduce the risk of early leaving from education and training.

Further actions are planned to continue tackling ELET; implementing a whole-school approach may be key to succeeding. The text of the national strategy on early leaving from education and training presented for public consultation in 2021 endorses whole-school approaches and targeted prevention measures directed at at-risk pupils. This may help to ensure a better coordination of the numerous ongoing initiatives. The government aims at addressing causes of absenteeism, which is often regarded as a first sign of disengagement and leaving education early. According to Eivers (2020), data on attendance are not systematically used to identify general patterns of absence as the issue is mainly treated as an individual problem and not

³ [GEM16+ Education Project \(gov.mt\)](https://gov.mt/gem16plus)

as a structural problem. Data are not sufficiently used to inform whole-school responses that engage the entire school community to reduce absenteeism. The government plans to strengthen communication between teachers and parents to ease children's transition to middle and secondary schools and build trust and mutual understanding, which stands at the core of the whole-school approach (European Commission, 2015). There is also the intention to strengthen vocational programmes such as the Alternative Learning Programme, which is a pull-out intervention measure for students who do not plan to sit secondary education certificate examinations or who are low academic achievers and/or habitual absentees. The government also aims at extending the free childcare scheme to all parents, regardless of whether they work or not (Abela, 2022). This may favour access of disadvantaged children who are most likely to benefit from participation in childcare. Effects on school engagement and completion rates would take a long time to appear but, provided that early childhood education and care provision is of high quality, are likely to be significant.

3. Early childhood education and care

Participation in early childhood education (ECEC) continues to decrease for children older than 3 years. The proportion of children over 3 in early childhood education stood at 89.1% in 2020, compared with an EU average of 93%. The rate has decreased by 7.8 pps since 2015, the highest decrease in the EU. In 2020, the proportion of children below 3 in formal childcare also decreased dramatically, by 8.6 percentage points⁴ since 2019. This latter result may be explained by the COVID-19 pandemic and the health restrictions in place in childcare centres; these may have affected provision and participation.

⁴ Data on participation in formal childcare was collected in October 2020.

Efforts to ensure high quality ECEC are underway. In the 2022/2023 school year, after being put on hold due to COVID-19 pandemic, reform of the learning outcomes framework will continue. As part of this, teacher training on the new curriculum for the early years also resumed. The new national standards for private and public childcare centres for children below 3 years have been in place since October 2021. An effective implementation of the new policy framework for ECEC, published in 2021, envisages evidence-based monitoring and evaluation. This may help to improve quality across the sector and plan more effective investments. The government envisages to employ teaching assistants also in childcare centres; they will help identify and address learning difficulties as early as possible. While welcomed in principle, research has pointed to the need to well-prepare and evaluate the deployment of teaching assistants to achieve results. (Higgins, 2014; Sharma and Salend, 2016; Sharples, Webster and Blatchford, 2015). Evaluations of the role of learning support educators in Malta's schools and their impact on student outcomes may also help to better understand what to plan at the level of ECEC. The Institute for Education will offer ECEC staff more opportunities to continue their professional learning to get a higher qualification on a part-time basis.

4. School education

Implementation of the 2017 learning outcomes framework has started at primary level; the government nevertheless plans to revise the competence-based curriculum. Implementation at higher education level started in 2018/2019 with the development of new syllabi (European Commission, 2019). The curriculum reform was intended to lead to more school autonomy and a more learner-centred approach (Caruana, 2019). The government (Abela, 2022) plans to update the curriculum with the objective of reacting to the need of equipping students with skills more relevant to the labour market. Competence-based curricula can help improve student achievements (European Commission, 2022d), if accompanied by appropriate preparation of schools and teachers.

Competence-based teaching requires schools to adopt new approaches, such as cross-curricular planning and competence-based student assessments that capture students' abilities to address complex problems. The shift to competence involves changes in pedagogical approaches to teaching, learning and assessment (European Commission, 2022e). Therefore, curricular reforms should be carefully designed to leave time for teachers and schools to prepare for further changes. Buy-in, and the active engagement of teachers and schools as enactors and mediators of the reform, are key factors for the success.

Malta aims to focus more on the development of creativity and critical thinking and to give more weight to coding as a key topic at primary and secondary level.

The subject ICT C3 was introduced at lower secondary level in 2018/2019, and in 2022/2023 at grade 11 in upper secondary level. Currently, it is a separate compulsory subject and includes coding, digital ethics, blockchain and digital safety among others. (European Commission/ EACEA / Eurydice, 2022). Making coding a key subject at all levels will require ICT teachers with advanced digital competence and appropriate pedagogical skills. Teacher shortages may arise as the demand for ICT graduates is already high in the Maltese labour market (European Commission, 2022c) and salaries and careers in the private sector tend to be much more attractive.

Making the teaching profession more attractive is one of the government's aims.

Research shows a positive link between teacher quality and student performance (Hanushek, Schwerdt, Wiederhold et al., 2015; Chetty, Friedman & Rockoff, 2014). In the Maltese context, where the proportion of 15-year-olds underachieving in all three PISA (Programme for International Student Assessment) domains combined is among the highest in the EU (22.6% vs 13.2%), attracting effective teachers and ensuring high teaching quality is key to addressing the basic skills challenge. Since 2014/2015, teachers' starting salaries have increased by about 10% as the result of collective bargaining

(European Commission/EACEA/Eurydice, 2020) and further increases are planned in the next 5 years. This may explain the increase by 10.4 pps in the share of new entrants in education fields at bachelor level between 2015 and 2020. Although starting salaries are important in attracting new teachers, a significant salary progression may also contribute to improving the attractiveness of the teaching profession, both for serving teachers and for potential candidates. However, salary progression shows only modest salary increases over a short time period (European Commission, 2019 and European Commission/EACEA/Eurydice, 2021b). Further financial incentives are also considered for the induction phase during which novice teachers will start getting a salary. While this shows a high commitment to improving the attractiveness of the profession, teacher working conditions also greatly affect the attractiveness of the profession and the quality of teaching in classes. The 2018 Teaching and Learning International Survey highlights that a high proportion of teachers consider that they do not receive sufficient incentives in continuing professional development, (European Commission, 2019). This may be due to the fact that participation in continuing professional development is not required for career progression and schools are not required to develop a CPD planning (European Commission/EACEA/Eurydice, 2021a), which may balance individual and organisational learning needs and help to better target teacher and student needs.

Malta plans to introduce targeted additional funding for schools with disadvantaged students.

Currently, the allocation of funding is student-focused: Through the Scheme 9, students from disadvantaged background are provided with basic educational necessities such as uniforms and have access to extracurricular activities. The objective for the future is to provide additional support to schools with the largest number of pupils coming from a disadvantaged background. Such support will include a larger allocation of funds and more resources to carry out targeted programmes (Abela, 2022). Currently, Malta is one of the few EU Member States in which such resources are not allocated (European

Commission/EACEA/Eurydice, 2020a). A more systematic and systemic collection of data on student socio-economic backgrounds at school and student level may help the Ministry for Education to be better able to evaluate how funds – and programmes – might be best targeted (i.e. at school or student level) to support students from a disadvantaged background, (European Commission, 2020).



Box 1: Investing in learning environments

Malta has been heavily investing in its education infrastructure through EU funds and the national budget. Although causal evidence is still limited, recent literature suggests that good architectural and educational design may lead to improved learning outcomes for students by influencing teacher and student behaviour, morale and practices. The share of public expenditure on education spent on buildings and fixed assets increased by 62% between 2015 and 2020, and was 12.8% of total education expenditure in 2020 (EU: 7.2%). Further investments are planned for the coming years at all education levels (Abela, 2022). They will cover schools, science laboratories, sports facilities, libraries and facilities for cultural activities. These investments are partly due to the dramatic increase in the student population seen in recent years⁵. However, they also respond to other needs: first, making public infrastructure greener and more energy efficient as also envisaged in the national recovery and resilience plan such as the near-carbon neutral primary school in Msida as well as the renovation of Ġħaxaq and Nadur Primary Schools; improving attractiveness of vocational education (European Commission, 2021); making learning spaces more inclusive as in the case of the new multisensory rooms for students with special needs (European Commission, 2021) included in the national recovery and resilience plan; and adapting educational buildings to new technologies and use of ICT for teaching

⁵ The number of students enrolled in the Maltese education system, from early childhood education (starting at 3 years old) to tertiary education, increased by 6.8% between 2015 and 2020, compared with 5.0% at EU level.

(European Commission, 2022b). Data on school infrastructure is centrally collected by the Foundation for Tomorrow's Schools. This may inform the annual assessment of investment gaps, which is usually carried out through stakeholder consultations (European Commission, 2022b).

5. Vocational education and training and adult learning

Despite recent investments in infrastructure and quality, the take-up of vocational education and training (VET) at upper secondary level is stagnant and below the EU average. Despite a high employment rate of recent VET graduates (89.0% vs 75.7% at EU level in 2020), the share of learners enrolled in 2020 in upper secondary VET in Malta remained at 27.6%, from 27.7% in 2019 and 28.5% in 2018, still well below the EU average (48.7% in 2020). Malta's main provider for vocational education and training, the Malta College of Arts, Science & Technology (MCAST), adopted in 2021 a new strategic plan covering the period 2022-2027. It includes several targets such as providing work-based training to all students and contributing to a 10% increase in adult-learning participation by 2027. The share of VET graduates benefiting from exposure to work-based learning during their vocational education and training was 48.3% in 2021, below the EU average (60.7%). MCAST also inaugurated a new resource centre hosting an applied research and innovation centre, a library, classrooms and an IT lab, co-funded by the European Regional Development Fund. The government plans to make the location available to voluntary organisations for educational and social activities.

Malta has one of the highest shares of low-skilled adults whose participation in learning remains low despite their greater needs. The proportion of people aged between 15 and 64 with a low level of education in 2021, while decreasing, stood at 36.1% compared with 24.6% for the EU. While participation in learning for all adults is above the EU average (13.9% vs 10.8%),

the rate for the low-skilled remains low (3.8%) in 2021, despite higher needs for upskilling and reskilling. To improve take-up, the Directorate for Research, Lifelong Learning and Employability has further developed guidance provisions in adult-learning centres and launched a basic skills assessment tool, the Skills Checker, developed as part of the Erasmus project Check In, Take Off (CITO). In 2022, the 'e-college', a digital learning platform for adults, is expected to be launched as part of Malta's national recovery and resilience plan. It aims to attract 4 800 learners before the end of 2024.

Malta is in the process of adopting key policy documents on adult learning. Following a consultation process in 2021, Malta plans to adopt in 2022 the National Strategy for Lifelong Learning 2020-2030, focusing on opportunities for low-skilled adults, inclusion, enhanced quality of learning, guidance and digital education. The Maltese Upskilling Pathways working group is also in the process of drafting of a basic skills framework that is a part of the national recovery and resilience plan, which is expected to enhance the quality of the learning offer. In October 2021, Malta published a renewed employment policy that includes relevant recommendations for the upskilling and reskilling of workers, such as launching a skills census, revamping the Skills Policy Council, developing a transversal skill set certification and an industry skills framework for all economic sectors. The policy document also calls for greater recognition of workplace learning, building capacity for recognition of prior learning, and improved career guidance. Malta has set a 2030 target for 57.6% of adults to be in learning every year, a huge increase from the 32.8% rate in 2016.



Box 2: Training for employment

Co-financed by the European Social Fund 2014-2020, the 'training for employment' project covers several initiatives - the work placement scheme, the work exposure scheme, the traineeship scheme, the developing skills scheme, a research study to define arduous and hazardous jobs in Malta, and the development of an occupational handbook - to facilitate access to employment through the development of skills of the working age population. Through the work placement, work exposure and traineeship schemes, employers, in partnership with Jobsplus - Malta's public employment service - are provided with the opportunity to train their prospective future employees. For all three schemes, participants are paid a training allowance calculated on the national minimum wage, payable by Jobsplus. All three schemes are available for both registered unemployed people and inactive jobseekers. Under the 'training for employment' project, from January 2016 until the end of December 2021, 3 128 trainees benefited from the work exposure scheme, 154 trainees benefited from the work placement scheme, and 651 trainees from the traineeship scheme. In addition, 4 101 individuals were eligible for funding under the 'developing skills' scheme, from March 2017 to end 2021. The 'training for employment' project will be extended until 2023.

More information available at: <https://jobsplus.gov.mt/>

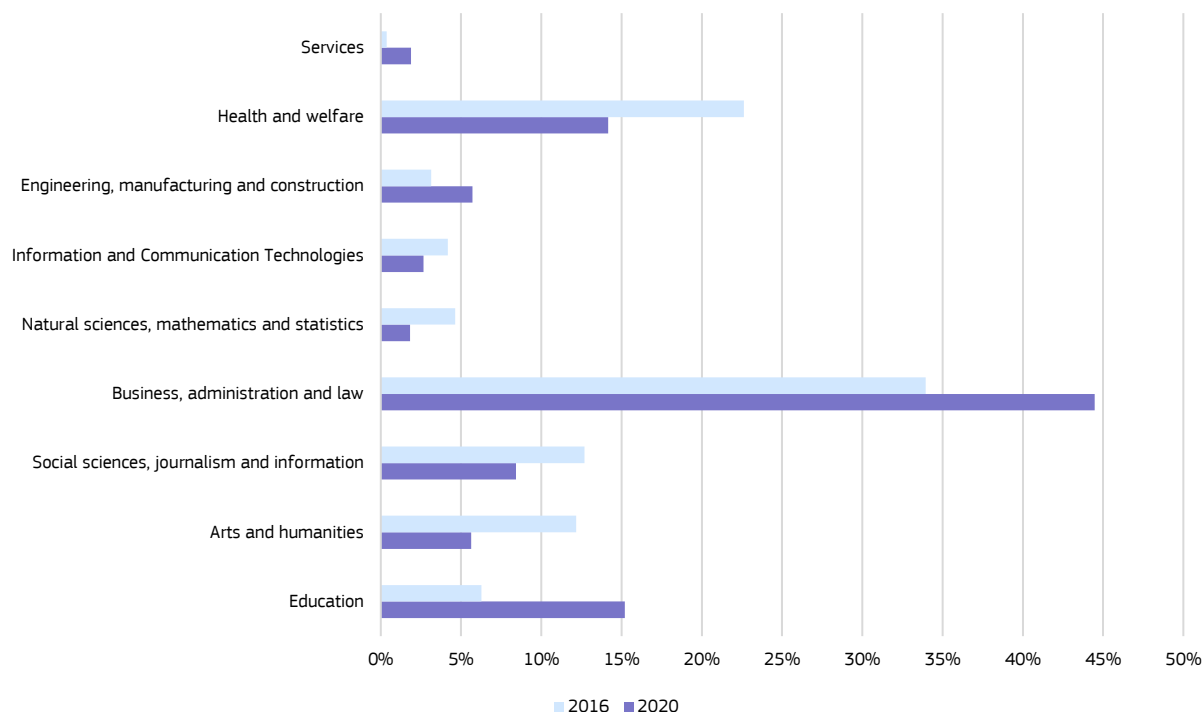
6. Higher education

Better targeted funding may help improve the responsiveness of the higher education system.

The proportion of 25-34-year-olds with tertiary education increased by 2.4 pps over the previous year to 42.5% in 2021. The attainment rate among the EU-born population from outside Malta (50.1%) surpasses that of the Maltese population (40.7%) and it is also relatively high among the non-EU-born (45.5%). The employment rate of people with tertiary qualification remained⁶

⁶ The number of new entrants has increased by 8 people in ICT fields and by 37 people in health fields. Eurostat, educ_uoe_ent02.

Figure 4: New entrants at ISCED 7 level, 2016 and 2020 (%)



Source: Eurostat, (UOE) [educ_uoe_ent02].

high (94.7%) in 2021 and above the EU average (84.9%) despite the COVID-19 outbreak. It still continues to be a key factor in attracting qualified people to Malta (Central Bank of Malta, 2021). In order to incentivise students to continue their studies, the government aims at strengthening existing scholarships and the tax credits programme for students at master's and doctoral level. While this measure may help increase the total number of people with more specialised and higher competence levels, it may need to be better targeted to improve the responsiveness of tertiary education to labour market needs more effectively, and to ensure that high investments yield improved outcomes. Between 2016 and 2020, the number of new entrants already increased from 1 340 to 2 401 at master's level and from 1 to 33 at doctoral level. The increase mainly concerned services and education fields: the number of new entrants has increased nine fold and four fold respectively, while entrants to ICT and health fields have remained practically the same despite the high demand of ICT specialists and future needs (European Commission, 2022c). Moreover, entrants to ICT

fields only represented 2.7% of total new entrants in 2020, while it was 4.2% in 2016 (Figure 4). However, the share of firms reporting hard-to-fill vacancies for jobs requiring ICT specialist skills is above the EU average - 66.1% vs 55.4% in 2020 (European Commission, 2022c).

Further improvement in student mobility is one of the objectives of the government.

Learning mobility has been found to be associated with benefits such as future mobility, higher earnings and lower unemployment. International student mobility could also have benefits at country level. Mobile students can contribute to knowledge absorption, technology upgrading and capacity building, not only in the host country but also in their home country if they return home after studies or maintain strong linkages with people at home (European Commission, 2018). In 2020, the share of outward mobile students⁷ was one of the highest in the EU, standing at 7.5%

⁷ For further details on international mobility, see 2022 Education and Training Monitor – Comparative report

compared with 4.2% at EU level. The full portability of grants from which Maltese students can benefit lightens the costs of mobility. Mobility is incorporated in the strategic plan of the University of Malta and increasing student mobility is one of the targets to be achieved by 2027 in the MCAST Strategic Plan 2022-2027. Further increases may be achieved by taking into account the needs of students from a low socio-economic background. Currently, Malta does not have a national policy covering mobility with a focus on students from disadvantaged groups (European Commission/ EACEA/ Eurydice, 2020b and 2022).

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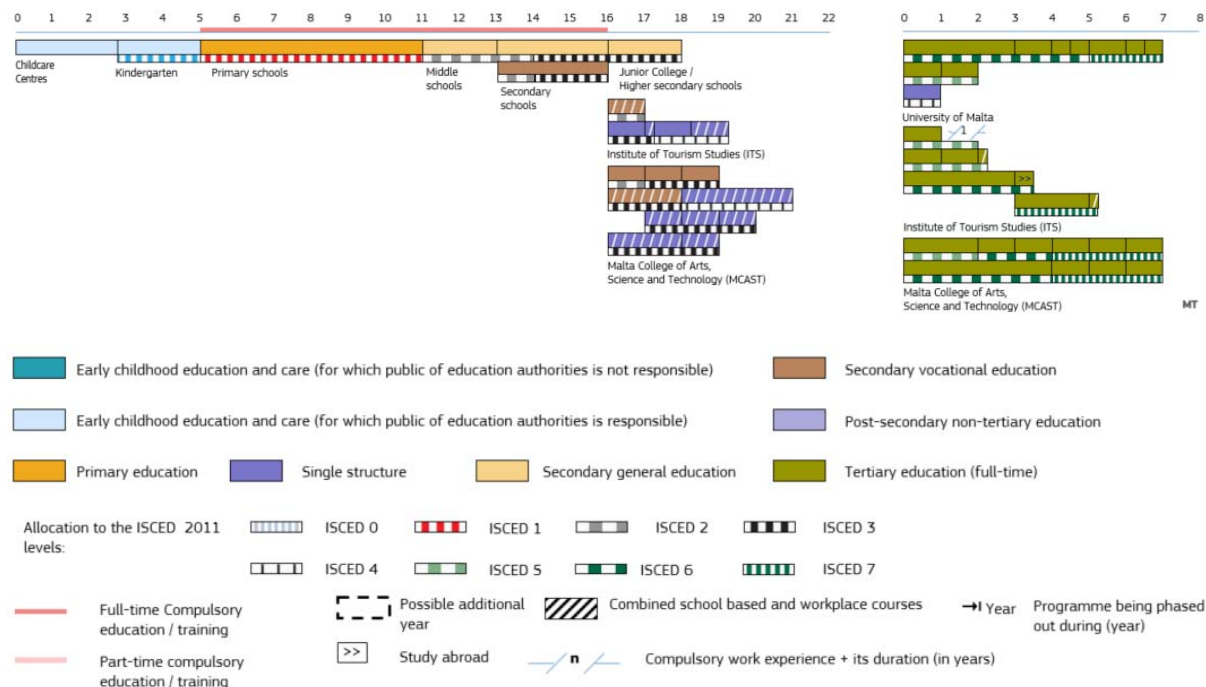
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Annex I: Key indicators sources

Indicator	Source
Participation in early childhood education	Eurostat (UOE), 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: Eurostat (LFS), edat_lfse_14 Data by country of birth: Eurostat (LFS), edat_lfse_02
Exposure of VET graduates to work based learning	Eurostat (LFS), edat_lfs_9919
Tertiary educational attainment	Main data: Eurostat (LFS), edat_lfse_03 Data by country of birth: Eurostat (LFS), edat_lfse_9912
Participation of adults in learning	Data for this EU-level target is not available. Data collection starts in 2022. Source: EU LFS.
Equity indicator	European Commission (Joint Research Centre) calculations based on OECD's PISA 2018 data
Upper secondary level attainment	Eurostat (LFS), edat_lfse_03
Public expenditure on education as a percentage of GDP	Eurostat (COFOG), gov_10a_exp
Public expenditure on education as a share of the total general government expenditure	Eurostat (COFOG), gov_10a_exp

Annex II: Structure of the education system



Source: European Commission/EACEA/Eurydice, 2022. The Structure of the European Education Systems 2022/2023: Schematic Diagrams. Eurydice Facts and Figures. Luxembourg: Publications Office of the European Union.

Please email any comments or questions to:
EAC-UNITE-A2@ec.europa.eu



Brussels, 18.11.2022
SWD(2022) 751 final

PART 20/28

COMMISSION STAFF WORKING DOCUMENT

Education and Training Monitor 2022

Accompanying the document

**Communication from the Commission to the European Parliament, the Council, the
European Economic and Social Committee and the Committee of the Regions**

on progress towards the achievement of the European Education Area

{COM(2022) 700 final} - {SWD(2022) 750 final}

Education and Training Monitor 2022

NETHERLANDS



The Education and Training Monitor's country reports present and assess the main recent and ongoing policy development at all education levels in EU Member States. They provide the reader with more in-depth insight of the performance of countries with regard to the EU level targets agreed within the EEA. They are based on the most up-to-date quantitative and qualitative evidence available.

Section 1 presents a statistical overview of the main education and training indicators. Section 2 focuses on how the Member State has addressed or is addressing one of its education challenges. Section 3 covers early childhood education and care. Section 4 deals with school education policies. Section 5 covers vocational education and training and adult learning. Finally, Section 6 discusses measures in higher education.

The Education and Training Monitor's country reports were prepared by the European Commission's Directorate-General for Education, Youth, Sport and Culture (DG EAC), with contributions from the Directorate-General for Employment, Social Affairs and Inclusion (DG EMPL).

The document was completed on 30 September 2022

More background data at:

<https://op.europa.eu/webpub/eac/education-and-training-monitor-2022/en/>



1. Key indicators

Figure 1: Key indicators overview

			Netherlands		EU	
			2011	2021	2011	2021
EU-level targets			2030 target			
Participation in early childhood education (from age 3 to starting age of compulsory primary education)	≥ 96 %		94.1% ¹³	91.7% ²⁰	91.8% ¹³	93.0% ²⁰
Low achieving eighth-graders in digital skills	< 15%		26.4% ¹³	:	:	:
Low achieving 15-year-olds in:	Reading	< 15%	14.3% ⁰⁹	24.1% ¹⁸	19.7% ⁰⁹	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	18.2% ⁰⁹	22.3% ¹⁸
Early leavers from education and training (age 18-24)	< 9 %		9.2%	5.3% ^b	13.2%	9.7% ^b
Exposure of VET graduates to work-based learning	≥ 60 % (2025)		:	92.1%	:	60.7%
Tertiary educational attainment (age 25-34)	≥ 45 %		40.0% ^b	55.6% ^b	33.0%	41.2% ^b
Participation of adults in learning (age 25-64)	≥ 47 % (2025)		:	:	:	:
Other contextual indicators						
Equity indicator (percentage points)			:	14.5 ¹⁸	:	19.30 ¹⁸
Early leavers from education and training (age 18-24)	Native		9.2%	5.0% ^b	11.9%	8.5% ^b
	EU-born		12.9%	10.8% ^b	25.3%	21.4% ^b
	Non EU-born		10.0%	7.5% ^b	31.4%	21.6% ^b
Upper secondary level attainment (age 20-24, ISCED 3-8)			78.1% ^b	87.5% ^b	79.6%	84.6% ^b
Tertiary educational attainment (age 25-34)	Native		42.0%	56.2% ^b	34.3%	42.1% ^b
	EU-born		41.9%	53.3% ^b	28.8%	40.7% ^b
	Non EU-born		25.2%	51.5% ^b	23.4%	34.7% ^b
Education investment	Public expenditure on education as a percentage of GDP		5.5%	5.3% ²⁰	4.9%	5.0% ²⁰
	Public expenditure on education as a share of the total general government expenditure		11.8%	11.0% ²⁰	10.0%	9.4% ²⁰

Sources: Eurostat (UOE, LFS, COFOG); OECD (PISA). Further information can be found in Annex I and at [Monitor Toolbox](#). 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; the equity indicator shows the gap in the share of underachievement in reading, mathematics and science (combined) among 15-year-olds between the lowest and highest quarters of socio-economic status; b = break in time series, u = low reliability, : = not available, 09 = 2009, 13 = 2013, 18 = 2018, 20 = 2020.

Figure 2: Position in relation to strongest and weakest performers



Source: DG Education, Youth, Sport and Culture, based on data from Eurostat (LFS 2021, UOE 2020) and OECD (PISA 2018).

2. A focus on tackling teacher shortages

The Netherlands faces growing teacher shortages in all sectors.

The share of online vacancies¹ for teaching posts in primary education rose from 6% in 2018/2019 to 8.6% in 2020/2021 (Inspectorate, 2022). In secondary education, the increase over the same period was from 10.5% to 16.9%. Vacancies are much higher in the five biggest urban areas (G5: Amsterdam, The Hague, Rotterdam, Utrecht and Almere). Here the vacancy rate was 14.3% in primary schools against 8% outside the G5. The shortage might be even bigger as not all schools publish vacancies online when they have unfilled posts. There is also a shortage of school heads: 12.9% in primary schools and 11% in secondary schools. Shortages are also more pronounced in special education, in schools where pupil weighting is higher² and in

schools that were assessed as very weak by the Inspectorate. The lack of qualified staff varies by subject and is the most pronounced for mathematics, IT, science, Dutch and foreign languages (Figure 3). Shortages often oblige schools to use emergency solutions such as the employment of unqualified teachers (OCW, 2021). Although the financing system should allow schools with more at-risk populations to hire more staff, it is unclear to what degree this possibility has been used and to what effect (Driessen, 2019).

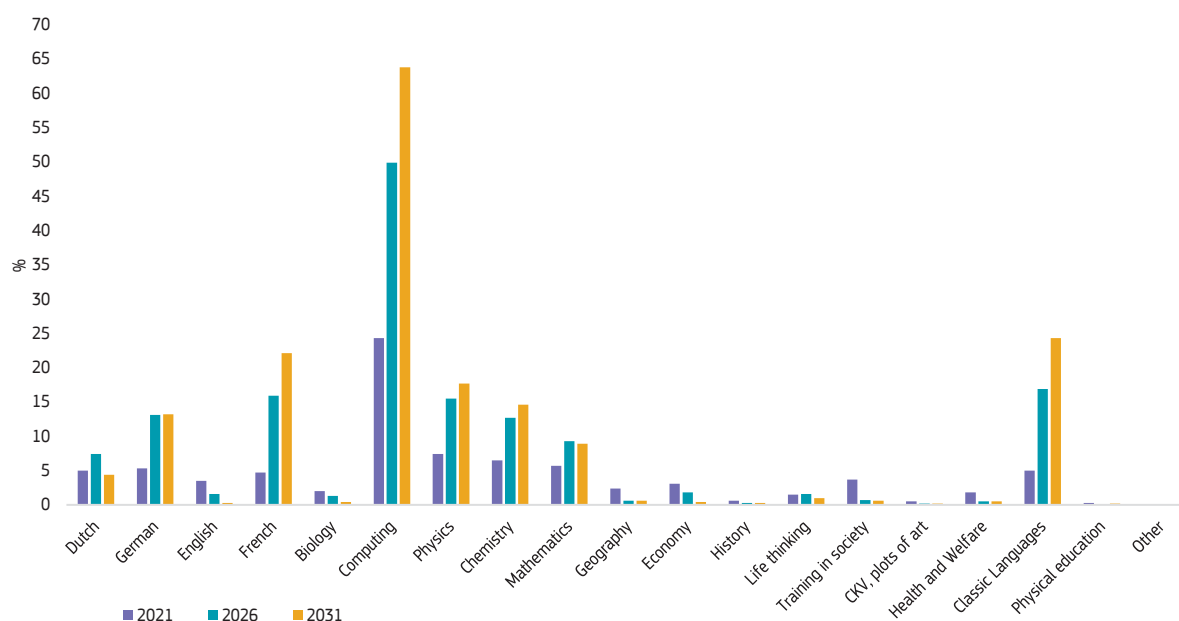
The Dutch government announced new measures and investments to make the teaching profession more attractive. The Education Agreement of April 2022 between the Ministry of Education, Culture and Sciences (OCW) and the trade unions and sectoral

¹ The number of vacancies divided by the total number of posts.

² The pupil weighting system allocates additional budgets to schools with pupils that are at risk of developing severe learning deficits right from their first day of

school. Since 2019/2020, the pupil weight indicators have been: educational level of both father and mother; country of birth of mother; length of stay in the Netherlands of mother; mean level of education of all mothers at school; whether the parents are repaying debt.

Figure 3: Forecast of unfilled teacher positions by subject as percentage of the total available positions by subject (2021-2031)



Source: Trendrapportage Arbeidsmarkt Leraren po, vo en mbo 2021

Organisations involves closing the salary gap between primary and secondary school teachers, with the government setting aside EUR 919 million each year for this on a regular basis (OCW, 2022a). In primary education, new salary scales have also been introduced in the image of secondary education so that pay reaches the same level in the two sectors. The agreement also contains commitments for additional funding to reduce the workload in secondary education (EUR 300 million) and more funding for continuous professional development (EUR 118 million). Additional funding for schools with a disadvantaged profile has become available so they can offer teaching staff a more attractive salary. OCW and the sectoral representatives in higher education have agreed to make initial teacher education more flexible for people who come from jobs in other areas. This will include the recognition of previously acquired skills, a modular curriculum and new academic training routes in primary education.

The Teacher Scholarship programme has been found to promote professionalisation.

In addition to regular continuous professional development, teachers can apply for a teacher scholarship. This enables them to obtain a Bachelor's or Master's degree so they can improve their qualifications. An evaluation of the scheme in terms of efficiency and effectiveness has yielded positive feedback (CAOP, MOOZ en Centerdata, 2022). On average, nearly 80% of all scholarship recipients have completed their education with a degree. School leaders indicated that the scheme promotes the professionalisation of teachers within their organisation.

3. Early childhood education and care

Participation in early childhood education and care (ECEC) from age 3 is below the EU average; recent investment aims to improve quality and participation time. From age 3, 91.7% of children in the Netherlands participate in ECEC, below the EU average (93.0%) and the EU-level target (96%) set for 2030. According to the

2020 sectoral report for ECEC (Kinderopvang, 2021), staff shortages is currently the biggest concern, both in terms of teaching staff and qualified personnel for other positions. To make up for the delays in pre-school education linked to the pandemic, municipalities receive EUR 300 million from the national education programme both in 2021/2022 and 2022/2023 (Kinderopvang total, 2021).

A compensation scheme is being worked out for the victims of discrimination in childcare support.

A parliamentary committee report of December 2020 revealed that the administration used unduly extra scrutiny with families from an immigrant background and claimed back childcare support payments from some 26 000 parents between 2013 and 2019. This resulted in severe financial problems for these families. The government apologised for the tax office's methods and set aside more than EUR 500 million in compensation, around EUR 30 000 for each family. The government eventually resigned in January 2021, assuming political responsibility for the scandal. The compensation scheme is still being finalised and is expected to start from the beginning of 2023. The new cabinet has decided to reform the childcare support system: support will gradually increase to cover 95% of childcare costs and will be paid directly to the childcare facility instead of to the parents.

The early childhood education scheme for disadvantaged children helps reduce learning gaps.

This scheme³ uses a specially developed programme. It is mainly intended to stimulate the cognitive, socio-emotional and motor development of children from around 2 years old until they start primary school. Targeted children either have (i) a migration background; (ii) parents with low education levels; (iii) families who do not speak Dutch at home; or (iv) a combination of the above. A national study showed that the educational

³ Early childhood education (Voor en vroegschoolse educatie) is part of the policy to eliminate educational disadvantages. It aims to help toddlers with a possible language or other developmental delay catch up and start primary school without any delay.

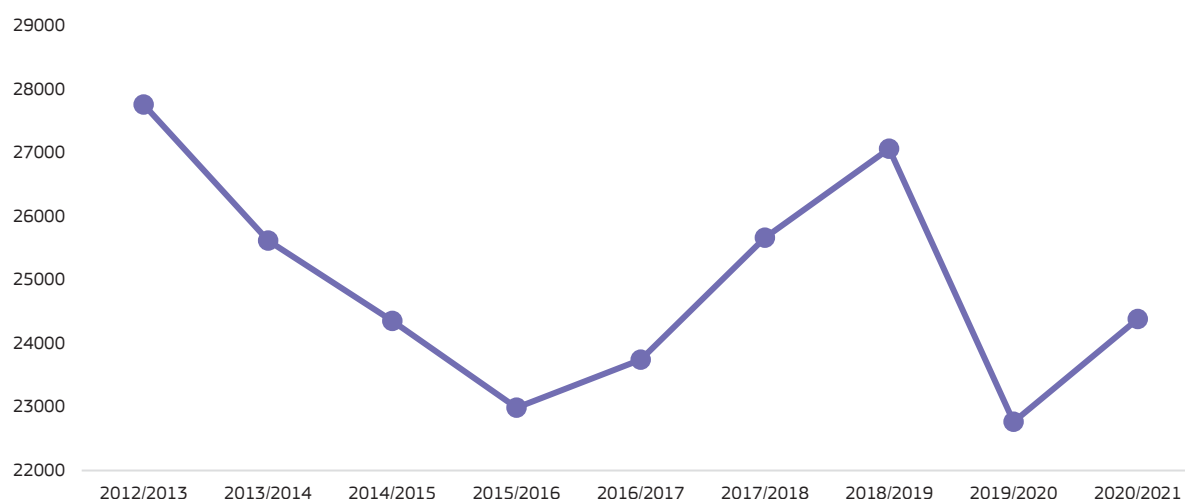
disadvantage of participating children compared to non-target group children decreases during pre-school. The gap observed by the end of pre-school is smaller, although still significant. Nevertheless, participating children catch up in particular on vocabulary, verbal short-term memory and selective attention. The study also showed that development at a younger age, in the pre-school period, is greater than at a later age in the early years of schooling and that the programme also has positive effects in the medium and long term (Veen and Leseman, 2022). There is international evidence that participation in a pre-school education scheme contributes in the long term to higher educational attainment, better labour participation, higher salaries and a healthier lifestyle as adults (Havnes and Mogstad, 2009; Thompson, 2018).

4. School education

The national education programme to compensate for the learning loss linked to the pandemic was extended by 2 years. This extraordinary additional investment of

EUR 8.5 billion was launched in February 2021 at all education levels. Of the total amount, approximately EUR 5.8 billion is for school education, and EUR 2.7 billion for vocational training and higher education. Schools with a higher proportion of disadvantaged pupils receive proportionally more money. In February 2022, the programme was extended until the school year 2024/2025; the allocations per secondary school pupil have been increased and the monitoring of the use of the funds has been strengthened (OCW, 2022b). Schools were requested to carry out a 'school scan' and on that basis to choose activities for the next years from a list the government published. Schools are responsible for the design, implementation and monitoring of the projects. In addition, the Netherlands will invest EUR 180 million from the Recovery and Resilience Facility to establish a National Education Laboratory for artificial intelligence (AI); support secondary school pupils in their final year and the integration of newly arrived migrants in education and provide disadvantaged learners with IT equipment (Government, 2022b).

Figure 4: Dropouts from education, 2012-2021⁴



Source: <https://www.ocwincijfers.nl/themas/voortijdig-schoolverlaten>

⁴ Data for 2021 is not final yet.

The share of early school leavers has dropped to a historical low. The Netherlands has already reached the EU-level target (less than 9%) for early leavers from education and training, and this decreased further in 2021 to 5.3%. However, the absolute number of young people who left education without an upper secondary qualification in 2020/2021 increased by more than 1 600 from the previous year to 24 385. The related target set in the regional strategy against early school leaving for 2020-2024 is to reduce the number of dropouts during a school year to below 20 000. Most early leavers dropped out of vocational education and training (VET). According to the Ministry of Education, the underlying reasons include mental problems linked to the pandemic and the fact that due to the cancellation of the central 'end of primary' exam, there were many new entrants to VET who would have not tried it otherwise (OCW, 2022c).

The proportion of young people aged 15-29 who are not in education, employment, education or training (NEETs) is one of the smallest in Europe. In 2021, the Netherlands had a 5.5% share of NEETs, the lowest across Europe (EU average 13.1%)⁵. However, young graduates with a non-western migration background are less often in employment and are more affected by the coronavirus crisis than their peers without a migration background (Inspectorate, 2022). This same group also faces labour market discrimination, including during their studies when finding an internship. To this end, the government has launched an action plan to combat internship and labour market discrimination.

Basic skills and key competences have deteriorated since the outbreak of the pandemic. At the end of 2020/2021, students in primary education performed less well at reading comprehension, mathematics and spelling than before the pandemic (Inspectorate, 2022). There was also a decline in all forms of secondary education. The following pupil groups faced the

biggest challenges in learning: pupils with parents having a lower education attainment, pupils from single-parent families or families with low incomes. Learning delays were on average lower in large schools. School leaders and administrators are, however, more concerned about the socio-emotional well-being of students than about their cognitive development. There is evidence of an increase in motivation problems, loneliness, stress, anxiety and sadness, especially among VET students (Inspectorate, 2022).

The government launched a new programme to improve basic skills. Over the long term, a downward trend in pupils' basic skills has been observed in various national and international surveys, including the OECD Programme for International Student Assessment (PISA). In the 2022 Coalition Agreement, the cabinet committed itself to investing EUR 1 billion each year in education quality (Government, 2022a). Against this background, it launched a 'basic skills master plan' for early childhood education, primary, secondary and vocational education in May 2022. The plan promotes Dutch reading and writing skills, mathematics, citizenship education and digital literacy. While the details of the plan will be defined at a later stage, funding is available for schools that already wish to start related activities from September 2022.

The diversity of primary school tests and compensatory measures in secondary school exams make comparisons with earlier years and between schools difficult. Unlike in 2020, the final tests in primary and special education did take place in 2021. Central exams in secondary schools were also held, with a number of adjustments linked to the exceptional circumstances. This makes it difficult to compare the results with previous years. Despite an overall decline in Dutch and maths skills, more pupils succeeded than in 2018/2019 thanks to the 'thumb rule' (the possibility of not including one of the exam subjects in the final result). Exam success increased particularly among pupils with a non-western migration background (91% versus 86% in 2019) (Inspectorate, 2022). In primary education, there used to be one single final test,

⁵ [EDAT_LFSE_18]

which gave an overview of the performance of the system. In 2015, the market was opened to several test providers, which made new standardisation efforts necessary in 2022, to keep results comparable.

Digital education is profiting from further investment. During the pandemic, the government promoted the development of online learning by providing additional financial support and digital devices to both schools and households in need. Through the Dutch recovery and resilience plan an additional EUR 24 million is invested to equip pupils with laptops or tablets in primary and secondary education. The ongoing curriculum reform in primary and secondary education envisages a more comprehensive approach to digital literacy education, in which coding is taught alongside media literacy, information and computing skills (European Commission, 2022a). In 2021, the government allocated EUR 80 million for setting up a National Education Lab for Artificial Intelligence (AI) to use AI technology for educational purposes in a safe and ethical manner. The project, whose first half will be financed from the Recovery and Resilience Facility, will bring together schools, entrepreneurs and students and allow participating schools to access well-developed public research infrastructure on AI for the first time in the Netherlands. The interested partners will start developing AI technology to improve the quality of education and integrate the use of technology in the education curricula, while adhering to ethical and responsible usage principles. Thanks to the National Growth Fund, another EUR 140 million will be invested in the digitalisation impulse education programme, in which educational institutions work together to improve the quality of education, make it more flexible and improve the digital skills of teachers and learners. This programme will benefit from an additional investment of EUR 209 million under the Dutch recovery and resilience plan.

Box 1: Services for the integration of newly arrived migrants in education have been extended in the face of the Ukrainian crisis.

In the Netherlands, newly arrived migrants and refugees are usually placed in separate classes for 1-2 years. The focus is on the language of schooling; teaching is provided by teachers specialised in teaching the language of schooling as a second language. Moreover, it is recommended that, within this approach, the first language be taught and used for the teaching of other curriculum subjects. Learners attending separate classes can obtain additional learning support if needed, and they generally also spend a certain amount of time (1 day a week or certain school subjects such as arts, music and sports) in regular classes with other peers (European Commission, 2022b). These classes prepare pupils for state education.

In September 2022, there were around 21.000 pupils enrolled in primary and secondary education who had arrived from Ukraine. As there is currently not enough capacity in normal schools and preparatory classes for them, temporary education facilities were opened in April. Their curriculum content varies, but must meet certain requirements. At least part of it must be focused on Dutch as a second language, and another part on other subjects, which must include at least mathematics, citizenship education and physical education. A third part of the curriculum content can be used for other education-related activities, such as sports, cultural activities and psychosocial support.

Collaboration between schools is strongly encouraged, especially with experienced newcomer schools and international bridging classes. The government issued an 'Education manual for children and young people from Ukraine', which offers expertise and assistance on the integration of children and young people from Ukraine in schools (Government, 2022d). Schools that take in refugee children receive extra funding. The website of LOWAN – the government-funded support organisation for the integration of refugee children in education – assists with the education of Ukrainian children in secondary education and provides practical examples of the different forms of newcomer education and temporary facilities.

Ukrainian teachers without knowledge of the



Dutch language can be employed as educational support staff in preparatory classes. In secondary education, they can have their professional qualifications as a teacher recognised and be formally employed as a teacher. A proposed change to the law will also make this possible for teachers in primary education. If this is passed, Ukrainian teachers without Dutch language skills can get a temporary recognition of their qualifications so they can teach in preparatory classes at primary school level.

5. Vocational education and training and adult learning

Targeted and continued support in basic, technical and digital skills could improve access to the labour market while promoting equal opportunities and active inclusion.

Participation in vocational education and training (VET) and adult learning remains significantly higher in the Netherlands than the EU average. In 2020, 68.1%⁶ of upper secondary pupils were enrolled in VET programmes (EU average 48.7%). After several years of weak growth, adult participation in learning decreased slightly in 2020, but much less than in most countries, and at 18.8% was still more than double the EU average (9.1%). Following a break in time series, the participation rate increased to 26.6% in 2021 (v EU 10.8%). A recent instrument introduced to boost adult learning is the public individual learning and development account (*Stimulans Arbeidsmarktpositie* or STAP) launched in March 2022. Anyone with a link to the Dutch labour market can apply for a subsidy of up to EUR 1 000 to cover their personal development and employability training costs. The measure has an annual budget of EUR 200 million and will replace the previous option of tax deductions for educational expenses. Participating in learning is a challenge for those in a vulnerable labour market situation because of their uncertain employment

condition and in certain cases low education level. More targeted support, including focusing on increasing cross-sector mobility, may be required to reach people at the margins of the labour market more effectively. The Dutch recovery and resilience plan covers some investments related to VET and adult learning via the 'Regional Mobility Teams' (EUR 25 million) and the 'Netherlands continues to learn' programme (EUR 95 million) to strengthen up- and reskilling opportunities, for instance through the provision of career advice.

Strengthening VET is a priority of the new government. The new coalition agreement refers to adult learning, especially in targeting groups that are poor and vulnerable to the impact of digitalisation, robotisation and globalisation. In July 2022, the government published the outline for a new agenda for VET. It focuses on ensuring equal opportunities, improving the connection between education and the labour market and boosting quality, research and innovation.

Lifelong learning and tackling low literacy remain a priority. A lifelong learning strategy and multiannual action plan, including a detailed roadmap, was adopted by the previous government. Key actions in this policy cover both labour market measures and education reforms. The new government is expected to announce its updated plans on lifelong learning in autumn 2022. To tackle low literacy, a lifelong learning initiative for 'low-educated and low-literate people' was launched on top of the existing programme called 'Tel mee met Taal 2020-2024'⁷. It aims to develop a new sustainable regional training offer for low-skilled and low-literate people that leads to a smooth transition to vocational education or the labour market.

The pool of ICT graduates does not meet the market demand for labour. The Netherlands continues to score very well in the share of the population with at least basic digital skills and is

⁶ [educ_uoe_enrs05]

⁷ An action programme promoting the development of adults' language, maths and digital skills, with an annual budget of EUR 60 million regular and EUR 25 million temporary additional budget.

among the top EU countries when it comes to individuals with advanced digital skills. It also features in the top five of EU countries for the share of ICT specialists as a percentage of the workforce. However, it faces a severe shortage of digital technology experts and ICT staff. While the share of new graduates in natural sciences, mathematics and statistics (at 6.8%) surpasses the EU average (6.2%), it is below the EU average (3.9%) in ICT (at 3.4%)⁸. The difficulty for companies to find qualified ICT specialists – over 70% of Dutch businesses reported difficulties in 2020 – could slow down progress in other aspects of the digital transition (European Commission, 2022a).



Box 2: Employment guidance for youth in special and practical education

From the start of the 2014-2020 European Social Fund (ESF) programming period, the Dutch government invested in the active inclusion of pupils from practical and special education (VSO/Pro). The Foodvalley Region used ESF resources to improve the employment guidance and sustainable work adaptation and integration for around 800 pupils per year, thereby increasing their job opportunities.

Given the vulnerable labour market position of this target group exacerbated by the pandemic, additional resources from the REACT-EU programme were made available for 2021/2022 to invest in their transition from school to work. Some 220 pupils were given the opportunity to participate in sector-specific courses such as working as kitchen staff, shop assistants or gardeners. Participants could also follow practical courses relevant to work and were offered the opportunity of an internship.

From these participants, it is estimated that 40% of them found work, 50% progressed to further education and 10% will continue with (occupational) daytime activities.

⁸ [educ_uoe_grad02]

Budget: EUR 400 430, of which EUR 273 800 from the ESF.

<https://www.hetstreek.nl/het-streek-college-pro-ontvangt-esf-subsidie-voor-arbeidstoeleiding/>

<https://www.pantarijn.nl/nieuwsflits-pro>

6. Higher education

Tertiary attainment and graduate employment rates are well above the EU average. 55.6% of the population aged 25-34 holds a tertiary degree (EU: 41.2%). The proportion of highly skilled women in this age group exceeds that of men by 9.7 percentage points (EU average: 11.1 percentage points). The attainment rate among the EU-born population from outside the Netherlands (53.3%) is close to that of the native population (56.2%) and is also relatively high among the non-EU-born (51.5%; EU average 34.7%). The employment rate of recent tertiary graduates is very high, at 95.2% (EU average 84.9%).

Enrolments in higher education continue to increase. In 2020, there was a sharp increase in the number of enrolments and fewer students dropped out. This was 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 likely 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 abolished exceptionally for 2019/2020. The increase in entrant numbers continued in 2021/2022, though was less for higher professional education (HBO) (+0.5%) than for university education (+4%). International students accounted for 58% of the new HBO Master's, almost 30% of university Bachelor's and 33% of university Master's enrolments (Inspectorate, 2022).

The number of graduates continues to increase. In 2020/2021, more students obtained a degree than in 2019/2020, both in HBO programmes and university education. This is in line with the trend for the past 10 years. Graduating within the nominal study time + 1 year

has been stable in the last 5 years. For higher professional education this has been around 56-58%, and for scientific education around 68% (Inspectorate, 2022).

The quality of programmes is good and most students are satisfied. In the Dutch accreditation system, the quality of each programme is assessed every 6 years. For many years now, the accreditation organisation NVAO has reached a positive accreditation decision for about 95% of the programmes, with only 4-5% of the programmes needing to carry out improvement activities in part (Inspectorate, 2022). The accreditation decision and the underlying assessment report are available for the public on the NVAO website. However, the way data is stored by the NVAO seems not to be accessible and useful for deeper, country-level analysis, which could help evaluations of policies and investments. According to the National Student Survey involving some 330 000 students, 71% are (very) satisfied with their education in general and only 9% (very) dissatisfied. The NVAO and the Inspectorate presented their analysis of the quality of higher education during COVID in a special report (NVAO-Inspectorate, 2022). They found that despite the pandemic, Dutch higher education institutions had been able to maintain the overall quality of education. However, study progress remained at a low level, the student learning experience decreased, and student well-being came under pressure. The general picture of the quality of education at the time of the COVID-19 measures is therefore mixed.

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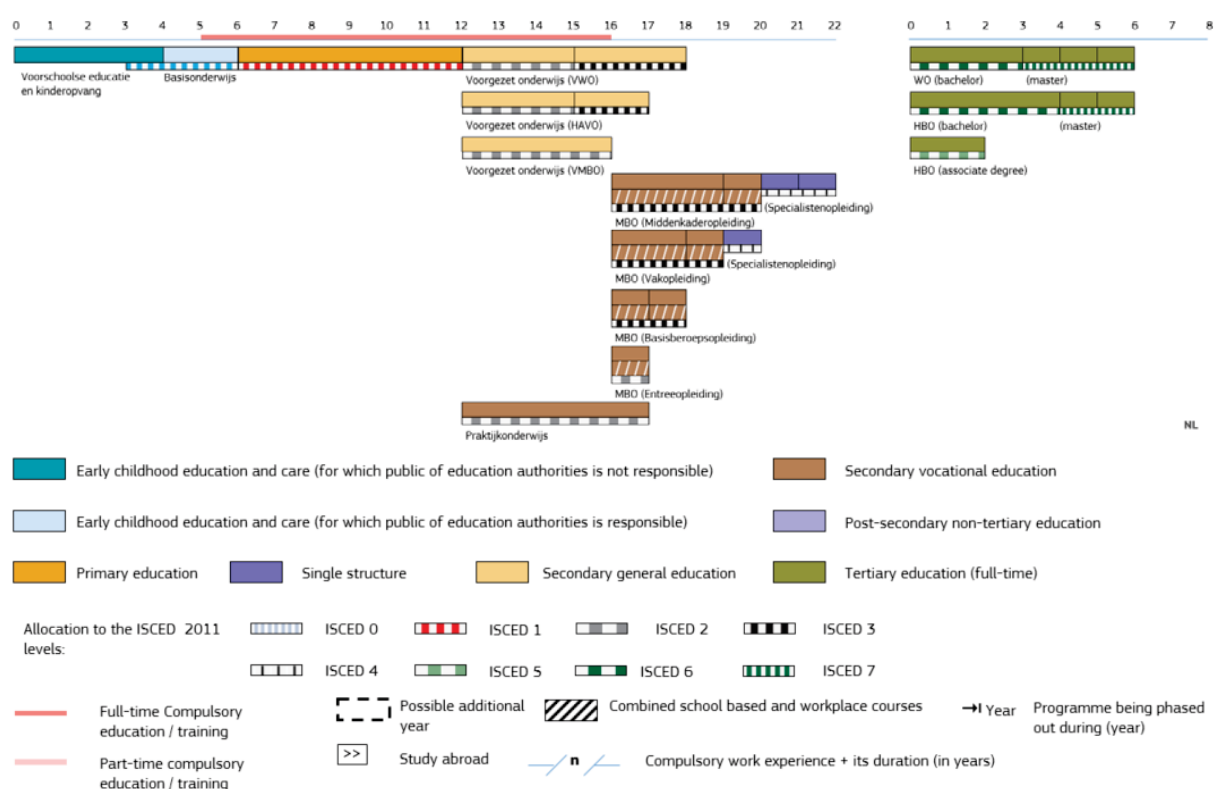
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Annex I: Key indicators sources

Indicator	Source
Participation in early childhood education	Eurostat (UOE), 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: Eurostat (LFS), edat_lfse_14 Data by country of birth: Eurostat (LFS), edat_lfse_02
Exposure of VET graduates to work based learning	Eurostat (LFS), edat_lfs_9919
Tertiary educational attainment	Main data: Eurostat (LFS), edat_lfse_03 Data by country of birth: Eurostat (LFS), edat_lfse_9912
Participation of adults in learning	Data for this EU-level target is not available. Data collection starts in 2022. Source: EU LFS.
Equity indicator	European Commission (Joint Research Centre) calculations based on OECD's PISA 2018 data
Upper secondary level attainment	Eurostat (LFS), edat_lfse_03
Public expenditure on education as a percentage of GDP	Eurostat (COFOG), gov_10a_exp
Public expenditure on education as a share of the total general government expenditure	Eurostat (COFOG), gov_10a_exp

Annex II: Structure of the education system



Source: European Commission/EACEA/Eurydice, 2022. The Structure of the European Education Systems 2022/2023: Schematic Diagrams. Eurydice Facts and Figures. Luxembourg: Publications Office of the European Union. Notes: At 16, students who have not obtained a basic qualification (Startkwalificatie) have to continue their education/training until they turn 18 or get a senior general secondary (HAVO) or pre-university (VWO) or VET (at least MBO 2) diploma.

Please email any comments or questions to:
EAC-UNITE-A2@ec.europa.eu

Brussels, 18.11.2022
SWD(2022) 751 final

PART 21/28

COMMISSION STAFF WORKING DOCUMENT

Education and Training Monitor 2022

Accompanying the document

**Communication from the Commission to the European Parliament, the Council, the
European Economic and Social Committee and the Committee of the Regions**

on progress towards the achievement of the European Education Area

{COM(2022) 700 final} - {SWD(2022) 750 final}

Education and Training Monitor 2022

AUSTRIA



The Education and Training Monitor's country reports present and assess the main recent and ongoing policy development at all education levels in EU Member States. They provide the reader with more in-depth insight of the performance of countries with regard to the EU level targets agreed within the EEA. They are based on the most up-to-date quantitative and qualitative evidence available.

Section 1 presents a statistical overview of the main education and training indicators. Section 2 focuses on how the Member State has addressed or is addressing one of its education challenges. Section 3 covers early childhood education and care. Section 4 deals with school education policies. Section 5 covers vocational education and training and adult learning. Finally, Section 6 discusses measures in higher education.

The Education and Training Monitor's country reports were prepared by the European Commission's Directorate-General for Education, Youth, Sport and Culture (DG EAC), with contributions from the Directorate-General for Employment, Social Affairs and Inclusion (DG EMPL).

The document was completed on 30 September 2022

More background data at:

<https://op.europa.eu/webpub/eac/education-and-training-monitor-2022/en/>



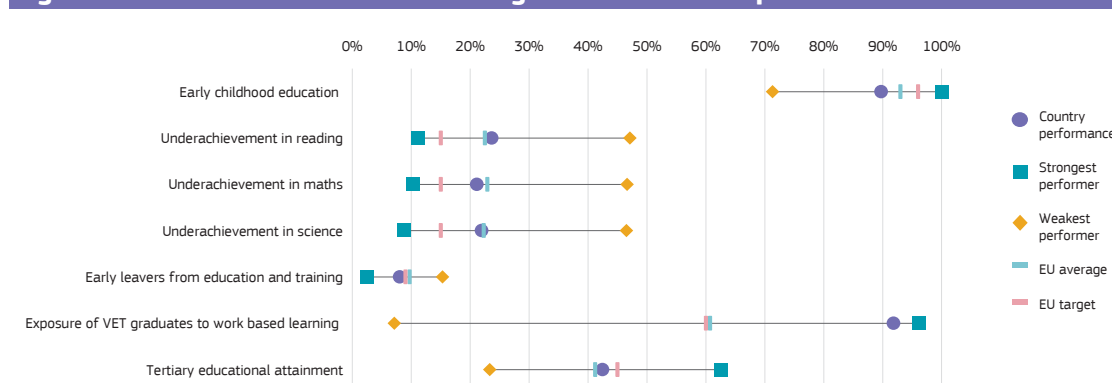
1. Key indicators

Figure 1: Key indicators overview

			Austria		EU	
			2011	2021	2011	2021
EU-level targets			2030 target			
Participation in early childhood education (from age 3 to starting age of compulsory primary education)	≥ 96 %		86.5% ¹³	89.7% ²⁰	91.8% ¹³	93.0% ²⁰
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	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	18.2% ⁰⁹	22.3% ¹⁸
Early leavers from education and training (age 18-24)	< 9 %		8.5%	8.0% ^b	13.2%	9.7% ^b
Exposure of VET graduates to work-based learning	≥ 60 % (2025)		:	91.8%	:	60.7%
Tertiary educational attainment (age 25-34)	≥ 45 %		20.9%	42.4% ^b	33.0%	41.2% ^b
Participation of adults in learning (age 25-64)	≥ 47 % (2025)		:	:	:	:
Other contextual indicators						
Equity indicator (percentage points)			:	19.2 ¹⁸	:	19.30 ¹⁸
Early leavers from education and training (age 18-24)	Native		6.4%	5.6% ^b	11.9%	8.5% ^b
	EU-born		:	21.0% ^b	25.3%	21.4% ^b
	Non EU-born		26.0%	19.1% ^b	31.4%	21.6% ^b
Upper secondary level attainment (age 20-24, ISCED 3-8)			85.2%	86.2% ^b	79.6%	84.6% ^b
Tertiary educational attainment (age 25-34)	Native		21.2%	43.0% ^b	34.3%	42.1% ^b
	EU-born		27.6%	48.6% ^b	28.8%	40.7% ^b
	Non EU-born		14.8%	34.5% ^b	23.4%	34.7% ^b
Education investment	Public expenditure on education as a percentage of GDP		5.0%	5.1% ²⁰	4.9%	5.0% ²⁰
	Public expenditure on education as a share of the total general government expenditure		9.8%	8.9% ²⁰	10.0%	9.4% ²⁰

Sources: Eurostat (UOE, LFS, COFOG); OECD (PISA). Further information can be found in Annex I and at [Monitor Toolbox](#). 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; the equity indicator shows the gap in the share of underachievement in reading, mathematics and science (combined) among 15-year-olds between the lowest and highest quarters of socio-economic status; b = break in time series, u = low reliability, : = not available, 09 = 2009, 13 = 2013, 18 = 2018, 20 = 2020..

Figure 2: Position in relation to strongest and weakest performers



Source: DG Education, Youth, Sport and Culture, based on data from Eurostat (LFS 2021, UOE 2020) and OECD (PISA 2018).

2. A focus on equity in education

Equity challenges start at an early age.

Participation in early childhood education and care is below the EU average for children both below and above 3 years of age (Section 3); attendance by disadvantaged children is even lower. Looking at children older than 3 years, the participation gap between children at risk of poverty or social exclusion and their more privileged peers was 19 percentage points (pps) in 2020, placing Austria among the five most challenged Member States¹.

Ensuring access to high-quality early childhood education and care (ECEC), including appropriate language support, is particularly important for children with a disadvantaged and migrant background. A crucial element to raise quality is early language

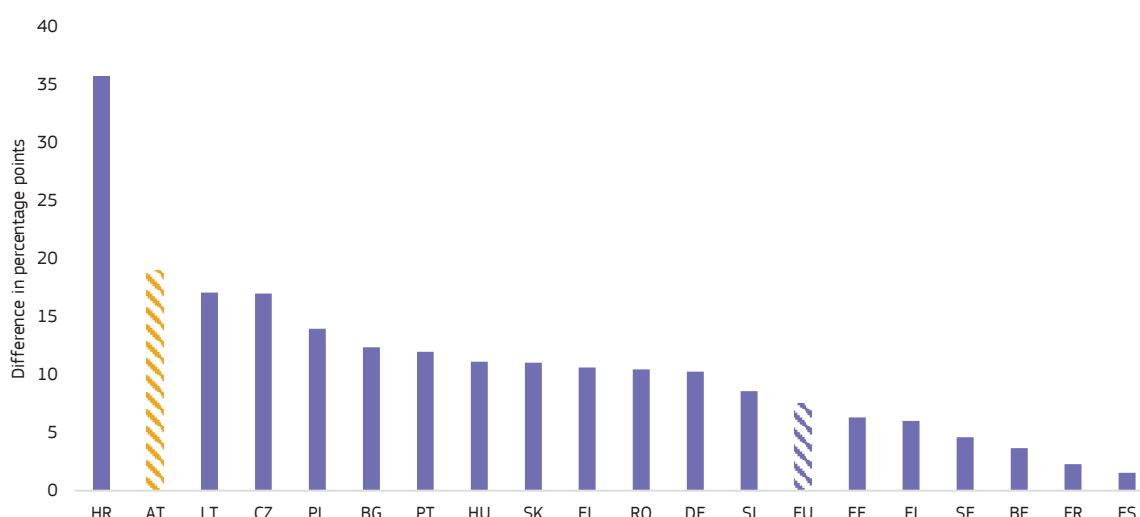
support for children who do not speak German at home or those lagging behind in language development. Thus it can also benefit 16% of children with German as first language². Early testing of language capabilities eases subsequent support to increase language competence in German. In 2021, the Austrian Court of Auditors reviewed ECEC language support, which has been continuously increasing in Austria. Looking at financing agreements between the federal and regional levels, it observed that implementation practices beyond the use of a federal standardised language test are not harmonised across the different regions and identified a suboptimal use of federal purpose grants to achieve quality improvements

In 2018, Austria introduced separate language classes in schools for pupils that do not have sufficient German language

¹ Participation of children in formal childcare or education by age group and duration by AROPE, 2020.

² Austrian Court of Auditors (2021)
https://www.rechnungshof.gv.at/rh/home/home_1/fragen-medien/Presseinfo_28.5.barrierefrei.pdf.

Figure 3: Gap in participation of children in formal childcare or education between 3 and minimum mandatory school age by AROPE, 2020



Source: Eurostat (EUSILC), special extraction. Note: Data on participation of children at risk of poverty or social exclusion in formal childcare or education has low reliability. Data with low reliability is not presented in the chart. At risk of poverty or social exclusion, abbreviated as AROPE, corresponds to the sum of individuals who are either at risk of poverty, or severely materially and socially deprived, or living in a household with a very low work intensity. People are included only once even if they are in more than one of the situations mentioned above. The AROPE rate is the share of the total population that is at risk of poverty or social exclusion

competence when entering school. These pupils can improve their German in separate language classes. These classes can last up to 2 years and the children are registered as extracurricular pupils. Experience shows that, after three semesters, only about half of the children can move to regular classes; 37% need at least 4 years to make this step. The effectiveness of the measure is partially questioned in the Austrian parliament and by several experts and stakeholders, including the Austrian Chamber of Labour. A key argument is that the separation of pupils may delay their learning, both in language acquisition and in specific subjects, may isolate them, and potentially may have a major negative impact on their future education career, social development and education outcomes.

The Austrian education report confirms the presence of links between socio-economic background, the language spoken at home, school choice and early school leaving.

Education outcomes of children are influenced by the educational attainment of their parents. Austria offers pupils at age 10 two different education pathways: (1) non-academic compulsory secondary schools (Mittelschule); and (2) academic schools preparing for higher education (Gymnasium). According to the 2021 education report, the choice remains heavily influenced by socio-economic and educational family background. This is also confirmed by international research on the impact of early tracking on educational inequalities (European Commission/EACEA/Eurydice, 2020). The OECD identifies significant performance gaps between 15-year-olds who attend a non-academic upper secondary school compared with those in an academic school. This adds to the gap between those with high or low socio-economic status. Austria also lags behind in social mobility (OECD 2020a). The socio-economic and educational background is especially differentiated among parents with a migrant background, for whom it is overall lower compared with Austrian parents. For instance, in primary school, 43% of pupils with a Turkish migration background have parents with only compulsory education compared with only 3% of the Austrian-born. In contrast, half of the

parents of pupils with a German migration background have a tertiary degree, which is even higher than for Austrian pupils (43%). The 2021 Austrian education report identifies an increased risk of educational disadvantage among most migrant subgroups. Those who do not speak German at home attend, to a greater extent, schools that do not lead to an upper secondary academic degree³. Especially in metropolitan areas, schools tend to be separated according to first language and the social background of the families of their pupils (Education report 2021, OECD PISA 2018 – Volume II). Foreign-born 18-24-year-olds leave education prematurely more than three times more often compared with the Austrian-born (20% vs 5.6%)⁴.

Schools report a lack of necessary additional resources to adequately deal with the challenge of increased diversity.

The 2018 federal general decree "Reflective Gender Education and Equality" provides key guidance on diversity⁵. The pilot project '100 schools and 1 000 chances' identifies what additional required resources 100 particular challenged schools need (European Commission 2021). Although this test phase already covers a certain share (of the neediest schools (Radinger et al. 2018), a broader initiative is still required to address the issue. In comparison with the EU, schools in Austria receive less administrative and technical support. The government has recently announced a general increase in non-teaching staff in schools⁶, which could allow teachers and head teachers to concentrate more on teaching.

More young people from socio-economic disadvantaged backgrounds enter vocational upper secondary education. Young people aged

³ According to the Integration Report 2021 (p 31), 33% are in new middle schools and in professional middle schools, 36% in polytechnic schools preparing for dual training, and 40% in special schools.

⁴ Eurostat, edat_ifse_02.

⁵ Press conference of Minister (25.5.2022).

⁶ https://rundschreiben.bmbwf.gv.at/download/2018_21_en.pdf

10 from weaker socio-economic backgrounds more often choose the non-academic track in compulsory school and upper secondary schools not giving access to higher education. Low-skilled young people without lower secondary education enter and finish dual training only with difficulties (Steiner, 2015). This is even more the case for those with a migrant background; in addition, they only enter the labour market with even more difficulties once they finish (OECD 2021).

Teacher competence differs between advantaged and disadvantaged schools.

There are indications that the best-qualified teachers are not engaged in the most challenging learning environments but that this task is left rather to young and less-experienced teachers (Weber, 2019). OECD observes better support in socio-economically advantaged schools than in disadvantaged ones. Experienced teachers are over-represented in rural schools and in urban schools that show fewer socio-economic complexities (OECD 2022). Pupils who would need more attention and stronger support therefore risk not receiving it.

Access to tertiary education remains widely influenced by the socio-economic status of parents; social measures have so far shown little effect.

In 2019/2020, young people with parents that have upper secondary level education were 2.47 times more likely to take up tertiary education compared with those without. This recruitment quota has hardly improved during the last 5 years, remaining far below the national target value for 2025⁷. Young people with a migration background take up tertiary education half as often as those born in Austria. About one fifth of all students receive grants (Studienbeihilfe)⁸. In 2017, Austria introduced a national strategy on the social dimension in higher education and student support, with the aim to improve participation of, and support for, less-advantaged young people in tertiary education; so

far, there has been only limited progress⁹. Students with non-traditional access to higher education barely increased their participation.

3. Early childhood education and care

Participation in early childhood education and care in Austria is below the EU average and the EU targets.

Between the age of 3 and the age of compulsory schooling, participation is just below 90%, and has been more or less stable since 2017¹⁰. This is 3 pps lower than the EU average and 6 pps below the 2030 EU-level target. For under-3-year-olds, participation at 21.1% in 2020 remains far below the 33% Barcelona target, and its share has hardly increased since 2018¹¹. About two thirds of under 3-year-olds attend for a duration below 29 hours¹². This is in line with the EU average. Opening hours in Austria are challenging in situations where both parents work or even work full-time. Austria is now making efforts to better streamline its ECEC system (European Commission 2020).

The federal level is increasing funding for early childhood education and care, a regional competence in Austria, to improve capacity and quality.

The 2009 cross-regional education framework plan¹³ sets basic requirements while allowing differences in implementation (Breit, 2018). There are also different regional regulations for external and internal evaluation (European Commission 2019). In May 2022, the federal government concluded an agreement with the federal states (Länder) covering the period 2022/2023 to 2026/2027. The annual federal budget contribution increased by

⁷ <https://awblog.at/soziale-dimension-an-den-hochschulen/>

⁸ Studierenden_Sozialerhebung_2019_auf_einen_Blick, IHS update 2021

⁹ Ministry of Education, Science and Research (8730/AB) from 4.2.2022 in response ri 8897/J (XXVII.GP).

¹⁰ Eurostat, [educ_uoe_enra21].

¹¹ Eurostat, [ilc_caindformal]. National statistics, however, show higher participation rates.

¹² Eurostat, [ilc_caindformal].

¹³ 'Bundesübergreifender BildungsRahmenPlan'.

40% to EUR 200 million and is annually matched by EUR 63 million from the regions. Key targets are a continued compulsory participation of 5-year-olds, extension of the offer of school places, and early language promotion (30% of funds instead of 10%). The share of places for under-3-year-olds is to be increased by 3 pps to potentially reach the Barcelona target of 33%. At the same time, the agreement aims at raising the share of places compatible with full-time employment of parents from 64% to 70% for under-3-year-olds, and from 51.8% to 57.8% for 3-to-6-year-olds. While the agreement offers opportunities for quality improvements, like reducing child-staff ratios albeit with a time limit, it still falls short of establishing compulsory quality standards; this is due to opposition from the regions. Only standards for staff dealing with language support have been agreed. However, to achieve a good-quality ECEC system in Austria, its quality and scope needs to be improved, for instance through: (1) a formal and compulsory ECEC quality framework; and (2) improved staff competence and working conditions.

It is increasingly difficult to recruit sufficient staff in early childhood education and care. Austria remains one of only six EU countries that train ECEC educators below bachelor level (European Commission 2019). As a result, very few educators have a bachelor's degree. The government supports the objective that ECEC group leading pedagogues increasingly obtain a bachelor's degree through a targeted higher education programme with 60 credits under the European Credit Transfer and Accumulation System¹⁴. Starting salaries for ECEC staff are just above the OECD average and hardly progress during a career. They are below comparable countries like the Netherlands, Sweden or Denmark (OECD 2019c). To attract more young people to the profession, it will be necessary to both invest in better working conditions and improve the image of the profession. A recent study calculates that, overall, the country would need an additional 860

managers, 2 450 qualified staff and 2 000 less-qualified staff by 2025 to increase the quantity and quality of provision (Neuwirth 2021). The Commission supports the ongoing Austrian project *Improving staff working conditions for better quality in early childhood education and care in Austria*, contributing to a nationwide strategy and campaign to raise the profile of the profession to reduce shortages of qualified staff.

4. School education

Demographic change is reflected in the composition of the Austrian school population. At country level, the share of the population with a migration background is 25%, while in Vienna it is 48%. The number of pupils in the Austrian compulsory education system is expected to increase by 5% up to 2030 in the age group 6 to 9 years and by 7% for 10 to 14 years. This is largely due to migration. In 2020/2021, 30.9% of primary school pupils did not use German as their conversational language. In 2019/2020, the highest shares of pupils with a migrant background can be found in Vienna with 32.3% overall, in non-academic compulsory schools (46.7%, professional lower secondary level) and in academic secondary schools (23%, Gymnasium). Extracurricular pupils are pupils at compulsory school age who so far lack the capacity to be fully integrated into schooling, be it for lack of sufficient linguistic or learning capacity. While their share in all schools in Austria amounts to 3%, it is the highest in primary schools, at 7.6%, and doubles in Vienna to 14.1%.

Early leaving from education and training remains below the EU average, but it has not improved lately and young people with migrant backgrounds do much worse. The share of 18-24-year-olds in Austria that leave education and training early is 1.7 pps below the EU average, but has started to increase slowly again since 2016. While it decreased in cities by about one percentage point in both 2020 and

¹⁴ European Credit Transfer and Accumulation System.

2021, it remained more stable in rural areas¹⁵. Foreign-born 18-24-year-olds continue to leave education early more than three times more often compared with those born in Austria (20% vs 5.6%)¹⁶. While in Austria a higher share of early leavers is employed (4.2% compared with 3.8% who are unemployed), the relationship in the EU is inversed with 4.1% employed and 5.6% not employed. This could suggest a stronger labour market pull factor in Austria.

With an ageing teacher workforce, teacher shortages may emerge. About one third of all teachers in Austria are aged 55 or more, around the EU average of 31.7%¹⁷. A retirement wave is expected within 10 years. In the wake of the COVID-19 pandemic, teachers received more public attention, as they suffered more from stress; some even decided to leave the profession. Temporary sick leave due to the pandemic resulted in an immediate need to replace sick

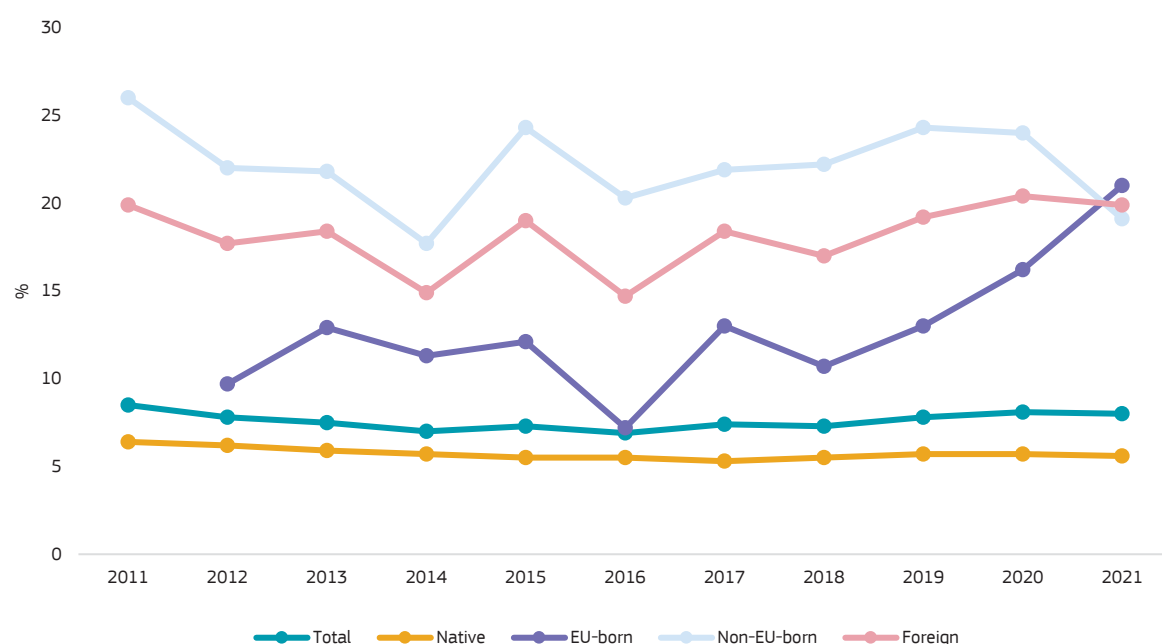
teachers. At the same time, the duration of initial teacher training was increased during the last reform. Therefore the Ministry of Education, Science and Research and several regions have identified actual teacher shortages. The government takes measures to improve the attractiveness of the teacher profession and to facilitate the training and integration of lateral entrants into the education sector. While financial conditions for the latter have improved, regular teachers do not benefit from a similar initiative. The high average age of teachers might also have a negative impact on improving their digital skills. Older teachers might have more ICT problems and generally Austrian teachers were particularly unsure about their ability to use ICT in teaching prior to the pandemic (OECD 2020a and European Commission 2021). Improving teaching skills is important to further improve the digital skills of students and allow Austria to catch up with the best-performing countries. Currently, 75% of 16–19-year-olds have basic or above basic overall digital skills, 6 pps above the EU average; there is room to catch up to the best. The "Digital School" initiative (8-point plan) strengthens measures to improve teachers' digital skills.

¹⁵ Eurostat, edat_lfse_30.

¹⁶ Eurostat, [edat_lfse_02].

¹⁷ 31.7%; Eurostat, [educ_uoe_perp01].

Figure 4: Early leavers from education and training in Austria by country of birth, 2011–2021 (%)



Source: Eurostat (LFS), edat_lfse_02.

Austria set up a large-scale compensation programme after the COVID-19 pandemic gave rise to greater distance learning.

The Austrian government designed such a programme in 2020 and in 2021, also focusing on the most vulnerable pupils. EUR 200 million have been mobilised for this with the support of REACT-EU and the Recovery and Resilience Facility. The mobilised support is equivalent to 4 500 additional teachers in the summer term 2021. Until February 2022, this delivered 3 million additional (single) support hours, with 10% earmarked for non-regular pupils (Education report 2021).

Disadvantaged pupils are often confronted with digital education of lesser quality.

OECD (2022), Mending the Education Divide, identifies a clear pre-pandemic digital education divide in Austria. Teachers in schools with 10% or less young from disadvantaged backgrounds tend to receive comparatively stronger support for their work and are more confident. Thus, pupils from disadvantaged backgrounds, who tended to have less access to digital learning at home, are also likely to have had less access to teachers with high capacity in ICT teaching at school (OECD 2022). Providing digital end devices to all students in fifth grade combined with a new compulsory subject of digital basic education in 5th to 8th grade could help reducing disadvantage.

5. Vocational education and training and adult learning

Austria continues to have a comparatively attractive and successful vocational education and training system. Around 75% of all students (after compulsory school) opt for a vocational programme¹⁸. Despite the unbalanced socio-economic background of students, this

approach facilitates their entry into jobs, and therefore contributes to keeping the youth unemployment rate relatively low. The large majority (91.8%) of recent VET graduates had experienced work-based learning during their training¹⁹. VET learners in Austria have good labour market prospects; in 2021, 86% of recent graduates were in employment²⁰. In addition, higher vocational education is gaining in importance. Establishing a BA Professional and an MA Professional improves movement between secondary VET and tertiary education.

Austria's 2022 VET National Implementation Programme modernises training.

It sets out some 30 measures on changing skills, green transition, digitisation, social dimension, internationalisation, and institutional change, responding to the Council Recommendation on Vocational Education and Training and the Osnabrück Declaration of 2020. Measures include, as one example, a screening of the entire apprenticeship landscape along current megatrends, such as climate change or digitisation. Sustainability will become a cross-cutting issue in all training regulations for the dual system, with new apprenticeships in the field of green skills and the creation of VET competence centres for green skills. An inclusive certification system for digital skills will be set up, while creating digital learning paths for apprentices. Guidance on career orientation, including on gender related questions, aims at enhancing the attractiveness of vocational education and training. Mobility of apprentices will be encouraged, while strengthening the internationalisation of vocational schools, including the promotion of participation in international skills competitions.

The share of Austrian adults (aged 25-64) having participated in learning over a previous 4-week period is above the EU average (14.6% vs 10.8% in 2021). After a sharp decline in 2020, these latest Austrian figures

¹⁸ According to Eurostat data, 69% of pupils in upper secondary education were enrolled in vocational programmes in 2020. Eurostat, educ_uoe_enrs05.

¹⁹ Eurostat, edat_ifs_9919.

²⁰ Eurostat, [edat_ifse_24].

rebounded to pre-pandemic levels. The share of the Austrian population with at least basic digital skills, at 63%, is also well above the EU average of 54%²¹.

Overall, Austria has a very good adult learning system with an ambitious 2030 national target, but skills shortages and inequalities do exist. A labour market recovery causes skills shortages, resulting in 8 out of 10 Austrian companies not investing due to a lack of skilled staff. The labour market potential of women, the low-skilled, older workers, and people with a migrant background remains underused – pointing to a need for enhanced upskilling and reskilling. Austria has set a 2030 national target of 62% of adults in training every year (a further increase over the already high 55.3% in 2016). However, as the least-qualified adults benefit from continued education about three times less often²² than more-educated adults, the qualification gap tends to persist. There is therefore scope for further strengthening the level of basic skills for disadvantaged groups, particularly people with a migrant background.

Austria continues to provide a broad range of active labour market policy measures and especially reaches out to people with a migration background. Apart from employment support, these measures have a strong focus on qualifications, including work foundations, education and training subsidies, intensive training for skilled workers, qualification subsidies, skilled worker scholarships, and counselling services. The Adult Education Initiative (*Initiative Erwachsenenbildung*) aims to ease entry to the labour market, particularly reaching out to people with a migration background. Its two programme parts, basic education and compulsory school leaving certificate, are complemented by other

projects, such as Rethinking Basic Education, supporting people in rural areas.

The ‘promoting reskilling and upskilling’ measures of the recovery and resilience plan also address these challenges by supporting training for the low-skilled and the long-term unemployed for jobs of the future. The ESF+ programme will provide complementary measures. In addition, the Higher Education Entrance Exam (*Berufsreifeprüfung*) and the ‘apprenticeship with Matura’, which is a combination of an apprenticeship qualification with the *Berufsreifeprüfung*, provide stepping stones towards higher qualifications.



Box 1: On the way to a professional future (October 2016 – December 2018)

This project offered ongoing support, advice and skills training for disadvantaged and marginalised women aged between 18 and 25. During the entire project period, the young women received ongoing support from an adviser. Additionally, free psychotherapy sessions were offered to provide more assistance. One-day courses focusing on creativity and crafts allowed the girls to test their skills and earn some pocket money. Available training included German training at level A2 and B1, catching up on missing knowledge due to non-completion of compulsory schooling, and help in obtaining key occupational qualifications. In addition, as part of their corporate social responsibility activities, companies offered internships for women aged 18 to 25. An adviser provides support to young women during the entire project period.

6. Higher education

Austria continuously increases tertiary attainment of 24-to-35-year-olds. In 2021, the rate reached 42.4%, which represents a 1 percentage point increase compared with the previous year, and comfortable progress towards the 45% EU-level target. Similar to the EU trend,

²¹ ESTAT table ISOC_SK_DSKL_I21, based on Digital Economy and Society Index (DESI) 2022.

²² Eurostat [trng_ifse_03] 2021 5.8% and 14.6%; EU 4.3% and 10.8% [Less than primary, primary and lower secondary education (levels 0-2) and all ISCED levels].

more women (46.8%) graduate than men (38.2%), but the gender gap is slightly smaller (8.6 pps vs 11.1 for the EU)²³.

Tertiary attainment in Austria increased, mainly in cities. The attainment gap between rural areas and cities²⁴ is, at 18.4 pps, smaller (-3.4 pps) than at EU level. It is interesting to note the dynamics over time. Between 2012 and 2021, the difference between the regions with the lowest and highest attainment levels increased by 2.2 pps while the average attainment increased 19.6 pps to 42.4%. The weakest region - Burgenland (15.5%) - managed to increase attainment by an impressive 29.1 pps to become, with 44.6% in 2021, the second strongest region behind Vienna with 51.6%²⁵. Burgenland is a region close to Vienna that benefited most from EU structural funds. The fact that all seven other regions besides Vienna and Salzburg changed their relative position underpins the dynamic in higher education.

Austria is performing well on science, technology, engineering, and mathematics (STEM), especially at doctorate level, but not on increasing the share of women graduating in STEM studies. In 2020, at 30.6%, Austria had one of the highest shares of STEM graduates among all graduates in the EU²⁶. This is 5.7 pps above the EU average and shows a positive trend (+ 1.3 pps since 2015). A significantly higher share of Austrian STEM graduates opt for engineering, manufacturing or construction²⁷, while for information and communication technologies, the Austrian share is more in line with the EU average²⁸. STEM participation in Austria varies at different ISCED levels and only at ISCED 7 is it more or less at the EU average; at all other levels,

it is higher²⁹. This puts Austria ahead in STEM PhDs, even ahead of Germany. Despite efforts, Austria could not yet significantly increase women's STEM participation. In 2020, the share of female STEM graduates³⁰ was around EU-wide values when compared with all graduates (8.1%, -0.1 pps). Compared with all STEM graduates (26.3%), the Austrian female share remained much smaller (-6.2 pps).

Distance learning during the pandemic did not have a major negative impact on learning outcomes. Three quarters of higher education students did not have problems with online exams, nor did they lack information when learning at home. Only 5% reported negative experiences³¹. About a quarter of students polled during the second lockdown indicated a worsening of their well-being; students generally maintained contacts important to them (European Commission 2021). In addition, distance learning improved their independent communication skills and learning, time management, and self-organisation. To make universities digitally fitter, the Federal Ministry of Education, Science and Research and universities are jointly working on a strategy for the digital future of universities 2030³², to be published still in 2022.

²³ Eurostat, [edat_lfse_03].

²⁴ Eurostat, [edat_lfs_9913].

²⁵ Eurostat, [edat_lfse_04].

²⁶ Eurostat, [educ_uoe_grad02].

²⁷ (20.7% / 14.8%).

²⁸ (4.4% / 3.9%).

²⁹ At ISCED 5 +10.48 pps, at ISCED 6 +3.74 pps, and at ISCED 8 +4.34 pps.

³⁰ Eurostat, [educ_uoe_grad02].

³¹ University of Vienna, 'Study – learning under COVID-19 conditions', 3rd questionnaire for students –results.

³² <https://www.bmbwf.gv.at/Themen/HS-Uni/Aktuelles/digitale-Zukunft.html>

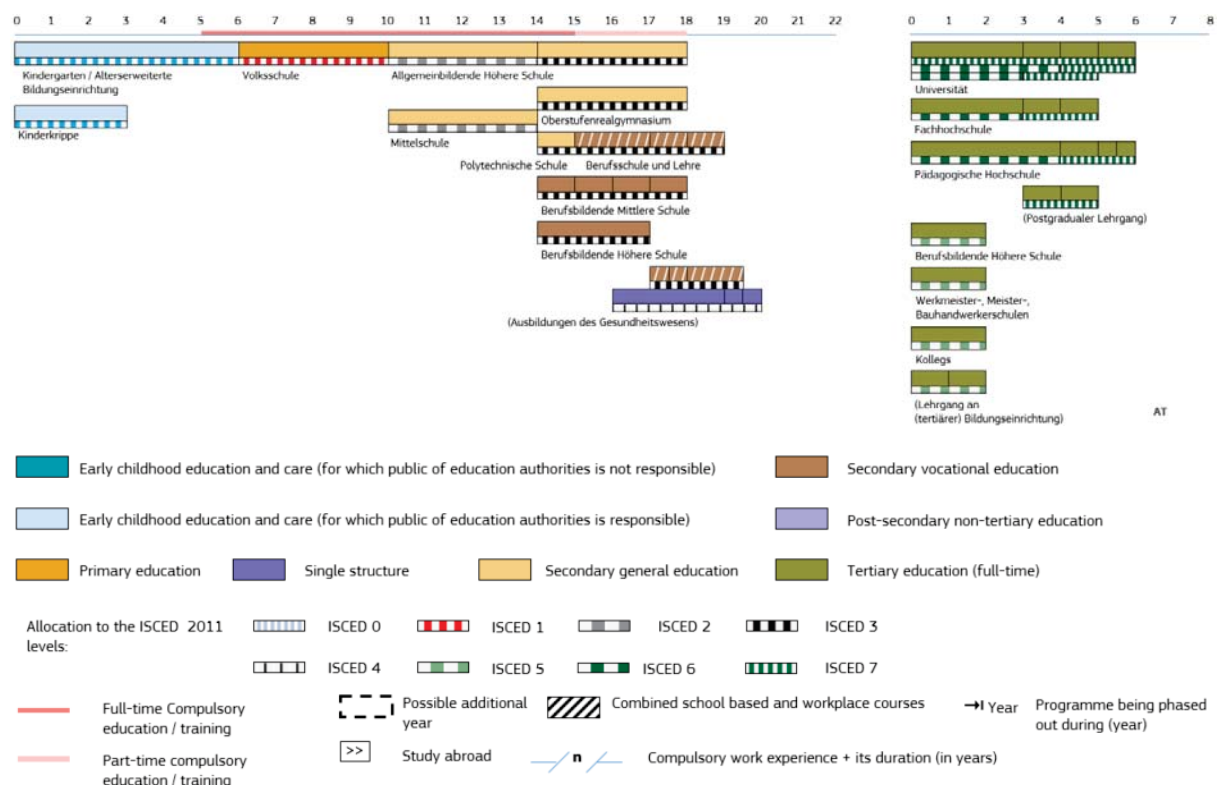
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Annex I: Key indicators sources

Indicator	Source
Participation in early childhood education	Eurostat (UOE), 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: Eurostat (LFS), edat_lfse_14 Data by country of birth: Eurostat (LFS), edat_lfse_02
Exposure of VET graduates to work based learning	Eurostat (LFS), edat_lfs_9919
Tertiary educational attainment	Main data: Eurostat (LFS), edat_lfse_03 Data by country of birth: Eurostat (LFS), edat_lfse_9912
Participation of adults in learning	Data for this EU-level target is not available. Data collection starts in 2022. Source: EU LFS.
Equity indicator	European Commission (Joint Research Centre) calculations based on OECD's PISA 2018 data
Upper secondary level attainment	Eurostat (LFS), edat_lfse_03
Public expenditure on education as a percentage of GDP	Eurostat (COFOG), gov_10a_exp
Public expenditure on education as a share of the total general government expenditure	Eurostat (COFOG), gov_10a_exp

Annex II: Structure of the education system



Source: European Commission/EACEA/Eurydice, 2022. The Structure of the European Education Systems 2022/2023: Schematic Diagrams. Eurydice Facts and Figures. Luxembourg: Publications Office of the European Union. Notes: *Berufsbildende Höhere Schulen* offer education programmes lasting 5 years: the first three years are classified as ISCED level 3 while the last two years belong to ISCED level 5.

Please email any comments or questions to:
EAC-UNITE-A2@ec.europa.eu



Brussels, 18.11.2022
SWD(2022) 751 final

PART 22/28

COMMISSION STAFF WORKING DOCUMENT

Education and Training Monitor 2022

Accompanying the document

**Communication from the Commission to the European Parliament, the Council, the
European Economic and Social Committee and the Committee of the Regions**

on progress towards the achievement of the European Education Area

{COM(2022) 700 final} - {SWD(2022) 750 final}

Education and Training Monitor 2022

POLAND



The Education and Training Monitor's country reports present and assess the main recent and ongoing policy development at all education levels in EU Member States. They provide the reader with more in-depth insight of the performance of countries with regard to the EU level targets agreed within the EEA. They are based on the most up-to-date quantitative and qualitative evidence available.

Section 1 presents a statistical overview of the main education and training indicators. Section 2 focuses on how the Member State has addressed or is addressing one of its education challenges. Section 3 covers early childhood education and care. Section 4 deals with school education policies. Section 5 covers vocational education and training and adult learning. Finally, Section 6 discusses measures in higher education.

The Education and Training Monitor's country reports were prepared by the European Commission's Directorate-General for Education, Youth, Sport and Culture (DG EAC), with contributions from the Directorate-General for Employment, Social Affairs and Inclusion (DG EMPL).

The document was completed on 30 September 2022

More background data at:

<https://op.europa.eu/webpub/eac/education-and-training-monitor-2022/en/>



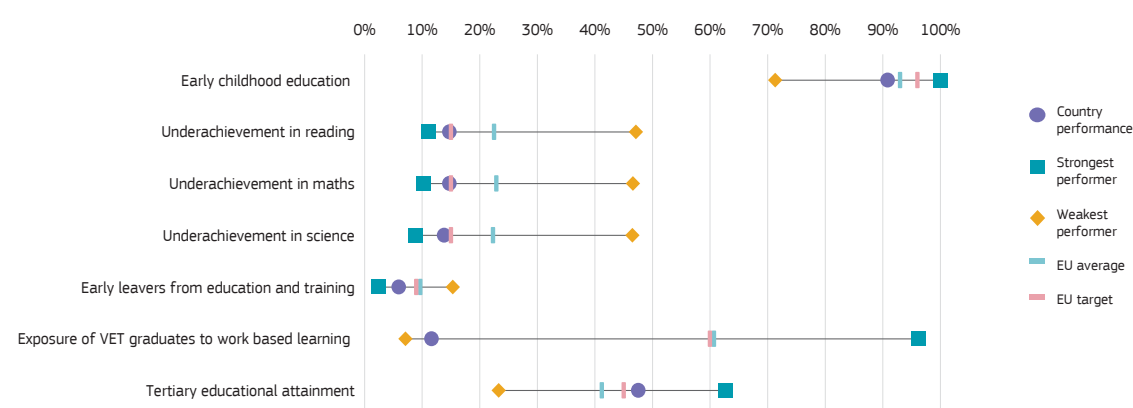
1. Key indicators

Figure 1: Key indicators overview

			Poland		EU	
			2011	2021	2011	2021
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}	90.8% ²⁰	91.8% ¹³	93.0% ²⁰
Low achieving eighth-graders in digital skills	< 15%		25.3% ¹³	:	:	:
Low achieving 15-year-olds in:	Reading	< 15%	15.0% ⁰⁹	14.7% ¹⁸	19.7% ⁰⁹	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	18.2% ⁰⁹	22.3% ¹⁸
Early leavers from education and training (age 18-24)	< 9 %		5.6%	5.9% ^b	13.2%	9.7% ^b
Exposure of VET graduates to work-based learning	≥ 60 % (2025)		:	11.6%	:	60.7%
Tertiary educational attainment (age 25-34)	≥ 45 %		39.0%	40.6% ^b	33.0%	41.2% ^b
Participation of adults in learning (age 25-64)	≥ 47 % (2025)		:	:	:	:
Other contextual indicators						
Equity indicator (percentage points)			:	10.6 ¹⁸	:	19.30 ¹⁸
Early leavers from education and training (age 18-24)	Native		5.6%	5.9% ^b	11.9%	8.5% ^b
	EU-born		:	:	25.3%	21.4% ^b
	Non EU-born		50.2%	:	31.4%	21.6% ^b
Upper secondary level attainment (age 20-24, ISCED 3-8)			90.1%	90.6% ^b	79.6%	84.6% ^b
Tertiary educational attainment (age 25-34)	Native		39.0%	40.4% ^b	34.3%	42.1% ^b
	EU-born		:	:	28.8%	40.7% ^b
	Non EU-born		50.2% ^u	63.5% ^b	23.4%	34.7% ^b
Education investment	Public expenditure on education as a percentage of GDP		5.4%	5.2% ²⁰	4.9%	5.0% ²⁰
	Public expenditure on education as a share of the total general government expenditure		12.3%	10.7% ²⁰	10.0%	9.4% ²⁰

Sources: Eurostat (UOE, LFS, COFOG); OECD (PISA). Further information can be found in Annex I and at [Monitor Toolbox](#). 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; the equity indicator shows the gap in the share of underachievement in reading, mathematics and science (combined) among 15-year-olds between the lowest and highest quarters of socio-economic status; b = break in time series, d = definition differs, u = low reliability, : = not available, 09 = 2009, 13 = 2013, 18 = 2018, 20 = 2020.

Figure 2: Position in relation to strongest and weakest performers



Source: DG Education, Youth, Sport and Culture, based on data from Eurostat (LFS 2021, UOE 2020) and OECD (PISA 2018).

2. A focus on quality inclusive education

Despite some improvements, a high proportion of students with disabilities remain in segregated educational settings.

Current legislation¹ ensures the right of all children, including those with disabilities, to attend any type of school, while the education system should ensure support adapted to children's needs, including targeted approaches. While the proportion of students with special educational needs in mainstream schools increased between 2010 and 2018, the level of segregation and disparities in educational attainment remains high. The related urban-rural divide is also stark: in 2018, 12.2 % of people with disabilities of working age living in cities completed higher education compared to 3.9% of those living in rural areas (European Commission, 2021a). In 2018/2019, 46% of pupils with special educational needs in primary schools attended mainstream classes, 19% were in inclusive classes², and 33% in special primary schools. While 32.2% of people with disabilities completed tertiary or equivalent education, slightly above the EU average, the disability equality gap is wider, at 17.7 pps (EU 14.4 pps). Furthermore, the European Disability Expertise report highlights the outstanding recommendations of the UN Committee on the Rights of Persons with Disabilities concerning quality inclusive education (European Commission, 2021a).

Supported by sound evidence, Poland is taking steps to improve the quality of inclusive education. Supported by the European Commission's structural reform support programme, the Ministry of Education and Science (the Ministry) has developed, in cooperation with the European Agency for Special Needs and Inclusive Education, solutions for improving the

quality of inclusive education, based on a list of recommendations and priority actions³. According to the baseline report prepared for the Ministry, the most acute problems are the lack of specialists, mainly psychologists and psychiatrists, cooperation models between relevant institutions, low awareness of special needs and inclusive education, including among parents, and teachers' need for support and knowledge about children's most common disorders (Podgorska-Jachnik, 2021). The draft law on inclusive education⁴ aims to develop a cross-disciplinary support system for children, students and families, a three-level system of early development support, and a new special needs diagnostics system, including monitoring and evaluation of individual support measures. The role of special education institutions will be expanded to support inclusive mainstream education. New supervisory measures are proposed to ensure the quality of and support for developing teaching staff's skills in inclusive education. Given different organisational challenges schools have faced in recent years, implementing all the changes will require careful planning. An information campaign was recently launched⁵, but a long-term inclusive education strategy, including monitoring and evaluation measures, would enable greater stakeholder involvement and continuous quality improvement.

New legislation aims to increase the number of specialist support staff in mainstream kindergartens and schools. The Act of 17 May 2022 amending the Education Law and other acts^{6,7} establishes the minimum number of

¹ Polish Constitution, Act of 16.12.2016 of Education Law, Children's Rights Convention, Convention on Persons with Disabilities.

² Mainstream classes with three to five students with special educational needs.

³ <https://www.gov.pl/web/edukacja-i-nauka/projekt-realizowany-w-ramach-program-wsparcia-reform-strukturalnych>

⁴ <https://edukacjawzasiegureki.pl/edukacja-wlaczajaca/projekt-ustawy-o-wsparciu-dzieci-uczniow-i-rodzicow-glowne-rozwiazania/> ;

⁵ <https://edukacjawzasiegureki.pl/kategoria/edukacja-wlaczajaca/>

⁶ <https://isap.sejm.gov.pl/isap.nsf/download.xsp/WDU20220001116/T/D20221116L.pdf> ; <https://www.prawo.vulcan.edu.pl/przegdok.asp?qdatprz=a&t&qplikid=4186>

⁷ <https://www.ore.edu.pl/2022/06/edukacja-wlaczajaca-odpowiedzia-na-potrzeby-wszystkich-polskich-uczniow/>

specialists⁸ and a new special educational needs teaching post in mainstream kindergartens and schools. The total number of these specialists in mainstream settings should increase from 22 000 in September 2022 to 51 000 in September 2024. To support the first stage of this, around EUR 110 million has been allocated to local governments. Earlier, as of 1 March, the Ministry allocated an additional around EUR 39 million for psychological and teaching support in kindergartens and schools, which can also be used to support displaced children from Ukraine.

Poland has been implementing projects on inclusive education supported by EU funds at all levels, but evaluation of the quality of support provided is essential for optimal policymaking. Since 2018, the European Social Fund (ESF) project ‘Accessible School Space’ has supported school accessibility⁹. With further ESF support¹⁰, Poland plans to train 28 000 teachers and specialists, introduce student assistants¹¹, develop functional assessment, and establish 23 support centres for inclusive education (Box 1). In 2022, it has launched research projects on integrated support for and postgraduate studies in early developmental support, to address special educational needs. At tertiary level, 21 higher education institutions (HEIs) participated in a project on integrating autistic students¹², and 32 projects on universal design¹³ were implemented

by HEIs. The programme ‘Accessible Universities’ supports organisational changes at 199 HEIs¹⁴. The evaluation of these projects was launched in 2021¹⁵.



Box 1: A model for specialised support centres for inclusive education supported by the ESF

The aim of the project (1.1.2020 – 30.6.2023) is to develop solutions to support mainstream schools in providing high-quality inclusive education. A network of 23 centres will be piloted, building on the expertise and resources of special education bodies. Experts will develop a model and training materials for the centres, selected under the grant award procedure. The pilot implementation of the centres will enable the evaluation of the model assumptions and contribute to improving teachers’ skills.

The grant will cover additional specialists, equipment and teaching materials for the kindergartens, schools and special institutions that will become inclusive education support centres. The equipment will be made available to mainstream schools as necessary. The centres’ activities will be monitored, and reports on the pilot implementation and the monitoring results will be published.

Total budget: around EUR 7.5 million

ESF support: around EUR 6.36 million

Link: <https://www.ore.edu.pl/2020/01/pilotazowe-wdrozenie-modelu-specjalistycznych-centrow-wspierajacych-edukacje-wlaczajaca-scwew/>

⁸ Psychologists, teachers, speech therapists, pedagogical therapists and special educators.

⁹ <https://www.funduszeuropejskie.gov.pl/strony/o-funduszach/fundusze-europejskie-bez-barier/dostepnosc-plus/aktualnosci/wystartowal-konkurs-przestrzen-dostepnej-szkoly/>

¹⁰ <https://www.gov.pl/web/edukacja-i-nauka/edukacja-wlaczajaca-nowa-jakosc-w-rozwoju-polskiego-systemu-edukacji---debata-z-udzialem-wiceminister-marzeny-machalek>

¹¹ <https://efs.mein.gov.pl/ogloszenia-nabory/konkurs-asystent-uczni-ze-specjalnymi-potrzebami-edukacyjnymi-2/>

¹² <https://www.gov.pl/web/fundusze-regiony/studenci-z-zaburzeniami-ze-spektrum-autyzmu-asd-z-szansa-na-lepsza-aktywizacje>

¹³ <https://www.gov.pl/web/ncbr/projektowanie-universalne-w-programach-studiow-ncbr-przekaze-uczelniom-40-mln-zl-na-zajecia-zwiekszajace-dostepnosc>

¹⁴ <https://www.gov.pl/web/ncbr/uczelnia-dostepna-iii>

¹⁵ <https://archiwum.ncbr.gov.pl/o-centrum/aktualnosci/szczegoly-aktualnosci/news/fundusze-europejskie-wspieraja-dostepnosc-uczelni-65265/>

3. Early childhood education and care

Participation of children in early childhood education and care (ECEC) continues to increase, but provision gaps persist in rural areas and some regions. In 2020, the rate reached 90.8%, up by 0.5 pps from 2019. Over the past decade, the rate increased by 14.4 pps from 2011, being now closer to the EU average (93%). The participation of 5- and 6-year-olds is high at 97%, but the rate for 3-year-olds (78.5%) is still below the EU average despite an increase of 11.4 pps since the introduction of the entitlement to a place in a kindergarten (2017). The rate is particularly low in rural areas, where provision is insufficient (NIK, 2019), and in some regions (*Warmińsko-Mazurskie, Kujawsko-Pomorskie*). In October 2022, over 41 000 displaced children from Ukraine were enrolled in kindergartens. The size of groups could be increased by maximum 3 displaced children arriving from Ukraine after 24 February. The sector is facing staff shortages and low salaries, and working hours are higher than the international average (OECD, 2021c).

Poland has launched new support schemes to improve the affordability of ECEC under 3. In 2020, the enrolment rate was 11.2%, an increase of 8.2 pps compared to 2011, but far below the EU average (35.3%) (Figure 3). The programmes (Toddler, Toddler+), implemented since 2011, support the creation of new places and reduce the fees for parents. On 1 January, the new family care capital programme subsidising childcare fees for parents was launched¹⁶. The maximum subsidy is around EUR 2 500 per second and subsequent child between 12 and 35 months old. On 1 April, a complementary programme was launched¹⁷, which

provides for the subsidy of EUR 89 a month for each first and only child. By the end of May, 78 500 children had been supported with a total amount of around EUR 20.2 million¹⁸, transferred directly to childcare facilities. Displaced children from Ukraine are also entitled to this support.

Poland plans to improve the accessibility and quality of ECEC under 3 under the national recovery and resilience plan (RRP) and the ESF+ programme. It aims to create 102 517 places (47 500 new places until 2026 from the RRP and 55 017 from the ESF+ until 2029), and to streamline the financing system for running childcare facilities. By 2023, it is committed to reviewing the current childcare standards to develop comprehensive quality standards, including educational guidelines, taking into account the Council Recommendation on High-Quality ECEC Systems (2019/C 189/02)¹⁹.

4. School education

Long periods of school closures due to COVID-19 have been a key challenge for students and teachers, but the achievement gap has not yet been measured. Between January 2020 and May 2021, schools taught remotely much longer than in other OECD countries. Overall, learning in upper secondary general education was disrupted for 272 days, including full and partial school closures (OECD, 2021c). Despite significant support for remote education from the Ministry, the evaluation of the education process between January 2020 and August 2021 by the Supreme Audit found negative impacts on the education process, leading to learning losses and affecting students' and teachers' well-being (NIK, 2022). While Poland has not carried out an assessment of the impact

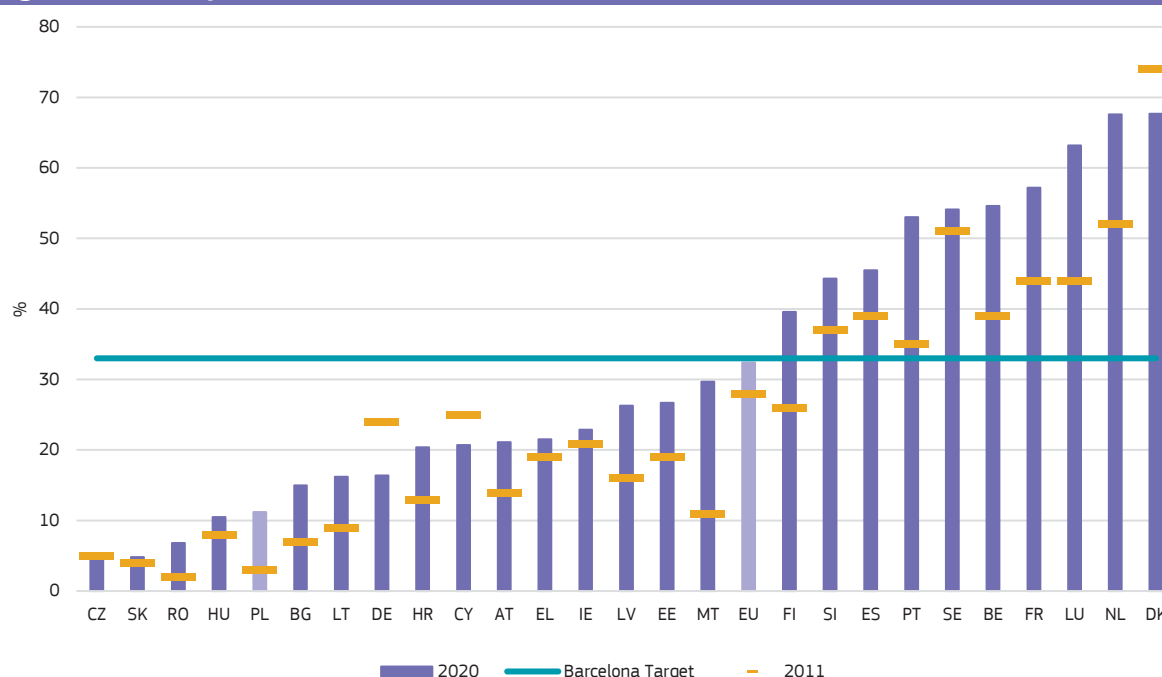
¹⁶ <https://www.gov.pl/web/polski-lad/rodzinny-kapital-opiekunczy>

¹⁷ <https://www.gov.pl/web/rodzina/rzad-dofinansuje-pobyt-dziecka-w-zlobku-klubie-dzieciwym-u-dziennego-opiekuna-rodzicu-sprawdz-jakie-nalezy-spelnic-formalnosci-by-skorzystac-z-tej-formy-wsparcia>

¹⁸ <https://www.gov.pl/web/rodzina/dofinansowanie-pobytu-dzieci-w-zlobkach-do-placowek-trafilo-juz-95-mln-zl>

¹⁹ [https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32019H0605\(01\)&from=EN](https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32019H0605(01)&from=EN)

Figure 3: Participation in formal childcare or education below 3, 2011 and 2020, (%)



Source: Eurostat (EU-SILC), [ilc_caindformal]. Notes: 2020 data for IT not available

of COVID-19 on students' learning outcomes, a survey run in upper secondary schools in Warsaw indicates that the pandemic, combined with the changes in the education system, has led to a significant reduction in students' learning outcomes (Jakubowski, M. et al., 2022). The results of the compensatory programme implemented during the 2021/2022 school year are not yet known. In July 2022, the Ministry launched a new programme worth around EUR 2.2 million to enhance digital skills, entrepreneurship, patriotic, and sports education²⁰, but no longer addressing learning losses. Also in 2022, the requirements for external exams both after primary and upper-secondary education were reduced, which could also lead to lowering students' achievements. In 2022/2023, due to an increased cohort of primary school graduates by around 50%²¹, upper secondary schools, mainly in cities, are at risk of overcrowding, further affecting their teaching and learning conditions. Monitoring of learning outcomes would be

necessary to identify problems and introduce corrective measures.

Curricular changes and new school subjects will be introduced, some despite widespread criticism. Poor social communication in education, curriculum overload and an insufficient focus on key competences were identified by the Supreme Audit as the education system's general weaknesses (NIK, 2022). From September, in the 'Safety Education' curriculum for eighth graders and first year upper secondary students, the mental health component was replaced with defense and shooting practice induced by the war in Ukraine²². Although health education remains present in other subjects in general education, the change gave psychologists²³ and some stakeholders²⁴ cause for concern. At upper secondary level, the new subject 'History and the Present', which integrated the current 'Civics'

²⁰ <https://www.gov.pl/web/edukacja-i-nauka/wystartowal-program-wsparcia-edukacji>

²¹ As a result of the 2009 reform lowering the primary school entry age to 6 from 7. The reform was abolished in 2016.

²² <https://www.gov.pl/web/edukacja-i-nauka/edukacja-dla-bezpieczenstwa--rozporzadzenia-podpisane>

²³ <https://wyborcza.pl/7,75398,28602291,nauka-o-zdrowiu-na-bok-najpierw-budowa-broni-a-gdzie-prewencja.html>

²⁴ <https://legislacja.rcl.gov.pl/projekt/12360100/katalog/12882014#12882014>

subject, aims to expand the teaching of modern history. It started in September²⁵ with a controversial textbook approved by the Ministry despite criticisms from numerous organisations²⁶, the public, teachers²⁷ and scientists²⁸. They bemoan largely reduced civic education, hasty preparation and consultation process, factual errors, homophobic statements, and a focus on knowledge at the expense of competences^{29,30}. Although two other textbooks were approved later, the concerns regarding the new subject persist. The introduction of 'Business and Management' is planned for September 2023, as a subject for the school-leaving exam as of 2027. The report from the public consultation on the curriculum content of this subject has been published³¹.

In 2021, the rate of early leaving from education and training was comparatively low. The overall rate remains significantly below the EU average (5.9 vs EU 9.7%). The gender gap stands at 2.8 pps: the rate for boys was 7.2%, for girls 4.4%.

The controversial amendment to the Criminal Code also contains stricter measures for school-age children, including penalties now imposed by schools. On 1 September, the Act of 9 June 2022 on the support and rehabilitation of minors entered into force, which replaced the Act of 26 October 1982 on proceedings in juvenile cases. For cases committed in schools school heads now have the power to impose measures which are set out in the law or in the school's

statute, without the need to notify the police and the Family Court unless the guardians of the minor do not agree with the proposed measures. The Act allows for the application of penalties defined in the school's statute which do not pose a threat to 10-year-olds. According to some educators^{32,33} the changes can also aggravate the school climate and the parent-teacher relations. Different organisations have criticised the overall amendment, which makes the penalty measures stricter as of the age 13³⁴, also indicating they are inconsistent with the Convention on the Rights of the Child and the recommendations of the Committee on the Rights of the Child.

Schools integrate large numbers of displaced children from Ukraine, which is a new challenge. Following the Russian aggression against Ukraine, around 528 000 school-going Ukrainian children and young people arrived in Poland. In October 2022, 192 278 were enrolled in educational settings from pre-primary up to upper secondary education³⁵. The law of 12 March³⁶ on assistance to Ukrainian citizens fleeing the war included measures on integrating children and students into education, psychological support, and facilitating the employment of Ukrainian citizens in schools. Guidance³⁷ and educational materials for teaching Ukrainian students³⁸ have been developed and Polish language courses for school staff were launched³⁹. To fulfil the obligation of compulsory education, the parents of

²⁵ <https://www.gov.pl/web/edukacja-i-nauka/historia-i-terazniejszosc--nowy-przedmiot-w-szkolach--ponadpodstawowych-od-1-wrzesnia-2022-r>

²⁶ <https://glos.pl/kontrowersyjny-podrecznik-do-przedmiotu-historia-i-terazniejszosc-autorstwa-prof-rozkowskiego-zatwierdzony-do-uzyciu>

²⁷ <https://www.onet.pl/informacje/onetiwiadomosci/ktory-podrecznik-do-hit-u-wybrala-twoja-szkola-sprawdz-to-na-tej-mapie/wry9842,79cfc278>

²⁸ <https://dokumenty.uw.edu.pl/dziennik/DWHis/Lists/Dziennik/Attachments/147/DWHIST.2022.104.URW.06.pdf>

²⁹ <https://glos.pl/uniwerytet-warszawski-pan-i-ptk-krytykuja-propozycje-zmian-w-podstawach-w-zakresie-historii-hit-i-wos>

³⁰ <https://legislacja.rcl.gov.pl/projekt/12354559/katalog/12839792#12839792>

³¹ <https://www.gov.pl/web/biz/raport-z-konsultacji2>

³² <https://glos.pl/mieszanie-szkoly-z-systemem-resocjalizacji-prof-marek-konopczynski-tlumaczy-dlaczego-to-zla-ustawa>

³³ <https://www.polityka.pl/tygodnikpolityka/spoleczenstwo/2169335,1,szkola-jak-areszt-w-wersji-light-ziobro-z-czarnkiem-zaprowadza-porzadek.read>

³⁴ <https://www.hfhr.pl/zmiany-w-kodeksie-karnym-odejscie-od-resocjalizacji-drakonskie-kary-i-bezwzgledna-kara-dozywotniego-wiezienia/>

³⁵ Polish Education Information System (SIO)

³⁶ <https://www.gov.pl/web/edukacja-i-nauka/ustawa-o-pomocy-obywatelom-ukrainy-w-zwiazku-z-konfliktem-zbrojnym-na-terytorium-tego-panstwa--juz-obowiazuje>

³⁷ <https://www.gov.pl/web/edukacja-i-nauka/szkola-dla-was>

³⁸ <https://www.ore.edu.pl/2022/03/materialy-edukacyjne-do-pracy-z-ukrainskimi-uczniami-w-polskich-szkolach/>

³⁹ <https://www.ore.edu.pl/2022/03/intensywny-kurs-jezyka-polskiego-na-poziomie-podstawowym-dla-nauczycieli-oraz-osob-zwiazanych-z-oswiata-pochodzacych-z-ukrainy>

Ukrainian children can decide whether to enroll their children in Polish schools or have them follow Ukrainian online education. To facilitate the integration of Ukrainian students, the Ministry cooperates with UNICEF Poland⁴⁰. Relevant provisions on admitting students from abroad into schools have been present in the Polish legislation⁴¹, however, better policy coordination and systemic solutions are needed, in particular support for teachers (NIK, 2020; CCE, 2022).

The new tax reform is likely to aggravate local governments' difficulties in financing.

Local governments receive educational subvention from the state budget to support the cost of functioning of schools and pre-schools, but they also add their own funds for this purpose. The proportion of spending in education covered by local governments has increased significantly over time. In 2020, they covered 43.3% of spending on pre-primary and primary school education for which they are responsible (Statistics Poland, 2021). Since the new tax reform under the 'Polish Deal' reform programme reduces local governments' own income from taxes⁴², financing of pre-primary and primary school education, including teachers' salaries, is likely to be further affected. Although the ministerial subvention for 2022 grew by 7.1% compared to 2021⁴³, the Polish Cities Union have called for an increase of the educational subvention as underfinancing affects the quality of education⁴⁴. In July 2022, the Minister allocated an additional around EUR 34 million to support schools managed by non-

governmental organisations (NGOs)⁴⁵, independent from local governments. The controversial bill to remove school autonomy, strengthen the role of regional educational authorities and limit the support of NGOs for schools was vetoed by the President in early 2022.

Teacher shortages are severe, and the recent salary increases and proposed changes to the Teachers' Charter raise concerns.

The teaching profession has faced many challenges, including low status and salaries, leading to shortages (Supreme Audit, 2021; European Commission, 2021b; European Commission/EACEA/Eurydice, 2021, 2022). In April 2022, a 4.4% increase in teachers' average salaries as of 1 May was approved⁴⁶. This is, however, below the current inflation rate (June: 15.6%) and teachers' expectations^{47,48}. From 1 September, the amendment to the Teachers' Charter⁴⁹ reduces the career progression steps, changes the assessment of teachers' performance and increases novice teachers' (former trainee and contract teachers') statutory salaries to 120% of the salary base. Teachers' representatives have criticised the amendment for the lack of consultation, no strategic or qualitative approach to improving teachers' status⁵⁰. Given the unsatisfactory progress in negotiations and the overall challenges in education, teachers' representatives have announced protests⁵¹.

Poland plans to develop a digital strategy for schools and digital competences, enhancing digital inclusiveness.

Over the past decade, supported by EU funds, Poland has

⁴⁰ <https://www.gov.pl/web/edukacja-i-nauka/minister-przemyslaw-czarnek-i-unicef-podpisali-memorandum-o-porozumieniu-ws-przeciwdzialania-wykluczeniu-edukacyjnemu-dzieci-i-mlodziezy-z-ukrainy>

⁴¹ Art. 165 and Art. 166 of Education Law; the Regulation of the Minister of National Education of August 23, 2017
<https://isap.sejm.gov.pl/isap.nsf/DocDetails.xsp?id=WDU20170001655>

⁴² <https://www.pit.pl/aktualnosci/polski-lad-2-0-z-poprawkami-komisji-finansow-publicznych-1006952> ; <https://metropolie.pl/arttykul/walczymy-o-wyzsze-udzialy-samorzadow-w-dochodach-z-calego-pit>

⁴³ the Ministry of Education and Science's own information

⁴⁴ <https://www.miasta.pl/edukacja/aktualnosci/stanowisko-zarzadu-zwiazku-miast-polskich-w-sprawie-sytuacji-w-oswiacie>

⁴⁵ <https://www.gov.pl/web/edukacja-i-nauka/program-wsparcia-i-edukacji-i-program-inwestycje-w-oswiacie--konferencja-prasowa-szefa-mein>

⁴⁶ <https://www.gov.pl/web/edukacja-i-nauka/prezydent-podpisal-nowelizacje-ustawy-karta-nauczyciela>

⁴⁷ <https://www.prawo.pl/oswiata/podwyzki-dla-nauczycieli-od-1-maja-2022-r,514177.html>

⁴⁸ <https://glos.pl/apel-znp-i-fzz-o-wspoldzialanie-zwiazkow-na-rzecz-wzrostu-wynagrodzen-w-oswiacie>

⁴⁹ <https://www.gov.pl/web/edukacja-i-nauka/wdrazanie-nowego-systemu-awansu-zawodowego-nauczycieli-w-swietle-przepisow-przejscowych>

⁵⁰ <https://znp.edu.pl/karta-nauczyciela-w-senacie-i-poprawki-znp/>

⁵¹ <https://glos.pl/znp-oglaszamy-pogotowie-protestacyjne>

invested in ICT infrastructure and the connectivity of schools⁵², digital educational materials⁵³ and the digital skills of teachers. However, despite recent support, remote education has exacerbated digital exclusion among students and teachers (connectivity, skills, equipment), and teachers lack training in digital teaching methods (NIK, 2022). In its RRP, Poland plans to develop a national digital skills programme, and for schools, a national digitalisation strategy and minimum standards for ICT equipment. All primary and secondary schools across Poland will receive multimedia equipment for teachers' and students' use, including 1.2 million laptops, a high-speed internet connection, and science, technology, engineering and maths (STEM) and artificial intelligence laboratories.



Box 2: The National Recovery and Resilience Plan

The Polish RRP⁵⁴ is worth EUR 23.9 billion in grants and EUR 12.1 billion in loans. Poland plans reforms to improve digital education and invest EUR 1.4 billion in digital infrastructure and equipment for schools, as well as digital competences. It also plans to modernise vocational learning by setting up sectoral skills centres for upskilling and reskilling, and to develop regional skills policies. The childcare financing system, quality and accessibility are to be improved. Poland plans to develop an incentive programme for medical students, increase admission to medical HEIs, and improve the energy efficiency of schools. Planned reforms and investments in education and training aim to address the 2019 and 2020 country-specific recommendations calling on Poland to 'foster quality education and skills relevant to the labour market, especially through adult learning', and to 'improve digital skills'.

⁵² <https://ose.gov.pl/internet-ose>

⁵³ <https://zpe.gov.pl/>

⁵⁴ https://ec.europa.eu/info/business-economy-euro/recovery-coronavirus/recovery-and-resilience-facility/recovery-and-resilience-plan-poland_en

5. Vocational education and training and adult learning

Poland plans to establish a network of skills centres. Many Polish companies say they have difficulties recruiting employees with the necessary skills. Additionally, a deficit of transversal skills affects professional performance on the labour market, contributing to the skills mismatch, including digital skills (MoNE, 2019). While participation in upper secondary VET is comparatively high⁵⁵ (53.1% in 2020 vs EU 48.7%), only 11% of VET graduates aged 20-34 (ISCED 3 and 4) participated in work-based learning in 2020, the second lowest figure in the EU⁵⁶. Under the RRP, Poland plans to create 120 sectoral skills centres, which will provide space for knowledge and technology transfers between business and education, a holistic approach to vocational and lifelong learning, helping students and adults obtain new professional qualifications. The centres will also support teachers and cooperate with researchers to provide expertise in specific sectors of the economy.

Poland plans to improve the regional coordination of skills and lifelong learning policies. In 2021, participation in adult learning increased to 5.4% (over the past four weeks), remaining below the EU average (10.8%). However, according to the national survey the participation is higher⁵⁷. Coordination of skills and adult learning policies is challenging. Responsibility for adult learning is shared between the Ministry of Science and Education, the Ministry of Social Policy and Family, and the Chancellery of the Prime Minister. Regional governments' role in the system is not well defined. In its RRP, Poland

⁵⁵ Eurostat, educ_uae_enrs05.

⁵⁶ Eurostat, edat_lfs_9919. However, 11.6% may be understated as work-based learning is an obligatory element of VET curricula in Poland.

⁵⁷ <https://www.parp.gov.pl/component/publications/publication/rozwoj-kompetencji-uczenie-sie-doroslych-i-sektor-rozwojowy>

plans to develop a regional coordination and monitoring system for vocational training, higher education and lifelong learning policies. The regional ('voivodship') coordination teams for vocational education and lifelong learning will be created, consisting of representatives from educational institutions, regional authorities and social partners. They will develop regional skills policies and implementation plans (with the objective of developing one per 'voivodship') tailored to the needs of local economies. The Polish 2030 target of 51.7% adults in learning every year involves more than doubling the 20.9% rate of 2016.

Integrating displaced people from Ukraine into the labour market requires targeted measures, long-term planning and policy coordination. Following the Russian invasion of Ukraine, around 4.24 million (June 2022) people crossed the Polish border. They start to integrate into the labour market. They largely perform unskilled jobs, although more than 60% have a tertiary degree. Insufficient Polish proficiency hampers employment (EWL, 2022). Within the ESF project 'Chance – new opportunities for adults'⁵⁸, an additional around EUR 3 million has been allocated for language training, upskilling and overall integration. However, there is an urgent need for systemic support, including access to language courses, reskilling, upskilling and the recognition of qualifications and skills.

6. Higher education

Poland's tertiary educational attainment rate has dropped below the EU average, and the proportion of STEM graduates has

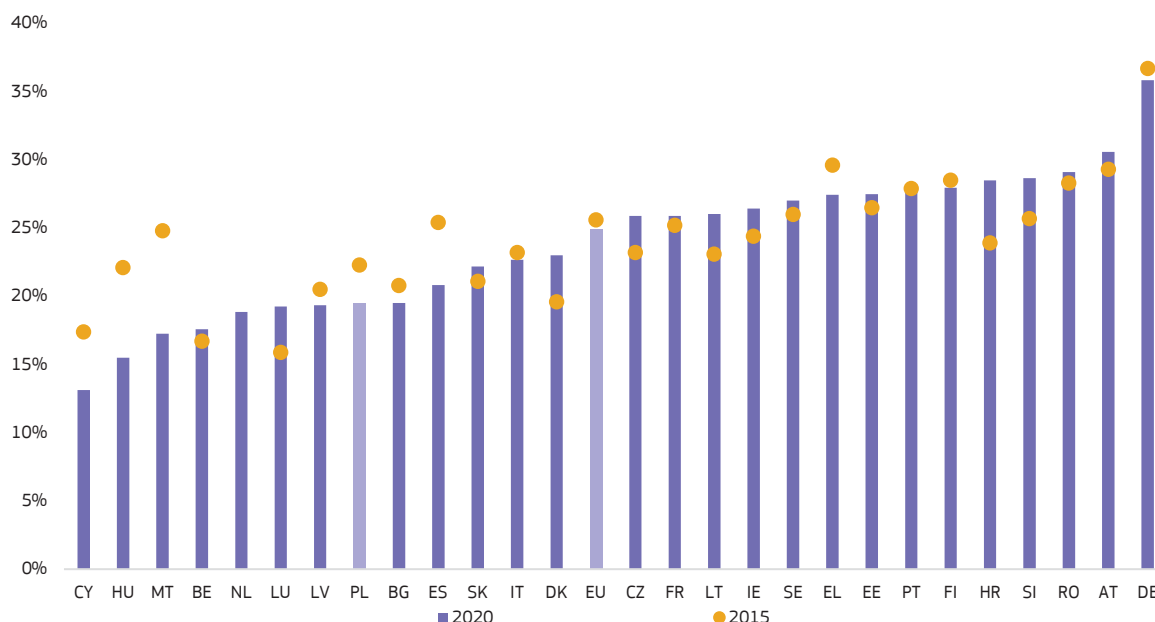
decreased further. In 2021, the tertiary educational attainment rate of people aged 25-34 was 40.6% (EU 41.2%), dropping by 1.8 pps compared to 2020 and 2.9 pps compared to 2019. The reasons for the decrease are not fully clear, but they could be associated with the 33.8% decrease in the number of students over the past 10 years (Statistics Poland, 2022). At 19 pps, the gender gap in favour of women remains significantly above the EU average (11.1 pps). The overall proportion of STEM graduates continues to decrease, falling to 19.4% (EU 24.9%) in 2020 (Figure 4). The proportion of graduates in natural sciences, maths and statistics is particularly low at 3.2% (EU 6.2%), and that of ICT graduates is slightly below the EU average (3.7% vs 3.9%). The overall gender gap and low proportion of science graduates can be explained by the high drop-out rate among men (by 15 pps higher than women), and science students (51%), the highest of all areas of study (OPI, 2021). The proportion of female graduates among all STEM graduates is comparatively high at 42% (EU 32.4%), but the proportion of female ICT graduates in total graduates is low (0.6% vs EU 0.7%)⁵⁹. In 2021, the employment rate of recent university graduates was higher than the EU average (89.4% vs EU 84.9%).

Higher education institutions have undergone the first scientific evaluation according to the new rules; last-minute changes may have further undermined the credibility of the evaluation process. In December 2021, the Minister published an amendment to a citation index, a key reference component of the evaluation process, increasing the number of points for citation in 237 journals without consulting the relevant bodies. The change

⁵⁸ <https://www.gov.pl/web/fundusze-regiony/fundusze-europejskie-na-nauke-jezyka-polskiego-dla-uchodzcow-z-ukrainy>

⁵⁹ Eurostat, educ_uoe_grad02

Figure 4: STEM graduates over total tertiary graduates in 2015 and 2020, (%)



Source: Eurostat (UOE), [educ_uae_grad02]. Note: 2015 Data for NL not available.

was strongly criticised by the scientific community⁶⁰. The first evaluation results have been published⁶¹. The evaluation process continues as HEIs and scientific institutes can still appeal. Some concerns refer to disproportionately better results for small HEIs in a specific discipline or those with new faculties than for the more experienced institutions⁶².

Poland has launched a support programme and an admission system for students from Ukraine. As of April, almost 5 700 students from Ukraine expressed an interest in continuing their studies in Poland⁶³. In consultation with academia,

the Polish National Agency for Academic Exchange (NAWA) established the 'Solidarity with Ukraine' programme⁶⁴ to enable Ukrainian students and doctoral candidates to continue their studies or research, participate in preparatory courses and receive psychological and legal support free of charge. Around EUR 5.2 million provided by the Ministry of Education and Science and the Ministry of Health should support 1 947 students. On the initiative of HEIs, an online admission system has been developed for candidates from Ukraine⁶⁵, and some HEIs have created additional places for Ukrainian candidates, bilingual studies, etc. Ukrainian and Belarussian students constitute the highest proportion of international students in Poland. During 2020/2021 and 2021/2022, around 1 200 Belarussian students have benefited from the government programme 'Solidarity with Belarus'. Over 80 students received an EU4Belarus scholarship to study in Poland⁶⁶.

⁶⁰ https://perspektywy.pl/portal/index.php?option=com_content&view=article&id=5566&catid=24&Itemid=119

<https://www.rp.pl/edukacja-i-wychowanie/art19194031-zmiany-w-punktacji-czasopism-naukowych-sa-nielegalne>

⁶¹ <https://www.gov.pl/web/edukacja-i-nauka/wyniki-ewaluacji-dzialalnosci-naukowej-za-lata-2017-2021>

⁶² <https://serwisy.gazetaprawna.pl/edukacja/artykuly/8511517,edukacja-uczelnie-ewaluacja-zastrzezenia-ocena-dzialalnosci.html>

⁶³ <https://naukawpolsce.pl/aktualnosci/news%2C92274%2Cmein-od-24-lutego-blisko-57-tys-obywateli-ukrainy-zglosilo-sie-na-polskie>

⁶⁴ <https://nawa.gov.pl/solidarni-z-ukraina/ogloszenie>

⁶⁵ <https://ukraina.irk.edu.pl/en-gb/>

⁶⁶ <https://nawa.gov.pl/nawa/aktualnosci/unia-europejska-nie-zapomina-o-bialoruskich-studentach>

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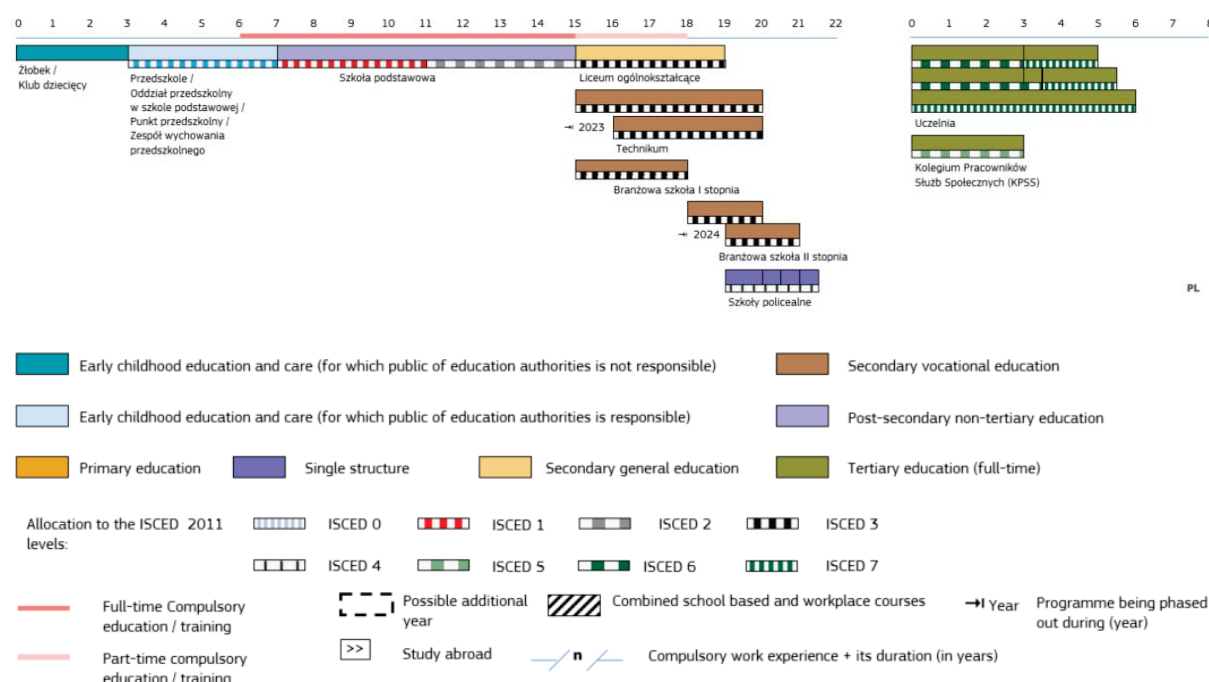
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Annex I: Key indicators sources

Indicator	Source
Participation in early childhood education	Eurostat (UOE), 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: Eurostat (LFS), edat_lfse_14 Data by country of birth: Eurostat (LFS), edat_lfse_02
Exposure of VET graduates to work based learning	Eurostat (LFS), edat_lfs_9919
Tertiary educational attainment	Main data: Eurostat (LFS), edat_lfse_03 Data by country of birth: Eurostat (LFS), edat_lfse_9912
Participation of adults in learning	Data for this EU-level target is not available. Data collection starts in 2022. Source: EU LFS.
Equity indicator	European Commission (Joint Research Centre) calculations based on OECD's PISA 2018 data
Upper secondary level attainment	Eurostat (LFS), edat_lfse_03
Public expenditure on education as a percentage of GDP	Eurostat (COFOG), gov_10a_exp
Public expenditure on education as a share of the total general government expenditure	Eurostat (COFOG), gov_10a_exp

Annex II: Structure of the education system



Source: European Commission/EACEA/Eurydice, 2022. The Structure of the European Education Systems 2022/2023: Schematic Diagrams. Eurydice Facts and Figures. Luxembourg: Publications Office of the European Union. Notes: Major changes at different education levels gradually take place between 1 September 2017 and the school year 2022/23 (Act of 14 December 2016 'Law on School Education' and an Act 'Legislation introducing the Act – Law on School Education'). A pre-reform programme for graduates of phased out *gymnasia* still operates in 4-year *technikum* up to the year 2022/23. In 2022/23 the 2-year *branżowa szkoła II stopnia* (secondary school) offers a new programme to graduates of *branżowa szkoła I stopnia*.

Please email any comments or questions to:
EAC-UNITE-A2@ec.europa.eu

Brussels, 18.11.2022
SWD(2022) 751 final

PART 23/28

COMMISSION STAFF WORKING DOCUMENT

Education and Training Monitor 2022

Accompanying the document

**Communication from the Commission to the European Parliament, the Council, the
European Economic and Social Committee and the Committee of the Regions**

on progress towards the achievement of the European Education Area

{COM(2022) 700 final} - {SWD(2022) 750 final}

Education and Training Monitor 2022

PORTUGAL



The Education and Training Monitor's country reports present and assess the main recent and ongoing policy development at all education levels in EU Member States. They provide the reader with more in-depth insight of the performance of countries with regard to the EU level targets agreed within the EEA. They are based on the most up-to-date quantitative and qualitative evidence available.

Section 1 presents a statistical overview of the main education and training indicators. Section 2 focuses on how the Member State has addressed or is addressing one of its education challenges. Section 3 covers early childhood education and care. Section 4 deals with school education policies. Section 5 covers vocational education and training and adult learning. Finally, Section 6 discusses measures in higher education.

The Education and Training Monitor's country reports were prepared by the European Commission's Directorate-General for Education, Youth, Sport and Culture (DG EAC), with contributions from the Directorate-General for Employment, Social Affairs and Inclusion (DG EMPL).

The document was completed on 30 September 2022

More background data at:

<https://op.europa.eu/webpub/eac/education-and-training-monitor-2022/en/>



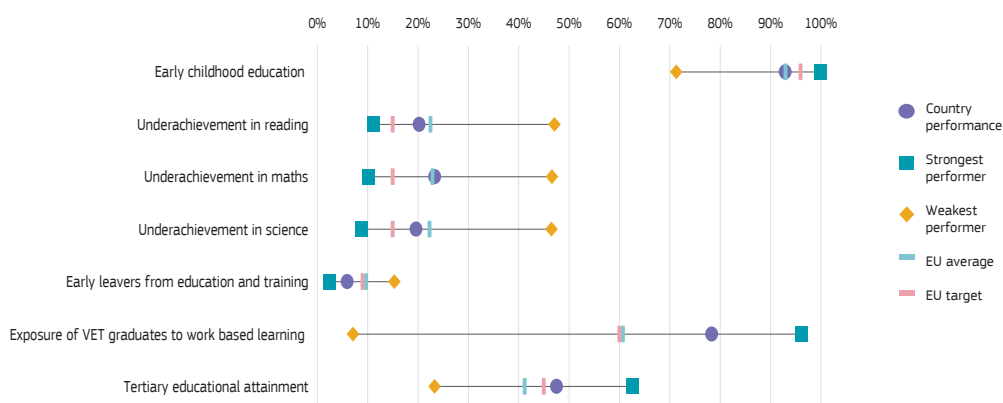
1. Key indicators

Figure 1: Key indicators overview

		Portugal		EU	
		2011	2021	2011	2021
EU-level targets		2030 target			
Participation in early childhood education (from age 3 to starting age of compulsory primary education)	≥ 96 %	88.7% ¹³	92.9% ^{20, d}	91.8% ¹³	93.0% ²⁰
Low achieving eighth-graders in digital skills	< 15%	:	33.5% ^{18, ††}	:	:
Low achieving 15-year-olds in:	Reading	17.6% ⁰⁹	20.2% ¹⁸	19.7% ⁰⁹	22.5% ¹⁸
	Maths	23.7% ⁰⁹	23.3% ¹⁸	22.7% ⁰⁹	22.9% ¹⁸
	Science	16.5% ⁰⁹	19.6% ¹⁸	18.2% ⁰⁹	22.3% ¹⁸
Early leavers from education and training (age 18-24)	< 9 %	23.0% ^b	5.9% ^b	13.2%	9.7% ^b
Exposure of VET graduates to work-based learning	≥ 60 % (2025)	:	78.3%	:	60.7%
Tertiary educational attainment (age 25-34)	≥ 45 %	27.5% ^b	47.5% ^b	33.0%	41.2% ^b
Participation of adults in learning (age 25-64)	≥ 47 % (2025)	:	:	:	:
Other contextual indicators					
Equity indicator (percentage points)		:	20.8 ¹⁸	:	19.30 ¹⁸
Early leavers from education and training (age 18-24)	Native	23.1% ^b	5.9% ^b	11.9%	8.5% ^b
	EU-born	:	:	25.3%	21.4% ^b
	Non EU-born	19.6% ^b	:	31.4%	21.6% ^b
Upper secondary level attainment (age 20-24, ISCED 3-8)		64.6% ^b	89.6% ^b	79.6%	84.6% ^b
Tertiary educational attainment (age 25-34)	Native	28.1%	47.6% ^b	34.3%	42.1% ^b
	EU-born	33.2%	56.3% ^b	28.8%	40.7% ^b
	Non EU-born	19.6%	41.1% ^b	23.4%	34.7% ^b
Education investment	Public expenditure on education as a percentage of GDP	6.1%	5.0% ^{20, p}	4.9%	5.0% ²⁰
	Public expenditure on education as a share of the total general government expenditure	12.3%	10.1% ^{20, p}	10.0%	9.4% ²⁰

Sources: Eurostat (UOE, LFS, COFOG); OECD (PISA). Further information can be found in Annex I and at [Monitor Toolbox](#). 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 and training systems – ISCED level 0; the equity indicator shows the gap in the share of underachievement in reading, mathematics and science (combined) among 15-year-olds between the lowest and highest quarters of socio-economic status; b = break in time series, d = definition differs, p = provisional, u = low reliability, : = not available, ††= Nearly met guidelines for sampling participation rates after replacement schools were included, 09 = 2009, 13 = 2013, 18 = 2018, 20 = 2020.

Figure 2: Position in relation to strongest and weakest performers



Source: DG Education, Youth, Sport and Culture, based on data from Eurostat (LFS 2021, UOE 2020) and OECD (PISA 2018).

2. A focus on equity and inclusiveness

In Portugal, the socio-economic background of students has a significant impact on their academic outcomes. The gap between advantaged and disadvantaged students in the share of underachieving students is just below the EU average (26.6 pps. vs 26.9 pps). Nevertheless, according to the PISA 2018 tests (OECD, 2020), variations in reading performance are highly correlated with the economic, social and cultural background of students. National data indicate that students from a disadvantaged socio-economic background who receive school social assistance (*Ação Social Escolar, ASE*) have more learning difficulties than their peers (CNE, 2019a). The PISA 2018 tests also show that students from a disadvantaged socio-economic background are more than five times more likely to repeat a grade than students from an advantaged background. It indicates also that disadvantaged students are likely to attend schools with students from a similar socio-economic background. Student composition differs significantly between schools across the country, and even within districts of the same city (Oliveira Baptista and Pereira, 2018). Since 2020, the Directorate-General for Statistics in Education and Science (DGEEC) has developed a new indicator that assesses the ability of school clusters and municipalities to foster school success among disadvantaged students. School success is defined as the completion of each school cycle in the expected time and with positive scores in the national exams¹. In 2020/2021, students who received additional learning and inclusion support improved their academic results and achieved the level reached by the overall student population. At secondary level, the success

rate (promotion to the next academic course) was even higher (91.2% vs 90.2%)².

Having an immigrant or Roma background were also factors influencing student performance. The reading performance in the PISA 2018 tests of students with an immigrant background was 32 score points lower than the performance of non-immigrant students. After accounting for students' and schools' socio-economic background, there is still a difference of 26 score points, equal to a half school year. Second-generation migrant students scored higher than first-generation students, which is a trend observed in most countries. Oliveira (2020) also found that in all years between 2011/2012 and 2018/2019, foreign students repeated courses³ in primary and secondary education more frequently than their peers. A study by Eurydice (European Commission/EACEA/Eurydice, 2019) estimates that in 2017, slightly more students with an immigrant background left education early (13.9%) than their native-born peers (12.5%). Students with an immigrant background also attend often schools that show a high concentration of migrant students (OECD 2019). According to the DGEEC (2020) report, *School Profile of Roma Communities 2018/2019*, retention and dropout rates are higher among Roma students than for the general population (15.6% in primary education and 12.6% in secondary vs 3.7% and 12.9% for the whole student population)⁴.

Educational inequality in Portugal is less pronounced than in other EU countries, but disparities between regions and high levels

¹ Exams taken in the 9th grade of basic education (Portuguese and Maths) and in the 11th and 12th grades of upper secondary education.

² [https://www.dgeec.mec.pt/np4/527/%7B\\$clientServletPath%7D/?newsId=1365&fileName=EI2021_BreveSinteseResultados.pdf](https://www.dgeec.mec.pt/np4/527/%7B$clientServletPath%7D/?newsId=1365&fileName=EI2021_BreveSinteseResultados.pdf)

³ The retention and dropout rate refers to students who are in a retention situation '(...)' which occurs as a result of the student's unsuccessful use due to non-compliance with the requirements set out in the legislation in force for attendance in the school year following that one. or in a situation of withdrawal '(...)' that occurs as a result of the temporary abandonment of a student or trainees from attending the teaching activities of a course, a training period or one or more subjects during the course of one academic year' (DGEEC).

⁴ <https://www.dgeec.mec.pt/np4/97/>.

of grade repetition remain key challenges.

Nearly all students are enrolled in schools and diversity in schools is increasing. Portugal has a comprehensive inclusive education framework but inclusion remains mainly geared towards including students with special education needs (SEN). Despite efforts made to collect data and evaluate existing programmes, the country lacks a coherent strategy to monitor and evaluate equity and inclusion in education.

Strengthening monitoring and evaluation of inclusive education policies could help further improve their effectiveness.

The OECD country policy review for Portugal, *Strength through Diversity: Education for inclusive society*,⁵ assessed how the Portuguese education system copes with diversity and inclusiveness. The review suggests, among other policy recommendations, strengthening strategies to monitor and evaluate inclusive education practices at local and school levels. Other short-term recommendations of the review focused on improving governance through better coordination, fostering synergies and accountability mechanisms, sustaining collaboration and sharing best practices between the different administrative levels of the education system. It also suggests expanding continuous professional learning opportunities for teachers to support diversity and inclusion and formulating clear guidance on the use of support resources in schools and communities. The European Commission, supports Portugal, through a multi-country project with Spain and Italy under the Technical Support Instrument, in improving the quality of their inclusive education policies.

The COVID-19 pandemic may have increased educational inequalities among Portuguese students.

The National Council of Education (CNE, 2021b) reports that 23% of students may not have participated regularly in school activities during distance learning. This mainly affected

children and young people from socio-economically disadvantaged environments, who risked being insufficiently involved. The lack of access to digital equipment and enough digital competences may have limited the participation of students in distance learning activities. To address some of these limitations, under the action plan for the digital transition⁶, in the 2020/2021 school year, the government delivered approximately 450 000 computers to schools, mainly benefiting children from low-income households.



Box 1: Inclusive books for students with visual and hearing impairments

The Coimbra Centro school cluster (Coimbra Centre) is a reference school both for bilingual education and for teaching pupils with vision impairments. The school has extra resources and expertise to support the learning and the inclusion of some students with special educational needs through specialised teachers and equipment.

Coimbra Centro school cluster is developing a series of inclusive educational books for primary school students with visual impairments, with the books translated into braille. Most printed images in the books have reliefs made of different materials, which give students a sensory experience through touch.

In addition, the books contain QR codes for students with hearing impairments. When scanned with a smartphone, the codes direct the reader to a Youtube video with a sign language interpreter.

This project is part of a school library network programme (RBE) entitled Todos Juntos Podemos Ler (since 2012). In 2014, Coimbra Centro participated by running a project called Leituras à medida and in 2019 continued with Tem de S(L)er, which was one of ten projects supported and funded at national level in 2020.

⁵ [https://urldefense.com/v3/__https://oecd.eduto day.com/portugal-inclusive-education/_;!!DOxrgLBm!SBuZfk6xf5TnDI7-16-glZqA4Y2w4dT6tj_acJ8d9kZOW623rEuqu6Nzxj4D-bvETJi8XINF02jXSg\\$](https://urldefense.com/v3/__https://oecd.eduto day.com/portugal-inclusive-education/_;!!DOxrgLBm!SBuZfk6xf5TnDI7-16-glZqA4Y2w4dT6tj_acJ8d9kZOW623rEuqu6Nzxj4D-bvETJi8XINF02jXSg$)

⁶ <https://www.poch.portugal2020.pt/pt-pt/Noticias/Paginas/noticia.aspx?nid=971&ano=2018&pag=3&nr=9>

The project was designed for three groups: 1) refugee students; 2) students in institutionalised care; 3) students with hearing, vision, low-vision, autism, multi-disabilities and severe learning difficulties. The project received financial public support (EUR 1 950) and from several private entities, for example Critical Software providing EUR 2 000 and two parish councils (EUR 200 each).

More information available at:
<https://padlet.com/bibliotecaaecc/605az4wctu4a>;
<https://www.aecoiembracentro.pt/comunicacao/noticia/312/projeto-tem-de-sler>;
<https://www.facebook.com/bibliotecaAecc>.

3. Early childhood education and care

Portugal is taking steps to extend the preschool network and make attendance in early childhood education and care (ECEC) universal. With support from the national recovery and resilience plan (RRP), the Portuguese government plans to expand its preschool network, which aims to provide free access to ECEC to all 3-year old children. ECEC attendance in Portugal (from age 3 to compulsory schooling age) in 2020 was similar to the EU average (92.9% vs 93.0%), but still below the EU-level target (96%). ECEC attendance of children aged 3 is below the EU average (83.2% vs 87.8% in 2020) but above average for children aged 4 and 5. The attendance rate is also much higher than the EU average for children below 3 years old (53% vs 32.3% in 2020)⁷. The rate of enrolment in ECEC tends to be significantly lower for children whose mother has not completed tertiary education and for children from low-income households (OECD, 2021)⁸.

The ECEC sector shrank during the last decade, despite expected higher demand. In 2021, around 251 000 children (aged 3–6) attended ECEC (51.5% boys and 48.5% girls),

⁷ EU-SILC, ilc_caindformal.

⁸ <http://www.oecd.org/education/education-at-a-glance-19991487.htm?refcode=20190209ig>

25 000 fewer than ten years earlier⁹. Consequently, the number of ECEC institutions also fell from 6 812 (2011) to 5 774 (2021)¹⁰. In 2021, 46% of children attended private kindergarten (96% of children below 3), which is also a reduction over the last decade¹¹. In 2021, there were 17 064 ECEC teachers, more than one thousand less than in 2011. The decrease was stronger in some regions (Norte, Centro and Madeira)¹². 99.1% of ECEC teachers are women (against the EU-27 average of 95.7%)¹³. The teaching population is also ageing. On average, the ratio of teachers aged over 50 to those under 35 years old is 7 to 1 (3 to 1 in the metropolitan area of Lisbon and 4 to 1 in Algarve)¹⁴.

4. School education

The number of students leaving education without completing upper secondary education is falling. In 2021, the rate of students leaving education and training early (ELET) reached a historic low of 5.9%. However, regional disparities persist, ranging from over 20% in Azores and Algarve to below the national average in the Norte region. The great success in reducing ELET rates (from 23% in 2011, 14% in 2016 to 8.9% in 2020) is linked to the implementation of policies such as the priority intervention educational territories programme (*Territórios Educativos de Intervenção Prioritária*,

⁹ <https://www.pordata.pt/Portugal/Alunos+matriculados+no+ensino+pr%c3%a9+escolar+total+e+por+sexo-852>

¹⁰ <https://www.pordata.pt/Portugal/Estabelecimentos+nos+ensinos+pr%c3%a9+escolar++b%c3%a1sico+e+secund%c3%a1rio+por+n%c3%advel+de+ensino-1237-9805>

¹¹ <https://www.pordata.pt/Portugal/Alunos+matriculados+no+ensino+pr%c3%a9+escolar+total+e+por+subsistema+de+ensino-853>

¹² <https://www.pordata.pt/Municipios/Docentes+em+exerc%c3%adcio+nos+ensinos+pr%c3%a9+escolar++b%c3%a1sico+e+secund%c3%a1rio+total+e+por+n%c3%advel+de+ensino-208-1495>

¹³ <https://www.pordata.pt/Europa/Docentes+do+sexo+feminino+em+percentagem+dos+docentes+por+n%c3%advel+de+ensino-1736>

¹⁴ <https://www.pordata.pt/Municipios/%c3%8ndice+de+envelhecimento+dos+docentes+em+exerc%c3%adcio++nos+ensinos+pr%c3%a9+escolar++b%c3%a1sico+e+secund%c3%a1rio+por+n%c3%advel+de+ensino-337>

Figure 3: Pupils from age 3 to the starting age of compulsory primary education, 2013 and 2020 (%)



Source: Eurostat (UOE), [educ_uoe_enra21].

TEIP)¹⁵ and the national programme for school success promotion (*Programa Nacional de Promoção do Sucesso Escolar*, PNPSE)¹⁶. The impact of parents' education background on ELET is the lowest in the EU, which shows that the school system is better at supporting inter-generational mobility than in other countries¹⁷.

Portugal launched a comprehensive plan to compensate for the loss of learning. In June 2021, the government presented the plan 21|23 *Escola*¹⁸, with a duration of two academic years and with an allocation of over EUR 900 million.

The plan aims to remedy students' learning losses during the pandemic in primary and secondary education, make curricular development more flexible and provide schools with resources to develop special measures, such as weeks or days with specific learning activities in priority subjects or domains¹⁹. Indicators and instruments for monitoring the plan are in progress²⁰. The plan contains three pillars: 'Teaching and Learning', 'Supporting the Educational Communities' and 'Knowing and Assess'. In particular, it includes boosting staffing levels in schools, training teaching and non-teaching staff, increasing digital resources and providing schools with more equipment and infrastructure. The Institute for evaluation of education (IAVE) published in March 2022 guidelines with suggestions on how to assess student performance²¹. Initial monitoring

¹⁵ The TEIP programme, implemented since the 1996/1997 school year, involves schools in areas with high levels of poverty and social exclusion, as identified by educational indicators (e.g. school failure) and socio-economic indicators (e.g. the ASE). <https://www.dge.mec.pt/teip>

¹⁶ Created in 2016, its mission is to prevent school failure by reducing grade repetition rates through a bottom-up approach. Each school can implement its own strategic action plan to promote educational practices and improve learning. <https://pnpse.min-educ.pt/programa>

¹⁷ See footnote 3.

¹⁸ <https://www.portugal.gov.pt/pt/gc22/comunicacao/noticia?i=governo-apresenta-plano-2123-escola>.

¹⁹ Order No 6726-A/2021).

²⁰ Resolution of the Council of Ministers No 90/2021 (Approves 21|23 School + Plan).

²¹ https://iave.pt/wp-content/uploads/2022/04/GPS_Completo_VersaoFinal.pdf.

data²² indicates that Portugal had already developed and implemented over 80% of the actions planned²³.

New live science clubs and digital laboratories in schools foster STEM subjects.

The Directorate-General for Education (DGE) and the National Agency for Scientific and Technological Culture *Ciência Viva*²⁴ approved the creation of new science clubs, increasing from 237 to 699 clubs across the country. The national RRP supports this measure. The *Ciência Viva* school network aims to expand experimental teaching of sciences and strengthen the sciences in primary and secondary education. The network runs partnerships with universities, research centres, museums and science centres, companies, associations and NGOs. The RRP will also support the creation of digital education laboratories²⁵ at schools in the second and third cycles of basic education and secondary education. Schools can opt to run different activities such as programming and robotics, STEM subjects or arts and multimedia.

The ageing of the teacher workforce and teacher shortages in certain fields are becoming major educational challenges.

National statistics indicate that over the last 15 years, the number of teachers decreased from more than 185 000 to just over 147 000. The National Council of Education (CNE, 2019b)²⁶ highlighted that the number of teachers who will retire by 2028 is increasing progressively. 20% of today's teachers will retire within the next five years and 58% within 10 years (Nunes, 2021). There is already a lack of qualified teachers for several subjects (e.g. Portuguese, geography, history, biology and IT). Teacher shortages are especially pronounced in the metropolitan area of

Lisbon, Setubal and Algarve, as stated by the unions. DGEEC estimates that by 2030/2031, Portugal will need around 34 500 new teachers to avoid a shortage of qualified teachers²⁷. To aggravate the situation, fewer young people are starting teacher training courses. The number of graduates in master's courses that provide a professional qualification for teaching is falling.

Portugal has revised the professional qualification requirements for teachers.

A proposal to modify the Legal Regime of Professional Qualification for Teaching in PreSchool, Primary and Secondary Education is being prepared by the Ministry of Education²⁸. With this, the government is seeking to remedy teacher shortages, for example by creating scope to recruit professionals with a relevant academic background. The teachers unions consider this a serious setback in terms of teacher quality, jeopardising the quality of education.

School buildings require renovation. Most schools in Portugal were built during the 1970/80s, and about 50% have not yet been renewed. In addition, current changes in the curriculum, new competences for students to acquire by the end of compulsory education and schools' autonomy to implement different teaching methods require different ways of organising the school space and highlight the need to modernise school premises.

Integrating displaced Ukrainian children is a challenge for Portugal's education system.

By May 2022, Portugal had welcomed more than 35 000 people fleeing the war: two out of three are women and about one third are children under 14. Displaced children are being integrated into the education system. However, in May only one third of minors who had arrived in Portugal had enrolled in school (around one thousand in pre-primary, three thousand in primary and several hundred in secondary). Children can continue their studies in the Ukrainian education system through

²² [https://www.dgeec.mec.pt/np4/%7B\\$clientServletPath%7D/?newsId=1348&fileName=Relat_rio_Plano_21_23_Escola__1a_Monito.pdf](https://www.dgeec.mec.pt/np4/%7B$clientServletPath%7D/?newsId=1348&fileName=Relat_rio_Plano_21_23_Escola__1a_Monito.pdf).

²³ <https://escolamais.dge.mec.pt/noticias/implementacao-do-plano-de-recuperacao-das-aprendizagens-superior-80>.

²⁴ <https://www.portugal.gov.pt/pt/gc22/comunicacao/noticia?i=rede-de-clubes-ciencia-viva-na-escola-triplica>

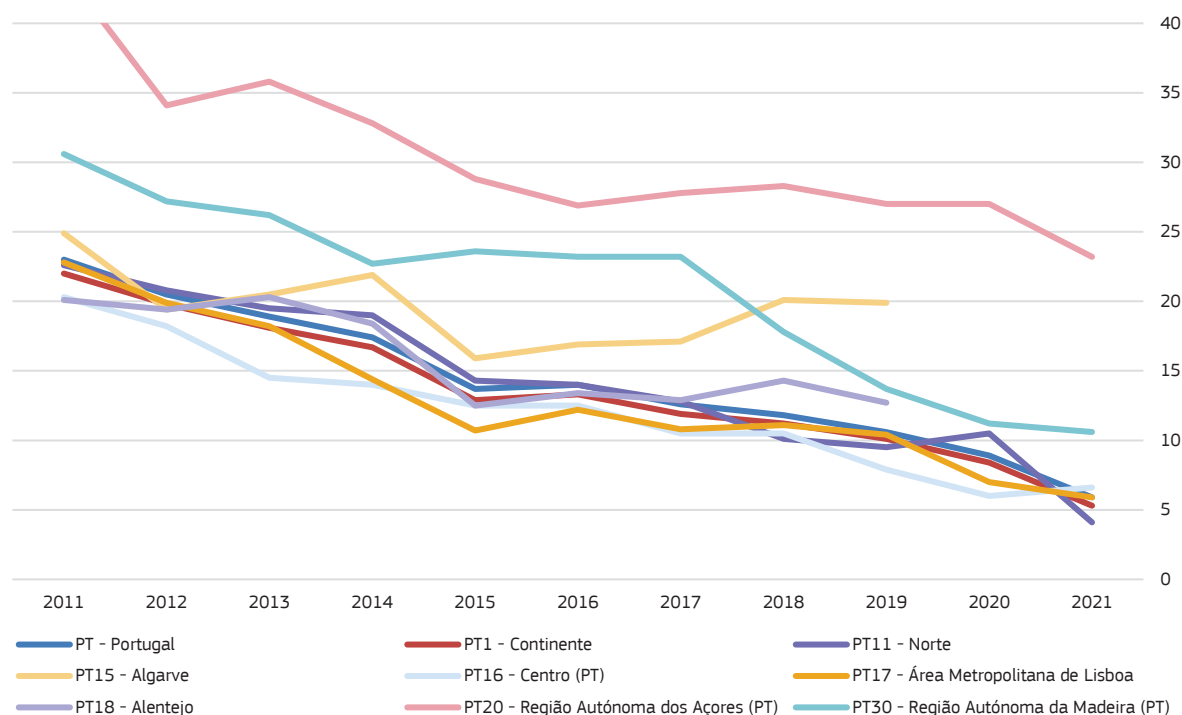
²⁵ https://www.dge.mec.pt/sites/default/files/informacoes_escolas/laboratorios_de_educacao_digital.pdf

²⁶ CNE - teacher recruitment study July 2019

²⁷ [https://www.dgeec.mec.pt/np4/%7B\\$clientServletPath%7D/?newsId=1304&fileName=DGEEC_Estudo_Diagnostico_de_Necessidade_.pdf](https://www.dgeec.mec.pt/np4/%7B$clientServletPath%7D/?newsId=1304&fileName=DGEEC_Estudo_Diagnostico_de_Necessidade_.pdf)

²⁸ <https://www.portugal.gov.pt/pt/gc22/comunicacao/noticia?i=governo-quer-tornar-profissao-docente-mais-atrativa>

Figure 4: Early leavers from education and training by NUTS 2 regions in Portugal, 2011-2021(%)



Source: Eurostat (LFS), [edat_lfse_16].

the National Online School²⁹ or via Ukrainian television whilst being supervised at Portuguese schools, with the learning of Portuguese being mandatory. The DGE has identified and sent to schools a set of guidelines on integrating refugee children in preschool education³⁰ and on welcoming, integrating and including Ukrainian children and young people³¹. The Ministry of Education also provides a collection of documents online³². Action on integration is monitored by a working group including the Ministry of Education

and other bodies such as the High Commissioner for Migration³³. A multidisciplinary team supporting inclusive education supports strategic teaching measures and accompanying students during teaching activities. The Ukrainian Refugees Association regrets the lack of places in day-care centres and kindergartens for their children. This makes it difficult for them to help parents integrate in the country as they cannot attend training courses, job interviews or accept jobs.

²⁹ <https://lms.e-school.net.ua/guide>

³⁰ https://www.dge.mec.pt/sites/default/files/Projetos/Criancas_jovens_refugiados/integracao_de_criancas_refugiadas_na_educacao_pre-escolar.pdf

³¹ http://www.dge.mec.pt/sites/default/files/Projetos/Criancas_jovens_refugiados/orientacoes_para_o_acolhimento_a_integracao_e_a_inclusao_de_criancas_e_jovens_ucranianos_refugiados.pdf

³² https://dge-mec-pt.translate.google.com/criancas-e-jovens-refugiados-medidas-educativas?_x_tr_sch=http&_x_tr_sl=auto&_x_tr_tl=en&_x_tr_hl=es&_x_tr_pto=wapp



Box 2: Supporting technological projects carried out by VET students – Vision helper

Since 2014, the Vocational School of Technology and Electronics (ESTEL) supports technological projects run by their trainees

³³ <https://www.acm.gov.pt/>

(secondary VET students with double certification). ESTEL has had over 800 VET trainees and received over EUR 3.5 million in funding from the European Social Fund for the period 2014-2021.

The project VisionHelper was developed by a trainee attending the IT Equipment Management Technician Vocational Course. It consists of a cane with several features designed to help people with visual impairments move about more easily. The cane, programmed in Arduino, contains informative LEDs, vibration sensors, proximity sensors, audio sensors, and a lithium battery. Proximity sensors detect obstacles and alert the user through vibrating pulses and an audio speaker. As obstacles get closer to the user, the vibrating pulses and audio sounds are intensified. VisionHelper gives people with this disability more autonomy when walking on the street, thus improving their quality of life and safety.

<https://e-volui.pt/estel-videos/?dc=VideoEstel112>

5. Vocational education and training and adult learning

In July 2021, the Portuguese government and the social partners signed a tripartite agreement to improve the VET system. In 2020, 38.7% of upper secondary pupils were enrolled in VET programmes (below the EU average of 48.7%)³⁴. In 2021, 65.4% of recent VET graduates were employed (below the EU average of 76.4%)³⁵. The agreement comprises: (i) regulation and governance of the VET system; (ii) improving the tools and responsiveness of the system; (iii) raising the skills base in the *Qualifica* programme; (iv) improving post-secondary education and intermediate levels of qualification; (v) applying innovation and flexibility in training methods and responses; (vi) fostering digital methods and distance learning. The agreement envisages putting in place a legal framework for VET, particularly for continuous training and its specificities. It also includes the creation of an

Inter-Ministerial Coordination Committee for Education and the VET system (legally established since December 2021) and streamlining VET measures (namely initial and continuous training) into a single programme under the 2021-2027 multiannual financial framework.

The agreement also aims to improve quality, notably by improving the certification system of training bodies (for instance by stepping up regular monitoring of these entities) and by strengthening links with EQAVET. The agreement envisages bringing in an integrated strategy to boost post-secondary courses that are part of the higher education admission process for VET students.

VET reform and the investments included in Portugal's RRP will produce tangible results as from 2023. The reform of the VET system modernises the supply of VET courses regulated by the National Qualifications Catalogue (CNQ) based on forecast needs for qualifications. By the end of 2025, at least 20 000 new vacancies will be created. To complement the reform, the RRP will fund the creation of 365 specialised technology centres for professional courses by 2025, and invest in the upgrading of VET offices in the public employment service network. These investments are expected to improve and increase the supply of VET significantly, in line with labour market needs and emerging and new skills/professions.

ESIF funding will complement VET reform and investment under the RRP. The ESIF programmes are expected to be adopted by the end of 2022, notably those related to the European Social Fund+. Most VET actions will be carried out under the proposed *Demography, Qualifications and Inclusion Programme*, an ESIF+ single-fund programme that will mobilise around EUR 6 700 million to support employment, training, education and social inclusion types of action.

Improving adult learning is also part of the agreement with social partners. The main tool remains the *Qualifica* programme, a flagship initiative to raise qualifications and facilitate tailored training pathways, which has been central to adult learning since 2017. The main goal of these improvements relates to the need to

³⁴ educ_uoe_enrs05.

³⁵ edat_lfse_24.

simplify and improve the autonomy of all operational phases under the *Qualifica* programme, with the aim of improving adult access to qualifications. To promote the effectiveness of the programme, Portugal plans to: (i) step up the recognition of competences; (ii) expand the geographical coverage of the *Qualifica* centres; (iii) develop the *Qualifica AP*; (iv) explore implementing an *Employer Qualifica* programme, specifically targeting employers of micro, small and medium enterprises with low educational attainment. Portugal's target for 2030 is the same as the EU target, to have 60% of adults in training each year.

Adults will be eligible for support to develop digital skills. The agreement with social partners includes deepening a 'Digital Guarantee' strategy, notably for unemployed adults, to ensure that all unemployed adults have access to digital skills training in line with their competences and, simultaneously, expanding the provision of digital training for employed adults.

The RRP will provide funding to help upskill 145 000 adults by 2025. The initiative is a part of a wider strategy to upskill the population, which overall has a low educational attainment, and respond to the 2019 country-specific recommendation. Measures under the RRP include: (i) basic education and training courses for adults in levels B1/B2/B3 run by local projects benefiting from the scaled-up national plan for adult literacy. The goal is to reach 226 projects by 2025 and involve 22 500 adults; (ii) 100 000 adults with skills recognition, validation and certification of competencies (RVCC) by the end of 2025; (iii) converting and updating the skills of active adults with short-term training in higher education, initial and postgraduate level, as well as life-long learning. Here, the objective is to reach 23 000 participants by 2025.

Portugal is already rolling out features to support skills validation, such as the *Qualifica Accelerator*. This financial support for adults uses the RVCC process to help adults complete an incomplete qualification or upgrade their schooling or professional qualification. This incentive is designed to encourage adults who have left school without concluding the 12th grade or without a professional qualification to return and invest in their qualifications. Portugal is

on the right track to meet the 30 000 adults' milestone set for 2022.

6. Higher education

Enrolment in higher education reached a record high. 2021 was the year with the second highest number of students competing for a place at higher education institutions since 1989. Demand increased as more students with low grades applied. In addition, since 2020, higher education institutions can run special entrance competitions for VET and specialised artistic education students³⁶.

Portugal is increasing the share of tertiary graduates, notably in ICT. The tertiary education attainment rate (25-34 years-old - TEA) in 2021 was 5.6 pps. higher than in 2020 and exceeded the EU average (47.5% vs 41.2%), being already above the EU-level target (45%). At regional level, the rate ranges from 53.8% in the metropolitan area of Lisbon to 24.2% in the Azores. There is also a rural/urban divide in the TEA (17.8 pps. difference), but lower than the EU average (21.8%). The rates also differ according to the people's country of origin: in 2021 the highest rate for people born in another EU country (56.3%), followed by Portuguese-born people (47.6%), and those born in another foreign country (41.1%). In Portugal, the TEA gender gap in favour of women is above the EU average (14.4% vs 10.8%). The percentage of STEM graduates of all graduates in 2020 was 27.8% (almost same than in 2015). The share of ICT graduates (2.6%) has doubled since 2015 however (1.2%), while the share of graduates in natural science, mathematics and statistics (6.2%) remained at the 2015 level.

Greater involvement of higher education institutions in upskilling/reskilling young people and adults. The *Adult Impulse Programme* and the *Impulso Jovem STEAM programme*, both supported by the RRP, have been designed for initial and postgraduate higher education. They help respond to the 2019 country-

³⁶ Decree-Law 11/2020, 2/4.

specific recommendation³⁷ to improve the digital skills of the population and to increase the number of graduates in ICT.

Digital skills are at the EU average. In 2022, Portugal ranks 14th out of the 27 EU countries in the human capital dimension of the Digital Economy and Society Index, at the EU average³⁸. 55% of Portugal's population has basic or above basic digital skills (EU average 54%). The proportion of ICT specialists in employment (4.7%) is similar to the EU average (4.5%), while the level of ICT graduates is below average (2.6% vs 3.9%). The share of female ICT specialists is 21%, the same as last year, above the EU average of 19%.

Higher education institutions require investment in digital skills and capacities.

There is a clear need for pedagogical training for higher education teachers to make higher education more attractive to students and prevent drop out. A number of researchers (Alarcão, 2015; Xavier & Leite, 2019) corroborated this need. Some state that higher education teachers should modernise their teaching methods³⁹. The CNE⁴⁰ highlights that Portugal's RRP does not mention action to integrate technological skills and digital resources in the teaching and learning processes of higher education institutions.

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³⁷ <https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1560258691459&uri=CELEX%3A52019DC0522>

³⁸ <https://ec.europa.eu/newsroom/dae/redirection/document/88718>

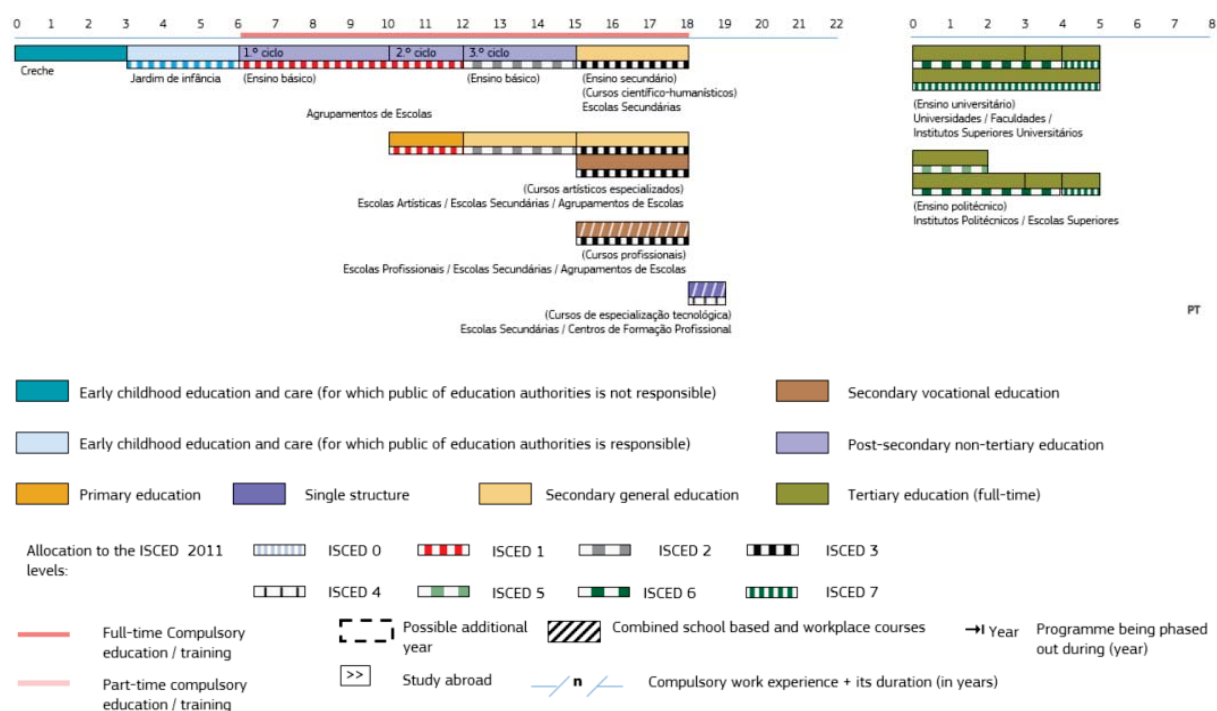
³⁹ <https://www.dn.pt/educacao-do-dia/06-jul-2020/ensino-remoto-veio-para-ficar-mas-so-como-complemento-12389539.html>

⁴⁰ Opinion No 4/2021.

Annex I: Key indicators sources

Indicator	Source
Participation in early childhood education	Eurostat (UOE), 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: Eurostat (LFS), edat_lfse_14 Data by country of birth: Eurostat (LFS), edat_lfse_02
Exposure of VET graduates to work based learning	Eurostat (LFS), edat_lfs_9919
Tertiary educational attainment	Main data: Eurostat (LFS), edat_lfse_03 Data by country of birth: Eurostat (LFS), edat_lfse_9912
Participation of adults in learning	Data for this EU-level target is not available. Data collection starts in 2022. Source: EU LFS.
Equity indicator	European Commission (Joint Research Centre) calculations based on OECD's PISA 2018 data
Upper secondary level attainment	Eurostat (LFS), edat_lfse_03
Public expenditure on education as a percentage of GDP	Eurostat (COFOG), gov_10a_exp
Public expenditure on education as a share of the total general government expenditure	Eurostat (COFOG), gov_10a_exp

Annex II: Structure of the education system



Source: European Commission/EACEA/Eurydice, 2022. The Structure of the European Education Systems 2022/2023: Schematic Diagrams. Eurydice Facts and Figures. Luxembourg: Publications Office of the European Union. Notes: Agrupamentos de Escolas (School Clusters) are organisational units that can encompass several schools and learning cycles, from kindergarten to upper secondary education. The institutions in the diagram are examples of some of the learning spaces where each type of education is offered; the diagram does not indicate all educational institutions existing in the Portuguese system.

Please email any comments or questions to:
EAC-UNITE-A2@ec.europa.eu



Brussels, 18.11.2022
SWD(2022) 751 final

PART 24/28

COMMISSION STAFF WORKING DOCUMENT

Education and Training Monitor 2022

Accompanying the document

**Communication from the Commission to the European Parliament, the Council, the
European Economic and Social Committee and the Committee of the Regions**

on progress towards the achievement of the European Education Area

{COM(2022) 700 final} - {SWD(2022) 750 final}

Education and Training Monitor 2022

ROMANIA



The Education and Training Monitor's country reports present and assess the main recent and ongoing policy development at all education levels in EU Member States. They provide the reader with more in-depth insight of the performance of countries with regard to the EU level targets agreed within the EEA. They are based on the most up-to-date quantitative and qualitative evidence available.

Section 1 presents a statistical overview of the main education and training indicators. Section 2 focuses on how the Member State has addressed or is addressing one of its education challenges. Section 3 covers early childhood education and care. Section 4 deals with school education policies. Section 5 covers vocational education and training and adult learning. Finally, Section 6 discusses measures in higher education.

The Education and Training Monitor's country reports were prepared by the European Commission's Directorate-General for Education, Youth, Sport and Culture (DG EAC), with contributions from the Directorate-General for Employment, Social Affairs and Inclusion (DG EMPL).

The document was completed on 30 September 2022

More background data at:

<https://op.europa.eu/webpub/eac/education-and-training-monitor-2022/en/>



1. Key indicators

Figure 1: Key indicators overview

			Romania		EU	
			2011	2021	2011	2021
EU-level targets			2030 target			
Participation in early childhood education (from age 3 to starting age of compulsory primary education)	≥ 96 %		84.1% ¹³	78.2% ²⁰	91.8% ¹³	93.0% ²⁰
Low achieving eighth-graders in digital skills	< 15%		:	:	:	:
Low achieving 15-year-olds in:	Reading	< 15%	40.4% ⁰⁹	40.8% ¹⁸	19.7% ⁰⁹	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	18.2% ⁰⁹	22.3% ¹⁸
Early leavers from education and training (age 18-24)	< 9 %		18.1%	15.3% ^b	13.2%	9.7% ^b
Exposure of VET graduates to work-based learning	≥ 60 % (2025)		:	7.1%	:	60.7%
Tertiary educational attainment (age 25-34)	≥ 45 %		22.5%	23.3% ^b	33.0%	41.2% ^b
Participation of adults in learning (age 25-64)	≥ 47 % (2025)		:	:	:	:
Other contextual indicators						
Equity indicator (percentage points)			:	39.0 ¹⁸	:	19.30 ¹⁸
Early leavers from education and training (age 18-24)	Native		18.1%	15.3% ^b	11.9%	8.5% ^b
	EU-born		:	: ^{bu}	25.3%	21.4% ^b
	Non EU-born		:	: ^{bu}	31.4%	21.6% ^b
Upper secondary level attainment (age 20-24, ISCED 3-8)			79.7%	83.3% ^b	79.6%	84.6% ^b
Tertiary educational attainment (age 25-34)	Native		22.5%	23.2% ^b	34.3%	42.1% ^b
	EU-born		: ^u	: ^{bu}	28.8%	40.7% ^b
	Non EU-born		: ^u	: ^{bu}	23.4%	34.7% ^b
Education investment	Public expenditure on education as a percentage of GDP		4.1%	3.7% ²⁰	4.9%	5.0% ²⁰
	Public expenditure on education as a share of the total general government expenditure		10.4%	8.8% ²⁰	10.0%	9.4% ²⁰

Sources: Eurostat (UOE, LFS, COFOG); OECD (PISA). Further information can be found in Annex I and at [Monitor Toolbox](#). 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; the equity indicator shows the gap in the share of underachievement in reading, mathematics and science (combined) among 15-year-olds between the lowest and highest quarters of socio-economic status; b = break in time series, u = low reliability, : = not available, 09 = 2009, 13 = 2013, 18 = 2018, 20 = 2020.

Figure 2: Position in relation to strongest and weakest performers



Source: DG Education, Youth, Sport and Culture, based on data from Eurostat (LFS 2021, UOE 2020) and OECD (PISA 2018).

2. A focus on early school leaving

Early school leaving continues to be a problem in Romania.

In 2021, the rate of 18-24 years olds not having completed upper-secondary education and not in education or training (ELET - early leaving from education and training) improved slightly, reaching again the 2019 level of 15.3%. However, this remains significantly higher than the EU average of 9.7%¹. Early school leaving is particularly high among Roma pupils. Only 22% of young Roma between 18 and 24 years of age have completed upper-secondary education, against 83.3% in the total population (Fundamental Rights Agency, 2022). The disparities in the rate of early leaving from education and training between urban (4.5%) and rural areas (23.2%) are substantial. A recent study by World Vision Romania shows that 1 in 10 children of compulsory schooling age in rural areas currently does not attend any educational institution. This study also showed that 1 in 3 teenagers (37%) is absent from school temporarily or permanently because they are working in the household (World Vision Romania, 2022).

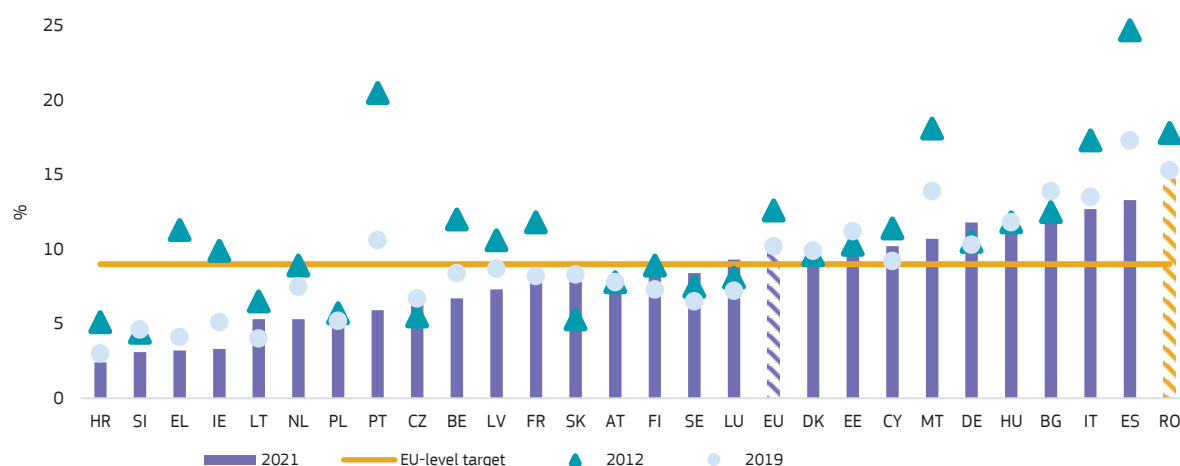
The ELET rate also differs between the regions: from 7.9% in Bucharest to nearly 23% in the south-east region. Students at risk of dropping out of school tend to be concentrated in disadvantaged schools in rural areas, which lack resources and experienced teachers (OECD, 2022). Many young Romanians leave the school system without acquiring the skills needed to enter the labour market with its fast-changing needs. This makes their transition from school to paid employment difficult (OECD, 2022).

The Recovery and Resilience Facility will support national efforts to reduce early school leaving.

Reducing early school leaving is one of the priorities of the Educated Romania Report (2021), which represents the national strategic framework for education towards 2030. This drive to reduce early school leaving will also be largely supported under the national resilience and recovery plan (NRRP). The National Programme for Reducing School Dropout (PNRAS), which was adopted in December 2021, is one of the most significant education measures in the NRRP. In March 2022, the Ministry of Education announced a list of schools eligible to participate in the programme. These schools were identified through Romania's MATE early-warning mechanism (see box 1).

¹ Over the past decade, Romania managed to reduce the early school leaving rate by only 2.5 pps (17.8% in 2012 compared to 15.3% in 2021).

Figure 3: Early leavers from education and training, 2012, 2019 and 2021 (%)



Source: Eurostat (LFS), [edat_lfse_14]. 2019 and 2021 data for HR is low reliable.

As part of PNRAS, at least 2 500 publicly funded primary and secondary schools with many students at high or medium risk of dropping out will receive grants of up to EUR 200 000. With this financial support, these schools can launch educational and support activities such as remedial courses, after-school activities, outdoor activities, the employment of school counsellors and mediators (in Roma communities), or the purchase of IT equipment. Partnerships with NGOs to support extra-curricular activities are also planned. The PNRAS programme should also improve the results obtained by students in national assessments. Moreover, the programme should help more students to complete lower-secondary education and participate in the national assessment for eighth-grade graduates, as well as successfully enter upper-secondary education.

Other programmes to reduce early school leaving and the drop-out rate will continue.

The number of schools participating in the 'Hot Meal in Schools' pilot project will double as of 2022/2023, by which time it will reach 350 pre-school and school institutions. The 'We Care' after-school programme has been in operation since 2016, offering a hot meal three times a week as well as additional classes in Romanian and mathematics in the afternoon. In 2021, more than 225,000 children have been enrolled in the 'School after school' programme, offering face-to-face additional courses. Despite the number of support measures to help pupils that leave school early to return to school, the distribution of these programmes is uneven between urban and rural areas, with more programmes in urban areas even though the demand is much greater in rural areas (OECD, 2020 a). The ongoing programme to identify and gather information on disadvantaged schools will contribute to improve the allocation of resources in the school network (OECD, 2022).



Box 1: MATE – Romania's mechanism for early warning in education

The development of Romania's MATE mechanism for early warning in education (from the Romanian Mecanismului de Avertizare Timpurie în Educație) was triggered by the country's persistently high level of early school leaving. MATE identifies schools that might need additional resources or support. The World Bank, in cooperation with the European Commission, developed a tool based on a vulnerability index (the index is itself based on criteria such as schools with a high number of substitute teachers, a high drop-out rate, a low participation rate, and poor results in national pupil assessments). Using these criteria, schools are classified into three categories, depending on the priority of the intervention: high, medium and low. Depending on the classification, schools are eligible for grants from the PNRAS programme for reducing the school drop-out rate, financed from the NRRP. Schools must become responsible for student outcomes and need to produce regular updates on the progress they have made, by transferring that information into the MATE data-collection system.

Source: Council Implementing Decision on the approval of the assessment of the recovery and resilience plan of Romania – Annex, European Commission 2021.

3. Early childhood education and care

Early childhood education and care (ECEC) continues to face problems of low participation and inadequate infrastructure.

In 2020, the rate of participation in ECEC of children in Romania between the age of 3 and the starting age of compulsory education was one of the lowest in the EU (78.2% vs an EU average of 93%). This participation rate has declined by around 6 pps since 2013. This is significantly below the EU target of 96%. Despite the financial

incentives for low-income families to enrol their children aged 3 to 5 in ECEC, the participation rate in each age category (3, 4 and 5+) is falling. The participation rate of Roma children is much lower at 27%, even though researchers agree that the benefits of early childhood education are greatest among disadvantaged children. Most of the kindergartens are located in urban areas, whereas enrolment in rural areas is hampered by capacity shortages. And more than 90% of nursery places for children under the age of 3 are located in urban areas (OECD, 2020b). Romania is also considered a country with relatively long and supportive parental-leave arrangements. This impacts overall participation in ECEC, in particular for children below the age of 3². The insufficient provision of childcare and long-term care is detrimental to women's participation in the labour market (OECD, 2022). **Romania aims to increase participation in ECEC by expanding capacity.** The network of crèches, kindergartens and other ECEC services in Romania is not sufficient to meet demand. As part of the 'Educated Romania' programme, Romania plans to increase participation in pre-school education of

children up to 3 years old to 30% and to 95% for children aged 4-6 by 2030. Some of the measures proposed under the programme will be financed through Romania's NRRP. By 2025, Romania will construct 110 energy-efficient crèches for up to 4 500 children, as well as 412 complementary early education services. The plan also aims to train and professionalise the staff working in ECEC, complementing the ongoing similar initiatives through an ESF-funded project.

Recent legislative changes are expected to improve the accessibility and quality of ECEC services.

In 2022, the government adopted new legislation on the organisation, functioning, financing and monitoring of crèches and other ECEC facilities³. This legislation should accelerate the integration of crèches into the national education system, with the overall aim of building an integrated, inclusive and high-quality ECEC system. Opening hours will reflect the needs of children and their parents, and can be flexible, offering childcare of between 5 and 10 hours per day. Activities will be organised by age, type of programme and size of the group, with the latter also being linked to the age of children.

² Only 6.8% of 0-2 year olds in Romania participated in ECEC.

³ https://www.edu.ro/comunicat_presa_28_2022_aprobare_metodologie_crese.

Figure 4: Participation in early childhood education of pupils from age 3 to the starting of compulsory primary education, 2013 and 2020 (%)



Source: Eurostat (UOE), [educ_uoe_enra21].

4. School education

National tests show poor educational outcomes in schools in Romania, confirming the poor results seen in the tests set by the OECD Programme for International Student Assessment (PISA) 2018⁴.

The results of Romania's national report on the level of literacy of students in Romania, published in May 2022, show that only 11% of students in Romania are fluent readers. 42% of the students are marked as 'non-functional', which is close to illiteracy. Many students in Romania lack skills in interpreting and analysing information and facts, forming their own ideas, or reaching conclusions. Contrary to PISA, which tests 15-year olds, the national assessment tests involved children between the ages of 6 and 14, with the aim of detecting early problems in literacy. The average total sample score of 26.9 points across all students tested is considered by BRIO (a Romanian company working on digital tools to improve school performance) to be a minimum functional average level⁵. These low rates risk deteriorating even further given the school closures and limited access to distance learning during the COVID-19 pandemic. During the 2020/2021 school year, approximately 65 000 students did not attend school at all (Unicef, 2021). School closures have disproportionately affected vulnerable children in rural areas as they had limited access to digital equipment and were not sufficiently prepared for remote teaching (European Commission, 2022). A recent Unicef report stated that nearly 70% of all children in Romania were not able to access quality online learning during school closures (Unicef, 2021).

Access to quality education is unequal. Discrepancies in the results of national exams

⁴ The latest PISA results were announced in 2019 and were broadly covered in the previous editions of the Monitor. The next PISA results will be published in 2023.

⁵ The study used a three-level scale in the analysis: a non-functional level (score between 0 and 20); a minimum functional level (score 21-50); and a functional level (score 51-100).

indicate structural inequity in the education system. The impact of socioeconomic status on educational outcomes is high, and equivalent to about 3 years of schooling (i.e. children from higher socioeconomic backgrounds perform at an educational level equivalent to being 3 years older than their peers from lower socioeconomic backgrounds). This perpetuates inequalities from one generation to the next. There is a 39 pp. difference in underachievement rates between students from high socioeconomic backgrounds (10.8% underachievement) and students from low socioeconomic backgrounds (49.8% underachievement). This underachievement gap in Romania is the highest in the EU (EU average: 19.3 pps). Providing education in the language of Romania's national minorities, in particular minorities from disadvantaged backgrounds, is held back by the lack of sufficient resources and staff. Overall, the inequality of the Romanian education system affects future participation in civic and economic life and holds back the development of the labour force.

The situation of Roma in the education system remains of concern.

79% of Roma children aged 0-17 are at risk of poverty, leading to educational disadvantage on the basis of both their socioeconomic background and minority status. In 2020, 51% of Roma children aged 6-15 attended schools where 'all or most of schoolmates are Roma' (Fundamental Rights Agency, 2022). At the end of 2019, the government adopted a methodology for monitoring school segregation in pre-university education. Despite the initial plan to implement this methodology in the 2021/2022 school year in order to reduce school segregation, implementation was postponed due to the recurrent closure of schools during the pandemic.

Policies to recruit and retain teachers face significant challenges.

Romania's ambition to improve educational outcomes rely largely on its existing teaching force, which is relatively young (European Commission, 2022). In recent years, Romania's policy toward teachers has focused on improving the process of recruitment and selection of future teachers, in particular for schools located in rural and economically

disadvantaged areas. Reforms and policies were aimed at increasing financial incentives and other measures to make the profession more attractive. Progress on these policies is limited due to the large number of schools in rural areas, which remain unattractive to highly qualified teachers. In addition, neither initial nor continuous teacher education is sufficiently aligned with classroom needs (European Commission, 2022). Throughout 2021-2023, several programmes are being rolled out to support the initial education and professional development of Romania's teachers. The NRRP will contribute to the development of teachers' skills, with a special focus on digital skills. Moreover, Romania's PROF project to professionalise the teaching career will run between 2021 and 2023. Its objective is to ensure professional mentorship throughout a teacher's career by providing training and development for teaching skills for 28 000 teachers. Another programme, 'Motivated teachers in disadvantaged schools', offers training for teachers, support staff, and school managers who need to develop skills and knowledge to be able to work in disadvantaged schools or use atypical teaching methods.

Romania is continuing its efforts to improve the quality of education. In July 2022, a new draft law on education (affecting pre-university and higher education) was submitted for public consultation. The new law constitutes the legislative basis for the comprehensive education reform proposed by the 'Educated Romania' programme, which contains modernisation proposals across all levels and areas of education⁶. The draft law will change the structure of the baccalaureate exam taken by school-leavers at approximately age 18. The new structure will include a digital-skills assessment test, while there will also be separate tests on Romanian language, literature, and grammar. The draft law also contains changes to the transition process from lower-secondary to upper-secondary education. It proposes to abolish grades in

physical education and the arts, and introduces changes in the early stages of the teaching profession, including a salary increase for young teachers and a minimum level of scholarships to encourage people to train as teachers. The draft law also plans to reorganise extra-curricular education activity in the national education system. Children's clubs and school sports clubs will become official parts of the school network. The draft law plans to gradually integrate students with special educational needs into mainstream education. The intention is to implement the new law by the 2023/2024 school year. The baccalaureate in the new form is expected to be in place in 2027⁷.

Romania will reorganise its quality-assurance system to improve the performance of its education system. The evaluation of Romania's previous strategic framework for education showed that the performance of its education system had been impacted by: (i) frequent changes among top-level decision makers; (ii) limited financial resources; (iii) an outdated legal framework; and (iv) a lack of focus on students from disadvantaged groups. To improve the quality of the education system, in 2022 the government reorganised the Romanian Agency for Quality Assurance in School Education (ARACIP). This was an important step in implementing the 'Educated Romania' programme. Educational stakeholders should now be better represented in the ARACIP, including pupils, parents, trade unions and the private sector. The ARACIP will also continue periodic evaluations of schools. The ARACIP's process for external evaluation of schools was also reorganised in order to ensure greater efficiency and professionalism.

Significant changes in the organisation of the school year and student assessment will come into effect from 2022/2023. As part of

⁶ See more in: European Commission (2019), Education and Training Monitor 2019, Volume II – Romania.

⁷ Press Release, 19.8.2022, Ministry of Education: [5 major decisions following the consultations of the Ministry of Education with the trade union federations!](#) | Ministry of Education.

the new structure, five learning periods of 6-8 weeks will replace the traditional semesters, which were considered too long for children. A similar approach is being applied in Belgium and France, where pupils benefit from the shortened learning periods, while the total number of school days remains the same. In addition, a 'Green week' will be introduced to raise children's awareness of climate change and the environment. Along with the new school-year structure, Romania decided to implement a new assessment system, which will be better aligned to the learning modules. The objective is to end the current practice of requiring pupils to complete a written assignment every semester ('semester theses') and replace this requirement with standardised evaluations at school level at the beginning and end of the school year⁸. Strengthening the student-assessment system may pave the way for a more evidence-based approach in education reform. Reorganising the structure of the school year and its assessment system should be followed by: (i) setting up a monitoring system; and (ii) developing a new methodology for school evaluation by collecting data and information. These additional changes would make it easier to implement more targeted evidence-based interventions and improve the quality of education in the country.

Romania is continuing its long-term policy reforms to improve digital learning and strengthen digital skills. In 2021, only 50% of adolescents in Romania aged 16-19 had basic or above-basic digital skills. This meant that Romania was ranked last among EU countries for digital skills. The EU average was 69% in this age group having basic or above-basic digital skills, and Romania's performance was below the EU's 'Digital Decade' target for 2030 of 80%⁹.

⁸ <https://www.hotnews.ro/stiri-educatie-25588105-noile-modificari-majore-din-educatie-anuntate-ora-10-00-sorin-cimpeanu.htm>

⁹ A new set of digital skills was added in 2021 (safety skills) and the questionnaire was modernised for all skills categories. Therefore, data from 2019 and 2021 are not directly comparable: Individuals' level of digital skills (from 2021 onwards). Eurostat, ISOC_SK_DSKL_I21.

Computer science and digital education are an important part of both the 'Educated Romania' programme and Romania's NRRP. The NRRP will finance school laboratories and digital equipment: over 6 000 schools will receive funds under the NRRP for equipping computer labs and online learning. Several measures to promote digital skills have already been implemented with the support of the European structural funds. These measures include the CRED project (2017-2022), co-financed by the European Social Fund+, which developed near 6 800 open-access educational resources, facilitating access to teaching materials, free electronic textbooks, and good practices in education. A dedicated database (red.educared.ro) was also set up to collect information about learning and training activities for teachers. In addition, the ROSE project (2015-2024) continues to support investments in electronic equipment provided to secondary schools, in particular disadvantaged schools. Despite these developments, significant gaps remain, including the availability of IT devices and internet connections.



Box 2: Promoting participation in education for children with parents abroad

This project aims to help children in Romania whose parents are abroad to continue their education. The need for this support is due to the large number of children in Romania finding themselves in this situation and facing challenges with their educational development. Studies have shown that having one or both parents abroad can increase the risk of early school leaving and lead to emotional and psychological stress. In order to mitigate this risk, the project aims to provide integrated support, combining educational and psychological assistance with other accompanying measures such as participation in outdoor or arts activities. Material support and parental counselling are also included in this project. The project seeks to create partnerships between schools, local authorities and NGOs as a tool for ensuring better outreach and sustainability of interventions. The project aims to support 3 000 children during the first stage of this pilot project.

5. Vocational education and training and adult learning

The disruption caused by the COVID-19 pandemic continues to impact the vocational education and training (VET) system. The shift to remote learning and the temporary closure of many businesses limited students' exposure to work-based learning during the pandemic. This effect, combined with the continued uncertainty in the labour market and wider economy, has led to a significant decrease in the employment rate of recent VET graduates (from 68.7% in 2020 to 61.4% in 2021). Certain ongoing projects, such as ReConnect, a skills-forecasting mechanism funded by the European Social Fund, should help provide a better match between demand in the labour market and the supply of skilled workers. The ongoing reform plans, which aim to transform VET schools into institutions more focused on dual education should also make these schools more attractive. Although the share of upper-secondary pupils enrolled in VET¹⁰ is relatively high (56.6% in 2020, above the EU average of 48.7%), recent graduates' exposure to work-based learning¹¹ is very limited (7.1% in 2021, compared to 60.7% EU-wide).

The NRRP contains significant investments in VET, with further support planned through other funding mechanisms. The NRRP aims to significantly improve equipment and infrastructure for VET schools, including agricultural schools, by investing in laboratories, IT equipment, and the development of 10 regional VET consortia. Moreover, new legislation for organizing the complete dual route and the new qualifications resulting from the complete dual route will be issued to support dual higher education. The NRRP plans for other EU-funded programmes (such as the European Social Fund+ education and employment programme) to complement these

measures by investing in: (i) quality-assurance mechanisms for the system; (ii) improving the quality of teaching through staff training; and (iii) support for improved participation of students from disadvantaged groups. Plans are also ongoing to both develop partnership networks between initial VET schools and extend counselling and remedial services to these same schools (with a focus on students in their first year of VET education). These measures would be matched by curricula that are more oriented to the needs of the labour market, including by implementing measures in the VET action plan towards focusing on emerging sectors (such as green and digital technology). The effectiveness of these reforms relies on their being reinforced by a student-centred approach to VET education.

Romania has recently made improvements in increasing participation in adult learning, but it still lags behind other EU Member States.

The participation rate of adults in learning in the last 4 weeks was 4.9% in 2021, much higher than in previous years, but still lower than in most other Member States (EU average: 10.8%). The low level of participation in adult learning has led to persistent skills shortages, which hampers economic growth and makes it difficult for Romania to adapt to a rapidly-changing labour market in the digital age. Moreover, the small number of low-skilled jobs available in the country poses a concern to the career prospects of those already in – or looking to join – the labour market, further highlighting the need to upskill the working population. A lack of financial resources, along with low levels of information on existing lifelong-learning programmes and market opportunities, have been identified as causes of the low take-up of adult learning. Tools such as the ReConnect skills-forecasting mechanism (currently under development with the assistance of EU funds) should help in this regard, by providing a better link between the training and education opportunities on offer and the skills needed by employers. Parts of the strategic policy framework are still not in place. For example, the national strategy for the continuous training of adults (2021-2027) is still under development. The NRRP also contains a number of investments and

¹⁰ Eurostat, educ_uoe_enrs05.

¹¹ Eurostat, edat_lfs_9919.

reforms to improve the digital skills of adults, including by developing a funding scheme for libraries to become digital-skills hubs. Nevertheless, more effort is needed to reach out to disadvantaged and marginalised groups given the significant demand for digital skills that is set to continue in the coming years. Romania has set a 2030 target of having 17.4% of adults engaged in learning in the past 12, which is three times the rate in 2016.

6. Higher education

Romania's tertiary education attainment rate remains the lowest of all EU countries.

Over the past decade, this rate has not improved significantly and a long-term stagnating trend can be observed. In 2021, this rate stood at 23.3%, which is almost half of the EU average (41.2%). Among other causes, low levels of higher education attainment is caused by the high rates of early school leaving, the low pass rates at the baccalaureate exam, and the low levels of participation in higher education by students from disadvantaged backgrounds. This results in a lack of highly skilled professionals. Emigration further reduces the availability of highly skilled workers holding a higher-education degree. Equality remains a significant challenge, with a particularly low tertiary attainment rate in rural areas (8.2% in 2021 vs EU average 29.6%). The rate of participation in higher education by people from rural areas has not changed substantially over the past 5 years. The attainment rate in cities is also below the EU average (44% vs 51.4%), but the gap here is smaller. The differences between regions reflect the rural-urban gap (e.g. there is a 50.5% rate in Bucharest vs a rate of 15.3% in rural south Muntenia). There is also a persistent gender gap, with 20.6% of men aged 25-34 having a tertiary qualification against 26.2% of women.

Romania's shares of graduates in information and communications technology (ICT) and science, technology, engineering and mathematics (STEM) are among the highest in the EU, but skills shortages remain. The share of students graduating in

STEM fields is high at 29.1% (EU: 24.9%). Moreover, the share of female STEM graduates over total female graduates is also above the EU average (59.1% vs 57.2%). Women on average account for almost 33% of STEM graduates in the EU-27 (Viarengo, M., 2021), with shares of over 40% in Romania¹². In the same vein, Romania has a high share of total ICT graduates (6.7% vs an EU average of 3.9%). This goes some way to addressing the high demands of the labour market, but skills shortages remain.

Progress is being made in digitalising higher education. The NRRP provides funding for the digitalisation of universities, including digital infrastructure and developing the digital skills of students and university teaching staff. The National Centre for Recognition and Equivalence of Diplomas launched platform, which provides information on higher-education institutions and accredited study programmes in over 80 countries. This platform is supported by the Erasmus+ programme and coordinated by the European Quality Assurance Register for Higher Education (EQAR), with the aim of expanding the scope of involvement of quality-assurance agencies in higher education in the European Higher Education Area and improving connections between these agencies.

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¹² Eurostat [educ_uoe_grad02].

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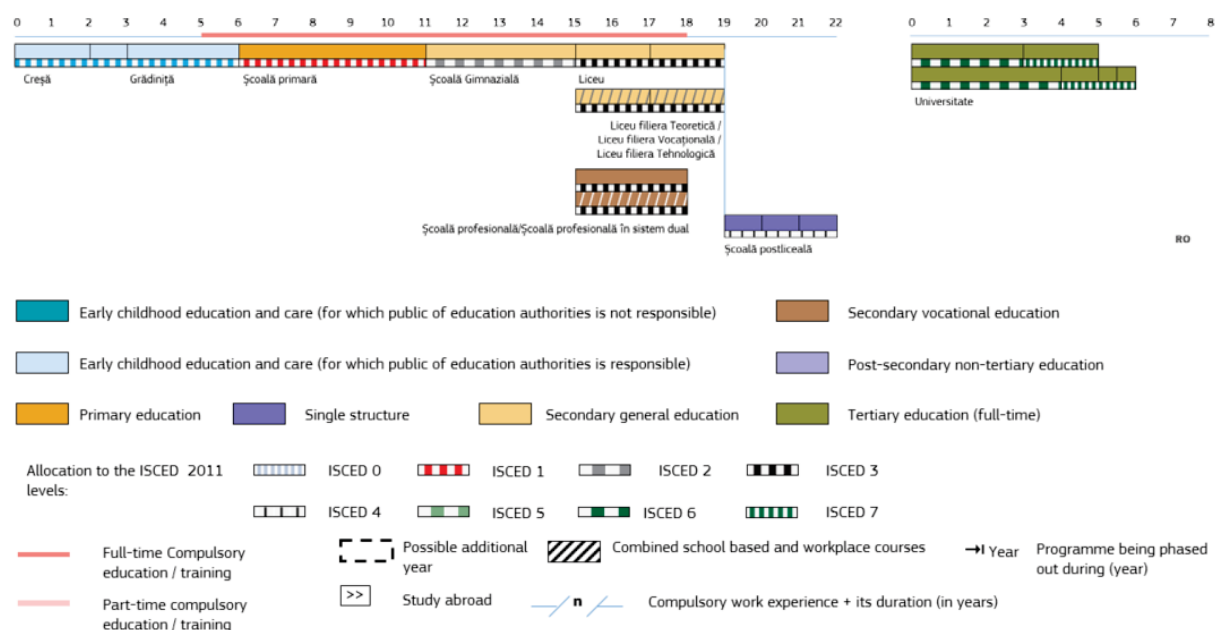
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Annex I: Key indicators sources

Indicator	Source
Participation in early childhood education	Eurostat (UOE), educ_uae_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: Eurostat (LFS), edat_ifse_14 Data by country of birth: Eurostat (LFS), edat_ifse_02
Exposure of VET graduates to work based learning	Eurostat (LFS), edat_ifs_9919
Tertiary educational attainment	Main data: Eurostat (LFS), edat_ifse_03 Data by country of birth: Eurostat (LFS), edat_ifse_9912
Participation of adults in learning	Data for this EU-level target is not available. Data collection starts in 2022. Source: EU LFS.
Equity indicator	European Commission (Joint Research Centre) calculations based on OECD's PISA 2018 data
Upper secondary level attainment	Eurostat (LFS), edat_ifse_03
Public expenditure on education as a percentage of GDP	Eurostat (COFOG), gov_10a_exp
Public expenditure on education as a share of the total general government expenditure	Eurostat (COFOG), gov_10a_exp

Annex II: Structure of the education system



Source: European Commission/EACEA/Eurydice, 2022. The Structure of the European Education Systems 2022/2023: Schematic Diagrams. Eurydice Facts and Figures. Luxembourg: Publications Office of the European Union.

Please email any comments or questions to:
EAC-UNITE-A2@ec.europa.eu



Brussels, 18.11.2022
SWD(2022) 751 final

PART 25/28

COMMISSION STAFF WORKING DOCUMENT

Education and Training Monitor 2022

Accompanying the document

**Communication from the Commission to the European Parliament, the Council, the
European Economic and Social Committee and the Committee of the Regions**

on progress towards the achievement of the European Education Area

{COM(2022) 700 final} - {SWD(2022) 750 final}

Education and Training Monitor 2022

SLOVENIA



The Education and Training Monitor's country reports present and assess the main recent and ongoing policy development at all education levels in EU Member States. They provide the reader with more in-depth insight of the performance of countries with regard to the EU level targets agreed within the EEA. They are based on the most up-to-date quantitative and qualitative evidence available.

Section 1 presents a statistical overview of the main education and training indicators. Section 2 focuses on how the Member State has addressed or is addressing one of its education challenges. Section 3 covers early childhood education and care. Section 4 deals with school education policies. Section 5 covers vocational education and training and adult learning. Finally, Section 6 discusses measures in higher education.

The Education and Training Monitor's country reports were prepared by the European Commission's Directorate-General for Education, Youth, Sport and Culture (DG EAC), with contributions from the Directorate-General for Employment, Social Affairs and Inclusion (DG EMPL).

The document was completed on 30 September 2022

More background data at:

<https://op.europa.eu/webpub/eac/education-and-training-monitor-2022/en/>



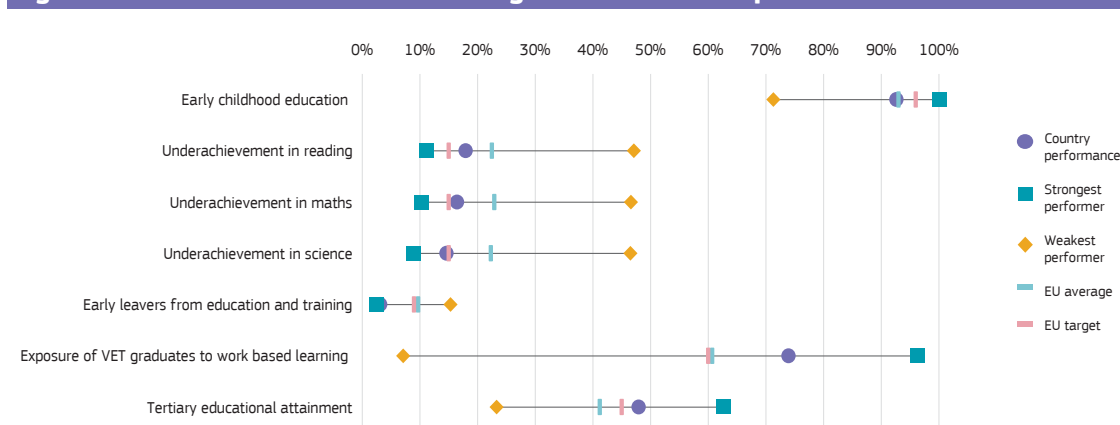
1. Key indicators

Figure 1: Key indicators overview

		Slovenia		EU	
		2011	2021	2011	2021
EU-level targets		2030 target			
Participation in early childhood education (from age 3 to starting age of compulsory primary education)	≥ 96 %	87.9% ¹³	92.6% ²⁰	91.8% ¹³	93.0% ²⁰
Low achieving eighth-graders in digital skills	< 15%	35.8% ¹³	:	:	:
Low achieving 15-year-olds in:	Reading	21.2% ⁰⁹	17.9% ¹⁸	19.7% ⁰⁹	22.5% ¹⁸
	Maths	20.3% ⁰⁹	16.4% ¹⁸	22.7% ⁰⁹	22.9% ¹⁸
	Science	14.8% ⁰⁹	14.6% ¹⁸	18.2% ⁰⁹	22.3% ¹⁸
Early leavers from education and training (age 18-24)	< 9 %	4.2%	3.1% ^{bu}	13.2%	9.7% ^b
Exposure of VET graduates to work-based learning	≥ 60 % (2025)	:	73.9%	:	60.7%
Tertiary educational attainment (age 25-34)	≥ 45 %	33.8%	47.9% ^b	33.0%	41.2% ^b
Participation of adults in learning (age 25-64)	≥ 47 % (2025)	:	:	:	:
Other contextual indicators					
Equity indicator (percentage points)		:	10.5 ¹⁸	:	19.30 ¹⁸
Early leavers from education and training (age 18-24)	Native	3.6%	2.9% ^{bu}	11.9%	8.5% ^b
	EU-born	:	:	25.3%	21.4% ^b
	Non EU-born	15.1% ^u	:	31.4%	21.6% ^b
Upper secondary level attainment (age 20-24, ISCED 3-8)		90.1%	94.2% ^b	79.6%	84.6% ^b
Tertiary educational attainment (age 25-34)	Native	35.2%	50.2% ^b	34.3%	42.1% ^b
	EU-born	28.8% ^u	57.9% ^{bu}	28.8%	40.7% ^b
	Non EU-born	8.9% ^u	24.3% ^{bu}	23.4%	34.7% ^b
Education investment	Public expenditure on education as a percentage of GDP	6.4%	5.8% ²⁰	4.9%	5.0% ²⁰
	Public expenditure on education as a share of the total general government expenditure	12.6%	11.2% ²⁰	10.0%	9.4% ²⁰

Sources: Eurostat (UOE, LFS, COFOG); OECD (PISA). Further information can be found in Annex I and at [Monitor Toolbox](#). 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; the equity indicator shows the gap in the share of underachievement in reading, mathematics and science (combined) among 15-year-olds between the lowest and highest quarters of socio-economic status; b = break in time series, u = low reliability, : = not available, 09 = 2009, 13 = 2013, 18 = 2018, 20 = 2020.

Figure 2: Position in relation to strongest and weakest performers



Source: DG Education, Youth, Sport and Culture, based on data from Eurostat (LFS 2021, UOE 2020) and OECD (PISA 2018).

2. A focus on digital education

Young people fare well in digital skills, but Slovenia faces a shortage of highly qualified information and communications technology (ICT) specialists. Slovenia ranks 11th among the EU Member States in the 2022 Digital Economy and Society Index (DESI). 68% of those aged 16-19 in Slovenia have basic or above-basic overall digital skills. This is close to the EU average (69%)¹. However, the gap with the EU average is larger when the reference group is widened to those aged 16-24; 63.4% have basic or above-basic overall digital skills vs an EU average of 71.2%. Teenagers seem to be more confident in their digital skills than young adults. The share of ICT graduates has been gradually increasing in recent years and now accounts for 4.1% of total graduates (EU average: 3.9%)². Nevertheless, 69.3% of companies in Slovenia which tried to recruit ICT specialists in 2021 reported difficulties in filling vacancies compared to an average of 55.4% of companies reporting the same problem across the EU (DESI, 2022). The demand for ICT specialists is high and the higher education sector struggles with supplying enough graduates with

advanced digital skills³. The share of ICT graduates in Slovenia in short-cycle tertiary education (i.e. below bachelor's level) is 6.4% and the share of ICT graduates of bachelor's degree courses is 4.6% (EU average: 4.9% and 4% respectively). However, Slovenia falls behind at the master's and doctorate levels where 2.6% of masters students and 2.3% of doctoral students graduate in the field of ICT compared to EU averages of 3.5% and 3.2% respectively⁴.

Slovenia is investing in digital skills and digital infrastructure for schools. Schools are better equipped and connected than the EU average. However, problems remain with connectivity in remote areas. Under the country's national recovery and resilience plan (NRRP), Slovenia aims to: (i) improve the connectivity of 228 educational institutions; (ii) permanently deploy at least 40 long-distance optical connections of 100 Gbps for the Academic and Research Network of Slovenia (ARNES); and (iii) develop new IT solutions to help digitise the teaching process at all education levels. Digital skills are also expected to be better integrated in curricula at all levels of education. Currently, computer science is a compulsory subject only in the first grade of upper secondary general education; it remains an optional subject at other

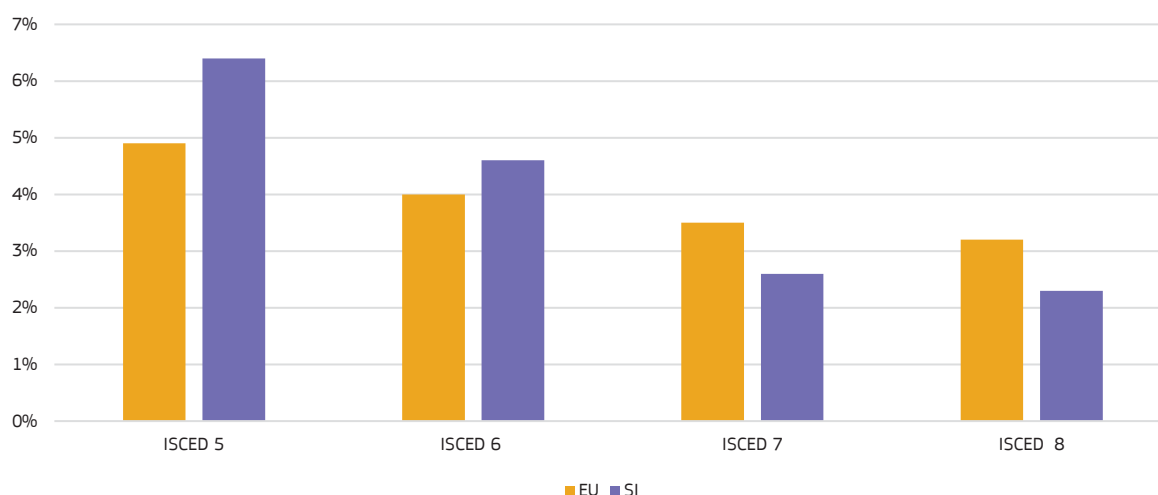
¹ Eurostat, SOC_SK_DSKL_I21

² UOE, educ_uoe_grad02

³ UOE, educ_uoe_grad02

⁴ See also OECD Economic Survey: Slovenia 2022.

Figure 3: Tertiary ICT graduates by education level, 2020.



Source: Eurostat (UOE), educ_uoe_grad02

levels. Computer science is integrated in several subjects in upper secondary vocational programmes. Slovenia maintains teachers' e-communities dedicated to digital education, and encourages the use of self-assessment tools for teachers (European Commission/EACEA/Eurydice, 2019). However, the COVID-19 pandemic revealed deficiencies in teachers' digital skills, which could be partly due to the lack of mandatory ICT training for teachers (European Commission, 2020). As part of the measures under the NRRP, Slovenia plans to train 20 000 education professionals and managers – half of the teaching population – in digital skills. In addition, in 2021 a two-year project on digital competency began in 220 schools to enhance digital school strategies and peer reflection of teachers.

Government action is increasing the digitalisation of education. The Digital Education Service, set up within the Ministry of Education, Science and Sport, is coordinating and supervising activities related to the digitalisation of education, including the Slovenian digital education action plan (ANDI 2027). The purpose of the action plan is to determine the country's vision and goals for digital education over the next 7 years in three areas. Besides organisational questions, it covers educational content related to: (i) teaching and curricula; (ii) education, training and communities; (iii) leadership; and (iv) the support environment (e-services, infrastructure, equal opportunities, evaluation). In addition the action plan looks at (i) provisions of the Slovenian state budget; and (ii) the efficient and coordinated use of EU, national and other resources. The plan envisages the set-up of a national digital education coordination centre, which will act as a single contact point for all services and activities at all levels of education. ANDI 2027 is also the main strategic framework for the continuous professional development of teachers in digital skills.

Box 1: E-content and e-services to support the introduction of new approaches in education

'E-content and e-services to support the introduction of new approaches in education' is a new project adopted in May 2022. It aims to facilitate Slovenia's transition to digital education. With a contribution from the European Regional Development Fund, the project will promote greater use of modern ICT in teaching and learning. As part of the project, the Ministry of Education, Science and Sport, the Academic and Research Network of Slovenia (ARNES) and the Institute of Information Science will provide a comprehensive upgrade of both: (i) existing educational e-services and e-content; as well as (ii) the current support system for both pupils and teachers in primary and secondary schools. This upgrade will be carried out in the period 2021-2023. The project will help to improve: (i) learning processes based on the use of innovative approaches; (ii) the skills of young people through greater use of modern ICT in teaching and learning; and (iii) the skills of educators through greater use of modern ICT in teaching and learning.

Source: European funds for the introduction of new approaches in education, GOV.SI

Slovenia is strengthening its measures to promote digital inclusion. In 2021, 50% of the population aged 16-74 had at-least-basic digital skills, which is comparable to the EU average (54%). 20% of the population had above-basic digital skills (EU average: 26%). The 'digital divide' remains significant with regard to marginalised groups, especially in rural areas (European Commission, 2021b). Slovenia's strategy for digital transformation of the economy sets the target of more than 80% of adults having at-least-basic digital skills by 2030, in line with the EU-level target. In early 2022, Slovenia adopted the Promotion of Digital Inclusion Act to: (i) improve digital literacy; (ii) increase interest in professional digital skills and entrepreneurship and (iii) reduce the gender gap in digital skills. The biggest digital literacy project in the country was launched in May 2022. It encompasses: (i) funding of EUR 150 in digital vouchers for students to buy digital devices; and (ii) funding for adults over 55



to participate in digital literacy training. Children will also be entitled to free courses in advanced digital skills, such as coding, robotics, artificial intelligence, and digital entrepreneurship. Further changes to the bill are planned to allocate more resources to digital literacy courses.

3. Early childhood education and care

Participation in early childhood education and care (ECEC) keeps increasing, and is now approaching the EU average. In Slovenia, as in most European countries, the share of children attending pre-school has increased significantly in the last 10 years. In 2020, 92.6% of children between the age of 3 and the starting age of compulsory education participated in ECEC (EU average: 93%). Since 2013, their participation has increased by 4.7 percentage points⁵. Similarly, the inclusion of toddlers up to three years of age in formal childcare or education has grown by 10.5 pps in the past decade⁶. Government policy has been successful by either subsidising fees for children who are enrolled in a public kindergarten or by giving a concession for parents who send their children to private institutions (cf. European Commission 2021a). Since 2018/2019, the Ministry of Education, Science and Sport covers all expenses for children aged 5 not previously attending kindergarten to be enrolled in short programmes (duration of 240 hours).

Slovenia is updating its ECEC curricula. In 2021, Slovenia amended its ECEC Act, with the intention of further increasing the rate of enrolment in ECEC. In early 2022, the Slovenian authorities launched a revision of the ECEC curricula as part of the broader education policy reform under the NRRP. According to the expert group convened to prepare the revision, the revised ECEC curricula should: (i) incorporate new insights from research and practice; (ii) respond to the changing societal context; and (iii) cater for

the specific developmental needs of children in the youngest age bracket (National Education Institute Slovenia, 2022a). It should also help to equip ECEC professionals with new skills, in particular digital skills, skills in teaching sustainability, and skills teaching in multilingual and multicultural classrooms (National Education Institute Slovenia, 2022a). The updated curricula shall be gradually implemented until 2026-2027, along with training of ECEC staff and an evaluation of the reform.

4. School education

The percentage of pupils who leave education and training early (3.1%) is significantly below the EU average (9.7%). Nevertheless, the share of early school leavers among young people born outside the EU is twice as high (6%) as among those born in Slovenia (2.9%)⁷. It is also much higher among some groups of teenagers, such as those of immigrant and Roma descent (OECD, 2021). Counselling services for pupils at risk have been provided in Slovenia since 1999, and contribute to the low national rate of early leaving from education and training. Counsellors provide pedagogical, psychological, and social counselling and offer support to pupils, teachers, parents and school management (European Commission, 2019).

Parents are increasingly postponing their children's entry into compulsory schooling by one year. In 2020, 86.4% of six-year olds attended primary education, a 6.1 percentage point drop compared to 2013⁸. The proportion of six-year olds enrolled in ECEC increased in the same period. The reasons for – and effects of – delayed schooling warrant more systematic research (Marjanovič Umek, 2021), as does the transition from pre-school to primary school requires further attention.

⁵ Eurostat, UOE, educ_uoe_enra21

⁶ Eurostat, EU-SILC, ilc_caindformal

⁷ The highest rate of ELET among foreign-born outside in Slovenia was 19.1% in 2013 and decreased irregularly since then to the level of 6% (Eurostat, edat_ifse_02).

⁸ Eurostat, UOE, educ_uoe_enrp07

Young Slovenians perform well in basic skills. However, gaps persist between boys and girls and between pupils born in Slovenia and pupils with a migrant background⁹.

15-year-olds in Slovenia tend to perform better in PISA tests than the EU average. This is one of the results of Slovenia's focus on ensuring quality and equity in its education system (European Commission, 2022b). Nevertheless, the educational achievement of 15-year-olds differs according to socioeconomic background, and the characteristics of the school and programme they attend. The national curriculum for basic schools (for children aged 6 to 15) and general upper-secondary schools has been amended to support the acquisition of key skills. Various initiatives, such as the 'Opening up Slovenia' initiative, which focuses on innovative open-learning approaches, have also contributed to the overall good results (European Commission, 2022b). The national strategy for the development of reading literacy (2019-2030) promotes the development of reading literacy and reading culture among individuals of various age and between social groups and individuals. Slovenia also runs a project focusing on mathematical and scientific literacy with support from the European Social Fund (National Education Institute Slovenia, 2021).

The government is promoting inclusion in education in Slovenia.

Following the implementation of the new 2020-2031 Roma education strategy, Slovene authorities launched a new project on 'Multifunctional Roma centres as innovative learning environments'. Supported by European funding, the project will help Slovenia's Centre for School and Extracurricular Activities to strengthen the skills and knowledge of Roma children and adolescents and increase their integration in the education system. Support for students from migrant backgrounds, including more language lessons (cf. European Commission, 2020) continues to be important, as Slovenia is a common destination country for migrants from other Balkan and eastern European countries.

Slovenia is focusing on the green and digital transitions in education, but implementation could be strengthened.

The NRRP supports a comprehensive reform of curricula aimed at developing digital skills, skills for sustainable development, and the financial literacy of teachers and pupils. Currently, environmental and sustainable development topics are integrated as a cross-curricular theme in many compulsory subjects in primary education. However, given the curriculum overload in Slovenia, not enough time can be given to these themes (European Commission, 2022a). Although teachers are obliged to include environmental education in their lessons, many of them lack the necessary knowledge and skills to do so, as environmental sustainability is rarely part of initial teacher training (European Commission, 2022a). Some progress has been made towards the nationwide implementation of education programmes to promote environmental sustainability, but it is far from being comprehensively implemented across the country (European Commission, 2022a). In addition, there are large divides in environmental optimism and the ability to explain or discuss environmental issues (environmental self-efficacy) between boys and girls as well as between socioeconomically advantaged and disadvantaged pupils (OECD, 2022b).

Slovenia faces a growing shortage of teachers at all levels of education.

The number of teachers in service has been falling due to retirement and low numbers of new entrants to the profession. Some schools are reporting difficulties in finding teachers of mathematics and technical subjects (e.g. computing). The challenges are expected to intensify in the future, especially for teachers of science, technology, engineering and mathematics (STEM) (European Commission, 2022b). In 2022, the Ministry of Education, Science and Sport issued a public call for scholarships for students of pedagogical study programmes in the fields of science and technology for the 2022/23 academic year. The Ministry also reintroduced systemic traineeship for education staff. Meanwhile, in early 2022, nearly 40 000 staff working in all levels of education protested to demand higher wages for teaching

⁹ See European Commission (2021a).

and non-teaching staff and bonuses for extra work during the pandemic.



Box 2: Hand-in-hand help

From 2017 to 2021, Slovenia implemented a programme funded by the European Social Fund aimed at strengthening the skills of professionals in education working with children with special needs (*Z roko v roki poMOČ*). The programme's main objective was to provide a wide range of pedagogical resources and methodological support to assist and treat children and to help develop inclusive and high-quality education. The programme focused not only on knowledge and skills but also on building professional values and creating positive attitudes towards all children with special needs. The programme's content was divided into different areas of work: identifying the needs of children with special needs; in-depth communication with parents; teamwork; curiosity; critical thinking; flexibility; and instilling a sense of responsibility. The needs of professionals for such training exceeded all expectations. By the end of the training project, 21 627 professionals had participated. The total value of the project funded by the EU was EUR 1.5 million.

Source: <http://projektpomoc.splet.arnes.si/>

Slovenia has welcomed displaced children from Ukraine into kindergartens, basic and upper secondary schools. Pupils with temporary protection are entitled to intensive Slovene language courses in the beginning of the school year. These courses have also been offered to Ukrainian students who have arrived since March 2022. In April, the National Education Institute published guidelines for the inclusion of children and adolescents with temporary protection in educational institutions to help managers and staff in kindergartens and schools to create an inclusive school environment (National Education Institute Slovenia, 2022b).

5. Vocational education and training and adult learning

In recent years, Slovenia has witnessed steady enrolment of young people in vocational education and training (VET) programmes. In 2021, approximately two thirds of Slovenian pupils (65.9%) opted for VET education programmes after completing basic education¹⁰. Despite high enrolment rates, the employment of recent VET upper secondary graduates decreased between 2018 (84.5%) and 2021 (78%) by 6.5 pps¹¹. Many Slovenian employers have had difficulties in finding suitable staff for several years. This might be related to the poor reputation and lower wages associated with these professions, (Hergan & Čelebič, 2016), and consequently the decision of young people to enrol in tertiary education. Participation in work-based learning by upper-secondary VET students was 73.9% in 2021, well above the EU average of 60.7%¹². Those enrolled in three-year VET programmes receive practical training with employers for at least 24 weeks, while those in four-year programmes receive practical training with employers of 8 weeks on average.

All key actors are satisfied with Slovenia's apprenticeship programme, but challenges remain. The Institute of the Republic of Slovenia for Vocational Education and Training (CPI) has published its final evaluation report on the implementation of the pilot apprenticeship scheme (Cedefop, 2022a). The scheme was launched in 2017 with four programmes, and then gradually extended to 12 programmes in 2021/2022. The evaluation revealed great satisfaction among learners/apprentices,

¹⁰ According to Eurostat data, 70.8% of pupils in upper secondary education were enrolled in VET programmes in 2020 (this was the highest share in the EU, where the average is 48.7%).

¹¹ Eurostat, edat_lfse_24

¹² Eurostat edat_lfs_9919__custom_3030797

companies and schools. Nevertheless, the evaluation also said that links between school-based and company-based learning could be strengthened. The attractiveness of apprenticeships and the shared responsibility of social partners could also be further promoted. The evaluation also showed that promoting the full equivalence between school-based and company-based learning for qualifications may need to be reconsidered.

The government has proposed measures to strengthen the cooperation of VET institutions with social partners.

As part of the European Social Fund Plus (ESF+), these measures will ensure that the VET system is better aligned and linked to the needs of the labour market through incentives for employers to provide learning places for apprentices and students in upper secondary and higher vocational schools. Furthermore, the promotion of vocational education will be encouraged to increase the attractiveness of VET. In 2021, the Ministry of Labour set up a project that will develop a long-term systemic approach to skills forecasting: the Skills Forecasting Platform (Cedefop, 2022b). The platform will be a systemic IT tool to better match the skills of job seekers and employees with the demands of the labour market. The government also intends to develop a tracking application to monitor the employment performance of VET graduates under the NRRP.

Adult participation in lifelong learning is improving, but vulnerable groups need support for upskilling and reskilling.

In 2021, 18.9% of the surveyed working age population in Slovenia (25-64) had participated in lifelong learning in the 4 weeks before the survey (the Labour Force Survey). This is significantly above the EU average of 10.8%¹³. Despite this positive

development, the rate of adult participation in learning in Slovenia has been declining since 2010. The participation in learning in the last four weeks prior to the survey is particularly low among low-skilled (3.4 %, EU average: 4.3%) while it has, compared to year 2020 (when it was 3.9%, below EU average of 4.8%) significantly improved for older persons (10.3%, EU average: 5.7%)¹⁴. The key reasons for low rates of participation in lifelong learning are the lack of motivation on the part of the target population and the reluctance of employers to refer their employees to training. Slovenia's 2030 target is the same as the EU target, namely for 60% of all adults to engage in learning in any given year.

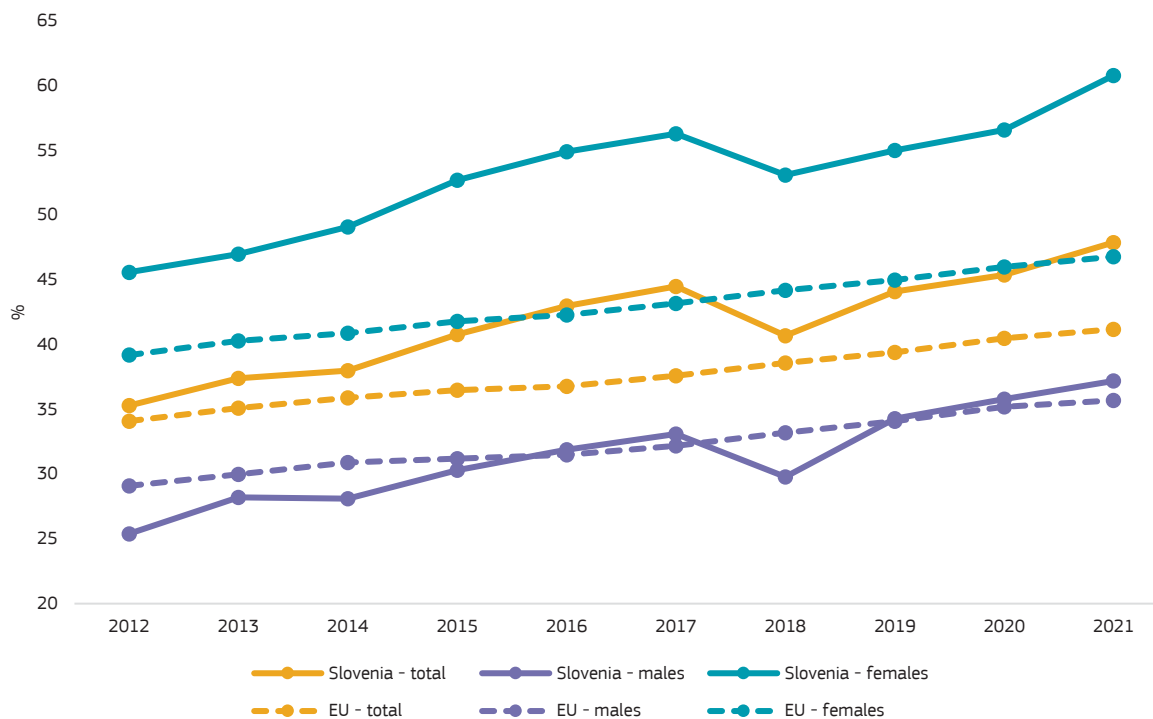
Slovenia intends to promote adult learning and strengthen participation in lifelong learning.

It has set an ambitious target to help achieve the objectives of the European Pillar of Social Rights action plan, while paying particular attention to different vulnerable groups (e.g. those over 65, the low-skilled, the less qualified, etc.). The National Assembly adopted the National Resolution of Adult Education Master Plan 2022-2030, with defined goals, indicators and priority areas. A significant share of resources from the European Social Fund Plus (ESF+) will be used to promote lifelong learning, in particular flexible upskilling and reskilling opportunities for all. These funds will take into account: (i) the need for entrepreneurial and digital skills; (ii) the need to better anticipate changes and new skills requirements based on labour-market needs; (iii) the need to facilitate career transitions and promote professional mobility; (iv) the need to modernise labour-market institutions and services to assess and anticipate skills needs; and (v) the need to provide timely and tailor-made support to match jobseekers with work, promote employment transitions, and encourage job mobility.

¹³ Eurostat, trng_lfse_01

¹⁴ Eurostat, trng_lfse_01

Figure 4: Tertiary education attainment rate by sex in Slovenia (%), 2012-2021.



Source: Eurostat, LFS edat_lfs_9912

6. Higher education

The tertiary education attainment rate among 25-34-year olds is well above the EU-level target and continues to increase.

It increased over 10 percentage points in the past decade, reaching 47.9% in 2021 (vs an EU average of 41.2%)¹⁵. This puts Slovenia ahead of the EU-level target of 45%. The Resolution on the national programme of higher education until 2030 envisages that at least 50% of Slovenian citizens aged 30 to 34 will complete one of the levels of higher education by 2030. At the same time, Slovenia has the largest tertiary-education gender gap in the EU (women 60.8%; men 37.2%) and a significant gap between the native and foreign-born population among 25-34 year-olds (50.2% among native-born vs 24.3% among foreign-born). The recent Eurostudent survey

shows that Slovenia is one of the countries with fewest female students compared to male students in the field of ICT (Hauschildt, K. et al., 2021). Meanwhile, the overrepresentation of female students in education subjects is high in Slovenia: the proportions of female students in the field of education are more than 30 percentage points higher than the average share of female students in the tertiary sector) (Hauschildt, K. et al., 2021).

The number of graduates in Slovenia has increased in all fields of higher education.

Many Slovenian students choose vocational tracks and STEM degrees (OECD, 2021). Compared to 2015, the number of graduates in STEM fields increased by 2.9 percentage points, accounting for almost a third (28.6%) of all graduates in 2020. As in previous years, the largest share of graduates completed studies in the fields of business, administration and law (19%), followed by engineering, manufacturing and construction

¹⁵ Eurostat, edat_lfse_03

(17%)¹⁶. A growing number of international students are enrolling in Slovenian higher-education institutions, with more than half originating from countries of the former Yugoslavia (OECD, 2022a, SURS, 2022c). In 2020, the share of foreign students among all students enrolled in tertiary education in Slovenia was 7.8%, almost twice the percentage registered in 2018 (4.7%). The share of both foreign students and graduates is the highest at the doctoral level. 20.1% of all doctoral students are foreign as are 11.4% of all doctoral graduates¹⁷.

The Slovenian authorities continue to reform higher education. Under the NRRP, Slovenia plans to invest into pilot projects of higher education institutions that focus on the green transition, digitisation and lifelong learning. Based on these pilot projects, Slovenia aims to prepare a Blueprint for investing in green, resilient, sustainable and digitally connected higher education, paving the way to systemic change. The reforms also hope to address attainment gaps by introducing greater flexibility in study programmes including through micro-credentials. The National Assembly adopted in March 2022 a resolution on the national programme of higher education until 2030. It aims to improve the quality, attractiveness and responsiveness to society of higher education. The document sets out strategic objectives in the following areas: (i) linking the higher-education system to social development; (ii) improving legislation and increasing funding; (iii) improving quality; (iv) increasing internationalisation; and (v) increasing digitalisation.

Student life is increasingly being affected by rising living costs, impacting the accessibility of higher education. Students face difficulties in renting apartments, a problem that is particularly acute in Ljubljana and for young people from disadvantaged backgrounds. The recently adopted Student Status Act, based on a proposal by the Slovenian Student Union, is aimed at improving

students' living conditions. Major provisions of the Act include: (i) a requirement for higher-education institutions to ensure equal treatment for all students; (ii) explicit prohibition of sexual and other harassment or violence; (iii) a gradual increase of 20% in the state scholarship by 2024; and (iv) ensuring additional financial support for the construction and renovation of student accommodation facilities.

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¹⁶ Eurostat, UOE, [educ_uoe_grad02]

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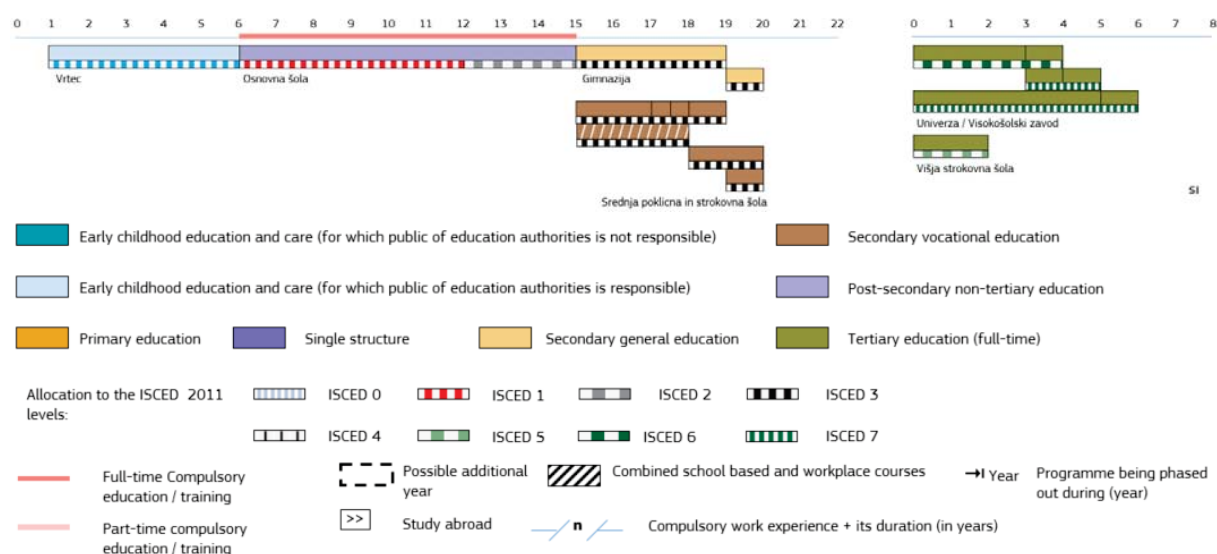
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Annex I: Key indicators sources

Indicator	Source
Participation in early childhood education	Eurostat (UOE), educ_uae_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: Eurostat (LFS), edat_lfse_14 Data by country of birth: Eurostat (LFS), edat_lfse_02
Exposure of VET graduates to work based learning	Eurostat (LFS), edat_lfs_9919
Tertiary educational attainment	Main data: Eurostat (LFS), edat_lfse_03 Data by country of birth: Eurostat (LFS), edat_lfse_9912
Participation of adults in learning	Data for this EU-level target is not available. Data collection starts in 2022. Source: EU LFS.
Equity indicator	European Commission (Joint Research Centre) calculations based on OECD's PISA 2018 data
Upper secondary level attainment	Eurostat (LFS), edat_lfse_03
Public expenditure on education as a percentage of GDP	Eurostat (COFOG), gov_10a_exp
Public expenditure on education as a share of the total general government expenditure	Eurostat (COFOG), gov_10a_exp

Annex II: Structure of the education system



Please email any comments or questions to:
EAC-UNITE-A2@ec.europa.eu

Brussels, 18.11.2022
SWD(2022) 751 final

PART 26/28

COMMISSION STAFF WORKING DOCUMENT

Education and Training Monitor 2022

Accompanying the document

**Communication from the Commission to the European Parliament, the Council, the
European Economic and Social Committee and the Committee of the Regions**

on progress towards the achievement of the European Education Area

{COM(2022) 700 final} - {SWD(2022) 750 final}

Education and Training Monitor 2022

SLOVAKIA



The Education and Training Monitor's country reports present and assess the main recent and ongoing policy development at all education levels in EU Member States. They provide the reader with more in-depth insight of the performance of countries with regard to the EU level targets agreed within the EEA. They are based on the most up-to-date quantitative and qualitative evidence available.

Section 1 presents a statistical overview of the main education and training indicators. Section 2 focuses on how the Member State has addressed or is addressing one of its education challenges. Section 3 covers early childhood education and care. Section 4 deals with school education policies. Section 5 covers vocational education and training and adult learning. Finally, Section 6 discusses measures in higher education.

The Education and Training Monitor's country reports were prepared by the European Commission's Directorate-General for Education, Youth, Sport and Culture (DG EAC), with contributions from the Directorate-General for Employment, Social Affairs and Inclusion (DG EMPL).

The document was completed on 30 September 2022

More background data at:

<https://op.europa.eu/webpub/eac/education-and-training-monitor-2022/en/>



1. Key indicators

Figure 1: Key indicators overview

			Slovakia		EU	
			2011	2021	2011	2021
EU-level targets			2030 target			
Participation in early childhood education (from age 3 to starting age of compulsory primary education)	≥ 96 %		72.3% ¹³	78.1% ²⁰	91.8% ¹³	93.0% ²⁰
Low achieving eighth-graders in digital skills	< 15%		32.8% ¹³	:	:	:
Low achieving 15-year-olds in:	Reading	< 15%	22.2% ⁰⁹	31.4% ¹⁸	19.7% ⁰⁹	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	18.2% ⁰⁹	22.3% ¹⁸
Early leavers from education and training (age 18-24)	< 9 %		5.1% ^b	7.8% ^b	13.2%	9.7% ^b
Exposure of VET graduates to work-based learning	≥ 60 % (2025)		:	56.9%	:	60.7%
Tertiary educational attainment (age 25-34)	≥ 45 %		25.5% ^b	39.5% ^b	33.0%	41.2% ^b
Participation of adults in learning (age 25-64)	≥ 47 % (2025)		:	:	:	:
Other contextual indicators						
Equity indicator (percentage points)			:	30.9 ¹⁸	:	19.30 ¹⁸
Early leavers from education and training (age 18-24)	Native		5.1% ^b	7.9% ^b	11.9%	8.5% ^b
	EU-born		:	:	25.3%	21.4% ^b
	Non EU-born		:	:	31.4%	21.6% ^b
Upper secondary level attainment (age 20-24, ISCED 3-8)			93.3% ^b	89.3% ^b	79.6%	84.6% ^b
Tertiary educational attainment (age 25-34)	Native		25.5%	39.5% ^b	34.3%	42.1% ^b
	EU-born		:	:	28.8%	40.7% ^b
	Non EU-born		:	:	23.4%	34.7% ^b
Education investment	Public expenditure on education as a percentage of GDP		4.3%	4.6% ²⁰	4.9%	5.0% ²⁰
	Public expenditure on education as a share of the total general government expenditure		10.3%	10.1% ²⁰	10.0%	9.4% ²⁰

Eurostat (UOE, LFS, COFOG); OECD (PISA). Further information can be found in Annex I and at [Monitor Toolbox](#). 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; the equity indicator shows the gap in the share of underachievement in reading, mathematics and science (combined) among 15-year-olds between the lowest and highest quarters of socio-economic status; b = break in time series, u = low reliability, : = not available, 09 = 2009, 13 = 2013, 18 = 2018, 20 = 2020.

Figure 2: Position in relation to strongest and weakest performers



Source: DG Education, Youth, Sport and Culture, based on data from Eurostat (LFS 2021, UOE 2020) and OECD (PISA 2018).

2. A focus on equity

Equity and inclusion in education have been long-standing challenges in Slovakia.

According to the 2018 PISA, more than half of Slovak 15-year-olds in the bottom social quartile lack basic skills (51.9%) compared to 1% in the highest quartile, which indicates that students' socio-economic background strongly affects their performance (OECD, 2019). The overall proportion of secondary school pupils with low levels of basic skills 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). In addition, low-performing and disadvantaged students often find themselves in the same schools; the related isolation index¹ shows that this is the case to a higher degree in Slovakia than in other EU countries. Rural areas and East Slovakia, which have the highest proportion of schools with disadvantaged students, also have the highest rate of early leavers from education and training (Section 4). This reinforces regional disparities at later stages of education, too: the tertiary educational attainment rate ranges from 35% in West Slovakia to 54.7% in the Bratislava region. The urban-rural divide related to the tertiary

educational attainment level is also deep: the attainment rate in cities is 60% vs 31.9% in rural areas (Figure 3). Additionally, the proportion of pupils with special educational needs who are placed in fully separate educational settings in Slovakia is the highest among the 23 EU countries surveyed (5.63% vs 1.55% in EU23) (EASNIE, 2020). This trend particularly affects Roma people (see below).

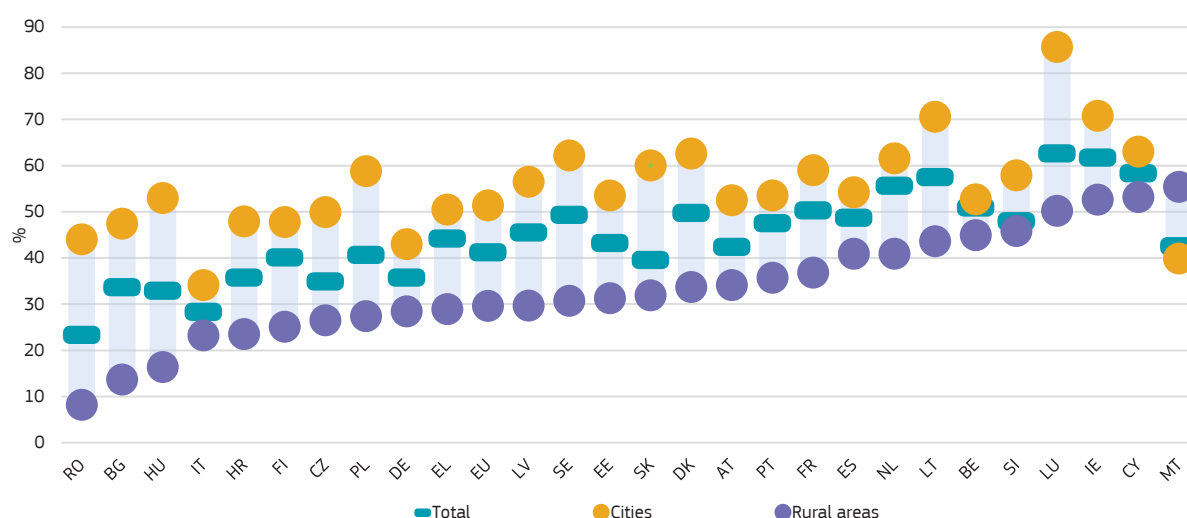
To improve inclusiveness, Slovakia plans to re-define its concept of special educational needs, and develop its catalogue of eligible support measures and the system for financing these. Investment will be made to improve the accessibility of schools and higher education institutions (HEIs). A scholarship scheme has been launched to facilitate access to higher education for students with a disadvantaged socio-economic background. Following the pandemic, the recent amendment to the law on higher education² envisages counselling centres being set up at all HEIs.

Finally, a national strategy on equity in higher education is being drawn up.

¹ SK: 0.76 vs EU: 0.67 (2018 PISA, OECD).

² Amendment of 23 March to Act No 131/2002 Coll.

Figure 3: Tertiary educational attainment rate (25-34) by degree of urbanisation, 2021 (%)



Source: Eurostat (EU-LFS) , [edat_lfs_9913].

This is key, as Slovakia scores very low on the social dimension in this sector (European Commission/EACEA/Eurydice, 2022a). The reforms address the country-specific recommendations issued under the European Semester (2019 and 2020), calling for improving the quality and inclusiveness of education and training at all levels and equal access to quality mainstream education.

Slovakia has launched the first implementation plan of the inclusive education strategy.

Developed through a participatory approach and extensive public consultation, the strategy for inclusive education to 2030 was adopted in December 2021 (Ministry of Education (MoE), 2021a). It covers six priority areas: i. inclusive education and support measures; ii. counselling system; iii. desegregation in education and care; iv. making the school environment barrier-free; v training of pedagogical and professional staff; and vi. de-stigmatisation. The first action plan (2022-2024)³ includes comprehensive measures to implement the strategic objectives in the above areas, as well as to develop systemic measures to integrate displaced children from Ukraine. However, a number of measures lack budgetary allocations and a monitoring framework is still to be developed. According to the action plan, an annual monitoring report is to be published on the MoE's website.

Desegregating Roma children in education remains a challenge.

Roma pupils are often segregated in Roma-only schools or classes⁴. Slovakia has been taking steps to address this segregation, mainly through adopting legislative amendments to the School Act. However, so far, there is a large discrepancy between the legislation and its implementation in practice. Furthermore, due to the decentralised system of

funding, allocation and use is difficult to monitor and evaluate (Verelst, S. et al, 2020). As Slovakia has planned new measures to better support desegregation under its NRRP, there will need to be clear guidance on implementation, monitoring of progress and an evaluation of the efficiency of the system. The infringement procedure (INFR(2015)2025) launched by the European Commission for segregation of Roma pupils in education and disproportionate placement of Roma pupils in special schools is ongoing.

Slovakia plans to develop a system providing equity support and funding.

According to a national analysis, the financial contribution provided to mainstream schools for educating students from a disadvantaged socio-economic background (EUR 150 per student) is not enough to cover the necessary support (MoE, 2021a). Furthermore, the allocation of 'non-normative funding'⁵ depends on the initiative of school leaders, which may undermine horizontal and vertical equity. Also, since funding is a local responsibility, the municipality's budget determines how much funding is allocated. The national monitoring system focuses only on the extent to which the school is in line with the relevant legislation, and the effectiveness of the funding structure in place is not assessed (Verelst, S. et al, 2020). Schools with a higher number of disadvantaged children also often have teachers that are out-of-field or are insufficiently well equipped or have fewer teaching assistants (Verelst, S. et al, 2020). Slovakia is currently developing its support system and reviewing the Financing Act 597/2003 Coll. to find a solution that better supports disadvantaged students in mainstream education. However, in order to appropriately monitor the policy, regular, detailed analyses of the distribution and use of extra resources at different policy levels are required (Field et al., 2007; Schaeffer and Yilmaz, 2008), and there is room for improvement in this area in Slovakia.

³ <https://www.minedu.sk/prvy-akcny-plan-plnenia-strategie-inkluzivneho-pristupu-vo-vychove-a-vzdelavani-na-roky-2022-2024/>

⁴ EU SILC_MRK 2020: 65% of Roma children in SK aged 6-15 attend schools where 'all or most of schoolmates are Roma'

⁵ Additional funding school heads apply for to support disadvantaged students, introduced in 2016 in Slovakia.

3. Early childhood education and care

The rate of participation in early childhood education and care (ECEC) remains low, but Slovakia is implementing measures to improve enrolment. In 2020, the ECEC participation rate of for children aged over 3 was 78.1% (EU 93%), an increase of 0.5 pp. between 2018-2020. In 2021, Slovakia implemented compulsory pre-primary education for 5-year-olds, which is likely to increase the overall ECE rate. According to a preliminary independent national analysis, 91.5% of 5-year-olds were enrolled. The lowest rates of participation – but also the strongest improvement compared to 2020 – were recorded in the most disadvantaged regions: in Košice (improvement by 9.8 pps), Prešov (by 7.4 pps) and Banská Bystrica (by 7.2 pps) (CEA, 2022). The reform of the financing system for pre-primary education planned for 2022 under the NRRP aims to ensure sustained national public financial support, which is indispensable for further reforms. Legal entitlement to ECEC for 4-year-olds is planned for 2024, extending to cover 3-year-olds in 2025. This is to be supported by substantial investment in boosting capacities, and reforms to increase the qualifications and skills of ECEC staff. Since pre-primary education providers other than kindergartens are also authorised, provision for quality assurance and for ensuring an inclusive environment will need to be made for those settings as well.

Some disadvantaged children faced obstacles in attending compulsory pre-primary education. Public kindergartens provide full-time education and care for children 1 year before compulsory school attendance, free of charge. Fees in private kindergartens for the final year are discounted by the state contribution (European Commission/EACEA/Eurydice, 2022). However, the Supreme Audit found that for children from socially disadvantaged backgrounds, especially from marginalised Roma communities, accessibility was a problem, and a financial barrier was induced by additional costs such as transport and specific fees (Supreme Audit, 2021a). Some

municipalities subsidised these costs to support attendance. The Supreme Audit recommends producing a comprehensive report on pre-primary education with specific measures on capacity provision, equipment of premises, staffing (particularly, inclusion specialists) and support for socio-economically disadvantaged families.

Slovakia takes its first steps to improve the availability and inclusiveness of ECEC for children aged under 3. The rate of enrolment in formal childcare or education of children below 3 is 4.8%, while for those at risk of poverty or social inclusion it is even lower, at 2.3% in 2020. Facilities that provide care for children below 3 are not part of the schooling system. Their primary source of funding is parents' fees, and public facilities are partly funded by municipalities. The pilot grant scheme launched under the NRRP⁶ aims to support the provision of ECEC and interventions for children aged 0-6, in particular those with a socio-economically disadvantaged background, including children from marginalised Roma communities. Involving Romani-speaking women and working with Roma families in their home environment should help to overcome the current barriers to accessing ECEC.

Slovakia has adopted an integrated ECEC strategy. To ensure comprehensive support for children aged under 7, including those with disabilities, and their parents, in June 2022, Slovakia adopted a strategy for the development of coordinated early intervention and early care services covering 2022-2030⁷ (Ministry of Labour, 2021). The strategy aims to establish a conceptual framework, the cooperation links between central healthcare, education and social services and external stakeholders, improve the accessibility of support systems, and develop the funding system. The implementation framework including budget, monitoring and evaluation measures remains to be established.

⁶ <https://www.minedu.sk/grantova-schema-na-podporu-ranej-starostlivosti-a-intervencie/>

⁷ <https://www.employment.gov.sk/sk/rodina-socialna-pomoc/socialne-sluzby/vcasna-intervencia-rana-starostlivost/>

4. School education

Slovakia is preparing a curricular reform for primary and lower secondary education, involving a broad range of experts and stakeholders.

A public consultation on two key reform documents explaining the rationale for and goals of the reform, the proposed changes to the curricula and the expected learning outcomes closed in January (NIE, 2022a, 2022b). Nine webinars covering seven educational areas⁸ took place from 21 January to 7 February. Among other experts and groups of stakeholders, the Slovak Chamber of Teachers has been directly involved in drawing up the reform, and parents and students also had an opportunity to comment. A new state educational programme containing all the educational standards and methodological materials is being developed by experts, and the full package will be submitted for public discussion in November 2022. Implementation of the reform in schools will be supported by a set of additional documents, including a guide to the ethos and culture of the school as a community and a guide to adapting educational standards to pupils' needs, as well as podcasts by teachers (NIE, 2022b). A network of regional teacher support centres to be established in 16 regions⁹ will provide curricular management and school support. A digital platform is being developed to support the development of schools' educational programmes. To deliver the necessary results, teachers will need high quality support from mentors and the provision of methodological materials, teaching aids and textbooks on time. The curricular reform is being supported by the Recovery and Resilience Facility. Additionally, the Commission's Technical Support Instrument provides expertise to Slovakia to inform and facilitate the digital transformation of schools, to effectively transfer the reformed curriculum to regional and school level, and to measure the

effects of these changes on learning outcomes¹⁰. The implementation report from the 2021-2023 pilot on the innovative use of digital technologies in primary schools will inform policy¹¹.

Slovakia adopted a new law on transforming the counselling system and a strategy on lifelong learning and counselling, to help prevent young people from leaving education and training early. The rate of early leavers from education and training (ELET) increased in 2021, reaching 7.8% (EU 9.7%) from a low base of 5.3% in 2012 (EU 12.6%). The highest ELET rate remains in East Slovakia at 14.4% (2021)¹², double the national rate (7.8%) (Figure 4). The proportion of early leavers who have parents with a low level of education (ISCED 0-2 level) in Slovakia is the highest in the EU, at 69.7% (EU 26.1%)¹³. A new five-level structure for counselling services should come into effect from 1 January 2023, in line with the new law on advisory and prevention facilities (Act No 24/2022 Coll.) of 17 January 2022¹⁴. Depending on students' needs, support is to be offered in schools by individual specialists, by newly introduced school support teams, or by centres for counselling and prevention serving all children in need, or highly specialised centres. New regional networks will be founded, based on proposals suggested by regional educational authorities. The reform is expected to be completed by 30 June 2025; it introduces also other preventive and corrective interventions set out in the 2030 lifelong learning and counselling strategy covering 2021-2030, which was adopted in November 2021 (MoE, 2021b).

⁸ Language and communication, mathematics and IT, humans and society, humans and nature, humans and the world of work, art and culture, health and exercise.

⁹ <https://www.minedu.sk/data/att/23153.pdf>

¹⁰ https://ec.europa.eu/info/sites/default/files/tsi_2021_country_factsheet_slovakia.pdf

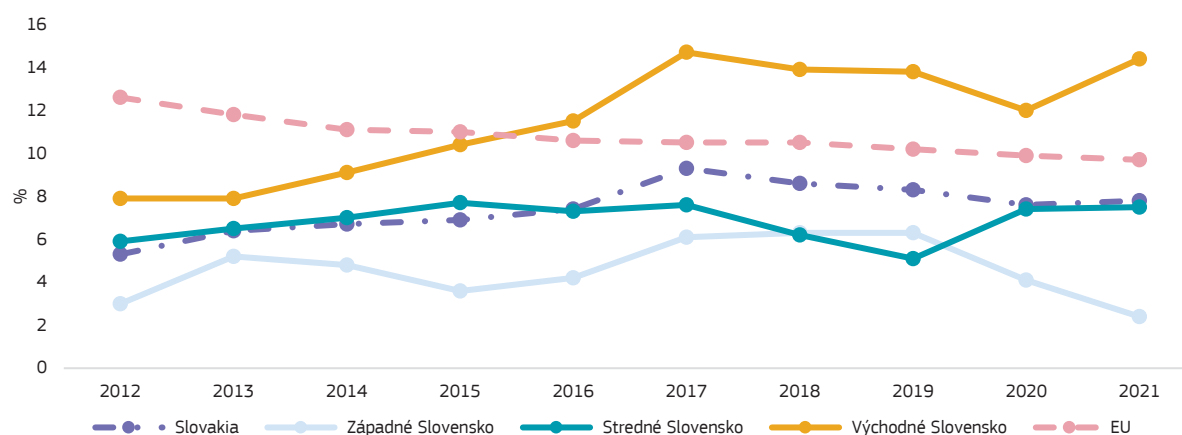
¹¹ <https://www.minedu.sk/projektovy-sprint-zrychli-digitalnu-transformaciu-skol/>

¹² Eurostat, edat_lfse_16.

¹³ LFS special extraction, 2021.

¹⁴ <https://www.slov-lex.sk/pravne-predpisy/SK/ZZ/2022/24/20230101.html>

Figure 4: Early leavers from education and training by region in Slovakia, 2012-2021 (%)



Source: Eurostat (LFS), [edat_lfse_16]. Note: Data for Bratislavský kraj not available. 2021 data for Západné Slovensko is of low reliability.

Slovakia has published its digitalisation programme for education to 2030.

Over half (55%) of Slovaks have basic digital skills (EU average: 54%), but only 21% have advanced digital skills (EU 26%) (European Commission, 2022). The programme for digitalising education to 2030¹⁵ was published on 17 May. Its objectives and activities are built around five themes: digital infrastructure and equipment for education; digital competences; transformation of education through digital technologies; development of electronic services and information systems in the Ministry of Education and schools; and cybersecurity and information safety. The first action plan (2021-2024)¹⁶ includes actions under all these chapters, however, the financial plan has not yet been adopted. The 'IT Academy' ESF project remains key in supporting the digitalisation of schools. Digital coordinators in schools are being appointed and trained. Additionally, the 'IT Fitness' test¹⁷, a comprehensive test of ICT skills in Slovakia, is expanding to Czechia, Hungary and Poland from 2022.

Slovakia is implementing projects to compensate for the learning losses due to

COVID-19. Due to insufficient digital readiness of schools and students, not everyone had equal access to distance education. Since 2020, Slovakia has therefore been implementing compensatory measures, supported also by the RRF and ESIF. These include summer schools (EUR 1.22 million in 2020 and 2021), the 'Smarter Together 2' and 'Smarter Together 3' tutoring and mentoring programmes (EUR 9.94 million), the subsidising of school club fees (EUR 289 575), and employing assistant educators in pre-primary facilities (EUR 5.07 million)¹⁸. Overall, over 16 700 students participated in summer schools, 27 000 in 'Smarter Together 2' and over 3 860 students were supported to attend school clubs. In 2021, the Supreme Audit found that there was a need to expand the coverage of the tutoring and mentoring programmes for disadvantaged pupils (Supreme Audit, 2021b). The overall impact of the measures remains to be assessed.

Slovakia is taking steps to rationalise its public expenditure and school governance.

According to the amendment of the Act on State Administration in Education and School Self-Government (No 596/2003 Coll.) of 14 April¹⁹ jurisdiction over schools is transferred from the Ministry of Interior to the Ministry of Education

¹⁵ <https://www.minedu.sk/program-informatizacie-skolstva-do-roku-2030/>

¹⁶ <https://www.minedu.sk/akcny-plan-informatizacie-a-digitalnej-transformacie-vzdelavania-v-sr-na-obdobie-2021-2024/>

¹⁷ <https://itfitness.sk/sk/>

¹⁸ Information provided by the Ministry of Education, March 2022.

¹⁹ <https://www.slov-lex.sk/pravne-predpisy/SK/ZZ/2003/596/20220101.html>

effective from 2022. Since 2013, the Ministry of Education has been responsible only for upper secondary schools set up by the regions. Both ministries overlap in some managerial and financial roles (European Commission, 2019). Following the amendment, the education departments of district offices will be transformed into the regional school administration offices under the Ministry of Education, creating a specialised administration for state education and simplifying the flow of funds to regional education. The amendment has been opposed by SK8, the association of self-governing regions, which recommends re-evaluating competences instead²⁰.

Low salaries for teachers limit the attractiveness of the teaching profession, and there are pronounced shortages of teachers. 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, 2021). In 2022, public sector wages rose by 3% in July, while in February inflation was 9%. This is the first salary increase for teachers in the past 2 years. The teacher population is ageing: in 2020, 40.3% of primary and secondary school teachers (ISCED 1-3) were aged over 50, while just 15.3% were under 34. Teacher shortages become pronounced, and it is expected that by 2023, Slovakia may lack 3 500 teachers, mainly in Bratislava²¹.

Comprehensive measures were implemented to support children and students fleeing the war in Ukraine. As of May, over 31 000 school-aged children and young people from Ukraine were registered in Slovakia, and over 9 700 (31%)

were enrolled in the national school system (European Commission / EACEA / Eurydice, 2022b). To support their integration, the Ministry of Education allocated EUR 200 per pupil in March to support initial costs²², published guidance and supporting materials for schools and Ukrainian parents²³. To coordinate the enrolment of refugee students, schools can update their free capacity on a central website²⁴. Slovak language courses for displaced children and students and webinars for teachers were also provided.

5. Vocational education and training and adult learning

Slovakia is introducing reforms to its systems for vocational education and training (VET) and adult learning, to address skills mismatches and skills shortages. The country's economic growth is being held back by its limited number of graduates in science, technology, engineering and mathematics (STEM), which leads to shortages across a number of high-skilled and medium-skilled jobs. Among OECD countries, Slovakia has one of the highest skills mismatches (35%) in the EU-ISCED 3-8. In 2021, the employment rate for upper secondary VET graduates was 75.3%, 5.4 pps less than in 2020 (80.7%) and 9.3 pps less than in 2019²⁵. Participation by adults (aged 25-64) in learning has been one of the lowest in the EU – in 2021, it was 4.8% (EU 10.8%). In the past, this has also been affected by a lack of governance structures. Some reforms have been adopted or launched under the NRRP.

²⁰ <https://www.aktuality.sk/clanok/881867/financovanie-skol-by-sa-malo-zjednotit-do-posobnosti-rezortu-skolstva/>;
<https://domov.sme.sk/c/22638751/samospravne-kraje-nesuhlasia-so-vznikom-skolskych-uradov.html>.

²¹ <https://enr.si.rtvs.sk/articles/news/293396/around-1300-teachers-missing-in-the-slovak-education-system-this-year>

²² <https://www.minedu.sk/b-grohling-skolam-ktore-vzdelavaju-ziakov-z-ukrajiny-pomozeme-s-preplatenim-nakladov/>

²³ <https://ukrajina.minedu.sk/vseobecne-informacie/>

²⁴ <https://www.minedu.sk/30527-sk/najst-skolu/>;
<https://www.minedu.sk/zaregistrovat-skolu/>

²⁵ Eurostat, edat_lfse_24.

The amendment of the Act on Vocational Education and Training came into force on 1 January.

The majority of upper secondary pupils are enrolled in VET programmes²⁶ (67.3% in 2020 vs EU 48.7%). In 2021, 56.9% of recent VET graduates reported to have experienced work-based learning²⁷. Secondary vocational schools are required to develop their programmes working together with the relevant professional organisations or an employer with whom the school organises practical education or has a dual education contract. The new amendment also introduces measures to improve training opportunities for students, including through better in-company services, internationalisation of practical training, longer apprenticeship contracts and expanding the possibility of carrying out practical training in dual education for pre-school education teachers and social workers.

Slovakia has adopted its lifelong learning and guidance strategy for 2021-2030 and the first action plan, covering 2022-2024.

The strategy²⁸, which was adopted in November 2021, and the first action plan²⁹ create a robust strategic framework to react to new dynamics in the labour market. They put forward measures to create a coherent lifelong guidance system, including through a new plan for graduate tracking, identifying funding opportunities, developing information tools and career management capacities, increasing the quality of lifelong learning and guidance, and also improving inter-ministerial coordination. Slovakia has set a 2030 target of 50% of adults in learning in a year, well below the EU target of 60%.

The governance of the adult learning system has been fragmented in Slovakia, based on several ad hoc interventions mainly financed under the ESF and mostly targeting job seekers.

The NRRP and the related complementary measures under the Commission's Technical Support Instrument focus mainly on improving the digital skills of adults aged 70+.

Slovakia plans to pilot individual learning accounts or similar schemes providing adults with training entitlements, supported with EU funds. Based on the 2022-2024 action plan, the pilot would cover 5 000 participants, who will be allocated EUR 200 each. The account holder will have full freedom ('individual right') to decide on the training, whether as part of a learning programme agreed with their employer or elsewhere.

6. Higher education

Tertiary educational attainment is close to the EU average, but the gender gap has further increased. Between 2016 and 2021, the tertiary educational attainment rate grew sharply, by 16.1 pps, and in 2021, 39.5% of adults aged between 25 and 34 in Slovakia held a tertiary education degree (EU 41.2%). The gender gap in favour of women has increased, and in 2021, it reached 23 pps, the second highest in the EU. STEM graduates made up 22.2% of the total number of graduates in 2020, remaining below the EU average (24.9%)³⁰. The proportion of female STEM graduates out of all STEM graduates (34.2%) is above the EU average (32.4%). The employment rate for recent tertiary graduates (aged 20-34) was 84% in 2021, in line with the EU average (84.9%).

Slovakia has amended its higher education law to reform the governance and accountability of higher education. On 23 March, the Slovak Parliament approved the Law amending Act No 131/2002 on higher education. The reform aims to improve university management and financing, allow greater flexibility within HEIs, and open academia to business and foreign applicants. The amendment,

²⁶ Eurostat, educ_uae_enrs05.

²⁷ Eurostat, edat_lfs_9912.

²⁸ <https://www.minedu.sk/data/att/22182.pdf>

²⁹ <https://epale.ec.europa.eu/system/files/2022-06/Akcny-plan-schvaleny-vladou-SR.pdf>

³⁰ Eurostat, educ_uae_grad02.

which is part of the reforms to higher education under the NRRP, will:

- strengthen the powers of the management board, including the budgetary decisions;
- strengthen the powers of the rector in the senior staff appointments or selections, and in budgetary proposals;
- empower the minister to appoint the same number of management board members as academia;
- require all members of the management board to be external;
- allow flexibility in faculty governing bodies;
- introduce performance contracts with HEIs;
- simplify the requirements for appointing and employing lecturers and professors, including foreigners.

The reform of the quality assurance system progresses well. Since 1 September 2020, new accreditation standards based on ESG³¹ 2015 have been applied. The standards and processes of the new Slovak Accreditation Agency for Higher Education³² were assessed by experts from ENQA and EQAR. HEIs need to comply with the new standards³³ by 31 August 2022, and request an evaluation of their internal quality assurance systems by December 2022. If positively assessed, a HEI will acquire the right to independently create, modify and implement study programmes within the fields of study and degrees for which it has applied for assessment. There will therefore be a move from the accreditation of individual study programmes to institutional accreditation. The Agency will continue to accredit new study programmes in the fields for which the institution is not yet

authorised. An assessment of HEIs' internal quality assurance systems is planned for 2023.

Slovakia has adopted an internationalisation strategy for higher education to 2030. The strategy, which was adopted in December 2021, provides for the development of internationalisation as an effective tool for increasing the quality of higher education and research by 2030³⁴. It focuses on increasing the availability of international mobility opportunities and the modernisation of higher education in the context of internationalisation.

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³² Established on the basis of the Act No 269/2018 Coll. - the Quality Act <https://saavs.sk/en/>.

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³⁴ <https://www.minedu.sk/data/att/21821.pdf>

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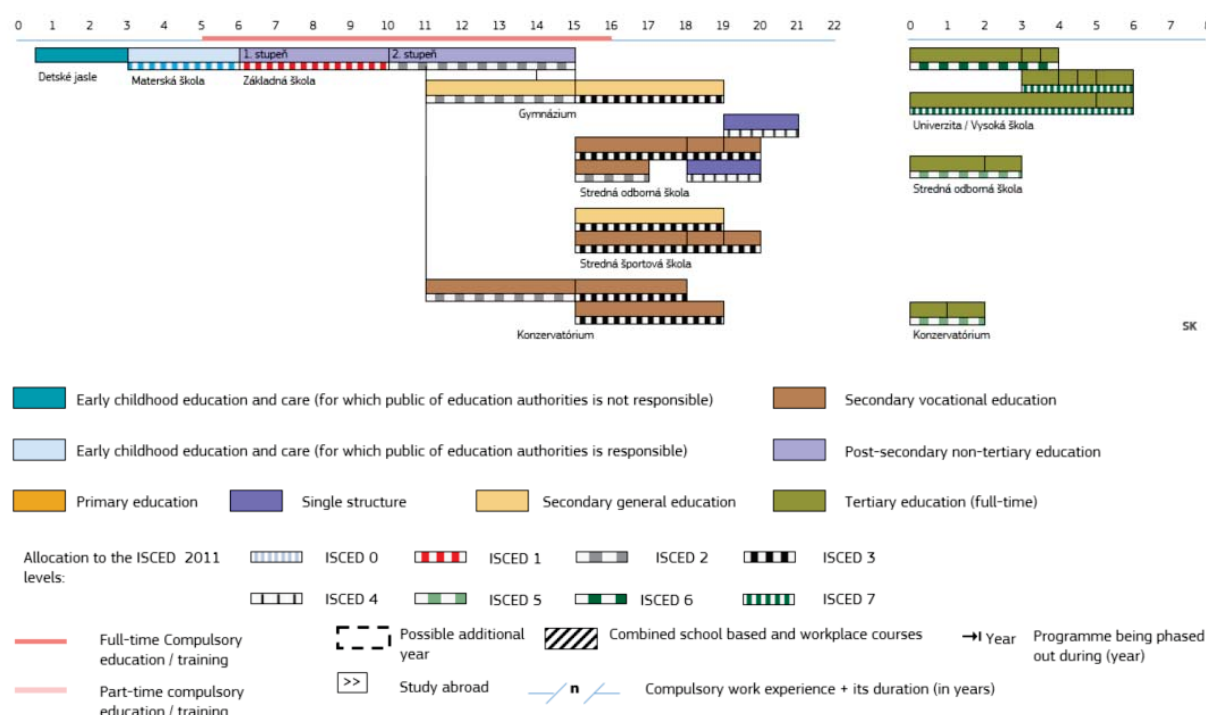
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Annex I: Key indicators sources

Indicator	Source
Participation in early childhood education	Eurostat (UOE), 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: Eurostat (LFS), edat_lfse_14 Data by country of birth: Eurostat (LFS), edat_lfse_02
Exposure of VET graduates to work based learning	Eurostat (LFS), edat_lfs_9919
Tertiary educational attainment	Main data: Eurostat (LFS), edat_lfse_03 Data by country of birth: Eurostat (LFS), edat_lfse_9912
Participation of adults in learning	Data for this EU-level target is not available. Data collection starts in 2022. Source: EU LFS.
Equity indicator	European Commission (Joint Research Centre) calculations based on OECD's PISA 2018 data
Upper secondary level attainment	Eurostat (LFS), edat_lfse_03
Public expenditure on education as a percentage of GDP	Eurostat (COFOG), gov_10a_exp
Public expenditure on education as a share of the total general government expenditure	Eurostat (COFOG), gov_10a_exp

Annex II: Structure of the education system



Source: European Commission/EACEA/Eurydice, 2022. The Structure of the European Education Systems 2022/2023: Schematic Diagrams. Eurydice Facts and Figures. Luxembourg: Publications Office of the European Union.

Please email any comments or questions to:
EAC-UNITE-A2@ec.europa.eu



Brussels, 18.11.2022
SWD(2022) 751 final

PART 27/28

COMMISSION STAFF WORKING DOCUMENT

Education and Training Monitor 2022

Accompanying the document

**Communication from the Commission to the European Parliament, the Council, the
European Economic and Social Committee and the Committee of the Regions**

on progress towards the achievement of the European Education Area

{COM(2022) 700 final} - {SWD(2022) 750 final}

Education and Training Monitor 2022

FINLAND



The Education and Training Monitor's country reports present and assess the main recent and ongoing policy development at all education levels in EU Member States. They provide the reader with more in-depth insight of the performance of countries with regard to the EU level targets agreed within the EEA. They are based on the most up-to-date quantitative and qualitative evidence available.

Section 1 presents a statistical overview of the main education and training indicators. Section 2 focuses on how the Member State has addressed or is addressing one of its education challenges. Section 3 covers early childhood education and care. Section 4 deals with school education policies. Section 5 covers vocational education and training and adult learning. Finally, Section 6 discusses measures in higher education.

The Education and Training Monitor's country reports were prepared by the European Commission's Directorate-General for Education, Youth, Sport and Culture (DG EAC), with contributions from the Directorate-General for Employment, Social Affairs and Inclusion (DG EMPL).

The document was completed on 30 September 2022

More background data at:

<https://op.europa.eu/webpub/eac/education-and-training-monitor-2022/en/>



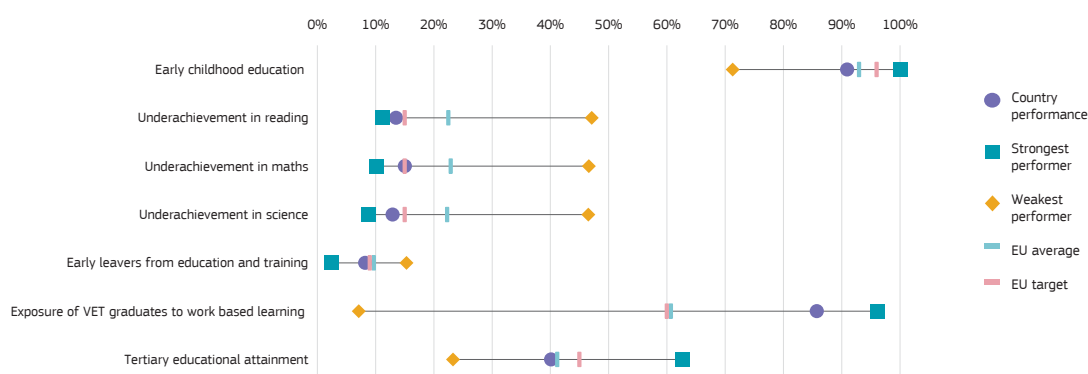
1. Key indicators

Figure 1: Key indicators overview

			Finland		EU	
			2011	2021	2011	2021
EU-level targets			2030 target			
Participation in early childhood education (from age 3 to starting age of compulsory primary education)	≥ 96 %		80.0% ¹³	90.9% ²⁰	91.8% ¹³	93.0% ²⁰
Low achieving eighth-graders in digital skills	< 15%		:	27.3% ¹⁸	:	:
Low achieving 15-year-olds in:	Reading	< 15%	8.1% ⁰⁹	13.5% ¹⁸	19.7% ⁰⁹	22.5% ¹⁸
	Maths	< 15%	7.8% ⁰⁹	15.0% ¹⁸	22.7% ⁰⁹	22.9% ¹⁸
	Science	< 15%	6.0% ⁰⁹	12.9% ¹⁸	18.2% ⁰⁹	22.3% ¹⁸
Early leavers from education and training (age 18-24)	< 9 %		9.8%	8.2% ^b	13.2%	9.7% ^b
Exposure of VET graduates to work-based learning	≥ 60 % (2025)		:	85.7%	:	60.7%
Tertiary educational attainment (age 25-34)	≥ 45 %		39.4%	40.1% ^b	33.0%	41.2% ^b
Participation of adults in learning (age 25-64)	≥ 47 % (2025)		:	:	:	:
Other contextual indicators						
Equity indicator (percentage points)			:	9.9 ¹⁸	:	19.30 ¹⁸
Early leavers from education and training (age 18-24)	Native		9.2%	7.7% ^b	11.9%	8.5% ^b
	EU-born		:	:	25.3%	21.4% ^b
	Non EU-born		19.7% ^u	15.7% ^b	31.4%	21.6% ^b
Upper secondary level attainment (age 20-24, ISCED 3-8)			85.4%	87.6% ^b	79.6%	84.6% ^b
Tertiary educational attainment (age 25-34)	Native		40.4%	42.0% ^b	34.3%	42.1% ^b
	EU-born		26.2%	28.5% ^b	28.8%	40.7% ^b
	Non EU-born		26.4%	28.2% ^b	23.4%	34.7% ^b
Education investment	Public expenditure on education as a percentage of GDP		6.4%	5.9% ²⁰	4.9%	5.0% ²⁰
	Public expenditure on education as a share of the total general government expenditure		12.0%	10.2% ²⁰	10.0%	9.4% ²⁰

Sources: Eurostat (UOE, LFS, COFOG); OECD (PISA). Further information can be found in Annex I and at [Monitor Toolbox](#). 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; the equity indicator shows the gap in the share of underachievement in reading, mathematics and science (combined) among 15-year-olds between the lowest and highest quarters of socio-economic status; b = break in time series, u = low reliability, : = not available, 09 = 2009, 13 = 2013, 18 = 2018, 20 = 2020.

Figure 2: Position in relation to strongest and weakest performers



Source: DG Education, Youth, Sport and Culture, based on data from Eurostat (LFS 2021, UOE 2020) and OECD (PISA 2018).

2. A focus on skills shortages and the role of higher education

Finland is one of EU countries with the highest European Skills Index score and can be considered as a role model. The European composite index measures skills development, skills activation and skills matching, through 15 indicators¹. Finland scored above 70 out of 100. 1 in 11 people in Finland are employed in high-tech companies, covering both high-tech manufacturing and knowledge-intensive services like ICT or finance sectors. Employment in Finland is projected to grow until 2030. The material and energy sectors – mining, production of electricity, gas or heat – are expected to grow fastest, followed by transport, storage and construction. Construction work, ICT professions and office professions are the areas in which most new jobs are expected to be created in the next decade. In 2020, the share of young Finns (aged 25–34) with tertiary education (ISCED 5 or 6) who were employed in posts for which they are overqualified was 17.5% for men and 15.6% for women, below the EU averages of 24.1% and 24.3%, respectively².

Reskilling and upskilling are key to matching the demand for future skills in an increasingly digital and green economy. The 2019 Finnish Higher Education Act aims, among other goals, to improve continuous learning opportunities in universities and polytechnics. Higher education institutions are discussing their strategic profiles and the areas in which they could increase their educational offer, and receiving support from the PROFI funding programme³. In addition, the new performance-

based funding model, in place since 2021, encourages higher education institutions to develop their adult education offer through continuous learning opportunities⁴.

The number of ICT specialists has not kept up with demand. According to DESI 2021, Finland ranks first among all EU Member States in the area of digital human capital. While Finland has the highest percentage of ICT specialists in the labour force in the EU (7.5%, almost double than the EU average of 3.9%), 59% of companies which recruited or tried to recruit an ICT specialist, had difficulties in doing so (EU average: 55%). In addition, the gender imbalance among ICT specialists remains a challenge. In 2021, 23% of ICT specialists were women (EU average 19%). With a shortage of highly skilled domestic employees, Finland also needs to attract highly skilled migrants to complement its reskilling and upskilling measures. The Finnish recovery and resilience plan (RRP) envisages measures to attract talent from abroad, notably through the Talent Boost programme (see box 1). The education offer in relation to advanced digital technologies by Finnish higher education institutions is, on average, larger than in the rest of EU⁵.

The RRP addresses education and skills in light of the green and digital transition. The plan includes a reform to the system for continuous learning. It also encompasses large-scale investments in upskilling and reskilling working age people. This is expected to increase

Evaluations of the instrument have shown that PROFI funding has helped to strengthen selected components, reduce fragmentation within disciplines and promote multidisciplinary and interdisciplinary cooperation

<https://www.aka.fi/en/research-funding/programmes-and-other-funding-schemes/university-profiling/>.

¹ <https://www.cedefop.europa.eu/en/blog-articles/european-skills-index-skills-systems-explained>.

² <https://www.cedefop.europa.eu/en/tools/skills-intelligence/over-qualification-rate-tertiary-graduates?year=2020&country=FI#6>.

³ The Academy of Finland grants competitive funding, called PROFI, to Finnish universities to support and speed up the strategic profiling of Finnish universities.

⁴ The share of funding based on continuous learning indicators is 9% of the total for universities of applied sciences and from 5% for the other general universities.

⁵ For example, the proportions of Master's programmes at Finnish universities teaching artificial intelligence, high-performance computing, cybersecurity and data science are all considerably above the EU average (Righi et al., 2020).

the employability of the labour force and support the transition to a digital and green economy.

An action plan to support science, technology, engineering and mathematics (STEM).

A working group has been created to promote an action plan for the national LUMA or STEM strategy⁶ (MINEDU, 2022b), covering all levels of education, but also other actors in society (teachers, researchers, parents, service providers, collaboration partners), aiming to improve Finnish competence in natural sciences, mathematics, and technology (MINEDU, 2022c).

A digital forum has been created to maintain an overview of digital skills and create long-term goals for the country.

As part of the national coalition on digital skills and jobs, the Ministry of Employment and Economy and the Ministry of Education and Culture set up the Do Digi Forum (2022-2023) to maintain an overview of digital skills and create long-term goals for the country.



Box 1: The Talent Boost programme

Talent Boost is a cross-administrative governmental programme launched in 2017. It is designed to increase immigration by senior specialists, employees, students and researchers. The programme is coordinated by the Ministry of Economic Affairs and Employment and the Ministry of Education and Culture. The Talent Boost steering group is composed of representatives from both Ministries and from Business Finland, the Centres for Economic Development, Transport and the Environment (ELY Centres), the Employment and Economic Development Offices (TE Offices), the Finnish Immigration Service, cities and higher education institutions.

The Talent Boost programme is being implemented through projects that also receive funding under the Cohesion policy. These

include for instance, the ERDF funded 'Talent Boost Lapland' project and the ESF funded 'Kokka kohti Suomea' (Setting the course for Finland) project,

<https://tem.fi/en/talent-boost-en>

<https://www.businessfinland.fi/en/for-finnish-customers/services/programs/talent-boost-finland>

3. Early childhood education and care

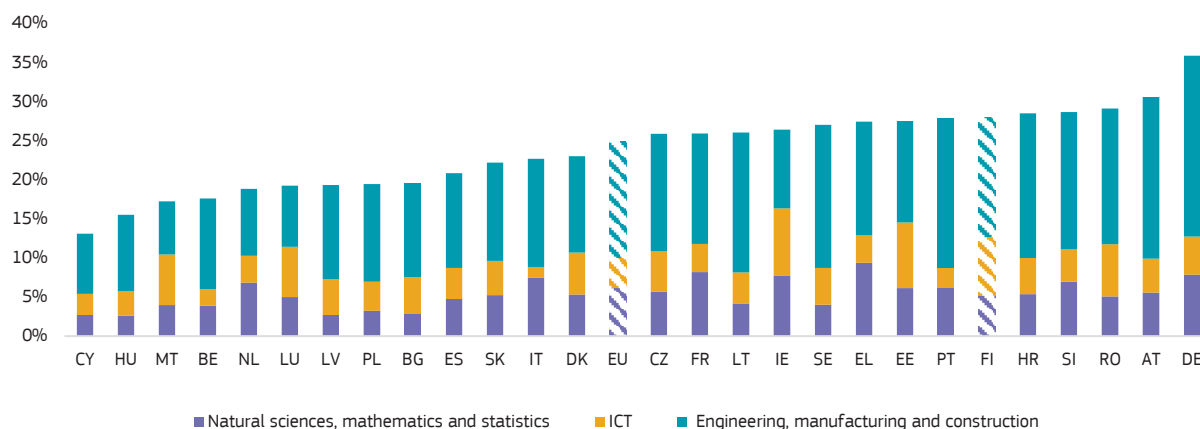
The shortage of teachers in early childhood education and care (ECEC) is a challenge for the expected increase in ECEC participation.

The ECEC participation rate in Finland is below the EU average (90.9% of children from age 3 to the starting age of compulsory primary education, EU average 93%) and it is at some distance from the EU-level target of 96%. Participation in formal childcare (from age 3 to compulsory schooling age) is lower by 6 pps for children at risk of poverty or social exclusion (EU average 7.5 pps). Recently adopted reforms in ECEC⁷ have not yet yielded the expected results. Challenging working conditions and relatively low salaries have reduced the attractiveness of the profession, while the 2018 reform (LAW 540/2018) requires that two thirds of the ECEC staff in an institution have a degree in early childhood education at Bachelor level, either from a research university or a university of applied sciences. This requirement put additional pressure on the availability of ECEC staff. Municipalities in the Helsinki metropolitan area have started to compete in hiring ECEC teachers by increasing salaries. The Minister of Science and Culture announced the opening of 400 extra tertiary study places for early childhood education. Among these, 40 study places at the University of Helsinki in 2022 are being financed

⁷ The restoration of children's subjective right to ECEC, the transfer of ECEC policies to the Ministry of Education and Culture, the pilots of free-of-charge ECEC for 5-year-olds in 2018-2020, the pilot project of 2-year pre-primary put into action in August 2021, and the new national curriculum.

⁶ <https://www.luma.fi/en/>

Figure 3: STEM tertiary graduates as a proportion of total graduates in 2020



Source: Eurostat (UOE), [educ_uae_grad02].

as part of the RRP. This measure might not be sufficient to remedy the shortage. In addition, the birth rate again increased over the last 2 years, after a previous decline (from 1.35 in 2019 to 1.46 in 2021); this could worsen the situation.

The arrival of displaced children from Ukraine may exacerbate the scarcity of ECEC places in certain locations. The bigger cities and municipalities and the border regions (the southern provinces of Varsinais-Suomi and Uusimaa) received a relatively large number of children from Ukraine. The number of minors (0-18 years old) is currently small (around 8 000 in May), but is expected to rise to about 30 000, close to three quarters of the size of a Finnish age cohort. (EDUFI, 2022).

4. School education

Fewer students complete upper secondary education in the expected time. The rate of early leavers from education and training (ELET) in Finland was 8.2% in 2021 on average (below the EU average of 9.7%), while the rate for women was 2.2 pps lower than for men. In the 2019/2020 academic year, 6.8 per cent of students attending education that leads to a qualification or a degree discontinued their studies

and did not resume them. This proportion was 3.6% for general upper secondary students⁸. A proportion of Finnish students (21%) do not complete general upper secondary education in the expected time (3 and half years) and after 4.5 years, 11% had not completed the matriculation examination (general upper secondary degree)⁹.

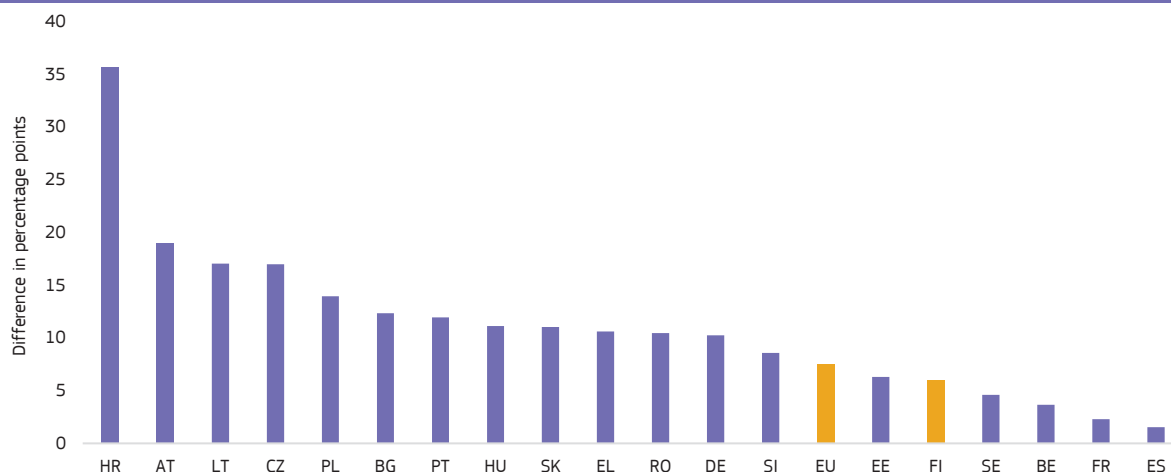
There are gaps in students' performance in Finland, notably in reading. Current educational challenges in education include the growing impact of students' socio-economic and migrant background on educational achievement, and the increasing performance gaps between students and between schools. However, the impact of socio-economic background is still among the smallest in the EU, as measured by several indicators. Existing data seem to indicate a continuous decline in learning outcomes and an increase in differences related to students' home background (Metsämuuronen & Nousiainen, 2021). In a study on equality, equity and participation, the Finnish Education Evaluation Centre (FINEEC)¹⁰ reported that 'basic education

⁸ http://www.stat.fi/til/kkesk/2020/kkesk_2020_2022-03-17_tie_001_en.html

⁹ https://stat.fi/til/opku/2020/opku_2020_2022-03-17_tie_001_en.html

¹⁰ <https://karvi.fi/2021/12/09/matemaattikan-osaamisen-taso-on-laskenut-ja-eriytynyt/>

Figure 4: Gap in children's participation in formal childcare or education between the age of 3 and the minimum mandatory school age, by AROPE, 2020



Source: Eurostat (EU-SILC), special extraction. Notes: Data for DK, LV, CY, MT and NL low reliable; Data for IE, IT, LU not available; At risk of poverty or social exclusion, abbreviated as AROPE, corresponds to the sum of persons who are either at risk of poverty, or severely materially and socially deprived or living in a household with a very low work intensity.

does not seem to be able to close the gaps caused by students' home background'. Another study¹¹ also reports that students' attainment had declined and differences between students increased. The decline in Finnish students' reading skills and reading habits is also a matter of general concern.

Schools need to do more to improve digital skills. A study (Vainikainen et al., 2022) reveals that lower secondary students have mainly acquired their digital skills outside school. According to this study, about 14% of students reported that their digital skills were inadequate and that they feel anxious when faced with digital requirements. Boys seem to make more multi-faceted use of digital devices, while girls predominantly use social media. Digital problem-solving tasks in schools seem to favour boys. Accordingly, the authors of the study recommends that schools should pay more attention to inviting all students to use their basic digital skills to be able to learn and study on an equal basis. The lack of school-based training in ICT also came up in a recent FINEEC report on programming in general upper secondary education (Nousiainen & Kivistö,

2022). It was found that only half of schools implemented courses in programming, and a majority of those only do this to a very limited extent.



Box 2: You can! Girls and technology

The You can! Girls and Technology project (2018-2022) aims to familiarise girls with technological fields and grow their interest and confidence by organising training and workshops, developing educational material, and offering on-the-job training for girls in cooperation with companies.

Supported by the European Social Fund with a budget of EUR 384 000, the project has involved 315 people (girls, teachers, career counsellors) and 18 companies.

More information available at:

<https://www.eura2014.fi/rtiepa/projekti.php?projektikoodi=521424>

A growing number of students apply for programmes with intensified special needs support instead of regular general and vocational upper secondary education. This

¹¹ https://karvi.fi/wp-content/uploads/2021/04/KARVI_0821.pdf

fact might be the consequence of declining learning results in lower secondary education. The comparison between 2021–2022 data (Torsell, 2022) reveals that while the number of students applying to upper secondary education as a whole has slightly increased to 1 735 additional applications, the number of students applying to general upper secondary education has decreased (840 applicants less). The number of students applying to vocational education decreased considerably (by 7 600 people). Most of these changes are explained by an increase in the number of students who applied for upper secondary education with intensive special needs support (an additional 7 100 people).

Upper secondary students were strongly impacted by the pandemic and the related school closures. Upper secondary students were the first to move to distance learning and the last to move away from it. A FINEEC report on data collected during the COVID-19 pandemic indicates that, while a majority of students consider that their studies have advanced as planned, about half of the students felt less motivated and a fifth believed that their studies have not advanced as planned. A joint study by Tampere and Helsinki Universities¹² reported that 40% of the counselling and guidance personnel for upper secondary schools felt that personal student welfare services provided by multi-professional teams weakened during the pandemic. The teachers surveyed also reported a decline in students' performance. The FINEEC has called for increased support to guarantee the equity of education and level out schools' potential inability to close learning gaps resulting from differences in students' social backgrounds (FINEEC, 2022).

The increase in the compulsory school age from 16 to 18 came into effect in August 2021 and is expected to have a positive impact on the education level and well-being of young people. The reform 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 implementation of the extension of compulsory education is being monitored through a separate monitoring plan¹³ covering 2021 to 2024. The extension of compulsory education has brought new requirements for upper secondary education institutions to support learning and monitor absenteeism. The Trade Union for Education (OAJ) has criticised what it describes as an excessive share of teachers' time being taken up by work not directly related to teaching and learning.

The impact of the new process for selecting higher education students is being evaluated. Apart from the extension of compulsory education, the main change in relation to lower secondary education is the reform to student grading in the final assessment (European Commission, 2021)¹⁴. In late 2021, the Ministry of Education and Culture launched an impact assessment of the 2018 reform of higher education students' selection (Karhunen et al., 2021). In addition, in spring 2022, the Rectors' Council of Universities launched their own study (UNIFI, 2022).

Low teacher salaries and poor working conditions led to the first teacher strike in Finland since 1984. Lasting 5 working days in spring 2022, the strike called for salaries to be increased, particularly for ECEC teachers, and working conditions to be improved. Complaints relate to concerns over large class size, too little time for lesson planning and work with children, too much paper work, and too few material and teaching resources. A new teacher education development programme for 2022–2026 was published. It had been drawn up collaboratively between teacher educators (e.g. universities), the Ministry of Education and Culture, the Finnish

¹² https://tuhat.helsinki.fi/ws/portalfiles/portal/141903720/Raportti_ensituloksista_elokuu_2020.pdf

¹³ Implementation of extended compulsory education: monitoring plan for 2021–2024 - Valto (valtioneuvosto.fi)

¹⁴ https://www.oph.fi/sites/default/files/documents/Perusopetuksen%20p%C3%A4%C3%A4tt%C3%B6arvioinnin%20kriteerit%2031.12.2020_0.pdf

National Agency for Education and representatives of stakeholders (such as municipalities, teacher organisations and the OAJ trade union) (MINEDU, 2022a)

5. Vocational education and training and adult learning

VET continues to be an attractive study choice, although the number of new enrolments has been decreasing in recent years. In 2020, 67.8% of all learners at upper secondary level were enrolled in VET (including adult students)¹⁵, compared to 68.7% in 2019 and 71.6% in 2018. The decline in the employment rate for recent VET graduates (aged 20-34) continued, from 74.6% in 2020 to 72.4% in 2021¹⁶.

The Finnish government set out the target state for education and research towards the 2040s¹⁷. The Education Policy report (2021) outlines several challenges for VET in Finland, including the rapid demographic change and its varying effects from region to region, changes in the world of work, a shortage of skilled labour. As a response, the Ministry of Education and Culture has launched a project to develop upper secondary education with objectives of increasing its accessibility and quality in different parts of Finland and meeting the needs of compulsory education and continuous learning, as well as skills needed for working life and society¹⁸.

Provision of VET has been strengthened, with a particular focus on teachers and trainers. In 2022, the Ministry of Education and Culture allocated EUR 75 million to VET providers under the 'Right to Learn' development programme. A

total of EUR 70 million was allocated to 115 training providers for the recruitment of teachers and mentors and support for teaching and guidance. A further EUR 5 million was allocated to piloting the training allowance for apprenticeships in VET.

Finland invests in sustainable VET. The programme for the sustainable development of VET and the green transition aims to support the achievement of the global Agenda 2030 goals in vocational education and training and to address the challenges posed by climate change and nature loss in the operation and operating culture of VET institutions. 10 projects are being supported with allocated funding of EUR 3.5 million.

Finland is finalising the modernisation of its regulatory framework for VET. The government proposed to amend the Higher Education Act, the Act on Vocational Education and Training and the Act on the Financing of Education and Culture. It aims to clarify the regulatory framework on general and vocational secondary education, as well as the funding framework¹⁹. The government aims to present the proposal to Parliament in the fall 2022 with entry into force expected in 2024. Finland continues to implement its 2018 VET reform, with a budget allocation of over EUR 270 million for 2020-2022.

The service centre for continuous learning and employment (JOTPA) started its activities in 2021. As part of the continuous learning reform, JOTPA's tasks include analysing competence and labour market needs, funding education and training for working age people, developing advisory and guidance services, and participating in developing a digital service package for continuous learning. In 2022, approximately EUR 14 million has been allocated to the centre's operational expenditure and EUR 16 million has been earmarked for the development of continuous learning and skills. Finland has one of the highest rates of in adult

¹⁵ Eurostat, educ_uoe_enrs05.

¹⁶ Eurostat, edat_lfse_24.

¹⁷ Education Policy Report of the Finnish Government - Valto (valtioneuvosto.fi)

¹⁸ Development of upper secondary education - OKM - Ministry of Education and Culture, Finland

¹⁹ Toisen asteen kehittämishanke (okm.fi)

participation in learning in the EU (30.5% in Finland, 10.8% in the EU-27 in 2021). Finland set a national target of 60% of adults (aged 25-64) participating in learning activities by 2030, matching the EU headline target on adult learning.

6. Higher education

To reach the national tertiary education attainment target, the RRP provides for an increase in the number of study places in higher education. The Finnish ambition is that 50% of the 25-34 years-olds should have a tertiary education degree by 2030. In 2020-2022, 12 500 new study places were added to the existing education offer, 600 of them were supported by the RRP. In line with employment prospects in the different sectors and regions, there will be an emphasis on the sectors most affected by labour shortages, including the STEM sectors and especially ICT.

The number of tertiary education students grew in 2021²⁰. According to Statistics Finland, a total of 159 500 students attended in 2021 higher education leading to a university degree. The number of students increased by 1.9 pps compared to 2020, continuing the trend of the last few years. There were 32 600 new students, which is 6.8 pps more than in the previous year. A total of 31 000 degrees (Bachelor's degrees, Master's degrees and doctorates) were completed. The majority of students chose engineering, manufacturing and construction, followed by business, administration and law (over 20 000 students in each field). ICT is the fifth largest field, with slightly over 17 000 students, although only a quarter of these students are women.

Completion of tertiary education within the target timeframe improved in 2020²¹. Within the target time (4.5 years), 57 per cent of students at universities of applied sciences finished their studies (the same as in the previous

year). Broken down by gender, 42 per cent of male students and 71 per cent of female students finished their studies within the target period. The field of technology has the lowest rate of students completing their studies within the target timeframe (38%). At general universities, 34% of students completed master's degrees within the target timeframe of 5.5 years (28% of male students and 40% of female students), 4 pps more than in 2019. The lowest completion rate was in natural sciences. Rates of leaving tertiary level education before completing studies also decreased (particularly among men)²².

Universities managed the impact of the COVID-19 crisis relatively well with regard to research and education, but students' well-being was negatively affected. Higher education has run largely remotely since the onset of the COVID-19 pandemic. At the end of the 2022 winter semester, Bachelor's degrees were awarded to students who had studied most of their courses without physical contact either with their fellow students or with their teachers. Demands for psycho-social support for anxiety and depression at the Student Health Services have continued to grow since the beginning of the pandemic, more from women than men. The use of digitally improved remote health services helped increase the number of student visits. (Hauhio et al., 2022).

The Ministry of Education and Culture announced an action plan to support Ukrainian higher education students and researchers.

According to the plan, students will be given opportunities to start or continue their studies, and researchers will be offered the opportunity to continue their research work in Finland. The Ministry estimates that these measures can provide 2 000 to 4 000 students with study opportunities. Using separate funding, the Ministry of Education and Culture will support Ukrainians in their studies and broaden the range of classes

²⁰ <https://www.stat.fi/en/publication/ckg66hse81qxg0109v9q3kc0b>

²¹ See note 10.

²² See note 9.

available to them, and will make provision for any guidance and counselling services deemed necessary.

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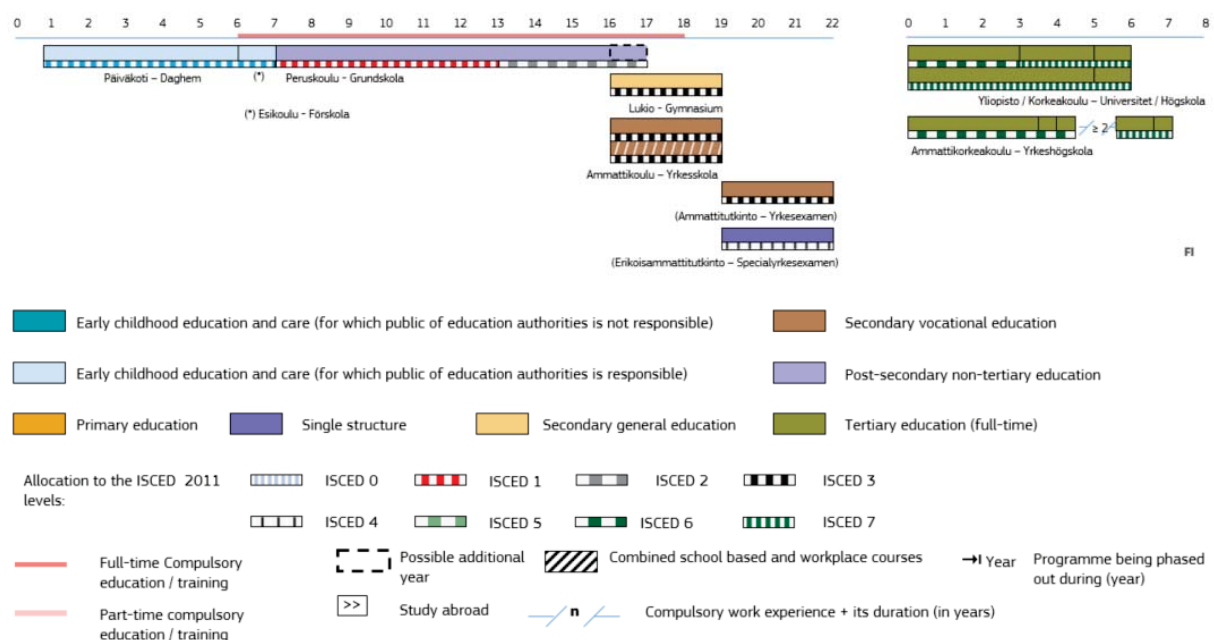
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Annex I: Key indicators sources

Indicator	Source
Participation in early childhood education	Eurostat (UOE), 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: Eurostat (LFS), edat_lfse_14 Data by country of birth: Eurostat (LFS), edat_lfse_02
Exposure of VET graduates to work based learning	Eurostat (LFS), edat_lfs_9919
Tertiary educational attainment	Main data: Eurostat (LFS), edat_lfse_03 Data by country of birth: Eurostat (LFS), edat_lfse_9912
Participation of adults in learning	Data for this EU-level target is not available. Data collection starts in 2022. Source: EU LFS.
Equity indicator	European Commission (Joint Research Centre) calculations based on OECD's PISA 2018 data
Upper secondary level attainment	Eurostat (LFS), edat_lfse_03
Public expenditure on education as a percentage of GDP	Eurostat (COFOG), gov_10a_exp
Public expenditure on education as a share of the total general government expenditure	Eurostat (COFOG), gov_10a_exp

Annex II: Structure of the education system



Source: European Commission/EACEA/Eurydice, 2022. The Structure of the European Education Systems 2022/2023: Schematic Diagrams. Eurydice Facts and Figures. Luxembourg: Publications Office of the European Union. Notes: Students can join ISCED 3 and 4 programmes at different ages.

Please email any comments or questions to:
EAC-UNITE-A2@ec.europa.eu

Brussels, 18.11.2022
SWD(2022) 751 final

PART 28/28

COMMISSION STAFF WORKING DOCUMENT

Education and Training Monitor 2022

Accompanying the document

**Communication from the Commission to the European Parliament, the Council, the
European Economic and Social Committee and the Committee of the Regions**

on progress towards the achievement of the European Education Area

{COM(2022) 700 final} - {SWD(2022) 750 final}

Education and Training Monitor 2022

SWEDEN



The Education and Training Monitor's country reports present and assess the main recent and ongoing policy development at all education levels in EU Member States. They provide the reader with more in-depth insight of the performance of countries with regard to the EU level targets agreed within the EEA. They are based on the most up-to-date quantitative and qualitative evidence available.

Section 1 presents a statistical overview of the main education and training indicators. Section 2 focuses on how the Member State has addressed or is addressing one of its education challenges. Section 3 covers early childhood education and care. Section 4 deals with school education policies. Section 5 covers vocational education and training and adult learning. Finally, Section 6 discusses measures in higher education.

The Education and Training Monitor's country reports were prepared by the European Commission's Directorate-General for Education, Youth, Sport and Culture (DG EAC), with contributions from the Directorate-General for Employment, Social Affairs and Inclusion (DG EMPL).

The document was completed on 30 September 2022
More background data at:
<https://op.europa.eu/webpub/eac/education-and-training-monitor-2022/en/>



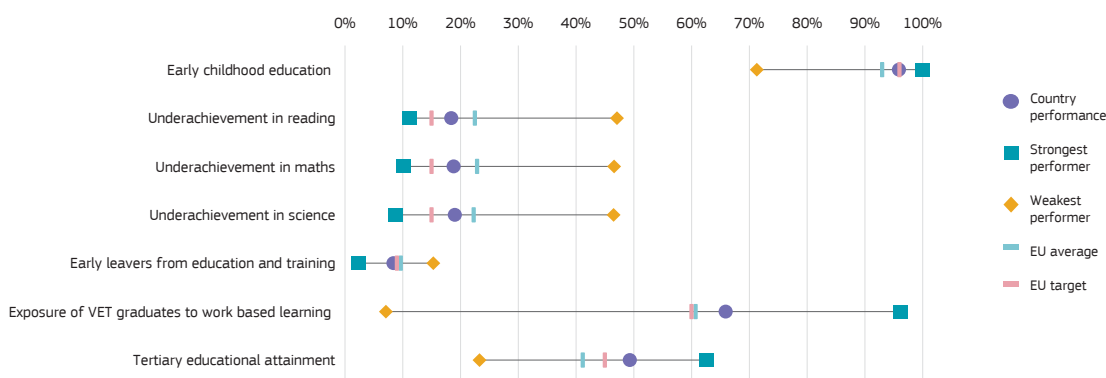
1. Key indicators

Figure 1: Key indicators overview

			Sweden		EU	
			2011	2021	2011	2021
EU-level targets			2030 target			
Participation in early childhood education (from age 3 to starting age of compulsory primary education)	≥ 96 %		95.0% ¹³	95.9% ²⁰	91.8% ¹³	93.0% ²⁰
Low achieving eighth-graders in digital skills	< 15%		:	:	:	:
Low achieving 15-year-olds in:	Reading	< 15%	17.4% ⁰⁹	18.4% ¹⁸	19.7% ⁰⁹	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	18.2% ⁰⁹	22.3% ¹⁸
Early leavers from education and training (age 18-24)	< 9 %		6.6%	8.4% ^b	13.2%	9.7% ^b
Exposure of VET graduates to work-based learning	≥ 60 % (2025)		:	65.9%	:	60.7%
Tertiary educational attainment (age 25-34)	≥ 45 %		42.8%	49.3% ^b	33.0%	41.2% ^b
Participation of adults in learning (age 25-64)	≥ 47 % (2025)		:	:	:	:
Other contextual indicators						
Equity indicator (percentage points)			:	14.5 ¹⁸	:	19.30 ¹⁸
Early leavers from education and training (age 18-24)	Native		5.8%	6.3% ^b	11.9%	8.5% ^b
	EU-born		13.0% ^u	:	25.3%	21.4% ^b
	Non EU-born		36.1%	16.3% ^{bu}	31.4%	21.6% ^b
Upper secondary level attainment (age 20-24, ISCED 3-8)			87.2%	83.0% ^b	79.6%	84.6% ^b
Tertiary educational attainment (age 25-34)	Native		43.6%	50.8% ^b	34.3%	42.1% ^b
	EU-born		60.1%	69.9% ^b	28.8%	40.7% ^b
	Non EU-born		36.1%	39.5% ^b	23.4%	34.7% ^b
Education investment	Public expenditure on education as a percentage of GDP		6.3%	7.0% ²⁰	4.9%	5.0% ²⁰
	Public expenditure on education as a share of the total general government expenditure		12.7%	13.4% ²⁰	10.0%	9.4% ²⁰

Sources: Eurostat (UOE, LFS, COFOG); OECD (PISA). Further information can be found in Annex I and at [Monitor Toolbox](#). 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; the equity indicator shows the gap in the share of underachievement in reading, mathematics and science (combined) among 15-year-olds between the lowest and highest quarters of socio-economic status; b = break in time series, u = low reliability, : = not available, 09 = 2009, 13 = 2013, 18 = 2018, 20 = 2020.

Figure 2: Position in relation to strongest and weakest performers



Source: DG Education, Youth, Sport and Culture, based on data from Eurostat (LFS 2021, UOE 2020) and OECD (PISA 2018).

2. A focus on school choice and equity

A number of recent studies confirm a strong link between school choice and increasing segregation of pupils. Despite overall good education outcomes, equity in education is a concern. A national report confirms increasing social and ethnical segregation in schools in Sweden, though it is still below the EU average. Pupils with a similar background tend to attend the same schools (IFAU, 2020). Research suggests that school choice leads to increasing segregation of pupils based on parents' country of birth and level of education (Branden and Bygren, 2021) with the more privileged pupils (also among pupils with a migrant background) more often attending independent schools (Läraryrket, 2022b). Interestingly, segregation increases especially in areas with a low residential segregation (Branden and Bygren, 2021). A survey of 690 lower secondary school principals confirms the increasing segregation of schools (Lärarnas riksförbund 2021). The Swedish Schools Inspectorate investigated the link between the queuing time in independent schools and pupils' migrant background. It found shortcomings in most schools, often in terms of applying additional undeclared criteria (Skolinspektionen 2022).

Increased funding for municipalities to address growing inequalities may not reach the schools as needed. Municipalities choose freely where they direct funding. A recent check of all school budgets concluded that 97.9% municipalities have cut school budgets despite receiving more funding. According to the author, a growing number of municipalities cite the establishment of independent schools and its financing as the cause of deficits. A newly created independent school receives per enrolled pupil a compensation from the municipality which is calculated on the basis of the municipality's budgeted school costs per pupil for the coming year. As pupils transfer to the new independent school, the municipality's costs per pupil rise, since the municipality doesn't have the time to adjust

its own school organisation accordingly. The amount of the compensation increases retroactively although the independent school does not share the municipality's responsibility to provide all pupils with a place in school (Lindquist, 2021). Based on the results of the Equity Inquiry, the government proposed to reduce the compensation for independent schools to reflect this difference in responsibility, but the proposal did not pass in Parliament (Riksdagen, 2022e). An inquiry is ongoing into increased government governance and national financing of the school system (Regeringen, 2020).

The government is proposing major reforms to improve equity in schools. Guided by the results of the Equity Inquiry and other research, the government proposed several major changes: abolishing queuing for school admissions¹ (Regeringen 2022a), harmonising school enrolment (Utbildningsdepartementet, 2022e), and introducing a ban on independent school providers' ability to generate profit from their schools. Currently, an inquiry is looking for a way to stop independent providers' profit-making from schools, while allowing the current independent schools to reorganise and continue working. Results are due on 29 February 2024 (Utbildningsdepartementet, 2022f). Stopping profit-making from schools could reduce grade inflation as independent schools are tempted to give better grades to attract pupils, and increase quality and equity.

3. Early childhood education and care

Participation in early childhood education and care (ECEC) is high, and new legal amendments aim to tackle the remaining challenges. In 2020, participation in ECEC was among the highest in the EU, both for children under 3 years old (54.1%) and from the age of 3 to the beginning of compulsory primary education (95.9% vs EU 93%). A national inquiry showed

¹ Also rejected by Parliament.

that fewer children with a low socio-economic status or migrant background attend ECEC (SOU 2020:67). New amendments to the Education Act from 1 July 2022 oblige municipalities to remind guardians of children over the age of 3 who do not attend ECEC of its benefits for the children and the children's right to it. They must also offer a place in ECEC to children who have lived in Sweden for a short time, even if their guardians have not applied for it, and to children who need ECEC for language development (Riksdagen, 2022d).

Few ECEC staff are qualified teachers, and their knowledge of Swedish is sometimes insufficient. The inquiry mentioned above has also shown that only 39.5% of the staff are qualified ECEC teachers - 28.5% in the suburbs, where the population with a migrant background is dominant. There, staff with a migrant background often also lack a sufficient knowledge of Swedish, which negatively affects children's language development (SOU 2020:67). Following this finding, some municipalities have started testing ECEC teachers' knowledge of Swedish to provide them with targeted training.

The government is increasing financial support for quality in ECEC. From 2022, two previous grants in ECEC - for reducing the size of groups and for quality measures - are merged into one grant, with the distribution much more affected by socio-economic factors to better target resources. For 2022, it amounts to EUR 170 million. It will increase by EUR 29.6 million in 2023 and EUR 26 million as of 2024 (Utbildningsdepartementet, 2021b).

The requirements governing educational care have become stricter. Educational care is an alternative to standard ECEC provision and after-school centres in Sweden, provided at a private home or other premises and organised by the municipality or an independent founder. Qualifications' requirements and adherence to the curricula are less strict (NAE, 2021a). The government requires now that the running of educational care services must be approved and monitored by the municipality to make sure that

children receive appropriate support (Regeringskansliet, 2022a).

4. School education

Sweden is taking action to improve education outcomes and reduce the rising early school leaving. The percentages of low achieving 15-year-olds are below the EU averages, but above the EU-level target for 2030. To improve the quality of education, the Swedish School Inspectorate will be authorised to close schools with serious and recurring shortcomings (Riksdagen, 2022a). From August 2022, school staff are allowed to take justified, immediate and temporary measures to ensure discipline, students' security and peaceful studying. During lessons, students are only allowed to use mobile devices following the teacher's instruction (Riksdagen, 2022f). In 2021, the share of early leavers from education and training (ELET) was below the EU average and the EU-level target (8.4% vs EU 9.7%), but it has slightly increased by 0.7 pps from 2020, in line with the trend in previous years. The change is mostly due to the increase for boys (from 9% in 2020 to 10.2% in 2021), which also led to 1 pps increase in gender gap (3.7 pps in 2021). Foreign-born pupils (15.7%) are twice as likely to leave education and training early as native-born (6.3%). In rural areas, ELET is also nearly twice as high as in cities (11% vs 5.8%), and it has significantly increased (by 2.1 pps between 2020 and 2021). From 1 July 2022, pupils in grades 4-9 of compulsory school are offered two additional hours of assisted study time per week. Pupils in grade 9 who might not be eligible for upper secondary school are offered 25 additional hours of schooling during vacations to increase their chances of getting into it (Riksdagen, 2022c).

Ongoing efforts to improve monitoring and coordination in education should increase quality and equity. The National Agency for Education (NAE), the Swedish Schools Inspectorate, the Swedish Agency for Special Needs Education and the Swedish Institute for Educational Research have been given the task of devising policies aimed at increasing the quality

and equity of schools. In cooperation with other authorities, the NAE will propose national objectives for schools and after-school centres; adjustments to existing national objectives and, if needed, develop sub-goals and indicators for follow-up and analysis of principals' activities and results. It will identify, compile and develop success factors for effective school development. It will also offer principals regular dialogues on quality and set up 10 regional offices to provide closer support (Utbildningsdepartementet, 2021c).

The government revised the estimates of teacher shortages and looked into the distribution of teachers by qualification.

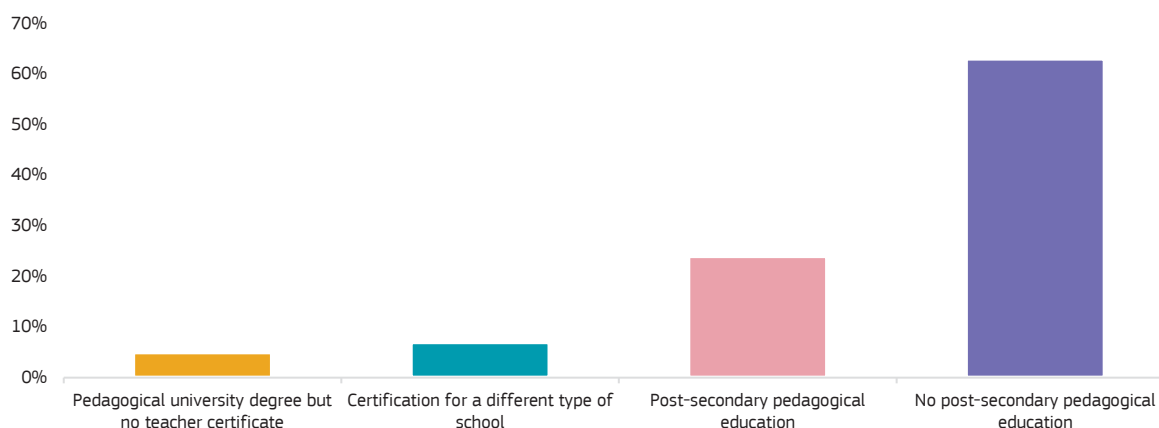
In 2021, the expected teacher shortage has been recalculated in line with the new population forecast, with 180 000 children fewer. It is now estimated that by 2035, Sweden will still need 12 000 new teachers. In 2020, only 72% of all teachers were qualified (varying between 20% and 85% depending on the type and level of education). Additional 12% had a teaching degree, but not appropriate subject/school-level qualification. The shortages are most acute for special needs teachers, subject teachers in compulsory school and vocational teachers in secondary school (NAE, 2021b). The NAE also

specifically looked into the situation with unqualified teachers in compulsory schools (21% in 2020/2021). Most (63%) had no post-secondary pedagogical education (see Figure 3) (NAE, 2021c). Research into the impact of COVID-19 shows that, due to compulsory schools remaining open, teachers teaching grades 7-9 and 4-6 were among the occupational groups with the highest infection rates (Vlachos et al., 2021). A teachers' union survey shows that the workload and work-related stress of teachers have increased (86% and 60%, respectively), partly due to the need to substitute for absent colleagues (Läraryrbundet 2022a).

A new national professional programme for teachers is under preparation.

In June 2022, the government proposed creating a national professional programme for principals, teachers and ECEC teachers that would create a national structure for continuous professional competence development. It would also contain a national merit system for licensed teachers and ECEC teachers. This would enable career progression of teachers and help improve the education outcomes of pupils (Utbildningsdepartementet, 2022d).

Figure 3: Unqualified teachers in compulsory schools (ISCED 1-2) in Sweden according to their qualification status in 2020/2021



Source: National Agency for Education (2021). Obehöriga lärare i grundskolan - läsåret 2020/21 (Unqualified teachers in compulsory school in 2020/21).

The government is investigating grade inflation and introducing central assessment of national tests in parallel with digitalisation. Due to inconsistencies between test results on national tests and grades, the Swedish Schools Inspectorate is looking into differences between the schools and examining the school owners' actions to prevent these discrepancies. Inspections can be increased in schools with wide discrepancies. A report is due by 15 April 2024 (Regeringen, 2021c). The main factors for upper secondary students' success are their grades from lower secondary school and their choice of upper secondary programme. However, among pupils with equal compulsory school grades, those coming from independent schools were less likely to complete upper secondary education successfully (NAE, 2022a). The NAE's task of developing digital national tests for schools by 2022 is extended until 2024 and expanded to include automatic correction for some parts by the system and introduction of central assessment of essays in Swedish and English ((NAE, 2022b) and (NAE, 2022d)). This should contribute to more equal grading and reduce the administrative burden on teachers.

Young people have good digital skills, and new digitalisation strategy for schools is being developed. In 2021, the share of individuals aged 16-19 with basic or above-basic digital skills overall was above the EU average: 78% vs EU 69%. By 15 December 2022, the NAE will draft the new national digitalisation strategy for the school system for 2023-2027 to help boost learning outcomes and equality in preschool and school (Utbildningsdepartementet, 2022g).

The COVID-19 pandemic increased inequalities and grade inflation. As in other EU countries, the pandemic exacerbated existing inequalities in the school system, as the physical absences of education staff and the transition to distance education reduced schools' ability to provide support to vulnerable pupils and pupils with disabilities. For upper secondary education, the cancellation of national tests in 2020 and 2021 due to the pandemic seems to have led to a 'more generous' grading on average, particularly

in independent schools (Coronakommissionen, 2021b and NAE, 2021d). In April 2022, Sweden removed the option to conduct distance education and the NAE's possibility to cancel national tests (Regeringen 2022b).

Support measures for migrants, Roma and Ukrainian refugees are similar and only generically defined at national level. Due to the decentralised nature of the education system, measures taken at national level for all three groups include language learning, help from a mediator or teacher who speaks the relevant language and financial assistance to municipalities for further voluntary measures. Available information from FRA Roma Survey 2019 shows good results: ECEC participation of 4 and 5-year old Roma children (90%) was close to that of the general population, and ELET was the lowest of all surveyed countries. Nevertheless, Roma pupils are still three times more likely to leave education early (around 33%) than their peers (8%)². The strategy for Roma inclusion for 2012-2032 does not contain any targets or indicators to enable monitoring of progress. The measures focus on employing Roma bridge-builders with Roma language and cultural skills in schools, studying Romani Chib in mother-tongue education and providing additional funding. An update of the strategy taking into account recent evidence on the situation of Roma would be welcome. Insufficient teaching materials in minority languages are an obstacle, but more concrete support is in development. From autumn 2022, the NAE is responsible for national coordination of the teaching of national minority languages, providing access to remote learning and to educational materials in national minority languages (Regeringskansliet, 2022b). To support children displaced from Ukraine, the NAE is attracting people with relevant language skills to work in the school system, comparing the Ukrainian and Swedish education systems, and helping principals assess the knowledge of newly

² https://fra.europa.eu/sites/default/files/fra_uploads/fra-2021-roma-and-travellers-survey-country-sheet-france_sv.pdf.

arrived pupils and provide them with teaching in their mother tongue. Ukrainian pupils have the right to education in Sweden if their parents so wish, but it is not obligatory. Responsibility for their integration (using the standard integration programme for pupils with a migrant background) lies with the municipalities (NAE, 2022c).



Box 1: *Uppdrag fullföljd utbildning*

Although 98% of pupils in Sweden enrol in upper secondary education, about 25% do not complete it within 5 years. The Swedish Association of Local Authorities and Regions (SALAR) has run projects to reduce early school leaving (ESL).

In 2021, SALAR started the project *Uppdrag fullföljd utbildning* (Assignment Completed Education) to get more students to start and complete upper secondary education. It is mostly financed by the European Social Fund (ESF), but also co-financed by Swedish government with EUR 770 000 per year in 2021 and 2022. It builds on lessons from SALAR's previous projects Yrk In and Plug In.

Plug In has shown that the individual-centred approach, monitoring and follow-up, positive relationships, flexibility and cooperation are very important in preventing ESL, and that prevention needs to happen at three levels: universal, group and individual levels.

Uppdrag fullföljd utbildning takes action in four areas: development of preventive measures and support, research on reasons for ESL, national coordination (development of national ESL prevention strategy), and international cooperation and exchange through forums. The governmental co-financing is focused on developing the transition between school forms and supporting principals by providing process support and competence development initiatives.

Sources:

<https://www.regeringen.se/pressmeddelanden/2021/03/overen-skommelse-for-att-fler-ska-klara-gymnasiet/> and <https://skr.se/skolakulturfritid/forskolagrundochgymnasieskola/uppdagfullfoljdutbildning.26377.html>

5. Vocational education and training and adult learning

The government has launched an inquiry into long-term and needs-adapted vocational education for adults. The skills mismatch hampers many unemployed people to take the jobs available. Attractive vocational education is necessary to boost the supply of skills and remedy the mismatch. Participation in vocational education and training (VET) is relatively low: 35.6% of upper secondary pupils vs EU 48.7% in 2020³. The government has appointed an inquiry to look into developing municipal vocational education and making it more effective and better adapted to the needs of the labour market and to jobseekers (Utbildningsdepartementet, 2022c). The inquiry will submit their proposals no later than February 2024.

Higher vocational education is being developed to better meet the skills needs. As part of the Knowledge Boost (*Kunskapslyftet*), the number of places at higher VET per year has doubled and now amounts to approximately 50 000. Short education courses of up to six months in full-time studies have been introduced in order to offer flexible opportunities for those who need to deepen, broaden or renew their skills. They are usually delivered as distance education to working adults. In 2021, the government appointed an inquiry to review the regulations for the higher VET to ensure a stable, efficient and sustainable function for the future as well (Regeringen, 2021a).

Adult learning continues to be a high priority in Sweden, with many new initiatives and funding. The ongoing Knowledge Boost (*Kunskapslyftet*) has continued with the expansion of permanent educational places within municipal adult education, higher vocational education and training (VET), folk high schools and universities

³ Eurostat, [educ_uoe_enrs05].

(Regeringskansliet, (2021). In total, the government has provided funds that in 2022 are estimated to cover over 160 000 training places. The government also set aside SEK 1 560 million in 2022 for 14 000 places in combination education, combining vocational education with municipal adult education in Swedish for immigrants or Swedish as a second language (Utbildningsdepartementet, 2021a). Participation is very high, already close to the 2030 target of 60%.

Increased validation of skills in municipal adult education will strengthen the supply of skills. A proposal has been adopted to increase the number of validations in Sweden (Utbildningsdepartementet, 2022a). The home municipality is obliged to ensure that people who want to have their knowledge mapped before education or examination in municipal adult education (*komvux*) are offered an initial survey. They are also obliged to ensure that a student in municipal adult education who needs it is offered validation, and that validation is done within the framework of a course paid for by the student's home municipality.

Sweden is investing more in adjustment and skills development. As part of the government's adjustment package for long-term improved flexibility, adaptability and security in the labour market (Riksdagen, 2022b), several new initiatives have been introduced. This includes a new adjustment study fund, enabling a vast majority to study with at least 80 percent of the salary for up to one year. This is a completely new student grant, which complements the regular student grant and aims to improve the conditions for adults to finance studies to boost their future prospects on the labour market. The age limits for regular study grants and study start support have also been raised (Riksdagen, 2021). Employers who finance adjustment and skills support for their employees will be able to receive compensation.

Sweden's national recovery and resilience plan (RRP) covers some reforms and investments in training and adult education

and contributes to existing initiatives such as the Knowledge Boost. The investments increase those already planned outside the RRP: an increase in the number of study places in municipal adult education, higher VET, and higher education.



Box 2: *Kompetens ger tillväxt* (Skills provide growth)

The aim of the project is to boost the skills of employees in companies in Landskrona, and to increase the companies' competitiveness.

It is designed in two parts. In the first part, a survey of the employees' skills development needs is carried out. It highlights the development potential of both the individual and the company. In collaboration with the employers, the survey is then analysed to find common denominators in each individual company but also with other participating companies. In the second part, company employees are offered a training place matching their training needs from the survey.

This strengthens the profile of individual workers in the labour market by boosting their skills and motivation. It also benefits the companies as a whole by boosting most of their employees' skills.

Number of beneficiaries: 566.

Budget: EUR 918 000 (SEK 9 595 795) (ESF support: EUR 614 500 (SEK 6 418 560))

<https://www.esf.se/resultat/projektbanken/projekt/?dnr=2021/00373>

6. Higher education

Tertiary education attainment is above the EU target, but the attainment gaps are widening. In 2021, the tertiary education attainment rate (TEA) was 49.3%, above both the EU average (41.2%) and the EU-level target of 45%. The gender gap in favour of women is above the EU average (17.3 pps vs EU 11.1 pps)⁴. The TEA of the foreign-born population is relatively high (45.3%) but lower than for the native-born (50.8%). The gap between them has been widening since 2017 (when they were 47.6% and 47.5% respectively), as the TEA of people from non-EU countries started decreasing (from 44.2% in 2017 to 39.5% in 2021). The urban-rural gap in the TEA is one of the highest in the EU (31.5 pps vs 21.8 pps). It has been steadily widening and has doubled over the past 16 years (see Figure 4). The employment rate of recent higher education (HE) graduates in 2021 is 90.7%, above the EU

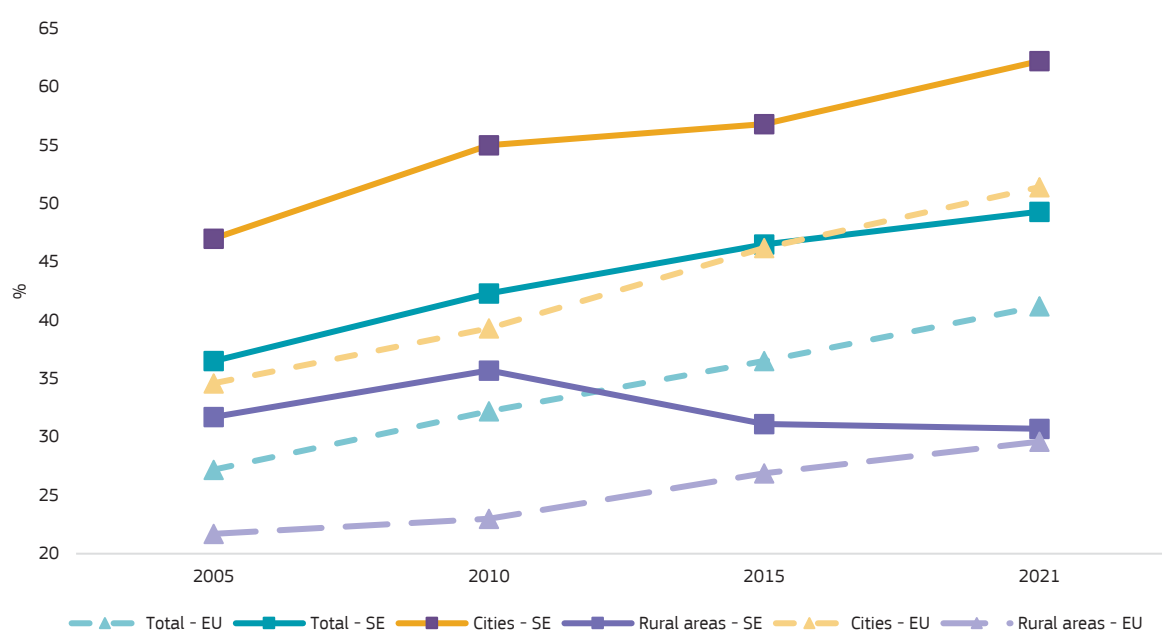
average of 84.9%. The employment rate of secondary VET graduates is equally high.

Sweden has many STEM graduates, and an above average proportion are women. The share of STEM graduates is above average (27% vs EU average of 24.9%). This is also true for the share of women in STEM studies: 15.9% of all female graduates are STEM graduates (EU: 14.1%), and they make up 37.1% of all STEM graduates (EU: 32.5%). Both the share of STEM graduates and the share of female STEM graduates in overall graduates (10%) rose by about 1 pps between 2015 and 2020.

There is a growing accent on national and international cooperation between universities. In December 2021, the Council for Higher Education (UHR) was instructed to create a 'boost for higher education (HE) pedagogical development'. It will collect and share information and good examples, and enable national exchange of experience to increase the quality of teaching in HE. This will be supported by SEK 10 million (EUR 956 000) in 2022 and SEK 20 million (EUR 1 912 000) in 2023 (Regeringen 2021f).

⁴ Eurostat, [edat_ifse_03].

Figure 4: Tertiary educational attainment level (25-34) by degree of urbanisation (%), 2005-2021



Source: Eurostat (EU LFS), [edat_ifs_9913].

Moreover, thirteen Swedish universities have been granted funding as partners under the European Universities initiative.

Efforts continue to increase the number of graduates in shortage professions, aided by EU funding. The shortage of health professionals and teachers is a long-standing issue. In the past, the government has requested that higher education institutions (HEIs) open more study places for those professions. However, this has not achieved the expected results, mostly due to too low interest in those studies and difficulties in arranging expansion (Riksrevisionen, 2021). Efforts continue to increase the number of graduates in those fields. The government has set targets for HEIs for the number of degrees in medical and teacher education in the period 2021–2024, and new goals are planned for 2025–2028 (Regeringen, 2021b). One of the measures in Sweden's RRP is increasing the number of study places at HEIs by 35 900 places until the end of 2025, giving priority to shortage occupations (CID Annex, 2022).

Two initiatives with alternative pathways to teaching profession are ongoing. One is a pilot project organised by several universities to enable more people with a previous degree from a university or college to become teachers through supplementary pedagogical education. HEIs will need to collaborate and document their work, accounting for the number of full-time students, their previous degrees and educational specialisations arranged for them, and to report on the outcome. Linköping University, as the coordinator, proposed a distribution of educational places between the HEIs for 2023–2027 (Regeringen, 2021f). The other similarly enables those with a doctors' degree to become teachers. Priority is given to applicants with subject knowledge in mathematics, biology, chemistry, physics or technology, followed by people with subject knowledge in other shortage subjects (Regeringen, 2021e).

The responsibility for university aptitude exams has now been permanently transferred from HEIs to the Council for Higher Education and checks will be

introduced to prevent cheating. This responsibility was temporarily transferred in the autumn of 2020 due to the pandemic. It will now become permanent to facilitate the management of exams (Utbildningsdepartementet, 2022b). To prevent cheating, the law introduced entry and exit checks and body searches of exam participants. From 1 July 2023, checks by security guards may be carried out in as many premises as needed. Any participants refusing the check will not be allowed to enter the exam room. (Riksdagen, 2022g).

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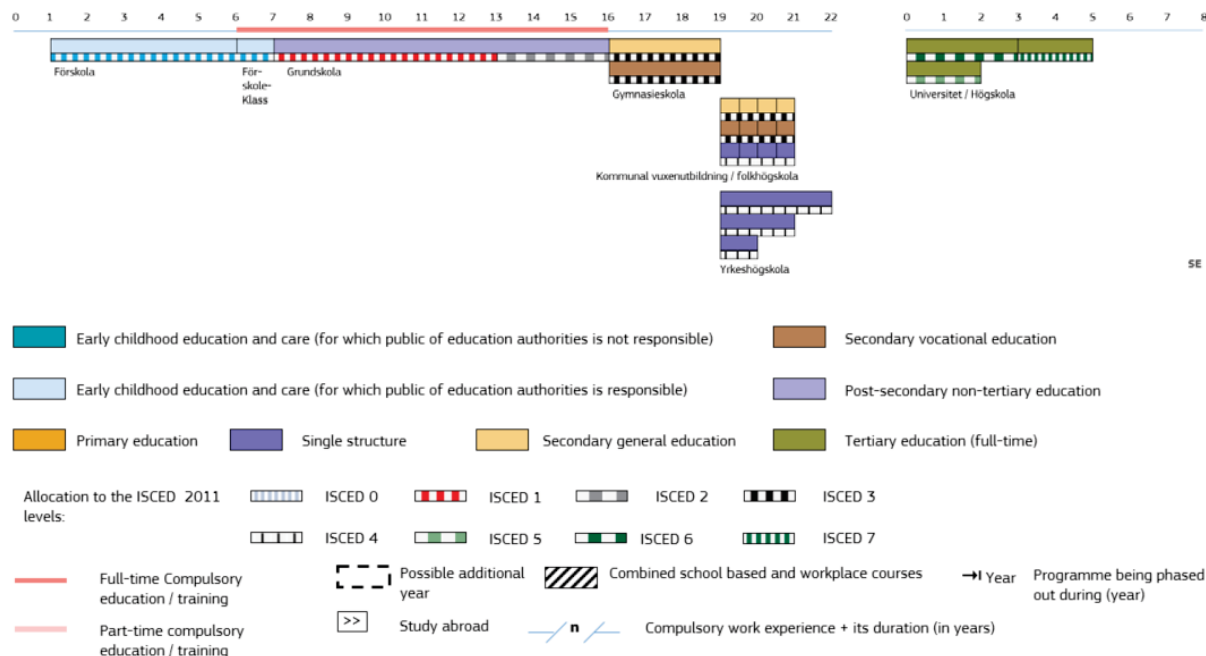
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Annex I: Key indicators sources

Indicator	Source
Participation in early childhood education	Eurostat (UOE), 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: Eurostat (LFS), edat_ifse_14 Data by country of birth: Eurostat (LFS), edat_ifse_02
Exposure of VET graduates to work based learning	Eurostat (LFS), edat_ifs_9919
Tertiary educational attainment	Main data: Eurostat (LFS), edat_ifse_03 Data by country of birth: Eurostat (LFS), edat_ifse_9912
Participation of adults in learning	Data for this EU-level target is not available. Data collection starts in 2022. Source: EU LFS.
Equity indicator	European Commission (Joint Research Centre) calculations based on OECD's PISA 2018 data
Upper secondary level attainment	Eurostat (LFS), edat_ifse_03
Public expenditure on education as a percentage of GDP	Eurostat (COFOG), gov_10a_exp
Public expenditure on education as a share of the total general government expenditure	Eurostat (COFOG), gov_10a_exp

Annex II: Structure of the education system



Source: European Commission/EACEA/Eurydice, 2022. The Structure of the European Education Systems 2022/2023: Schematic Diagrams. Eurydice Facts and Figures. Luxembourg: Publications Office of the European Union.

Please email any comments or questions to:
EAC-UNITE-A2@ec.europa.eu