

## ANNEX 15: EDUCATION AND TRAINING



This Annex outlines the main challenges of Romania's education and training system based on the 2023 Education and Training Monitor and the 2022 OECD Programme for International Student Assessment (PISA) results.

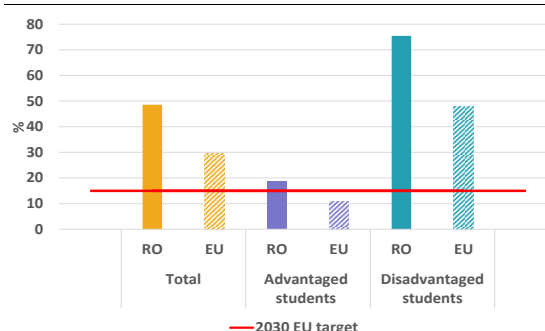
Romania's poor PISA scores reflect structural challenges for education and training, linked to quality and equity. The OECD's 2022 PISA <sup>(121)</sup> showed that 48.6% of Romanian 15-year-olds had difficulties in interpreting and recognising how a simple situation can be represented mathematically. 41.7% could not identify the main idea in a text of moderate length and reflect on its purpose. 44% could not recognise the correct explanation for familiar scientific phenomena and draw evidence-based conclusions. Compared with 2012, these shares increased by 7.7 pps in mathematics (EU 7.3 pps), 4.5 pps in reading (EU 8.2 pps) and 6.7 pps in science (EU 7.4 pps). These results may reflect challenges linked to the teaching profession (e.g. weaknesses of initial teacher education and continuous professional development, challenges in rural areas), the curricula, the underfunding of the sector, and the strong impact of socio-economic factors on performance. They could also reflect challenges due to the fragmentation of the school network in rural areas and segregation in education. Results may also reflect challenges linked to school climate and discipline and the impact of the pandemic.

Lack of basic skills among young Romanians will have an impact on their future employability, skills acquisition and productivity. Romania's rates of low achievement in basic skills are among the highest in the EU and significantly above the EU averages, which also worsened in 2022 (29.5% in mathematics, 26.2% in reading, 24.2% in science). Insufficient labour market relevance of vocational education and training and higher education, and low adult learning participation, add to the challenge (see Annex 14). Few Romanian 15-year-olds were top performers in the 2022 PISA test. Only 4% of youngsters demonstrated advanced skills in

mathematics (EU 7.9%), 2% in reading (EU 6.5%) and 1.4% in sciences (EU 6.9%). The low shares of top-performing students represent an additional obstacle for increasing productivity and future innovation capacity.

High inequalities in education persist. 75.4% of students from disadvantaged background were low achievers in mathematics (EU 48%), compared with 18.7% of advantaged students (EU 10.9%). The gap in performance (see Graph A15.1) has increased compared with 2012 and is the highest in the EU, pointing to the strong impact of socio-economic factors on student outcomes <sup>(122)</sup>.

Graph A15.1: Underachievement rates in mathematics by socio-economic background, PISA 2022



Source: OECD (2023).

There are challenges linked to school climate and discipline affecting performance. Only 50% of 15-year-olds feel that they belong in school, the lowest rate in the EU. 57% reported that their mathematics teachers show an interest in every student's learning (69% in 2012). 25% reported frequent bullying, while 35% get distracted using digital devices.

Inequalities in education start early and particularly affect rural areas and the Roma. In 2021, only 75.6% of children between age 3 and compulsory primary education were enrolled in early childhood education (EU 92.5%). Participation rates are significantly lower in rural areas <sup>(123)</sup> and for the Roma <sup>(124)</sup>.

<sup>(121)</sup> OECD (2023), PISA 2022 Results (Volume I): [The State of Learning and Equity in Education](#)

<sup>(122)</sup> PISA 2022 Results: Factsheets, [Romania](#).

<sup>(123)</sup> Ministry of Education 2022, [Starea invatamantului pre-universitar din România](#).

Table A15.1: EU-level targets and other contextual indicators under the European Education Area strategic framework

Indicator	Target	2012		2018		2023	
		Romania	EU-27	Romania	EU-27	Romania	EU-27
<sup>1</sup> Participation in early childhood education (age 3+)	96%	84.1% <sup>2013</sup>	91.8% <sup>2013</sup>	81.9%	92.2%	75.6% <sup>2021</sup>	92.5% <sup>2021,d</sup>
<sup>2</sup> Low-achieving 15-year-olds in:	Reading	< 15%	37.3%	18.0%	40.8%	22.5%	41.7% <sup>2022</sup>
	Mathematics	< 15%	40.8%	22.1%	46.6%	22.9%	48.6% <sup>2022</sup>
	Science	< 15%	37.3%	16.8%	43.9%	22.3%	44.0% <sup>2022</sup>
Early leavers from education and training (age 18-24)	<sup>3</sup> Total	< 9 %	17.8%	12.6%	16.4%	10.5%	16.6%
	<sup>3</sup> By gender	Men	18.5%	14.5%	16.7%	12.1%	16.5%
		Women	16.9%	10.6%	16.1%	8.7%	16.7%
	<sup>4</sup> By degree of urbanisation	Cities	5.0% <sup>b</sup>	11.2%	4.2%	9.4%	3.3%
		Rural areas	31.0% <sup>b</sup>	14.0%	25.4%	11.0%	27.5%
	<sup>5</sup> By country of birth	Native	17.8%	11.3%	16.4%	9.2%	16.6%
		EU-born	: <sup>u</sup>	26.2%	: <sup>u</sup>	22.4%	: <sup>u</sup>
		Non EU-born	: <sup>u</sup>	30.1%	: <sup>u</sup>	23.0%	: <sup>u</sup>
<sup>6</sup> Socio-economic gap (percentage points)		43.9	:	46.0	29.5	56.7 <sup>2022</sup>	37.2 <sup>2022</sup>
<sup>7</sup> Exposure of VET graduates to work-based learning	≥ 60% (2025)	:	:	:	:	8.1%	64.5%
Tertiary educational attainment (age 25-34)	<sup>8</sup> Total	45%	23.6%	34.1%	24.9%	38.7%	22.5%
	<sup>8</sup> By gender	Men	21.6%	29.1%	21.8%	33.3%	19.4%
		Women	25.6%	39.2%	28.2%	44.2%	25.7%
	<sup>9</sup> By degree of urbanisation	Cities	41.0% <sup>b</sup>	43.5%	45.4%	49.0%	44.4%
		Rural areas	6.9% <sup>b</sup>	24.8%	8.2%	27.7%	8.8%
	<sup>10</sup> By country of birth	Native	23.5%	35.4%	24.8%	39.7%	22.4%
		EU-born	: <sup>u</sup>	29.3%	: <sup>u</sup>	36.7%	: <sup>u</sup>
		Non EU-born	: <sup>u</sup>	24.2%	: <sup>u</sup>	31.0%	: <sup>u</sup>
<sup>11</sup> Participation in adult learning (age 25-64)	≥ 47% (2025)	:	:	5.8% <sup>2016</sup>	37.4% <sup>2016</sup>	19.1% <sup>2022</sup>	39.5% <sup>2022</sup>
<sup>12</sup> Share of school teachers (ISCED 1-3) who are 55 years or over		19.5% <sup>2013</sup>	22.7% <sup>2013</sup>	18.4%	23.8%	16.9% <sup>2021</sup>	24.5% <sup>2021</sup>

Notes: b = break in time series; d = definition differs; e = estimated; p = provisional; u = low reliability; : = data not available.

Source: 1,3,4,5,7,8,9,10,12=Eurostat; 11= Eurostat, Adult Education Survey; 2,6=OECD, PISA.

The shortage of staff with proper qualifications especially affects schools in rural areas, which provide education for more than 40% of pupils in primary and lower secondary education. This challenge is worsened by the fragmentation of the school network, predominantly in rural areas. Early school leaving is among the highest in the EU (16.6%, compared with the EU average of 9.5% in 2023), and is especially worrying in rural areas (27.5%) and for the Roma (<sup>125</sup>). Romania is implementing ambitious investments and reforms, financed by the Recovery and Resilience Facility, the European Social Fund Plus and the European Regional Development Fund, at all levels of education.

**The new education laws aim to address some of the challenges for the teaching profession.** To overcome weak initial teacher education, a master's programme in teaching, combined with traineeships and mentoring, became compulsory for future teachers. A newly developed teacher competence framework will guide teacher education, career development and certification. Continuous teacher education was also revised. Implementation details remain to be worked out and will determine the success of the reform.

**Tertiary educational attainment remains low.** The percentage of university graduates aged 25-34 was 22.5% in 2023 and is one of the lowest in the EU (EU 43.1%). It remains constrained due to high early school leaving, socio-economic factors, low passing-rates of the baccalaureate exam and high dropout rates from tertiary education. The new higher education law lays down measures to improve

(<sup>124</sup>) Fundamental Rights Agency (FRA), 2022, [Headline indicators for the EU Roma strategic framework for equality, inclusion and participation for 2020-2030](#).

(<sup>125</sup>) 75% of Roma aged 18-24 did not complete upper secondary education (FRA, 2022).

retention, equity, quality and labour market relevance <sup>(126)</sup>).

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<sup>(126)</sup> For more information see [Education and Training Monitor 2023](#).