

## 2. Education and training<sup>1</sup>























Over the past year, indicators show a generalised trend towards improvement.

The measures of the level of education achieved by the population have a positive trend: 61.7% of people aged 25-64 have at least upper secondary school graduation (+0.8 compared to 2017); 27.8% of young people between 30 and 34 years of age have obtained a degree or other tertiary education (+0.9 compared to 2017).

Positive signs are also the reduction in the proportion of young people aged 15-29 who are not engaged in education, employment nor training (Neet), which drops to 23.4% (-0.7 compared to 2017), and the growth in the share of people who carried out activities of cultural participation in the year, rising to 27.9% (+0.8 compared to 2017). Both indicators, however, show a worse performance compared to 2010. Numerical and alphabetical skills of second grade students in high school, which for the first time can be compared with the results of the previous year, slightly improved.

On the other hand, the criticality of early school leavers, which is increasing compared to 2016, remains. In 2018, 14.5% of 18-24 year-olds who have not attained a high school diploma of second degree is not in education or training.

**Table 1. Education and training indicators: value for the latest available year. Percentage variations on previous year and on 2010**

INDICATOR	Latest available year value	% variation (compared with the previous year)	% variation (compared with 2010)
1. Participation in the school system of children aged 4-5 (% , 2017/2018) (a)	94.9		
2. People with at least upper secondary education level (25-64 years) (% , 2018)	61.7		
3. People having completed tertiary education (30-34 years) (% , 2018)	27.8		
4. First-time entry rate to university by cohort of upper secondary graduates(% , 2018/2019) (b)	50.4		
5. Early leavers from education and training (% , 2018)	14.5		
6. People not in education, employment, or training (Neet)(% , 2018)	23.4		
7. Participation in life-long learning (% , 2018)	8.1		
8. Inadequate level of literacy (% , 2018/2019)	30.4		—
9. Inadequate level of numeracy (% , 2018/2019)	37.8		—
10. People with high level of IT competencies (% , 2018)	22.0		—
11. Synthetic indicator of the level of cultural participation (% , 2018)	27.9		
— Comparison not available  Improvement  Stability  Deterioration			
(a) 2010/2011 data not available, variation based on 2012/2013 data			
(b) 2010/2011 data not available, variation based on 2013/2014 data			

Note: variations between two points in time above 1% are considered positive (in green), below -1% are considered negative (in red). Variations between -1 and +1% refer to stability (in grey).

The analysis by region shows a highly differentiated situation (Figure 1).

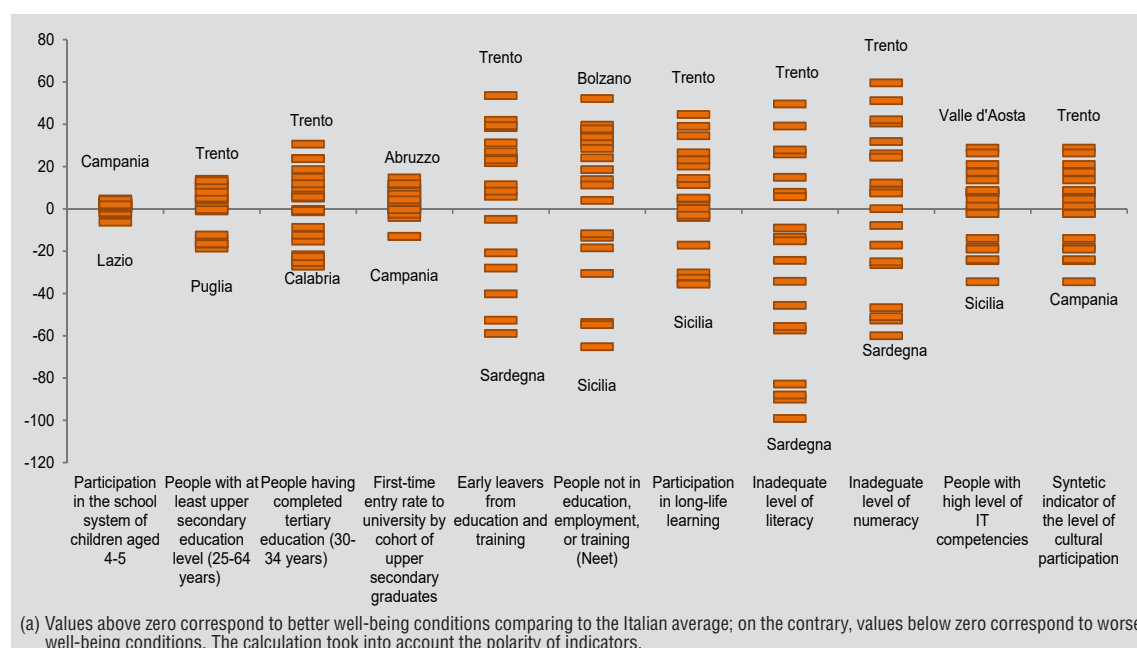
The territorial variations in the share of tertiary graduates among people aged 30-34 and in that of people with at least a high school diploma in population aged 25-64 are marked:

<sup>1</sup> This chapter was edited by Barbara Baldazzi with contributions from: Raffaella Cascioli, Anna Emilia Martino, Miria Savioli, Liana Verzicco and Laura Zannella.

in the Centre, North and in Abruzzo, Molise and Basilicata there are more than sixty high school graduates every hundred people, and in the other regions of southern Italy just over fifty every hundred; in Piemonte, Lombardia, Trento, Veneto, Friuli-Venezia Giulia, Emilia-Romagna and Lazio one young person in three has a university or tertiary degree, while in the other regions about one in four.

The shares of people taking part in lifelong learning and cultural activities, two variables that are highly correlated with the educational qualification, reach high levels in the northern and central regions, where population is comparatively more educated than in the South. Alphabetical and numerical skills of students attending second grade high school, early school leavers and Neet's share show the same regional gradient. The indicators are higher than average in the province of Trento, Veneto, Friuli-Venezia Giulia and Lombardia, while in Sardegna, Sicilia, Calabria, Puglia and Campania they are lower than the national average. The indicator with the smallest territorial variations is the participation of children aged 4-5 years in kindergarten and, for those aged 5, in the first class of primary school. In Campania, in school year 2017/2018, 99.3% of children aged 4-5 years attended a pre-primary or primary school; in Lazio, 88.8%.

**Figure 1. Percentage variation for Education and training indicators comparing to the value for Italy by region. Latest available year (a)**



The indicator that quantifies the proportion of young people who go to university after completing upper secondary education also varies little between regions: in Puglia, Campania, Sicilia and Calabria just under half of all graduates students enrolled for the first time at university in the same year in which they graduated; on the contrary, in Molise, Abruzzo, Marche and Liguria the percentage is over 55%.

On the whole, most of the indicators for the regions of the South express worse performances than those of the Centre-North regions, with the only exception of Lazio, which has the lowest level of participation in the school system for children aged 4-5 years. The provinces of Bolzano and Trento reach the most satisfactory levels for almost all measures of the domain.

### International comparison

Since 2010, the main indicators of education and training in Italy are far below the European average (Figure 2).

Of particular concern is the international comparison for the early leavers from education and training among young people aged 18-24. Italy is the fourth country with the worst performance (14.5%), after Spain (17.7%), Malta (17.4%), and Romania (16.4%), and far above the European average (10.6%). Among people aged 30-34, 40.7% completed tertiary education (universities and other equivalent courses) in the average of the EU countries, the percentage for Italy drops to 27.8%, followed only by Romania (24.6%).

The percentage of people aged 25-64 who have obtained at least a high school diploma is also significantly lower than the European average (-16.4 points compared to 78.1% of Eu28). Only Spain (60.1%), Malta (54%) and Portugal (49.8%) have lower percentages.

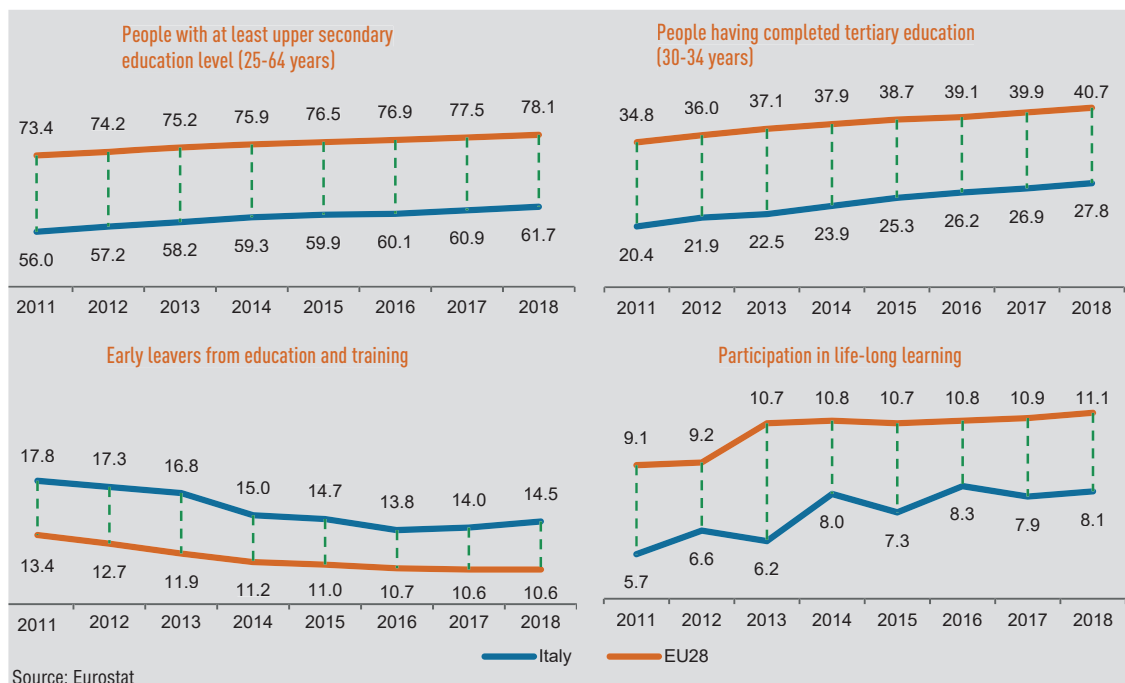
Italy's disadvantage with respect to the EU average for lifelong learning is, on the other hand, less pronounced, with 8.1% of individuals participating in lifelong learning, compared to 11.1% of the European average.

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**Figure 2. Main indicators of education and training in Italy and the Eu28. Years 2011-2018. Percentage values**



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## Analysis of national data

### The number of children attending childcare services is still too low

Access to early childhood services and pre-primary school has positive and long-term effects on the child's cognitive and behavioural abilities. The very first experiences of children lay the foundation for all forms of later learning. The Italian legislation<sup>2</sup>, more than the common feeling, recognizes the educational purposes of the service provided by the nursery, being aimed at fostering the expression of cognitive, affective and relational potential of the child. However, this regulatory definition is not followed by adequate investments and widespread participation in early childhood education. Italy, in fact, has very low levels of inclusion of children between 0 and 2 years in nursery schools. Only 13% of children between 0 and 2 years of age attended municipal nursery schools<sup>3</sup>. If 3-year-old children and private facilities are also included, the share reaches 28.6%, which is still below the European target of at least one in three children<sup>4</sup>.

Participation in the educational system of children aged 4 and 5 provides, on the other hand, a positive indication: about 95% of children are included in pre-primary school (or in the first year of primary school, because those who have turned five can also access it<sup>5</sup>).

### More 18-24 year-olds leaving education and training early

The proportion of early school leavers among 18-24 year-olds increased to 14.5% in 2018, maintaining major regional and gender differences.

Between 2016 and 2018, the proportion of girls aged 18-24 without a high school diploma and not in education and training increased by about 1 percentage point (from 11.2% to 12.3%), while it increased less among boys (16.5% in 2018, compared to 16.1% in 2016).

2 See Laws 285/1997, 448/2001, 107/2015, 11/2016 et seq. and Legislative Decree 65/2017, which established an integrated education system in the 0-6 age group.

3 See the chapter on "Quality of services".

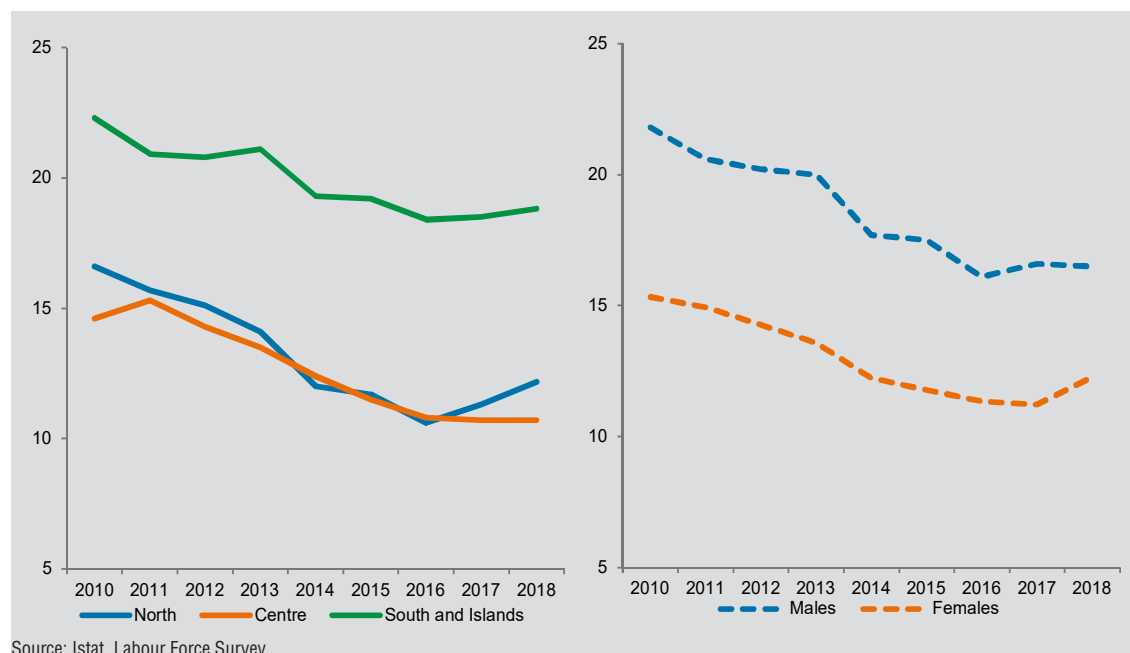
4 The Lisbon European Council in 2000 set as a priority the upgrading of pre-school age services. The strategy was subsequently developed into two measurable objectives: to provide childcare to at least 90% of all children between 3 years and the mandatory school age and at least 33% of all children under 3 years of age.

5 Since this edition of the BES Report, the first indicator of the Education and Training domain has changed: the indicator published also by Eurostat, therefore with a methodology shared at European level, on "Participation in the school system of children aged 4-5 years" (i.e. the percentage of children aged 4-5 years attending pre-primary school or the first year of primary school calculated on the total number of children aged 4-5 years) has been inserted in place of the indicator on "Participation in pre-primary school of children aged 4-5 years".

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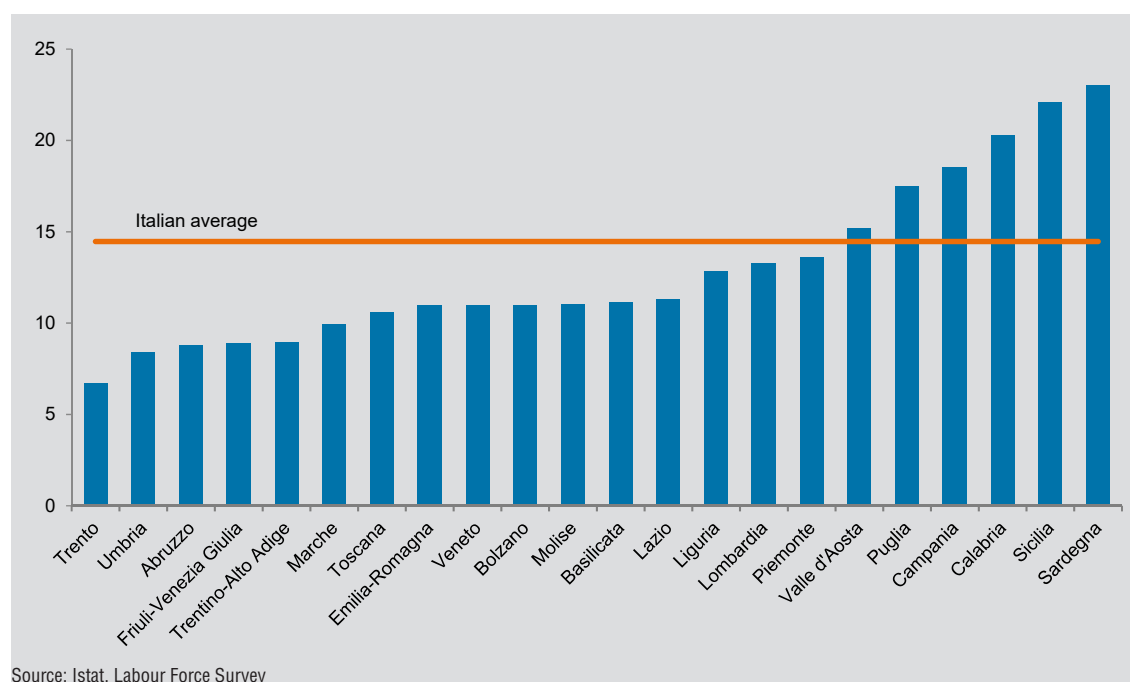
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Figure 3. Early leavers from education and training by geographic area and gender. Years 2010-2018. Percentage values



In the last two years, the percentage of young people who left education early has increased by 1.6 percentage points in the North (from 10.6% to 12.2%), with the sharpest increase achieved in Veneto (from 6.9% to 11%) and Piemonte (from 10.2% to 13.6%). In southern Italy, the share of early school leavers exceeded 20% in Calabria (20.3% in 2018 against 15.7% in 2016) and Sardegna (23% against 18.1%). Sicilia (22.1%), Campania (18.5%), Puglia (17.5%) and Valle d'Aosta (15.2%) also showed a more critical situation than the national average (Figure 4).

Figure 4. Early leavers from education and training in the Italian regions. Year 2018. Percentage values



### Small improvements in students' skills in mathematics and Italian

During the school year 2018/2019, the share of students attending the second year of secondary school who did not achieve the sufficiency (are low performers) is 30.4% in Italian skills, 37.8% in mathematics skills. Compared to the previous school year, the percentage of those who did not reach a pass in Italian fell by 3.1 percentage points (it was 33.5%) and by 3.8 points in mathematics (it was 41.6%). Improvements occurred rather uniformly between the geographical areas.

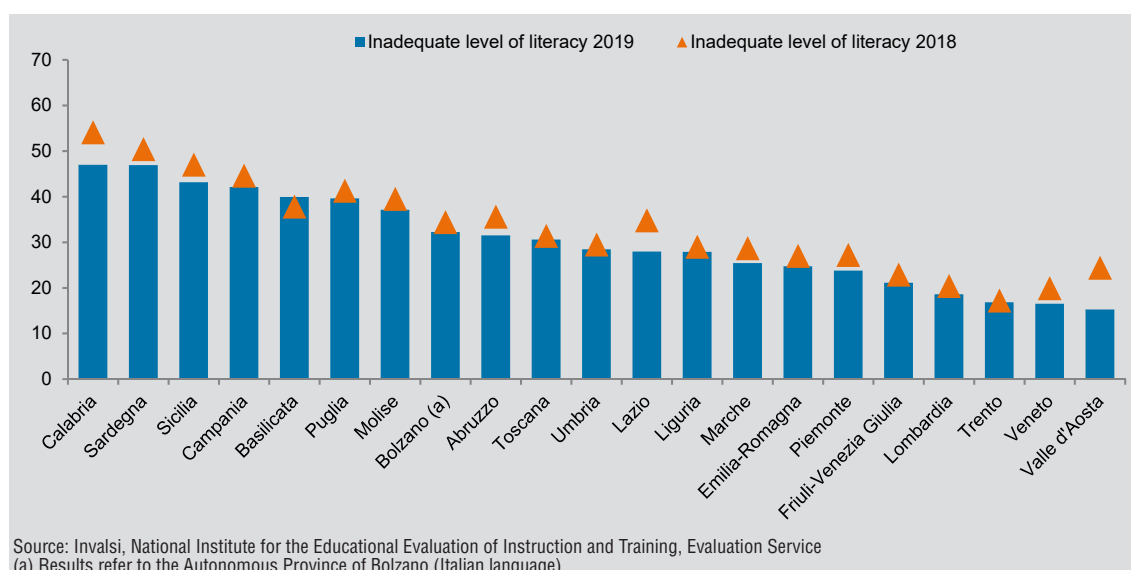
Among girls, who were less proficient in mathematics, 42.2% had inadequate mathematics skills (they were 45.1% in the previous school year), while the percentage is lower among boys (33.5%, comparing to 38.2% in the previous school year). The situation is reversed for Italian. Boys, in spite of an improvement, show more difficulties than girls: 34.4% do not have an adequate level of Italian skills (it was 37.7% in 2018), comparing to 26.3% among girls (they were 29.1% in 2018).

### Marked differences across regions

In the southern regions the highest proportion of students performing below the baseline level of proficiency literacy or numeracy is observed (Figures 5 and 6). Particularly severe, for Italian skills, is the situation in Calabria (47% of students are insufficient), Sardegna (46.9%), Sicilia (43.2%) and Campania (42.1%). For mathematics, the highest percentages of students performing below the baseline level is observed in Sardegna (60.5%), Calabria (57.7%), Sicilia (57.1%), Campania (55.5%), Puglia (47.8%), Basilicata (47.3%), Molise (44.3%) and Lazio (40.8%).

Compared to 2018, however, there have been improvements, and the percentage of students with inadequate skills has decreased. For Italian skills, the sharpest decrease was recorded in Valle d'Aosta (-9.1 percentage points), Calabria (-7.1) and Lazio (-6.8). For mathematics skills, distances were reduced in Calabria (-10.5), Veneto (-6.1), Emilia-Romagna (-5.9), Sardegna (-5.5) and Lazio (-5.3).

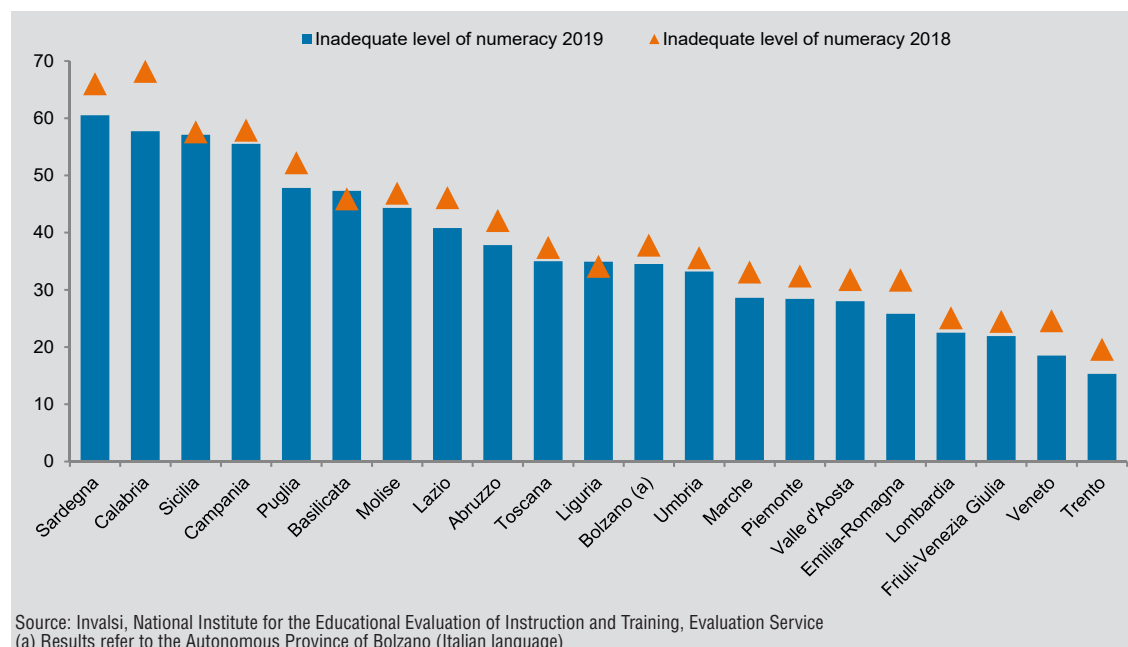
**Figure 5. Share of students in Class II of secondary school performing below the baseline level of proficiency in literacy competence. School years 2017/2018, 2018/2019**



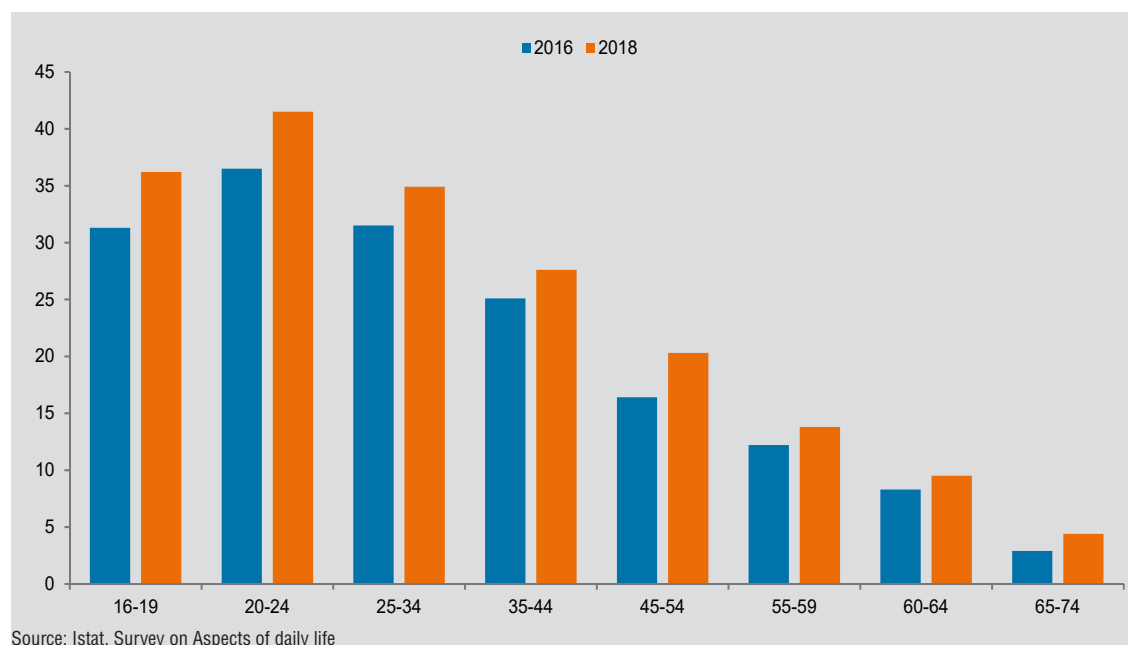
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**Figure 6. Share of students in Class II of secondary school performing below the baseline level of proficiency in numeracy competence. School years 2017/2018, 2018/2019**



**Figure 7. Share of population aged 16-74 with advanced digital skills by age group. Years 2016, 2018**

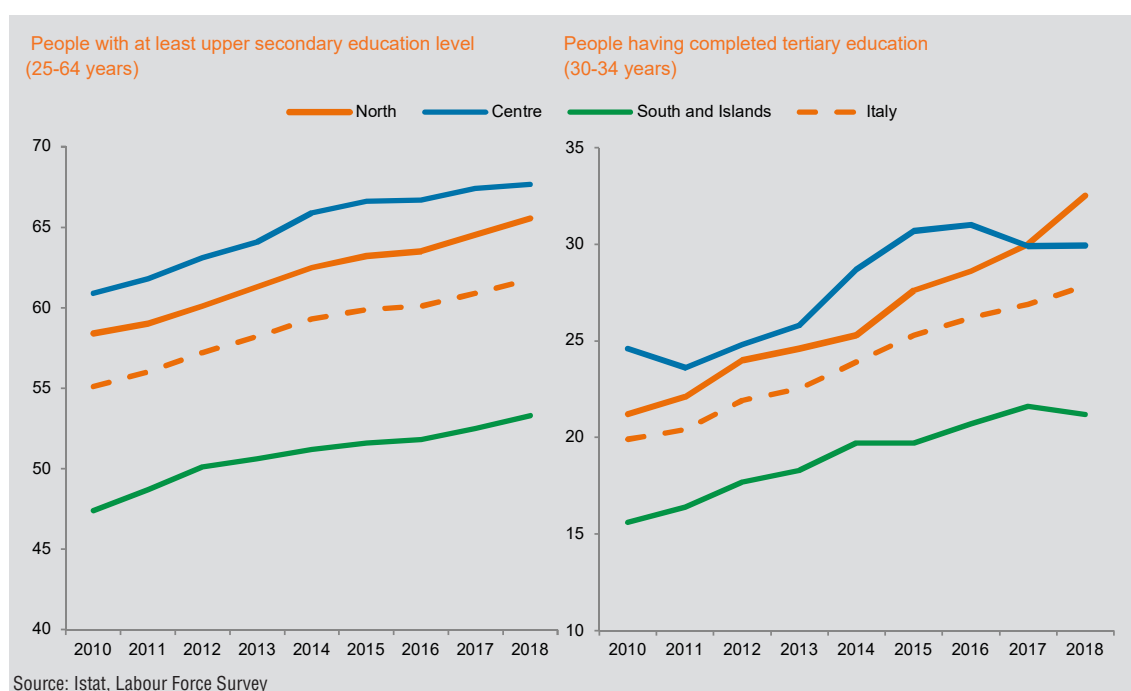


In 2018, the share of the population aged 16-74 with a high level of IT competencies was 22%, increasing in all age groups compared to 2016 (19.5% - Figure 7). The youngest have the most advanced skills (41.5% among people aged 20-24, about 35% among those aged 16-19 and 25-34).

### The level of education has been improving, with widening territorial gaps

In 2018, 61.7% of people aged 25-64 have attained at least a high school diploma, in constant growth over time (it was 60.9% in 2017). However, territorial differences are significant. In the South, in fact, only one person every two has obtained at least the diploma in the 25-64 age group; in the North the proportion rises to 65.5%, to 67.7% in the Centre. While the gap between the Centre and the North is narrowing, the gap between Centre-North and the South continues to increase. Among the young people aged 30-34, the percentage of those who have achieved a tertiary/university degree is constantly increasing: in 2018 the young graduates are 27.8% (the previous year they were 26.9%). Again, the gap between North and South is widening: 32.5% of young people in the North hold a tertiary degree compared to 21.2% of young people living in the South. In the Centre the share of graduates, about 30%, has remained almost unchanged over the last 4 years. The regions with the highest proportion of 30-34 year-olds with a tertiary degree are the province of Trento (36.4%), Friuli-Venezia Giulia and Emilia-Romagna (34.4%), Lombardia (33%), Veneto (32%), Lazio (31.1%) and Piemonte (30.4%). In all regions of southern Italy the percentage is below 25%, with the exception of Basilicata, where it reaches 25.4%.

**Figure 8. Share of people with at least upper secondary education among the population aged 25-64 and share of graduates and other tertiary education among the population aged 30-34 by geographic area. Years 2010-2018**

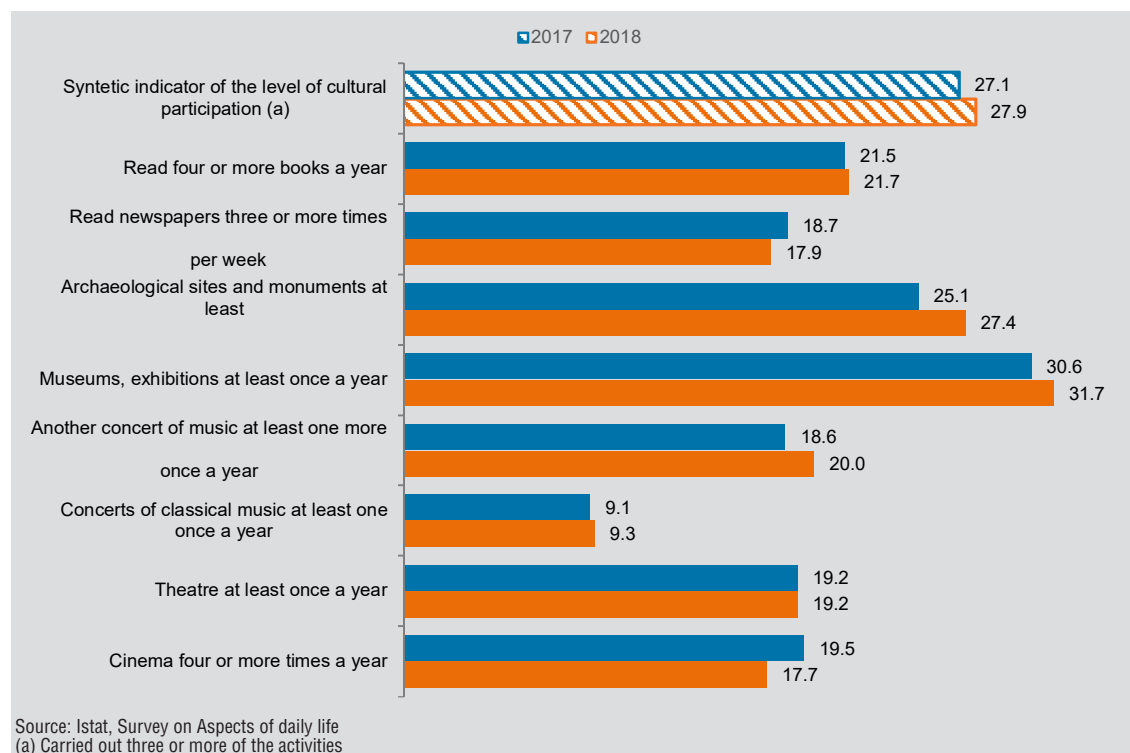


In 2018 the share of people aged 6 years and over who have been involved in at least three cultural activities (such as going to the cinema, theatre or concert, attending museums or exhibitions, reading books or newspapers, etc.) increased by about one percentage point, reaching 27.9%. If, on the one hand, the percentage of people declaring to have frequented archaeological sites and monuments, museums and exhibitions increased, on the other hand, the share of those who declare themselves to have read newspapers and books and those who have been to the cinema decreased.

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Figure 9. Share of people participating in at least 3 cultural activities. Years 2017-2018



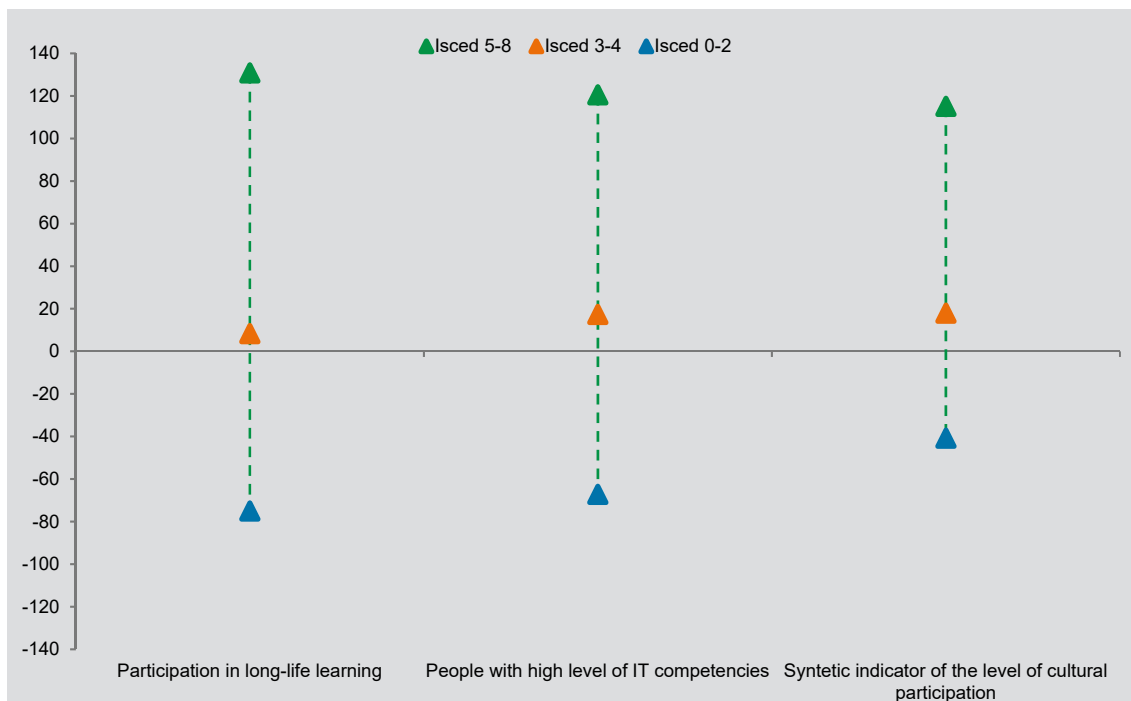
### High levels of education, high levels of participation and skills

The level of education, together with employment and economic conditions, is directly linked to the possibility of remaining active and being fully integrated into the cultural and social life of a community.

Among those who have achieved a high educational qualification, in fact, there is a double percentage compared to the Italian average of participation in lifelong learning at all ages. This happens for both men and women. People with a high educational qualification who have participated in training activities are 18.7%, compared to 8.1% of the Italian average. Participation in cultural activities among those with a secondary or tertiary degree (32.9% and 60% respectively) is more frequent than in the average population (27.9%) and than among people with a low degree (16.5% - figure 10).

Advanced digital skills are also a prerogative of people with higher educational qualifications: almost half (48.5%) of those with a high level of education have high digital skills, compared to 25.8% of those with secondary education and 7.2% of those with a lower educational qualification.

Figure 10. Percentage variation for some Education and training indicators comparing to the value for Italy by level of education. Latest available year (a) (b)



Source: Istat, Labour force survey, Survey on Aspects of daily life

(a) Low level of education: Isced 0-2; Medium level of education: Isced 3-4; High level of education: Isced 5-8.

(b) Values above zero correspond to better well-being conditions comparing to the Italian average; on the contrary, values below zero correspond to worse well-being conditions. The calculation took into account the polarity of indicators.

### Indicators

1. **Participation in the school system of children aged 4-5:** Percentage of children aged 4-5 years participating in pre-primary education or in primary education on total children aged 4-5 years.  
Source: Ministry of Education, Universities and Research
2. **People with at least upper secondary education level (25-64 years):** Percentage of people aged 25-64 having completed at least upper secondary education (ISCED level not below 3) on total people aged 25-64 years.  
Source: Istat, Labour force survey
3. **People having completed tertiary education (30-34 years):** Percentage of people aged 30-34 years having completed tertiary education (ISCED 5, 6, 7 or 8) on total people aged 30-34.  
Source: Istat, Labour force survey
4. **First-time entry rate to university by cohort of upper secondary graduates:** Proportion of new-graduates from upper secondary education enrolled for the first time at university in the same year of upper secondary graduation (cohort-specific rate). Students enrolled in “Istituti Tecnici Superiori”, “Istituti di Alta Formazione Artistica, Musicale e Coreutica”, “Scuole superiori per Mediatori linguistici” and at foreign universities are excluded.  
Source: Ministry of Education, Universities and Research
5. **Early leavers from education and training:** Percentage of people aged 18-24 years who have achieved only lower secondary (ISCED 2) and are not included in a training program on total people aged 18-24 years.  
Source: Istat, Labour force survey
6. **People not in education, employment, or training (Neet):** Percentage of people aged 15-29 years that are not in education, employment, or training on total people aged 15-29 years.  
Source: Istat, Labour force survey
7. **Participation in life-long learning:** Percentage of people aged 25-64 years participating in formal or non-formal education on total people aged 25-64 years.  
Source: Istat, Labour force survey
8. **Inadequate level of literacy:** Share of students in grade 10 (second year of upper secondary education) performing below the baseline level of proficiency in literacy competence.  
Source: Invalsi, National Institute for the Educational Evaluation of Instruction and Training, Evaluation Service
9. **Inadequate level of numeracy:** Share of students in grade 10 (second year of upper secondary education) performing below the baseline level of proficiency in numeric competence (level 2 out of 5 levels).  
Source: Invalsi, National Institute for the Educational Evaluation of Instruction and Training, Evaluation Service
10. **People with high level of IT competencies:** Percentage of people aged 16-74 with advanced competences in all 4 groups identified in the “Digital competence framework”.  
Source: Istat, Survey on Aspects of daily life
11. **Syntetic indicator of the level of cultural participation:** Percentage of people aged 6 years and over who have carried out 3 or more activities in the 12 months before the interview on total people aged 6 years and over. The activities considered are: go to the cinema at least four times, at least once to the theatre, exhibitions and museums, archaeological sites, monuments, concerts of classical music, opera, concerts of other kind of music; read the newspaper at least three times per week, read at least four books. Istat,  
Source: Survey on Aspects of daily life

## Indicators by region and geographic area

REGIONS AND GEOGRAPHIC AREAS	Participation in the school system of children aged 4-5 (a)	People with at least upper secondary education level (25-64 years) (b)	People having completed tertiary education (30-34 years) (c)	First-time entry rate to university by cohort of upper se- condary graduates (d)	Early leavers from education and training (e)
	2017/2018	2018	2018	2018	2018
Piemonte	95.3	62.9	30.4	52.9	13.6
Valle d'Aosta/Vallée d'Aoste	97.3	61.1	27.4	50.2	15.2
Liguria	95.8	67.2	29.6	55.4	12.8
Lombardia	92.7	65.0	33.0	54.5	13.3
Trentino-Alto Adige/Südtirol	97.5	69.7	32.8	....	8.9
<i>Bolzano/Bozen</i>	<i>97.4</i>	<i>69.1</i>	<i>29.2</i>	<i>....</i>	<i>11.0</i>
<i>Trento</i>	<i>97.7</i>	<i>70.3</i>	<i>36.4</i>	<i>51.6</i>	<i>6.7</i>
Veneto	94.7	64.6	32.0	50.2	11.0
Friuli-Venezia Giulia	95.7	68.6	34.4	51.9	8.9
Emilia-Romagna	93.1	68.1	34.4	53.6	11.0
Toscana	95.3	64.9	29.4	51.9	10.6
Umbria	95.9	68.4	27.8	54.9	8.4
Marche	95.8	64.9	27.6	56.1	10.0
Lazio	88.8	69.9	31.1	53.8	11.3
Abruzzo	97.3	66.6	23.6	57.7	8.8
Molise	95.4	62.2	24.3	56.3	11.0
Campania	99.3	53.0	20.4	43.7	18.5
Puglia	98.1	50.2	21.8	48.3	17.5
Basilicata	97.9	61.5	25.4	52.5	11.1
Calabria	99.0	54.1	20.3	49.1	20.3
Sicilia	96.0	51.4	20.8	43.8	22.1
Sardegna	96.7	51.5	21.5	50.1	23.0
North	94.0	65.5	32.5	52.5	12.2
Centre	92.1	67.7	29.9	53.7	10.7
South and Islands	97.8	53.3	21.2	46.6	18.8
Italy	94.9	61.7	27.8	50.4	14.5

- (a) Per 100 children aged 4-5;  
 (b) Per 100 persons aged 25-64;  
 (c) Per 100 persons aged 30-34;  
 (d) Specific cohort rate;  
 (e) Per 100 persons aged 18-24;  
 (f) Per 100 persons aged 15-29;  
 (g) Per 100 students in Grade 10;  
 (h) Per 100 persons aged 16-74;  
 (i) Per 100 persons aged 6 years and over.

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People not in education, employment, or training (Neet) (f)	Participation in life-long learning (b)	Inadequate level of literacy (g)	Inadequate level of numeracy (g)	People with high level of IT competencies (h)	Syntetic indicator of the level of cultural participation (i)
2018	2018	2018/2019	2018/2019	2018	2018
17.7	8.4	23.8	28.4	23.6	31.1
16.1	8.5	15.3	28.0	28.3	31.6
20.1	9.1	27.9	34.9	22	30.7
15.1	9.0	18.6	22.5	26.6	32.9
12.6	11.0	....	....	25.7	38.0
11.2	10.3	32.2	34.5	23.6	38.6
14.1	11.7	16.8	15.3	27.8	37.3
14.8	9.8	16.5	18.5	23.8	31.5
14.5	11.3	21.1	21.9	25.8	33.8
15.4	10.9	24.7	25.8	25	34.8
16.2	10.0	30.6	35.0	23.8	33.4
19.0	9.3	28.4	33.2	22.3	29.7
16.7	7.9	25.4	28.6	21.5	24.9
22.4	8.1	28.0	40.8	23.9	32.1
20.7	6.7	31.5	37.8	21.5	20.7
26.5	7.8	37.1	44.3	18.9	17.9
35.9	5.7	42.1	55.5	16.6	18.9
30.5	5.4	39.6	47.8	18	19.1
26.1	7.9	39.9	47.3	17.8	21.9
36.2	5.2	47.0	57.7	16.7	16.5
38.6	5.2	43.2	57.1	14.4	18.7
27.7	8.5	46.9	60.5	23	24.4
15.6	9.5	20.7	23.8	25.0	32.8
19.6	8.7	28.5	36.8	23.5	31.4
33.8	5.9	41.9	53.5	17.2	19.3
23.4	8.1	30.4	37.8	22.0	27.9