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EUROPEAN COMMISSION

# **Education and Training Monitor 2018**

Romania

*Volume 2 of the Education and Training Monitor 2018 includes twenty-eight individual country reports. It builds on the most up-to-date quantitative and qualitative evidence to present and assess the main recent and ongoing policy measures in each EU Member State, with a focus on developments since mid-2017. It therefore complements other sources of information which offer descriptions of national education and training systems.*

*Section 1 presents a statistical overview of the main education and training indicators. Section 2 briefly identifies the main strengths and challenges of the country's education and training system. Section 3 looks at investment in education and training. Section 4 focuses on citizenship education. Section 5 deals with policies to modernise school education. Section 6 discusses measures to modernise higher education. Finally, section 7 covers vocational education and training, while section 8 covers adult learning.*

*The manuscript was completed on 1 September 2018.*

*Additional contextual data can be found online ([ec.europa.eu/education/monitor](http://ec.europa.eu/education/monitor))*

## 1. Key indicators

|   |   | Romania             |                      | EU average           |                     |                 |
|---|---|---------------------|----------------------|----------------------|---------------------|-----------------|
|   |   | 2014                | 2017                 | 2014                 | 2017                |                 |
| <b>Education and training 2020 benchmarks</b>   |   |                     |                      |                      |                     |                 |
| Early leavers from education and training (age 18-24)   |   | 18.1%               | 18.1%                | 11.2%                | 10.6%               |                 |
| Tertiary educational attainment (age 30-34)   |   | 25.0%               | 26.3%                | 37.9%                | 39.9%               |                 |
| Early childhood education and care (from age 4 to starting age of compulsory primary education)                                 |   | 86.4% <sup>13</sup> | 88.2% <sup>16</sup>  | 94.2% <sup>13</sup>  | 95.3% <sup>16</sup> |                 |
| Proportion of 15 year-olds underachieving in:   | Reading   | 37.3% <sup>12</sup> | 38.7% <sup>15</sup>  | 17.8% <sup>12</sup>  | 19.7% <sup>15</sup> |                 |
|   | Maths   | 40.8% <sup>12</sup> | 39.9% <sup>15</sup>  | 22.1% <sup>12</sup>  | 22.2% <sup>15</sup> |                 |
|   | Science   | 37.3% <sup>12</sup> | 38.5% <sup>15</sup>  | 16.6% <sup>12</sup>  | 20.6% <sup>15</sup> |                 |
| Employment rate of recent graduates by educational attainment (age 20-34 having left education 1-3 years before reference year) | ISCED 3-8 (total)   | 66.2%               | 76.0%                | 76.0%                | 80.2%               |                 |
| Adult participation in learning (age 25-64)   | ISCED 0-8 (total)   | 1.5%                | 1.1%                 | 10.8%                | 10.9%               |                 |
| Learning mobility   | Degree mobile graduates (ISCED 5-8)                                 | :                   | 4.9% <sup>16</sup>   | :                    | 3.1% <sup>16</sup>  |                 |
|   | Credit mobile graduates (ISCED 5-8)                                 | :                   | 1.9% <sup>16</sup>   | :                    | 7.6% <sup>16</sup>  |                 |
| <b>Other contextual indicators</b>  |   |                     |                      |                      |                     |                 |
| Education investment  | Public expenditure on education as a percentage of GDP              | 3.0%                | 3.7% <sup>16</sup>   | 4.9%                 | 4.7% <sup>16</sup>  |                 |
|   | Expenditure on public and private institutions per student in € PPS | ISCED 1-2           | €1 877               | €2 047 <sup>15</sup> | €6 494 <sup>d</sup> | : <sup>15</sup> |
|   |   | ISCED 3-4           | €2 341               | €2 741 <sup>15</sup> | €7 741 <sup>d</sup> | : <sup>15</sup> |
| ISCED 5-8   |   | €4 203              | €5 054 <sup>15</sup> | €11 187 <sup>d</sup> | : <sup>15</sup>     |                 |
| Early leavers from education and training (age 18-24)   | Native-born   | 18.2%               | 18.1%                | 10.4%                | 9.6%                |                 |
|   | Foreign-born  | :                   | :                    | 20.2%                | 19.4%               |                 |
| Tertiary educational attainment (age 30-34)   | Native-born   | 25.0%               | 26.3%                | 38.6%                | 40.6%               |                 |
|   | Foreign-born  | :                   | :                    | 34.3%                | 36.3%               |                 |
| Employment rate of recent graduates by educational attainment (age 20-34 having left education 1-3 years before reference year) | ISCED 3-4   | 57.2%               | 65.9%                | 70.7%                | 74.1%               |                 |
|   | ISCED 5-8   | 74.2%               | 87.4%                | 80.5%                | 84.9%               |                 |

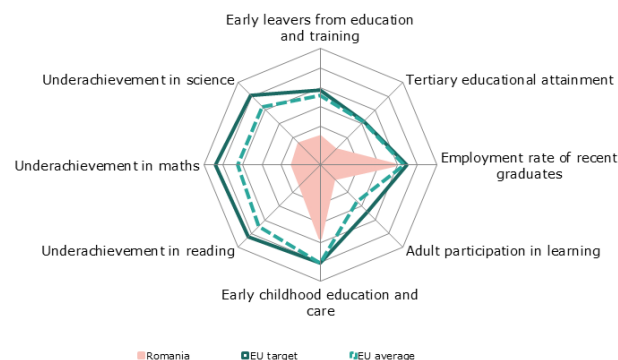
Sources: Eurostat (see section 10 for more details); OECD (PISA).

Notes: data refer to weighted EU averages, covering different numbers of Member States depending on the source; d = definition differs, 12 = 2012, 13 = 2013, 15 = 2015, 16 = 2016.

On credit graduate mobility, the EU average is calculated by DG EAC on the available countries; on degree graduate mobility, the EU average is calculated by JRC over Eurostat and OECD data.

Further information can be found in the relevant section of Volume 1 ([ec.europa.eu/education/monitor](http://ec.europa.eu/education/monitor)).

**Figure 1. Position in relation to strongest (outer ring) and weakest performers (centre)**



Source: DG Education and Culture calculations, based on data from Eurostat (LFS 2017, UOE 2016) and OECD (PISA 2015). Note: all scores are set between a maximum (the strongest performers represented by the outer ring) and a minimum (the weakest performers represented by the centre of the figure).

## 2. Highlights

- Romania is pursuing several initiatives to modernise its education system. However, implementation is advancing at different speeds, and measures to improve participation rates and the quality of education have not always been well correlated. Several initiatives promote citizenship education.
- Despite increasing in 2016, spending on education remains low, particularly for pre-school and school education. Both areas are important for an equal start in life and for tackling early school leaving, which remains problematic.
- Equity in education, the rural-urban gap and Roma inclusion remain key challenges, with consequences for inclusive growth and inequalities in society.
- Efforts are being made to improve vocational education and training (VET) and strengthen the links between businesses and universities, but overall the labour market relevance of education is still a challenge.
- The education system and the skill set of the workforce are not keeping up with the demands of a modern economy. The need for upskilling remains urgent. Participation in adult learning is very low, in particular among low-skilled people.

## 3. Investing in education and training

**Spending on education increased in 2016, largely reflecting the retrospective recognition of teachers' salary rights.** In 2016 general government expenditure on education (COFOG) increased in real terms by 18.4 % — the highest percentage increase in the EU. As a result, spending on education reached 3.7 % of GDP (+0.6 percentage points), although this is still one of the lowest levels in the EU (EU average: 4.7 %). As a proportion of total government expenditure, spending on education increased to 10.8 %, above the EU average (10.2 %). These increases are largely due to a court decision that retroactively recognised teachers' salaries<sup>1</sup> cut during the crisis (see Figure 2 – 'other spending'). The increase in compensation of employees, which includes teachers' salaries and social security contributions, reflects the 15 % payroll rise of December 2015 and the revision of the salary grid in August 2016<sup>2</sup>.

**Despite the 2016 increases, Romania still invests little in areas that are key to tackling early school leaving and ensuring an equal start in life.** Spending for pre-primary and primary education is very low compared to the EU average (0.7 % vs 1.5 % of GDP in the EU-28). Spending in secondary education is also lower (1.5 % vs 1.9 % of GDP). By contrast, the proportion of spending for tertiary education is typically higher<sup>3</sup>, reflecting policy priorities at national level. Evidence shows that a large part of income inequality can be tracked back to unequal starts, especially in countries that invest less in education, and particularly at the pre-primary level (WB, 2018). Equalising opportunities starting in early childhood, when the bulk of cognitive and socio-emotional skills are formed, can help improve the skills distribution of the population and prevent further inequalities linked to the arrival of new technology (ibid.).

**Declining student numbers call for optimising spending while improving equity.** From 2006 to 2016 the total number of students dropped by 17 %. The trend is expected to continue in line with the decrease in the general population (INS, 2016). Numbers dropped by 20 % in pre-schools, by 13 % in schools and by 48 % in tertiary education. The sharp decrease in tertiary education, particularly in private universities and in the fields of social sciences, business and law, is mainly explained by stricter quality assurance mechanisms, which resulted in fewer private university programmes and lower passing rates at the baccalaureate; it also reflects high levels of

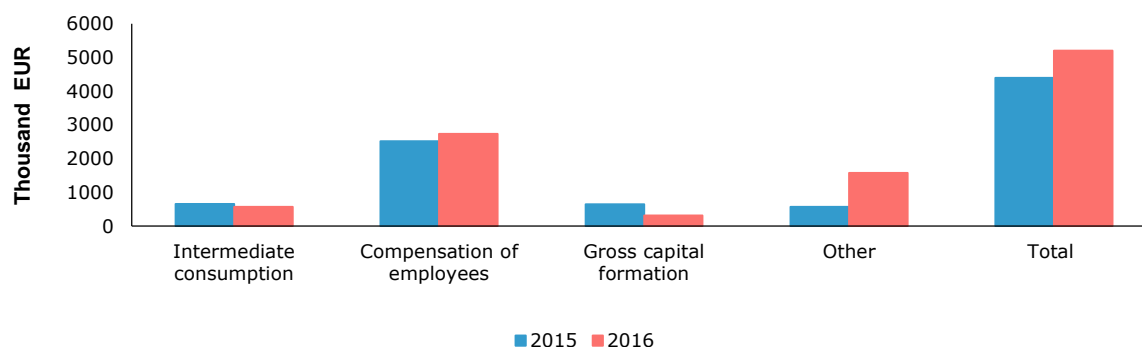
<sup>1</sup> Law 85/2016 introduced a gradual retroactive payment of salary differences for the period 2008-2011. Payments are made in instalments: 5 % in 2016, 10 % in 2017, 25 % in 2018, 25 % in 2019 and 35 % in 2020. Retired teachers and those who retired in 2016 received the full amount. Because general government expenditure on education records expenditure on accrual basis, the full amount of retrospective salary differences was recorded in 2016.

<sup>2</sup> Salaries of teachers in higher education, including the salary differences stemming from Law 85/2016, are recorded under basic funding in higher education, recorded under 'other transfers'.

<sup>3</sup> 1 % vs EU-28: 0.7 % of GDP in 2016.

emigration. Romania is preparing a strategy to modernise educational infrastructure (MEN, 2018) to guide investment from national and EU funds<sup>4</sup> and address significant efficiency and equity challenges: 10 % of schools are overcrowded (particularly in urban areas), while 60 % are underutilised (especially in rural areas). School transportation services are overall insufficient and inadequate, while accessibility worsens as students advance through the school system. 38 % of schools in rural areas have outside toilets, without running water or sewage (7 % in urban areas) and only 20 % have a library (60 % in urban areas). Several universities do not possess sufficient accommodation facilities (ibid). To improve efficiency and equity of spending on education, Romania will undergo the OECD review of school resources.

**Figure 2. General government spending on education in Romania**



Source: DG EAC, based on Eurostat statistics on general government spending. Online data code: [gov\\_10a\\_exp](#).

## 4. Citizenship education

**Romania has several initiatives promoting citizenship education.** In Romania citizenship education is taught either as a compulsory subject (in the fourth, fifth, eighth and ninth grades) or integrated into various optional subjects, e.g. education for society, European education, intercultural education. In July 2017 the Ministry of Education signed a cooperation protocol with key judicial institutions on providing judicial education in schools. There is a national programme of one-week extra-curricular activities. Citizenship education is not provided in initial vocational education and training (IVET). According to self-reporting by school principals in the OECD Programme for International Student Assessment (PISA) 2015, 43 % of Romanian 15 year-olds study in schools that offer chess clubs, 84 % in schools offering ICT clubs and 37 % in schools that organise science competitions.

## 5. Modernising school education

**Early school leaving remains problematic.** At 18.1 % in 2017, the rate of early leavers from education and training (ages 18-24) remains one of the highest in the EU. It is significantly above the EU average (10.6 %) and the national target for 2020 (11.3 %). The rate is alarmingly high in rural areas (27.1 %) and among the Roma (77 %, FRA). A recent study (UNICEF, 2017) suggests that the high rate of early leavers from education and training is likely to persist. Although dropout rates in primary and lower secondary have decreased, particularly in rural areas, the proportion of out-of-school children has increased. Enrolment rates in upper secondary education suggest that one in four students either does not continue to upper secondary (after the eighth grade) or drops out after completing compulsory education (tenth grade). The study notes that despite policies to improve the quality of education in the last decade, interventions were insufficiently correlated, and the link with increasing participation rates remains weak. Most measures are focused on addressing social barriers to school participation and less on increasing the quality of education on offer in schools (ibid). Romania is currently developing an early warning mechanism to identify children at risk of dropping out. European Social Fund (ESF)-funded projects to attract motivated teachers to disadvantaged schools and tackle dropout rates have started<sup>5</sup> to be implemented, albeit with a

<sup>4</sup> Under the European Regional Development Fund (2014-2020) EUR 352 million were earmarked for investments in infrastructure at all levels of education. Project applications to calls published indicate a high demand.

<sup>5</sup> 122 projects for 'School for all' (EUR 146 million) and 27 projects for 'Motivated teachers in disadvantaged schools'

delay. Although the timing of second-chance options for adult learners has been made more flexible, the design of such options remains unattractive.

**Participation in early childhood education and care (ECEC) is improving, but remains low.**

In 2016 the participation of children aged between 4 and the compulsory school age of 6 increased slightly to 88.2 %, still below the Education and Training 2020 benchmark of 95 %. The implementation of a cash-conditional coupon to increase the participation of disadvantaged children in ECEC continued. However, the project has still to reach its target participation of 110 000 (the equivalent of almost one in five children in kindergarten). In 2018 there were 47 000 children in the programme, but only a few had not been to kindergarten before. This suggests that its impact on enrolment rate is marginal, despite improving attendance rates. The curriculum for crèches is being revised with ESF support to improve the quality of education. The proportion of children aged less than 3 in formal childcare is improving (17.4 % in 2016), but is still low (EU average: 32.9 %), including due to lack of facilities.

**Roma inclusion in education remains a major challenge.** Roma are disproportionately at risk of dropping out and few Roma children attend kindergarten: 38 % in 2016 (FRA, 2016). Coupled with the concentration of Roma in disadvantaged schools, this situation reinforces the cycle of exclusion. Dropout among Roma can also be explained by high levels of poverty, limited parental participation in education and lower qualifications of teachers in predominantly Roma schools. In 2016 Romania adopted an anti-segregation roadmap and revised legislation by expanding the focus from Roma to a wider set of target groups (i.e. children with disabilities, from rural areas and from disadvantaged backgrounds). The responsibilities of school inspectorates and of the quality assurance agency (ARACIP) to monitor segregation were expanded accordingly. However, monitoring activities were hampered by significant delays in developing the monitoring methodology.

**The combination of low educational outcomes and equity challenges persists.** PISA 2015 showed that almost 40 % of Romanian 15 year-olds (the future workforce) do not have a minimum level of basic skills, while socio-economic background significantly affects students' performance. In addition, the rural-urban gap in education remains striking. The index of socio-educational risk (Human Catalyst, 2018) shows that financially disadvantaged schools are concentrated particularly in poor and marginalised areas, including in Roma communities. In addition, an increasing number of weaker students, often from disadvantaged backgrounds, are not sitting the national evaluation at the end of the eighth grade (ibid.<sup>6</sup>). Despite recent efforts, quality assurance in school education remains largely focused on compliance and not on increasing standards (EC, 2018). Implementation of the competence-based curriculum is under way, but is incomplete. Only 52 % of young people aged 16-19 have basic or above basic digital skills (EU-28: 83 %). To improve the situation, coding and technology classes were introduced starting from the fifth grade, complementing those offered in high schools. Despite the recent measures taken, the weak performance of the education and training system risks limiting growth prospects in the long run (ibid.). In this context, the 2018 European Semester country-specific recommendations call on Romania to 'improve the provision of quality mainstream education, in particular for Roma and children in rural areas' (European Council, 2018).

**Box 1: 'CRED: Relevant Curriculum, Open Education for all'**

CRED is a project financed by the ESF to support the ongoing curricular reform. The project aims to facilitate the understanding of the new competence-based student-centred curriculum and modernise teaching practices. Almost half of teachers in primary and lower secondary education (55 000 teachers) will be trained in how to teach the new curriculum and how to adapt teaching to the specific needs of students, including students at risk of dropping out. Open educational resources for classroom activities will be developed. In addition, CRED will finance the development of key competences through innovative projects involving 2 500 students. The project has a total budget of EUR 42 million and will be implemented between November 2017 and November 2021.

(EUR 21 mil).

<sup>6</sup> The 'Brăila phenomenon'.



**The teaching profession faces challenges.** A recent review (OECD, 2017) shows that entry requirements to teacher education programmes are low and that students' motivations for entering the programme are not checked systematically. The high fail rates at the *definitivat* and the tenure exam suggest that using such tests as the main method of screening is less efficient than having high entry standards to initial teacher education. Programmes offer limited practical training and there is as yet no functioning programme in place for mentoring teachers in the first stages of their careers. Regular teacher assessment over the course of a career is not connected to continuing professional development. Despite efforts to provide teachers with continuous professional development that meets their needs, courses are not always free of charge or accredited. In addition, career paths are not seen as motivating enough (ibid), while the current merit-based allowance insufficiently supports work with students from disadvantaged backgrounds (EC, 2018.).

## 6. Modernising higher education

**Despite improvement, tertiary educational attainment remains one of the lowest in the EU and achieving significant increases in the medium term is difficult.** Tertiary educational attainment increased to 26.3 % in 2017 (up 0.7 percentage points compared to 2016), almost reaching the national Europe 2020 target of 26.7 %. Despite having doubled over the past decade, the rate remains one of the lowest in the EU (EU-28: 39.9 %). Evidence suggests that substantial leaps will be difficult to achieve in the medium term. In fact, estimations (Romania Court of Accounts, 2015) show that tertiary attainment is likely to decrease after 2020, reflecting continued high early school leaving in the school system and low enrolment rates for 19-23 year-olds, which is the age group most likely to be in university (35.8 % in 2016, down from 57 % in 2009). To improve the transition to higher education, authorities are implementing the 'Romanian Upper Secondary Project' (ROSE), which aims to improve pass rates in the baccalaureate exam (which students have to pass in order to continue to university) and retention in the first year of higher education. The project targets 271 typically underperforming high schools (almost 1 in 5 high-schools), providing them with grants for pedagogical and extra-curricular activities, coaching and mentoring. In 2018 pass rates were still low at 67.7 % and calculated based on actual participation in the test, which means that the rate was decoupled from the actual size of the student cohort and from dropout and non-participation rates.

**Quality and labour market relevance of higher education are still faced with challenges.** The employment rate of recent tertiary graduates continued to increase in 2017, supported by strong economic growth. At 87.4 %, the rate is one of the highest in the EU (EU-28: 84.9 %). However, skills shortages exist for medium- to high-skilled jobs in engineering, machinery, IT and services (EC, 2018). Although the proportion of graduates in science, technology, engineering and mathematics (STEM) is above the EU-average (see Figure 3), the number of STEM graduates is low due to low participation in higher education: there are 14.4 graduates in STEM for every 1 000 people aged 20-29, compared to an EU average of 19.1, and the number of new graduates in science and engineering for every 1 000 people aged 25-34 is decreasing<sup>7</sup>. Emigration after graduation adds to skills shortages. Employers report that students and graduates entering the labour market often lack key socio-emotional skills<sup>8</sup> and possess sufficient, though overly theoretical, academic skills (WB, 2018). Only 40 % of students in Romania report being satisfied with the organisation of studies and the timetable, study facilities and the quality of teaching (EUROSTUDENT, 2018). Some steps were taken to improve the internationalisation of higher education.

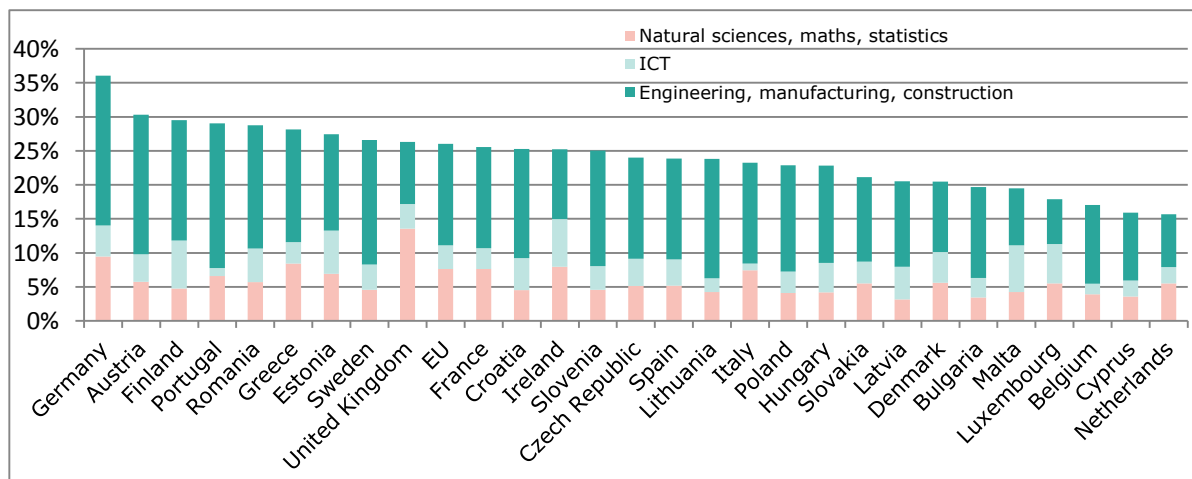
**Some measures aim to address quality and labour market relevance.** The legal framework for external evaluation was revised. Specifically, all universities are required to have a code of ethics for professional and academic integrity, and to report annually on implementation of the code. This includes measures to prevent and eliminate plagiarism. In addition, universities are expected to revise their educational offer regularly by taking into account employers' views, and students' expectations and satisfaction with studies (ARACIS, 2018). However, the reaccreditation of doctoral schools mandated by law is postponed until October 2019. With the support of the ESF, Romania is developing a tool to monitor university graduates' transition to the labour market. The graduate tracking tool also aims to analyse how employers' needs are matched by the higher

<sup>7</sup> 10.9 in 2016, compared to 15.9 in 2013.

<sup>8</sup> Motivation, empathy, tolerance, self-management, problem-solving, teamwork, communication, learning to learn, accountability, planning, engagement, commitment.

education offer, including at regional level. For the moment the tool is not used at the national scale. Romania is also undergoing a review of higher education from the perspective of entrepreneurship, links with the labour market and innovation (i.e. the OECD HEInnovate review). The review will be finalised during the first half of 2019. ESF also supports entrepreneurship among doctoral students.

**Figure 3. Distribution of tertiary graduates by STEM fields in 2016, as a proportion of total graduates**



Source: DG EAC, based on Eurostat statistics. Online data code: [educ\\_uae\\_grad02](#).

## 7. Modernising vocational education and training

**The labour market relevance of vocational education and training (VET) is still a challenge, but new initiatives seek to improve the situation.** Implementation of dual VET has started (see Box 2) and the curriculum for upper secondary education, including VET, is under revision. Other recent measures include the development and updating of professional qualifications and of professional training standards with the aim of increasing quality and labour market relevance. Despite these measures, efforts and investment are insufficient to adapt the educational offer to the needs of the economy, in particular to increase the quality of vocational courses in a wide number of sectors. Incentives for employers to hire apprentices increased. This is expected to improve take-up of apprenticeships, even though their actual cost is higher and SMEs have difficulties in covering it. At the same time, the administrative burden on employers is too high to make apprenticeships truly attractive, while the links with employers and local labour market needs remain rather weak. Skills shortages reported in skilled manual professions are partially due to the low development of VET: the skills of VET graduates are regarded as outdated because of outdated equipment and teaching methods (WB, 2018).

### Box 2: Dual VET reform

Dual VET was launched in 2017. It is organised at the initiative of interested companies based on a partnership contract between schools and employers and individual training contracts for students. In September 2017, 2 412 students (the equivalent of 8 % of students in professional schools) were enrolled in the first year of dual VET at European Qualifications Framework (EQF) level 3. 106 dual classes in 68 schools were organised, in cooperation with 227 companies. Authorities expect over 5 000 to enrol in 2018 and expect to see increasing interest from VET schools and companies (NRP, 2018). The next step will be to set up the methodology for conducting entrance examinations to dual VET at EQF levels 4 and 5.

## 8. Promoting adult learning

**Participation and access to adult learning remain very low despite the need for upskilling and reskilling of the workforce.** Participation in adult learning was 1.1 % in 2017, significantly below the EU average of 10.9 %. The population's digital skills are improving but remain among the lowest in the EU: in 2017, only 29 % of the population possessed at least basic digital skills (compared to the EU average of 57 %). The skills of the workforce are inadequate for the needs of a modern economy (WB, 2018). As in many other countries, in Romania the automation of production processes is driving the demand for higher levels of cognitive skills (ibid). According to the Continuing Vocational Training Survey, 26.7 % of Romanian companies (EU-28: 72.6 %) provided vocational training to their employees in 2015, and 21.3 % of employees participated in this training (EU-28: 40.8 %). In 2015 most Romanian businesses indicated that the main skills needed for the development of their business were team-working skills, technical skills, practical skills and job-specific skills.

**Some steps were made to address the EU Council Recommendation on upskilling pathways, yet challenges remain.** The methodology for profiling jobseekers by the public employment service was improved. Key competences courses for low-skilled jobseekers were included in the national public employment service plan, and the occupational classification was amended to target 'unqualified workers' in order to provide them with a qualification level 1. Remaining challenges include outreach to inactive adults; the limited offer for non-formal education and training; the restrictive access to vocational qualifications programmes for low-qualified people; insufficient evidence-base and coordination between stakeholders; monitoring, quality assurance and staff training. The current evaluation of skills on which training programmes are based relies on past vacancies. This does not sufficiently take into account the rapidly changing needs of the economy (Cedefop, 2017). The Romanian national qualifications framework was referenced to the European Qualifications Framework (EQF) in April 2018. It includes all levels (eight) and types of qualifications in formal education and training, but implementation is still at an early stage (Cedefop, 2018c). Considering these challenges, the 2018 country-specific recommendations also call on Romania to improve upskilling.

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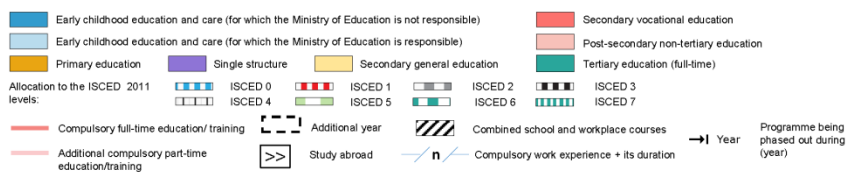
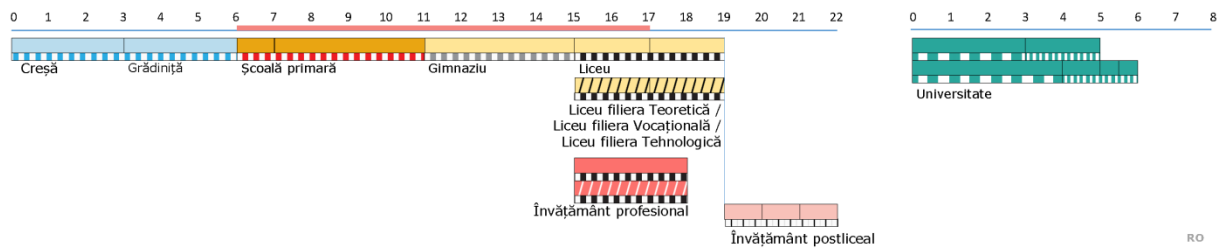
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## 10. Annex I: Key indicator sources

| Indicator  | Eurostat online data code                           |
|--|---|
| Early leavers from education and training                  | edat_lfse_14 + edat_lfse_02                         |
| Tertiary educational attainment                            | edat_lfse_03 + edat_lfs_9912                        |
| Early childhood education and care                         | educ_uoe_enra10                                     |
| Underachievement in reading, maths, science                | OECD (PISA)   |
| Employment rate of recent graduates                        | edat_lfse_24  |
| Adult participation in learning                            | trng_lfse_03  |
| Public expenditure on education as a percentage of GDP     | gov_10a_exp   |
| Expenditure on public and private institutions per student | educ_uoe_fini04                                     |
| Learning mobility: Degree mobile graduates                 | JRC computation based on Eurostat / UIS / OECD data |
| Credit mobile graduates                                    | educ_uoe_mobc02                                     |

## 11. Annex II: Structure of the education system



Source: European Commission/EACEA/Eurydice, 2017. *The Structure of the European Education Systems 2017/18: Schematic Diagrams*. Eurydice Facts and Figures. Luxembourg; Publications Office of the European Union.

Comments and questions on this report are welcome and can be sent by email to:  
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