

2. Education and training¹

Education, training and skill levels influence people's well-being and open up pathways and opportunities that would otherwise be closed.

The focus on skills upgrading is one of the main points for the implementation of the European Green Deal policies. Moreover, the Next Generation Fund has, among its contents, education and skills agendas. In Italy, despite improvements over the last decade, the system is still unable to offer all young people the same opportunities for an adequate education.

The level of education and skills young people are able to achieve still largely depends on social background, socio-economic context and the geographical area in which one lives.

The delay compared to the European average and the territorial gap, in fact, are found in all indicators on education, lifelong learning and skill levels. The 2020 pandemic, with the consequent closure of schools and universities and the transition to distance, or integrated, education, has exacerbated inequalities.

The analysis of the indicators in the Education and Training domain will follow the lifelong learning pathway, in a process that begins with attendance at the nursery school from an early age and with pre-primary school, and then extends beyond secondary school and university with lifelong learning and, more generally, with cultural participation activities.

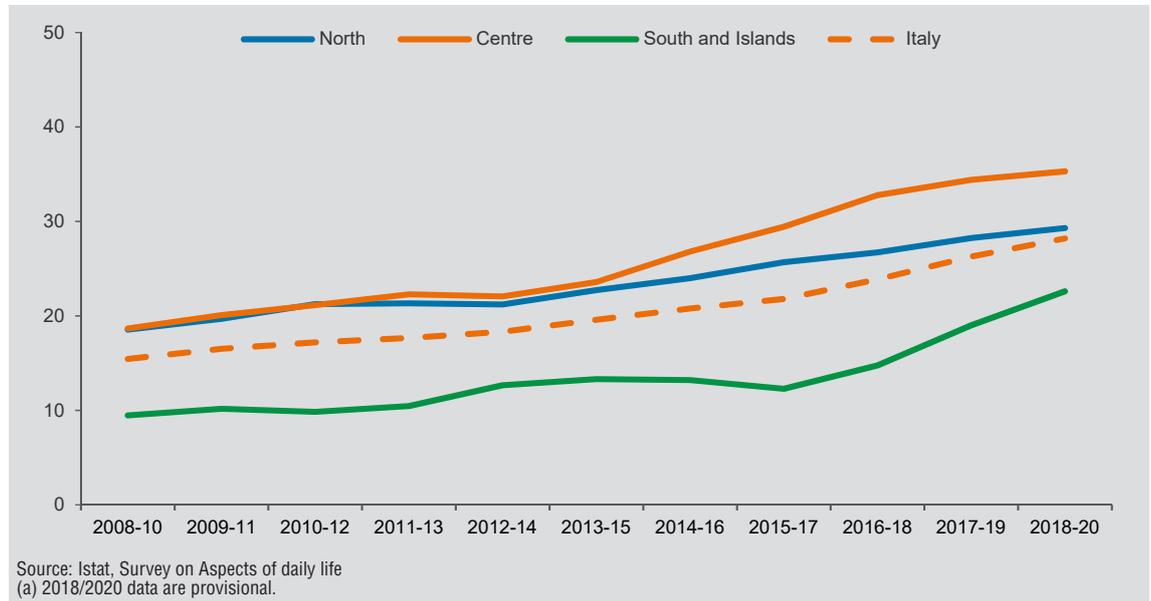
Few children attend early childcare services

The first step on the educational path is the inclusion of children aged 0-2 years in dedicated early childhood services. Children's earliest experiences are the foundation of all future learning, having positive effects on children's behavioural skills and lightening the burden of family work, especially for women. Investing in the supply of and demand for early childcare services can, therefore, have a positive effect in addressing inequalities of opportunity for children, increasing gender equality and sharing family burdens². However, over the years there has been neither adequate investment nor widespread participation in early childhood education, especially in Southern Italy. Although the inclusion of 0-2 year olds in childcare facilities has increased over time, from 15.4 per cent in 2008-2010 to 28.2 per cent in 2018-2020, the level is still below the European target of at least 1 in 3 children set for 2010 (Figure 1).

¹ This chapter was edited by Barbara Baldazzi, with contributions from Emanuela Bologna, Raffaella Cascioli, Claudia Di Priamo, Donatella Grassi, Anna Emilia Martino, Giulia Milan, Miria Savioli, Alessandra Tinto, Azzurra Tivoli and Laura Zannella.

² See Laws 285/1997, 448/2001, 107/2015, 11/2016 et seq. and Legislative Decree 65/2017, which established an integrated education system for children aged 0-6 years recognizing service provided by kindergarten as having formative purposes, being aimed at encouraging the expression of the child's cognitive, affective and relational potential.

Figure 1. Children aged 0-2 years enrolled in early childcare services by geographic area. Years 2008/2010-2018/2020 (a). Three-term moving average. Percentage values



At the territorial level, the highest inclusion is observed in the regions of the North (43% of children aged 0-2 years enrolled in nursery schools in the autonomous province of Trento, 41.7% in Valle D'Aosta, 34.5% in Veneto), in the Centre (42.6% in Toscana, 32.4% in Umbria and 33.8% in Lazio) and in Sardegna (28.8% - Figure 2).

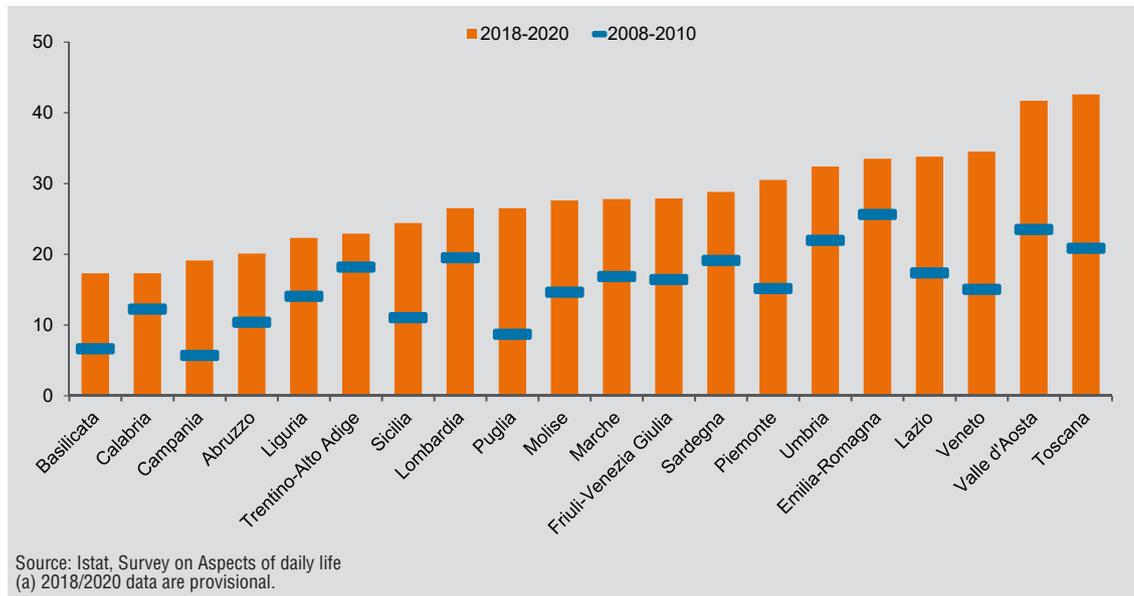
Access to early childhood education services follows, in fact, the geography of the availability of services on the Italian territory, and suffers from strong delays and territorial inequalities. On the supply side of early childhood services, with the exception of Sardegna, there is still a large delay in southern Italy, although many of the regions in this area have recorded the most significant increase in recent years. In the 2018/2019 educational year, 13,335 early childhood services were active on the national territory with a coverage of 25.5% of places for resident children aged up to 2 years, still far from the 33% parameter set by the Eu for 2010³.

The propensity to use the kindergarten is, therefore, linked to the availability of facilities, but also to socio-economic factors. In fact, the net annual income of families with children who attend nursery schools is, on the average, higher than that of families who do not attend; children with more educated parents have more frequent access to educational services. Thus, it is families in more vulnerable situations that have difficulty in accessing early childhood services, confirming how socio-economic inequality can translate into inequality of opportunity.

³ The Lisbon European Council of 2000 established as a priority the strengthening of pre-primary services. The strategy was subsequently divided into two measurable objectives. For pre-primary school age, between 3 and 5 years, the need was established to provide childcare for at least 90% of children. For early childhood, under the age of 3, the target was set to provide at least 33 places for every 100 children.

2. Education and training

Figure 2. Children aged 0-2 years enrolled in early childcare services by region. Years 2008/2010 and 2018/2020 (a). Three-term moving average. Percentage values



The second part of the educational path is implemented with the participation of children aged 3-5 years in pre-primary school, which is a service widely spread throughout the Country and usually free of charge. By reason of these characteristics, in territories where there is limited availability of early childhood services (mainly in the South) the possibility of anticipating entry into pre-primary school before age 3 is widely exploited. In the 2018/2019 educational year, 14.8% of 2-year-olds attended pre-primary school, with percentages above 20% in Calabria (29.1%), Campania (25%), Basilicata (23.7%), Molise (23.3%), Abruzzo and Puglia (22.5%), and Sicilia (20.1%).

When they reach the age of 4-5, almost all the children are, in any case, included in the educational pathways: about 95% of the children attend pre-primary school or the first year of primary school (with average values of 97.6% in the South, 92.3% in the Centre and 93.9% in the North), a percentage that also corresponds to the European target to be reached in 2020.

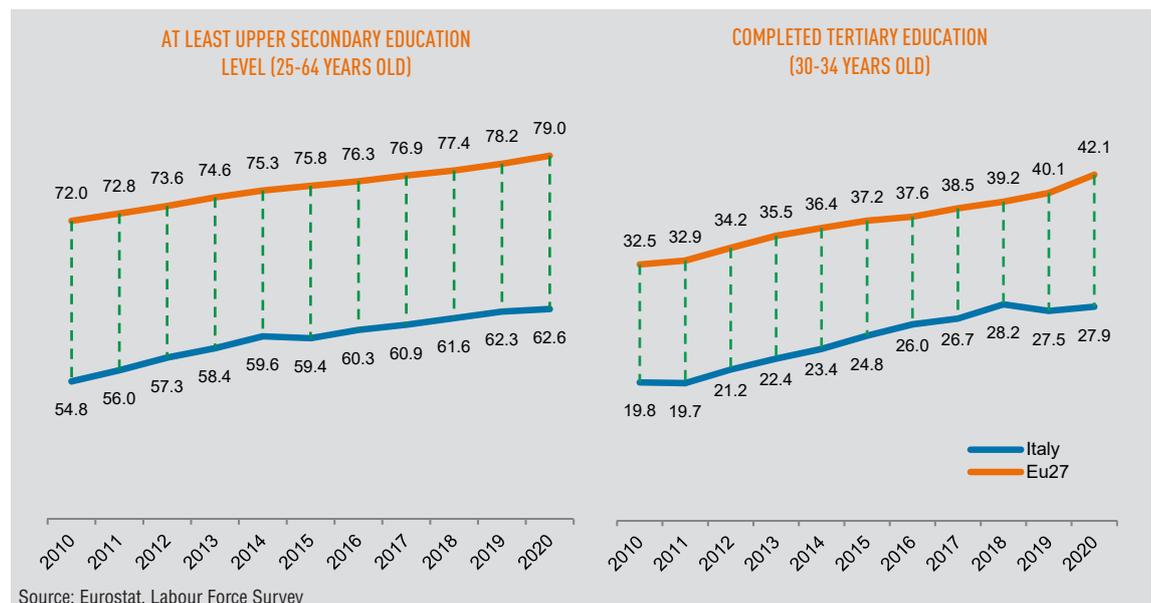
Despite steady progress in education, Italy still remains distant from Europe

In order to monitor the next steps of the ladder for the attainment of an adequate level of education, the two main indicators are the share of 25-64 year-olds with at least a high school diploma and the share of 30-34 year-olds with a university or other tertiary degree. Although these two indicators are constantly on the rise, so far Italy was unable to catch up with most European Union countries (Figure 3). In the second quarter of 2020, in Italy, 62.6% of 25-64 year-olds had at least a high school diploma, 16 percentage points lower compared to the European average (79%). Lower percentages are recorded only in Malta (57.4%) and Portugal (55.2%). The proportion of young people aged 30-34 who have attained a university or tertiary degree is 27.9%, compared with 42.1% of the European average, second last in the ranking before Romania (25.2%) and 14 points behind Europe.

In Sicilia and Puglia, the share of 25-64 year-olds with at least a high school diploma, in the second quarter of 2020, is around 52%, 10 percentage points lower than the Italian average and around 20 points lower than the regions with the highest values, such as the autonomous provinces of Bolzano and Trento, Friuli-Venezia Giulia, Lazio and Umbria, which exceed 70%. At the same time, the proportion of 30-34 year-olds who, in the second quarter of 2020, hold a tertiary degree is around 33% in the Centre, 30.9% in the North and only 21.7% in the South and Islands.

Women have better results than men for many indicators of education and training: the gap in the share of 25-64 year-olds who have at least a high school diploma, in the second quarter of 2020, is 4.7 percentage points in favour of women (64.9% among women and 60.2% among men). For tertiary degrees, the gap is even wider: 21.7% of men aged 30-34 hold a tertiary degree compared to 34.3% of women. Despite the fact that there are more women graduates, the gap with other European countries is still significant: in the average of European Union countries, 47.1% of women aged 30-34 have a university degree, 13 percentage points more than men.

Figure 3. Persons aged 25-64 having completed at least upper secondary education (ISCED level not below 3) and persons aged 30-34 having completed tertiary education (ISCED 5, 6, 7 or 8) in Italy and Eu27. Years 2010-2020 II quarter. Percentage values

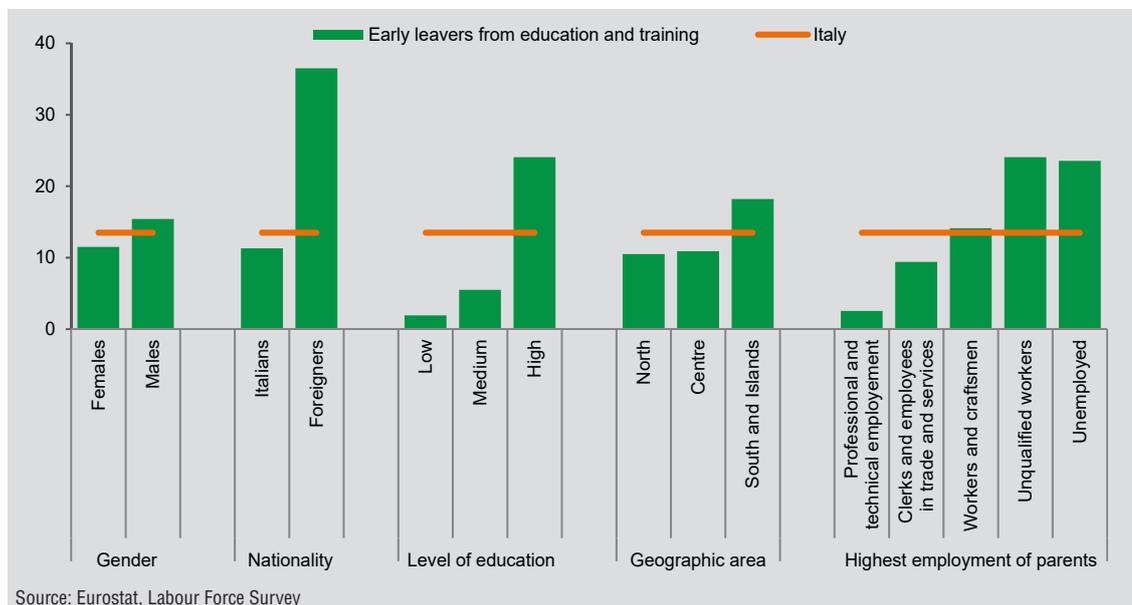


Still too many NEETs and early leavers from education and training

The share of those who are not studying and not working (the NEETs) among young people aged 15-29 years remains high and returns to grow, after several years of decrease, to 23.9% of young people in the second quarter of 2020 (it was 21.2% in the second quarter of 2019). The component due to inactivity is particularly influential, especially in the Northern and Central regions, where the job search has suffered an unexpected interruption due to the COVID-19 pandemic.

Equally high is the quota of young people who leave the education and training system early after having attained at most lower secondary school qualification. In the second quarter of 2020, in Italy, the educational pathway was interrupted very early for 13.5% of young people aged between 18 and 24, a value that is stable compared to the second quarter of 2019. The phenomenon of exit from the education and training system worries, above all, in terms of inequalities. Through the analysis of 2019 data, with which it is possible to have a snapshot of the characteristics of those who leave school prematurely, it emerges how the prosecution in the training path, the skills learned and the subsequent choices are still highly determined by the socio-economic context of origin. The educational qualification of the parents strongly influences school success and permanence in the education and training system. The children of parents with at most a lower secondary school diploma have an exit rate from education and training of 24%, which is reduced to 5.5% among the children of parents with an upper secondary school diploma and to 1.9% among the children of parents with at least a tertiary degree. Similarly, children with at least one parent employed in skilled and technical occupations drop out of school in 2.5% of cases compared to 24% among children of parents employed in unskilled occupations (Figure 4). Among males and foreigners, moreover, the quota of those who drop out of school is, respectively, 15.4% and 36.5%, higher if compared with that of girls (11.5%) and young Italian citizens (11.3%).

Figure 4. Early leavers from education and training by gender, geographic region, citizenship, educational attainment and highest parental occupation. Year 2019. Percentage values

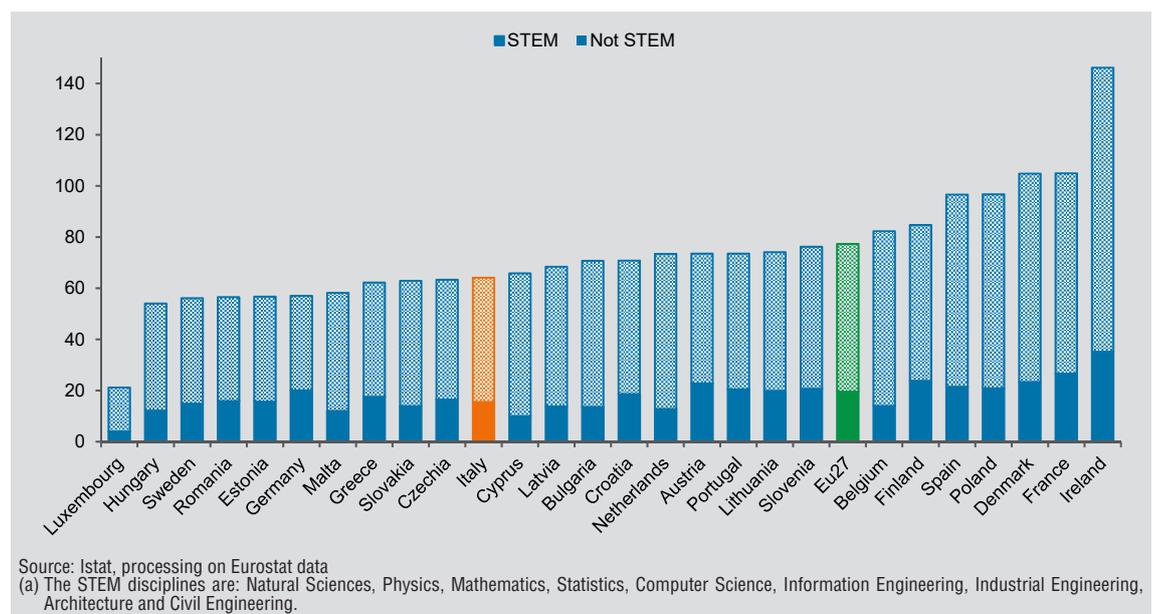


More women graduated in tertiary education than men, but fewer graduated in science disciplines

Continuing in the educational path, the student has the option of enrolling in university or other tertiary courses. Only half of new graduates enrol for the first time at university in the same year in which they obtained their upper secondary school diploma. Enrolment, like the outcomes of university studies, is strongly influenced by the ease of access to courses (low costs, scholarships), the flexibility of programs, the variety of paths offered and their territorial spread. An examination of the flow of people with a tertiary degree summarises a country's ability to increase knowledge-based opportunities for its citizens and to prepare potential future workers with advanced specialised skills. In times of rapid technological innovation, skills in STEM⁴ disciplines (science, technology, engineering, and mathematics) become particularly relevant. Despite this, only one in four young people in Europe has a tertiary education degree in these disciplines, and this happens for half as many women as men. The choice to enrol in STEM courses, rather than other tertiary education programs, often depends on secondary school performance, but general societal perceptions and attitudes also come into play.

Across the European Union as a whole, just under 4 million people earned a tertiary degree⁵ in 2018. This flow represents 7.7% of people aged 20-29, the reference population conventionally used to measure the intensity of the phenomenon (Figure 5). In Italy, in 2018, about 400 thousand people obtained a tertiary degree for an incidence of 6.4%, growing steadily in recent years (it was 4.2% in 2010).

Figure 5. University graduates and other tertiary degrees by discipline of study in some European countries (a). Year 2018. Values per 1,000 inhabitants aged 20-29

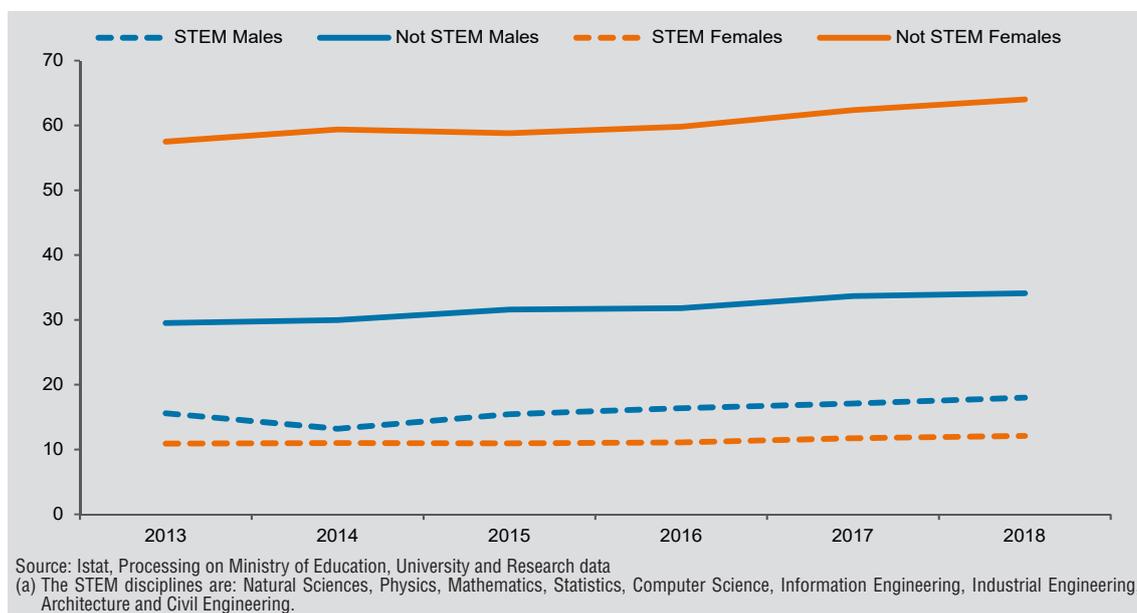


- 4 The New Skills Agenda for Europe proposes in Action 7 to “Increasing STEM graduates and fostering entrepreneurial and transversal skills.” STEM skills are critical to driving the twin ecological and digital transitions, and actions taken must increase the attractiveness of studies and careers in STEM fields, with targeted actions to attract girls and women.
- 5 Tertiary degrees include levels 5-8 of the 2011 Isced International Classification.

2. Education and training

More women than men attain a tertiary degree: in Italy, in 2018, there were 231 thousand women compared to 169 thousand men, equal to about 7.6 per 100 women and 5.2 per 100 men, and the growth in the last 5 years has affected both genders (in 2013 there were 6.9 women and 4.5 men per 100) and all disciplines (Figure 6). The difference in the choice of the degree program to follow remains wide: out of 100 women graduates, only 16 obtain a tertiary degree in STEM competences (equal to about 38 thousand women), while out of 100 men graduates those who are in STEM disciplines reach 35 (equal to about 59 thousand men).

Figure 6. Graduates and other tertiary degrees by discipline of study and gender in Italy (a). Years 2013-2018. Values per 1,000 inhabitants aged 20-29



Unequal skills of students by social background

Dropping out of school is only the tip of the iceberg. The difficulty of some young people to continue with their education and training starts early in school and the levels of competence are unequally influenced by certain characteristics: gender, citizenship, socio-economic and cultural status of the family. Inadequate skills are perpetuated over the years and influence school choice, learning, and ultimately the decision to drop out of school. Students of grade 10 in the 2018/2019 school year performing below the baseline level of proficiency in literacy competence are 30.4%, with very wide territorial variations, ranging from 41.9% in the South and Islands to 20.7% in the North. (Figure 7). Inequalities are also wide by gender, social class and citizenship, with 34.4% of inadequate literacy skills among boys compared to 26.3% among girls; 54.2% among first generation foreigners, compared to 27.8% among children born in Italy by Italian parents, and 46.5% among children belonging to the lowest socioeconomic and cultural quartile⁶, compared to 19.4% among those

⁶ In order to measure the socio-economic and cultural status of students, INVALSI constructs, by integrating several variables an indicator called ESCS (Economic Social Cultural Status index), standardised so that the zero value corresponds to the Italian average and each unit above or below it to the standard deviation of the distribution of values. The first quartile corresponds to the score below which 25% of the ESCS scores, in ascending order, are located. The second quartile (or median) is the score below which 50% of the measures are found, and so on.

living in more advantaged households. In addition, the percentage of those performing below the baseline level is higher among students in vocational institutions (66.7%) than among students in high schools (16%).

For students of grade 10 in the 2018/2019 school year performing below the baseline level of proficiency in numeracy, the percentages track the same categories but are much higher (37.8). The only exception is the higher proportion of girls with inadequate skills compared to boys 42.2% vs 33.5% (Figure 8).

Figure 7. Students of grade 10 in 2018/2019, performing below the baseline level of proficiency in literacy competence by gender, territory, nationality, typology of institute, ESCS (Economic Social Cultural Status index). Scholastic year 2018/19. Percentage values

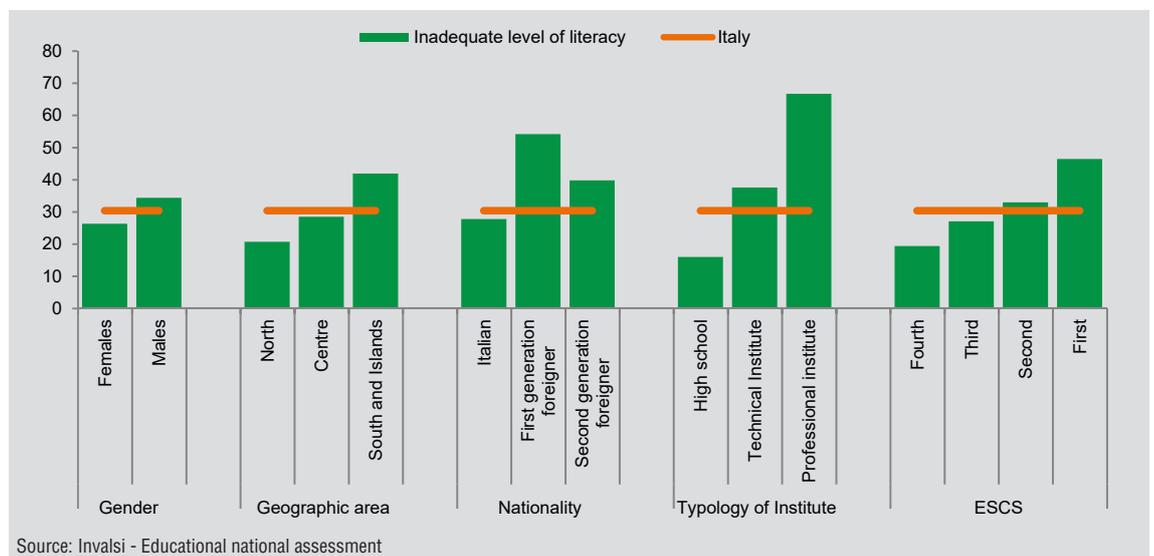
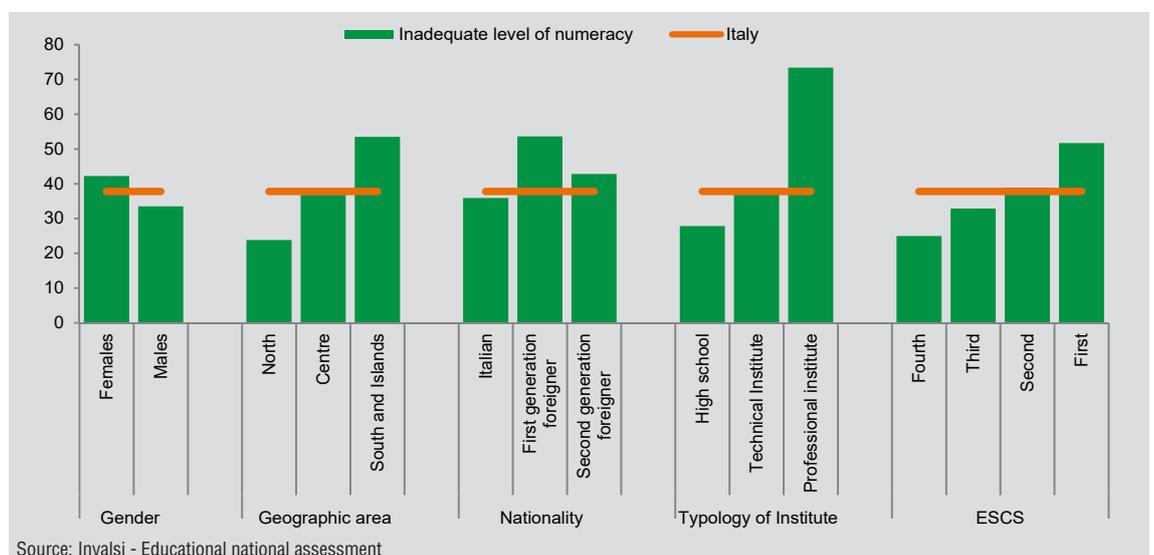


Figure 8. Students of grade 10 in 2018/2019, performing below the baseline level of proficiency in Numeracy by gender, territory, nationality, typology of institute, ESCS (Economic Social Cultural Status index). Scholastic year 2018/19. Percentage values



Apart from these factors⁷, it is interesting to analyse which other stimuli can be protective with respect to the risk of not reaching an adequate level of competence in the two subjects, such as: having books, an internet connection and a PC in one's home; having attended pre-school; speaking mainly Italian at home rather than another language.

As a proxy for household cultural level, being able to count on a large presence of books in the home (more than 100 books), is associated with a probability of attaining sufficient competences which is 2.5 times higher than not having books or having less than 25 books. The protective effect of attending pre-primary school is weaker but still significant, with a 34% higher probability of having adequate competences among those who went to pre-primary school compared to those who did not attend. Speaking Italian in the household, even for everyday exchanges, facilitates skills (63% more than for those who habitually speak a language other than Italian). Owning a personal computer and an Internet connection helps in developing skills: 59% more likely than those who do not have a connection and a personal computer.

Among students with a low socio-economic and cultural level⁸, having a pc and an internet connection increases the probability of having good skills, more than for students belonging to families with higher socio-economic and cultural levels (69%).

The new challenges of distance learning: internet connection, pc availability and digital skills

In 2020, the school path of students has undergone one of the most profound and sudden transformations, passing from a totally face-to-face teaching to a distance teaching for the last months of the school year 2019/20 and to a mixed teaching (mainly distance for secondary school students) in the first months of the school year 2020/21. Thus, it becomes even more important to have a good connection and a PC or electronic device available to interact with school and teachers. The Istat Survey on students with disabilities in public and private schools, submitted to schools⁹ in the 2019/20 school year, showed how schools have equipped themselves in various forms of distance learning¹⁰, but despite the efforts of educational institutions, teachers and families, 8% of children and young people in schools of all levels remained excluded from any form of distance learning and did not take part in video lessons with the class group, a percentage that rises to 23% among students with disabilities.

7 The analysis was performed through a regression model with most of the variables examined here and found to be discriminating for the dependent variable called "learning adequate competences," understood as achieving a sufficient level in both competences (Reading and Numeracy). For definitions of levels, see the 2019 National Invalsi Testing Report https://invalsi-areaprove.cineca.it/docs/2019/Rapporto_prove_INVALSI_2019.pdf (in Italian).

8 Boys from households that fall in the first quartile of the ESCS (see note 6).

9 78.5% of schools responded to the survey. See: <https://www.istat.it/it/files//2020/12/Report-alunni-con-disabilita.pdf> (in Italian).

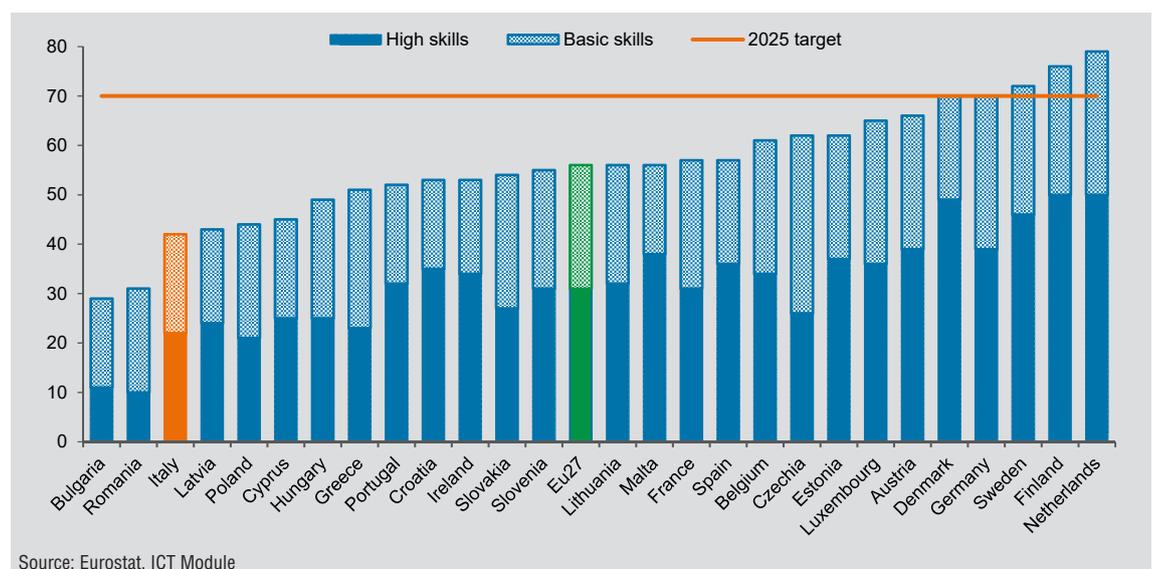
10 Distance learning activities involve the reasoned and guided construction of knowledge through an interaction between teachers and pupils. Whatever the medium through which didactics is exercised, the aim and the principles do not change. It takes place through direct or indirect connection, immediate or deferred, by means of videoconferences, video lessons, group chats; the reasoned transmission of teaching materials, by uploading them onto digital platforms and the use of class registers in all their communication and teaching support functions, with subsequent revision and discussion carried out directly or indirectly with the teacher, interaction on systems and interactive educational applications that are strictly digital. The mere sending of materials or the mere assignment of tasks, which are not preceded by an explanation of the content in question or which do not provide for a subsequent clarification or restitution by the teacher, are devoid of elements that can stimulate learning and are therefore not considered part of distance learning.

In this very particular phase of education, having a connection and a PC, besides being a fundamental predictive factor for an adequate development of skills, becomes a requirement for access to education. The impact of distance learning and school closures has, therefore, affected a population of students already crossed by profound inequalities of opportunity and, despite national and local policies, the efforts of educational institutions, teachers and families, the effects on skills and school dropout, especially in the most vulnerable segments of the population, could be particularly serious.

In addition to the availability of computing devices, the sudden and necessary introduction of distance learning has come up against difficulties in the digital skills of the Italian population, an area of particular difficulty comparing to the rest of Europe. In 2019, among individuals aged 16-74, only 22% declared to have high digital skills, i.e., to be able to perform different activities in the 4 domains of information, communication, problem solving and content creation, the percentage is 31% in the Eu27. The majority of individuals have low (32%) or basic (19%) skills, while 3.4% have no skills at all and 24% say they have not even used the internet in the last 3 months. Age remains an important factor: 41.5% of young people aged 20-24 have advanced levels of skills, 36.2% among those aged 16-19; the percentage decreases as age increases and reaches 20.3% among 45-54 year olds and 4.4% among those aged 65-74.

In the New European Commission's Skills Agenda for Europe¹¹, one of the goals is to have 230 million adults, or 70% of the corresponding EU population, with at least basic digital skills by 2025. This goal has so far been achieved only in the Netherlands, Finland, Sweden, Germany and Denmark; Italy, with 42% of people with high and basic skills, is in the third last country in Europe (Figure 9).

Figure 9. Basic and high digital skills for some European countries and 2025 target. Year 2019. Percentage values

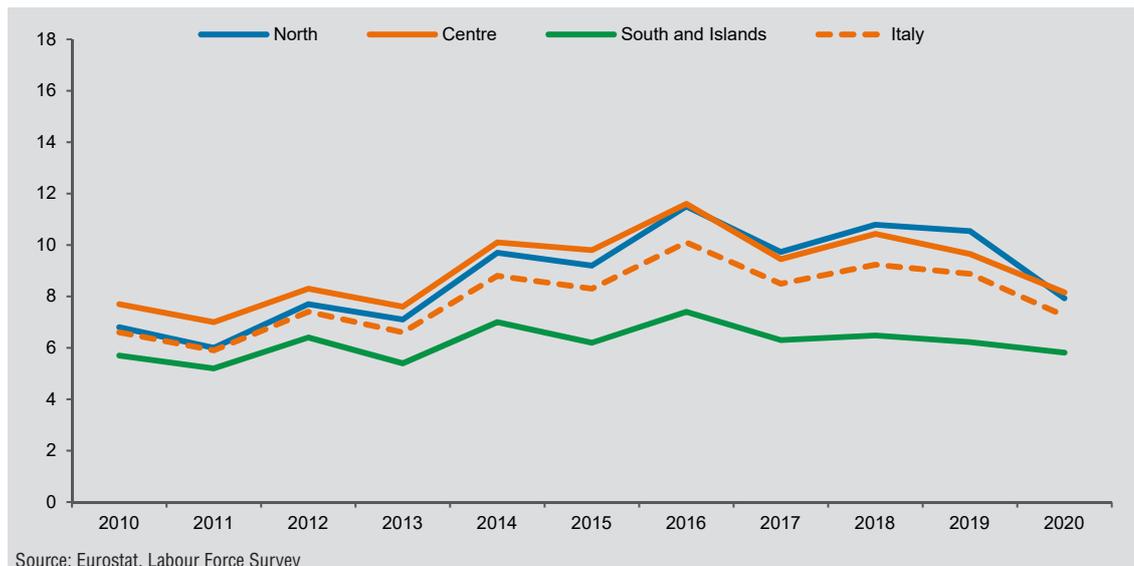


11 The Skills Agenda for Europe, presented in July 2020, and part of the implementations of the European Green New Deal strategy presented in December 2019, proposes in Action 6: "Skills to support the twin transitions (green transition and digital skills for all)" actions to increase digital skills and indicators to monitor their growth. <https://ec.europa.eu/social/main.jsp?catId=1223&langId=en>.

The setback for lifelong learning

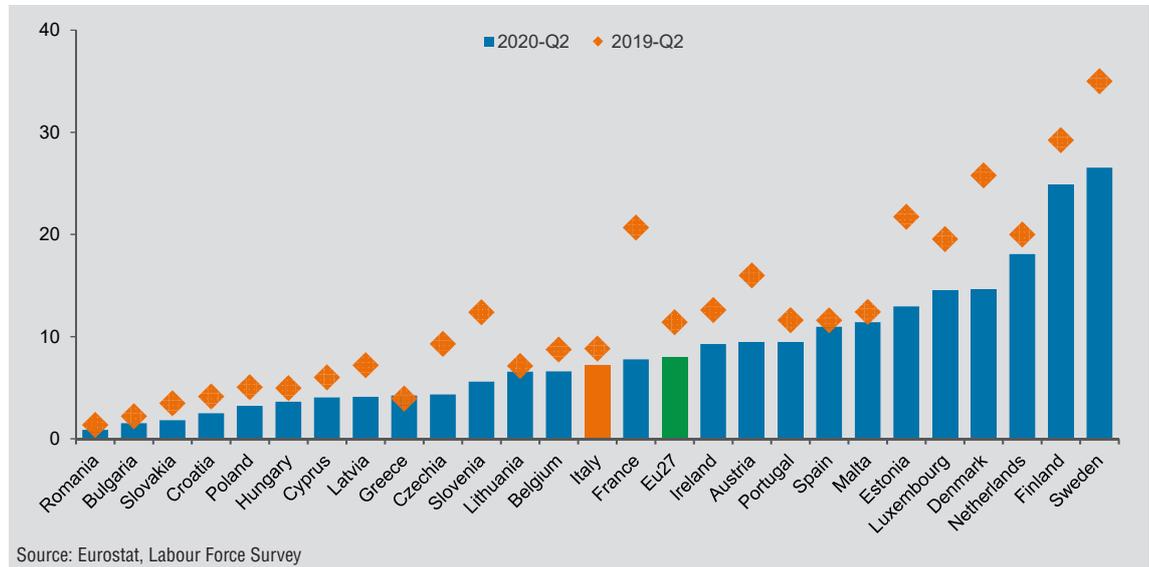
The Skills Agenda indicates, among other things, how lifelong learning must become a reality in Europe. All citizens must have access to attractive, innovative and inclusive learning programs, not least because skills become obsolete very quickly. What will make the difference is lifelong learning, even in old age. However, in Italy, the use of lifelong learning, in the 4 weeks prior to the interview in the Labour Force Survey referring to the second quarter of 2019, reached only 8.9% among the population aged 25-64, compared to a European average of 11.4% (Figure 10). In 2020, the opportunity to participate in learning activities was, also like school, abruptly interrupted, especially in March, April, and May, or partially converted to other ways of delivery. Average participation for Italy fell to 7.2% of individuals; the decline was particularly evident for the North, where the percentage fell from 10.5% in the second quarter of 2019 to 7.9% in the same period in 2020, and for the Centre (from 9.6% to 8.2%).

Figure 10. Participation in lifelong learning for the 25-64 year old population by geographic region. Years 2010-2020 Q2. Percentage values



In other European countries that have imposed closures and restrictions on travel and activities, the share of those who have participated in training activities has also experienced significant declines (Figure 11): this is the case in Denmark (from 25.8% in Q2 2019 to 14.6% in Q2 2020), France (from 20.7% to 7.8%), Sweden (from 35% to 26.5%), Estonia (from 21.7% to 12.9%), Slovenia (from 12.4% to 5.6%), and Austria (from 16% to 9.5%).

Figure 11. Participation in lifelong learning for the 25-64 year old population for some European countries. Years 2019 and 2020 II quarter. Percentage values



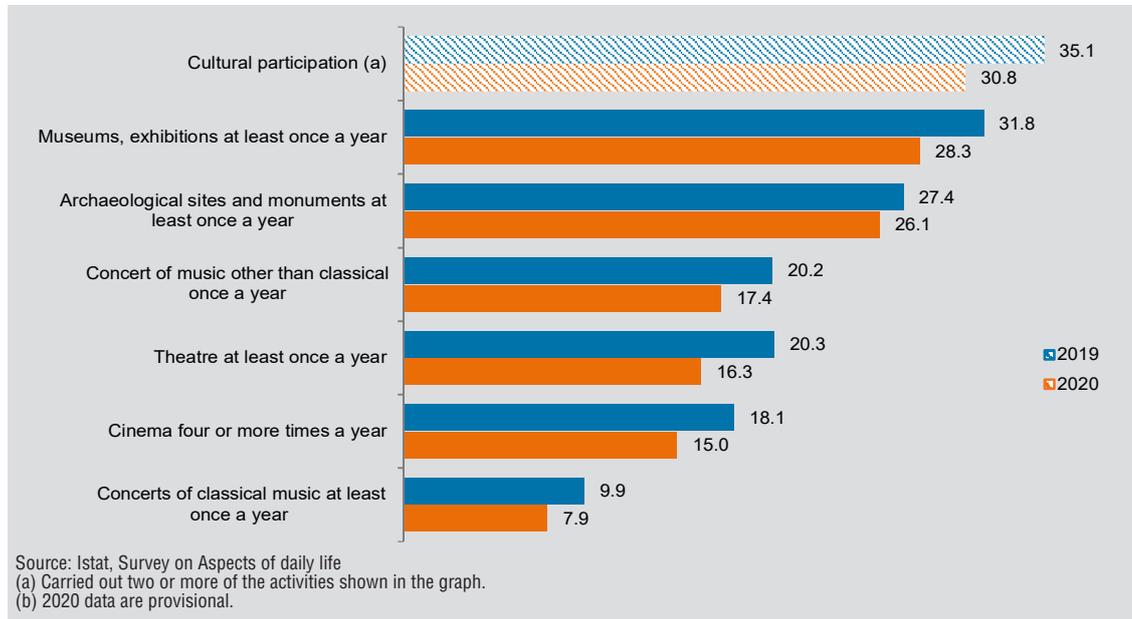
Participation in cultural activities outside the home declines, reading increases

In 2020, the lockdown significantly affected some leisure activities that take place outside the home: the closure of museums, theatres and cinemas, the suspension of concert activities and limits imposed on travel led to a decrease in the share of the population claiming to have enjoyed cultural activities. In contrast to cultural enjoyment outside the home, in 2020, thanks to more time spent inside the home, an upturn in book reading is recorded. In 2020, the share of people aged 6 and over who engaged in at least two cultural activities outside the home (such as going to the cinema, the theatre or a concert, visiting museums or exhibitions) stood at 30.8%, going down by 4.3 percentage points compared to 2019 (35.1% - Figure 12). The decline is across the Country and it is more accentuated for theatrical performances (-4 percentage points compared to 2019) and visits to museums and exhibitions (-3.5 percentage points). In the face of a decrease in the number of people who say they went to the cinema at least 4 times in the last year (from 18.1% in 2019 to 15% in 2020), there is a significant increase in the share of the population that has the habit of watching movies at home at least weekly, which reaches 69.8% in 2020 (it was 65.1% in 2019).

Cultural participation outside the home is higher among women, compared to men (31.6% vs. 30%), and in the Centre-North (over 34%), compared to the South and Islands (23.3%); it is confirmed to be higher among young people aged 11-24 (about 44%), gradually decreasing in subsequent age groups and going below 9% among people aged 75 and older. Between 2019 and 2020, however, the bigger decreases are observed among the younger segments of the population.

2. Education and training

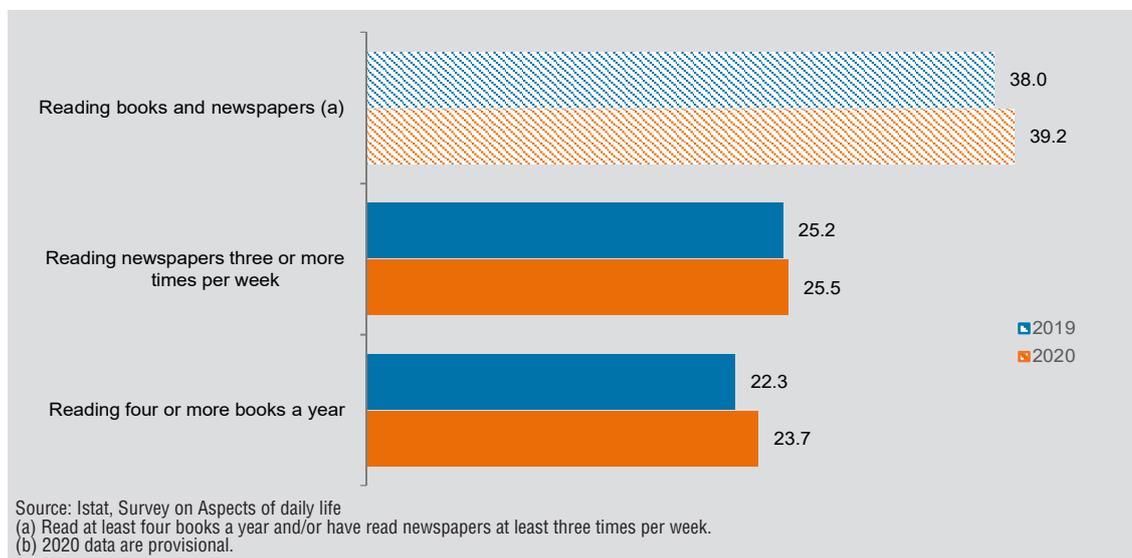
Figure 12. Persons aged 6 years and older who engaged in 2 or more cultural activities outside the home in the 12 months before the interview. Years 2019 and 2020 (b). Percentage values



Strong educational qualification-related inequalities in cultural participation outside the home are also confirmed in 2020, with a ratio of about 6 to 1 between the participation of people aged 25 and older with a high educational qualification compared to those with at most a lower secondary school diploma.

Between 2019 and 2020, there is an increase in reading (at least 4 books in the year and/or at least 3 newspapers per week) by about 1 percentage point (from 38% to 39.2%). This increase is due exclusively to the reading of books, which increases from 22.3% to 23.7%, while a substantial stability is observed in the reading of newspapers, which is at around 25% in the two years considered (Figure 13).

Figure 13. Persons aged 6 and older who read at least 4 books in the year and/or at least 3 newspapers per week (print or online). Years 2019 and 2020 (b). Percentage values



Between 2019 and 2020, there is a significant increase in book and/or newspaper reading among women, an increase that brings the percentage of female readers to 39.5%, overcoming, for the first time, the share of male readers (38.8%).

Reading books and/or newspapers is most prevalent among adults aged 35-74: about 4 in 10 individuals engage in this activity in this age group. Between 2019 and 2020, it is above all among adults aged 55-64 that the greatest increase in reading is observed (about 3 percentage points), while there is substantial stability among young people up to 24 years of age and people aged 65 and older.

From a territorial point of view, a strong North-South gradient can be observed, with percentages of readers remaining higher in the northern (47.6%) and central (40.6%) regions and lower in the South and Islands (27%). Compared to 2019, there is stability in the share of readers in both Central Italy and the South and Islands and a significant increase, however, in the Northern regions.

Declining library use

In 2020, 12.8% of the population aged 3 years and older declared that they had been to a library at least once in the last year; the situation determined by the pandemic has certainly affected the share of library users, which decreased between 2019 and 2020 by 2.5 percentage points. This decrease is recorded among users in the North and the Centre of the Country, while it is more contained in the South and Islands and almost exclusively affects young people and those up to 24 years of age. On the other hand, the closure of schools and universities has undoubtedly produced changes in the habits of students that nevertheless present the highest percentage of users, 29.4% in 2020. Starting from the age of 25, on the other hand, library attendance decreases significantly (it is 14% among 25-34 year olds) to drop below 9% after the age of 54.

The prevalence of women who have gone to the library is higher: 14.5% compared to 10.9% among men. The greatest gender gap is found among 15-24 year olds; in this age group, 37.1% of girls report having been to the library, compared to 23.5% of boys.

In 2020, libraries were frequented by a greater number of users in the northern (17.9% of the population) and central (10.9%) regions. The lowest percentages are found in the South and Islands (6.9%). Differences in the use of libraries are certainly also connected to the different distribution of library services throughout the Country, which are more prevalent in the central and northern regions and less so in southern Italy.

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 old):** 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 old):** Percentage of people aged 30-34 years having completed tertiary education (ISCED 5, 6, 7 or 8) on total people aged 30-34 years.
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 (students in grade 10):** Share of students in grade 10 (second year of upper secondary education) performing below the baseline level of proficiency in literacy competence.
Source: Invalsi, Educational national assessment
- 9. Inadequate level of numeracy (students in grade 10):** 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, Educational national assessment
- 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. Pupils aged 0-2 years enrolled in early childcare services:** Pupils aged 0-2 years enrolled in early childcare services (per 100 children aged 0-2 years).
Source: Istat, Survey on Aspects of daily life
- 12. STEM graduates:** Graduates in tertiary education, in science, math., computing, engineering, manufacturing, construction per 1,000 residents aged 20-29. The numerator includes graduates with a Short-cycle tertiary education, Bachelor’s or equivalent level, Master’s or equivalent level, Doctoral or equivalent level (levels 5-8 of Isced 2011).
Source: Istat, Processing on Ministry of Education, University and Research data
- 13. Outdoor cultural participation:** Percentage of people aged 6 years and over who have carried out 2 or more activities in the 12 months before the interview out of total people aged 6 years and over. The activities considered are 6: going to the cinema at least four times; at least once to: theatre; exhibitions and museums; archaeological sites, monuments; concerts of classical music, opera; concerts of other kind of music.
Source: Istat, Survey on Aspects of daily life
- 14. Reading books and newspapers:** Percentage of people aged 6 and over who have read at least four books a year for reasons not strictly educational or professional (paper books, e-books, online books, audio books) and/or have read newspapers (paper and/ or online) at least three times per week out of total people aged 6 years and over.
Source: Istat, Survey on Aspects of daily life
- 15. Use of libraries:** Percentage of people aged 3 and over who went to the library at least once in the past 12 months before interview out of total people aged 3 years and over.
Source: Istat, Survey on Aspects of daily life

Indicators by region and geographic area

| REGIONS AND GEOGRAPHIC AREAS | Participation in the school sy- stem of children aged 4-5 (a) | People with at least upper secondary education level (25-64 years old) (b) | People having completed ter- tiary education (30-34 years old) (c) | First-time entry rate to universi- ty by cohort of upper secondary graduates (d) | Early leavers from education and training (e) | People not in education, employment, or training (NEET) (f) |
|---------------------------------|---|---|---|---|--|---|
| | 2018/2019 | 2020-Q2 | 2020-Q2 | 2018 | 2020-Q2 | 2020-Q2 |
| Piemonte | 95.5 | 63.6 | ... | 52.9 | ... | 19.6 |
| Valle d'Aosta/Vallée d'Aoste | 95.7 | 60.3 | ... | 50.2 | ... | 20.2 |
| Liguria | 95.6 | 68.7 | ... | 55.4 | ... | 24.2 |
| Lombardia | 92.7 | 64.6 | ... | 54.5 | ... | 17.0 |
| Trentino-Alto Adige/Südtirol | 96.9 | 71.4 | ... | ... | ... | 14.7 |
| <i>Bolzano/Bozen</i> | <i>96.8</i> | <i>71.4</i> | ... | ... | ... | <i>12.8</i> |
| <i>Trento</i> | <i>97.1</i> | <i>71.4</i> | ... | <i>51.6</i> | ... | <i>16.6</i> |
| Veneto | 94.0 | 66.0 | ... | 50.2 | ... | 13.3 |
| Friuli-Venezia Giulia | 95.6 | 71.6 | ... | 51.9 | ... | 13.5 |
| Emilia-Romagna | 93.2 | 69.1 | ... | 53.6 | ... | 16.7 |
| Toscana | 95.4 | 64.2 | ... | 51.9 | ... | 18.6 |
| Umbria | 95.9 | 70.9 | ... | 54.9 | ... | 20.0 |
| Marche | 95.7 | 65.6 | ... | 56.1 | ... | 16.7 |
| Lazio | 89.1 | 70.8 | ... | 53.8 | ... | 22.7 |
| Abruzzo | 96.9 | 68.6 | ... | 57.7 | ... | 22.3 |
| Molise | 94.5 | 62.7 | ... | 56.3 | ... | 26.6 |
| Campania | 99.2 | 54.0 | ... | 43.7 | ... | 33.6 |
| Puglia | 97.9 | 52.0 | ... | 48.3 | ... | 31.9 |
| Basilicata | 98.8 | 62.7 | ... | 52.5 | ... | 26.2 |
| Calabria | 97.1 | 54.9 | ... | 49.1 | ... | 39.1 |
| Sicilia | 96.1 | 51.8 | ... | 43.8 | ... | 39.1 |
| Sardegna | 96.8 | 53.7 | ... | 50.1 | ... | 28.3 |
| North | 93.9 | 66.2 | 30.9 | 52.5 | 11.1 | 16.8 |
| Centre | 92.3 | 68.2 | 33.0 | 53.7 | 12.3 | 20.5 |
| South and Islands | 97.6 | 54.4 | 21.7 | 46.6 | 16.9 | 33.9 |
| Italy | 94.8 | 62.6 | 27.9 | 50.4 | 13.5 | 23.9 |

- (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;

2. Education and training

75

| Participation in life-long learning (b) | Inadequate level of literacy (g) | Inadequate level of numeracy (g) | People with high level of IT competencies (h) | Pupils aged 0-2 years enrolled in early childcare services (i) | STEM graduates (j) | Outdoor cultural participation (k) | Reading books and newspapers (k) | Use of libraries (l) |
|---|----------------------------------|----------------------------------|---|--|--------------------|------------------------------------|----------------------------------|----------------------|
| 2020-Q2 | 2018/2019 | 2018/2019 | 2019 | 2018/2020 (*) | 2018 | 2020 (*) | 2020 (*) | 2020 (*) |
| 6.5 | 23.8 | 28.4 | 23.6 | 30.5 | 14.4 | 33.9 | 43.9 | 15.9 |
| 7.4 | 15.3 | 28.0 | 28.3 | 41.7 | 9.5 | 33.8 | 48.4 | 24.5 |
| 9.5 | 27.9 | 34.9 | 22.0 | 22.3 | 16.7 | 32.9 | 48.6 | 12.8 |
| 7.6 | 18.6 | 22.5 | 26.6 | 26.5 | 14.1 | 35.5 | 46.7 | 18.4 |
| 9.5 | | | 25.7 | 22.9 | 7.9 | 39.6 | 58.1 | 30.0 |
| 6.1 | 32.2 | 34.5 | 23.6 | 5.7 | 2.7 | 41.0 | 60.5 | 31.2 |
| 12.8 | 16.8 | 15.3 | 27.8 | 43.0 | 13.5 | 38.3 | 55.8 | 28.7 |
| 6.9 | 16.5 | 18.5 | 23.8 | 34.5 | 15.6 | 33.0 | 46.2 | 17.2 |
| 8.5 | 21.1 | 21.9 | 25.8 | 27.9 | 16.2 | 37.4 | 53.1 | 16.8 |
| 10.0 | 24.7 | 25.8 | 25.0 | 33.5 | 15.4 | 34.5 | 50.2 | 18.3 |
| 8.9 | 30.6 | 35.0 | 23.8 | 42.6 | 13.3 | 34.7 | 42.9 | 14.5 |
| 7.8 | 28.4 | 33.2 | 22.3 | 32.4 | 16.0 | 28.6 | 37.9 | 10.8 |
| 7.6 | 25.4 | 28.6 | 21.5 | 27.8 | 17.6 | 26.9 | 34.6 | 11.2 |
| 7.9 | 28.0 | 40.8 | 23.9 | 33.8 | 16.3 | 37.2 | 41.0 | 8.5 |
| 6.4 | 31.5 | 37.8 | 21.5 | 20.1 | 18.2 | 28.4 | 35.7 | 8.2 |
| 7.6 | 37.1 | 44.3 | 18.9 | 27.6 | 18.9 | 22.5 | 28.9 | 6.2 |
| 5.6 | 42.1 | 55.5 | 16.6 | 19.1 | 15.2 | 23.7 | 22.0 | 5.6 |
| 6.1 | 39.6 | 47.8 | 18.0 | 26.5 | 14.5 | 24.7 | 26.8 | 8.1 |
| 7.7 | 39.9 | 47.3 | 17.8 | 17.3 | 18.0 | 24.3 | 24.8 | 6.8 |
| 4.5 | 47.0 | 57.7 | 16.7 | 17.3 | 14.4 | 15.9 | 21.2 | 4.1 |
| 4.6 | 43.2 | 57.1 | 14.4 | 24.4 | 11.5 | 22.0 | 26.8 | 5.8 |
| 9.3 | 46.9 | 60.5 | 23.0 | 28.8 | 12.8 | 27.1 | 45.3 | 14.7 |
| 7.9 | 20.7 | 23.8 | 25.0 | 29.3 | 14.6 | 34.8 | 47.6 | 17.9 |
| 8.2 | 28.5 | 36.8 | 23.5 | 35.3 | 15.5 | 34.5 | 40.6 | 10.9 |
| 5.8 | 41.9 | 53.5 | 17.2 | 22.6 | 14.2 | 23.3 | 27.0 | 6.9 |
| 7.2 | 30.4 | 37.8 | 22.0 | 28.2 | 15.1 | 30.8 | 39.2 | 12.8 |

(h) Per 100 persons aged 16-74;

(i) Per 100 pupils aged 0-2;

(j) Per 1,000 population aged 20-29;

(k) Per 100 persons aged 6 years and over;

(l) Per 100 persons aged 3 years and over;

(*) Provisional data.