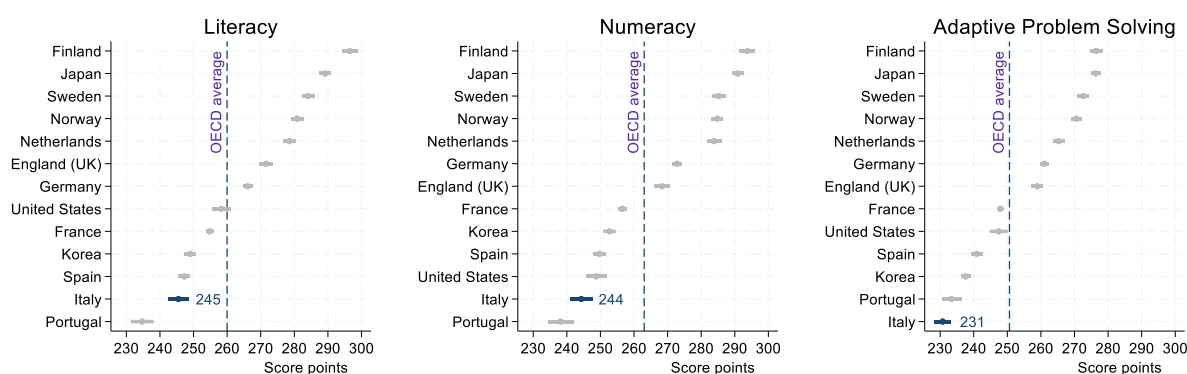# Italy

The Survey of Adult Skills offers unique insights on adults' proficiency in literacy, numeracy, and problem solving. These skills are crucial for both personal and societal success, and form the foundation for continuous learning and innovation. Skilled adults are better equipped to handle the complexities of modern life. By effectively navigating today's information-rich environment, they contribute to more informed decisions and policies.

In 2022-23, the survey assessed adults aged 16-65 in 31 countries and economies. Italy participated in the Survey of Adult Skills for the second time in 2022-23 (its first participation was in 2011-12). By comparing results over time and with those of other participating countries and economies, Italy can track the skill levels of its adult population, pinpoint barriers to skill development and use, and craft effective policies to address these challenges.

How well did adults in Italy do in the assessment?

Figure 1. Mean performance in literacy, numeracy and adaptive problem solving

Italy, OECD average and selected comparison countries/economies

Notes: Comparison countries include the highest-performing countries, and the participating countries and economies with the largest population of adults aged 16-65. Horizontal lines that extend beyond the markers represent a measure of uncertainty associated with mean estimates (the 95% confidence interval).
Source: Table A.2.1.

In Italy, adults aged 16-65 scored, on average, 245 points in literacy (below the OECD average), 244 points in numeracy (below the OECD average), and 231 points in adaptive problem solving (below the OECD average) (Figure 1).

In literacy, 35% of adults (OECD average: 26%) scored at Level 1 or below, meaning they have low literacy proficiency. At Level 1, they can understand short texts and organised lists when information is clearly indicated, find specific information and identify relevant links. Those below Level 1 can at most understand

short, simple sentences. At the other end of the spectrum, 5% of adults (OECD average: 12%) scored at Levels 4 or 5 in literacy and are high performers. These adults can comprehend and evaluate long, dense texts across several pages, grasp complex or hidden meanings, and use prior knowledge to understand texts and complete tasks (see Table 2.4 in Chapter 2 for a description of what adults can do at each proficiency level in literacy, and Figure 2 for the proportion of adults at each level).
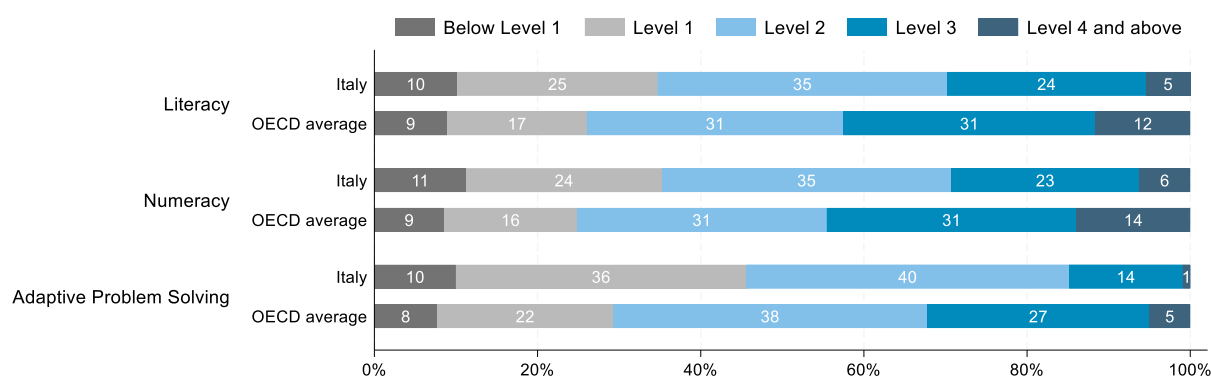
In numeracy, 35% of adults (OECD average: 25%) scored at or below Level 1 proficiency. At Level 1, they can do basic maths with whole numbers or money, understand decimals, and find single pieces of information in tables or charts, but may struggle with tasks needing multiple steps (e.g. solving a proportion). Those below Level 1 can add and subtract small numbers. Adults at Levels 4 or 5 are top performers (6% in Italy, 14% on average across OECD countries and economies). They can calculate and understand rates and ratios, interpret complex graphs, and critically evaluate statistical claims. (see Table 2.5 in Chapter 2 for a description of what adults can do at each proficiency level in numeracy, and Figure 2 for the proportion of adults at each level).

In adaptive problem solving, 46% of adults (OECD average: 29%) scored at or below Level 1 proficiency. Adults at Level 1 can solve simple problems with few variables and little irrelevant information, which do not change as they make progress towards the solution. They struggle with multi-step problems, or those needing monitoring of multiple variables. Adults below Level 1 at most understand very simple problems, typically solved in one step. Some 1% of adults (OECD average: 5%) scored at Level 4. They have a deeper understanding of problems, and can adapt to unexpected changes, even if they require a major re-evaluation of the problem (see Table 2.6 in Chapter 2 for a description of what adults can do at each proficiency level in adaptive problem solving, and Figure 2 for the proportion of adults at each level).

When considering all three domains jointly, 26% of adults in Italy (OECD average: 18%) scored at the two lowest levels of these proficiency scales (Table A.2.3).

Figure 2. Proficiency in literacy, numeracy, and adaptive problem solving among adults

Italy and OECD average
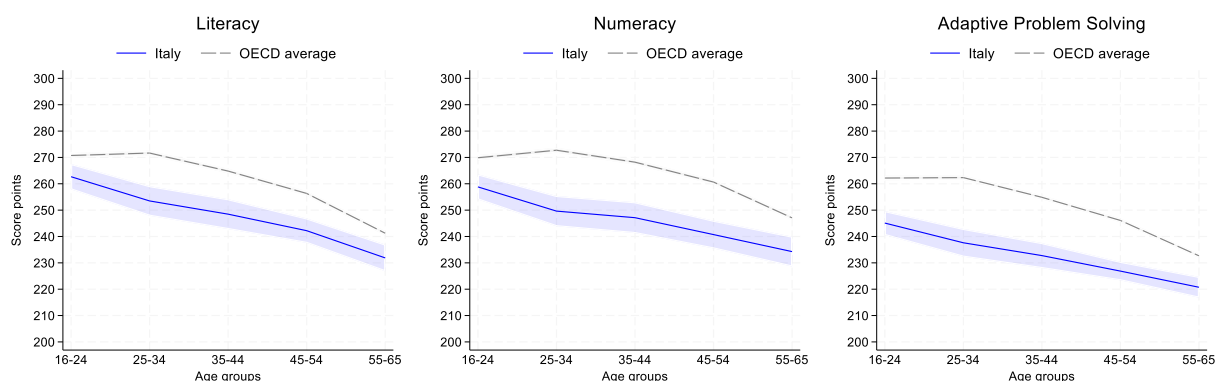

Note: Percentages may not add up to 100 due to rounding.
Source: Table A.2.2.

Older adults (aged 55 to 65) in Italy displayed lower proficiency than 25-34 year-olds in literacy, numeracy and adaptive problem solving (Figure 3). In literacy, adults aged 55-65 scored 22 points lower than 25-34 year-olds (OECD average: 30 points lower). Skill gaps between older and younger adults could reflect ageing effects (see below), but also differences in the quality and quantity of education and training across generations.

For young adults still enrolled in initial education or who completed it only recently, the results of the Survey of Adult Skills complement those from school-based assessments and provide useful information about the quality of education systems. In Italy, young adults aged 16 to 24 scored, on average, 263 points in literacy (below the OECD average), 259 points in numeracy (below the OECD average), and 245 points in adaptive problem solving (below the OECD average) (Figure 3).

Figure 3. Average proficiency in literacy, numeracy, and adaptive problem solving, by age

Italy and OECD average

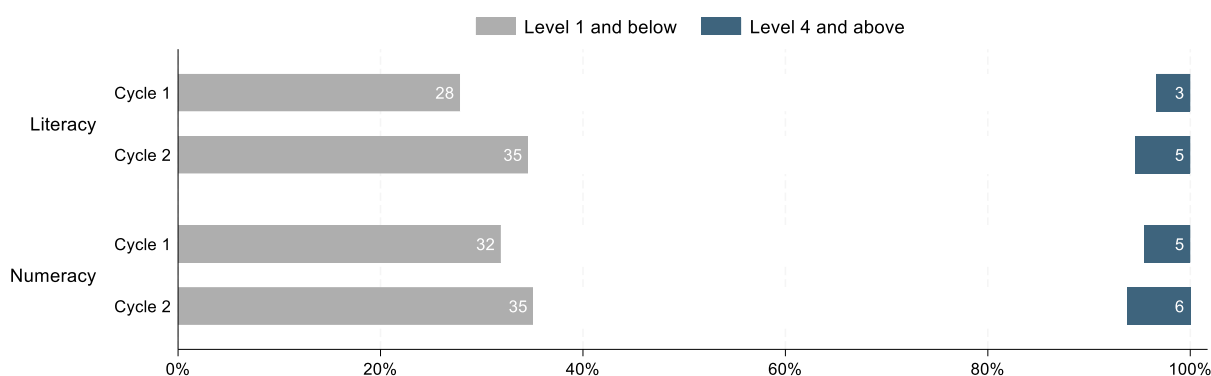Note: The shaded area represents a measure of uncertainty associated with estimates (the 95% confidence interval).
Source: Table A.2.4.

How did adults' skills evolve over the past decade?

In Italy, average results in 2022-23 remained similar compared to 2011-12 in literacy and numeracy (Table A.3.1). Despite this apparent stability, in both literacy and numeracy, the gap between the highest- and lowest-performing adults widened between 2011-12 and 2022-23 (Tables A.3.3). In literacy the share of low-performing adults (scoring at Level 1 or below) increased; the share of high-performing adults (scoring at Levels 4 or 5) remained stable (Table A.3.2).

Figure 4. Share of adults scoring at low and high proficiency levels in literacy and numeracy
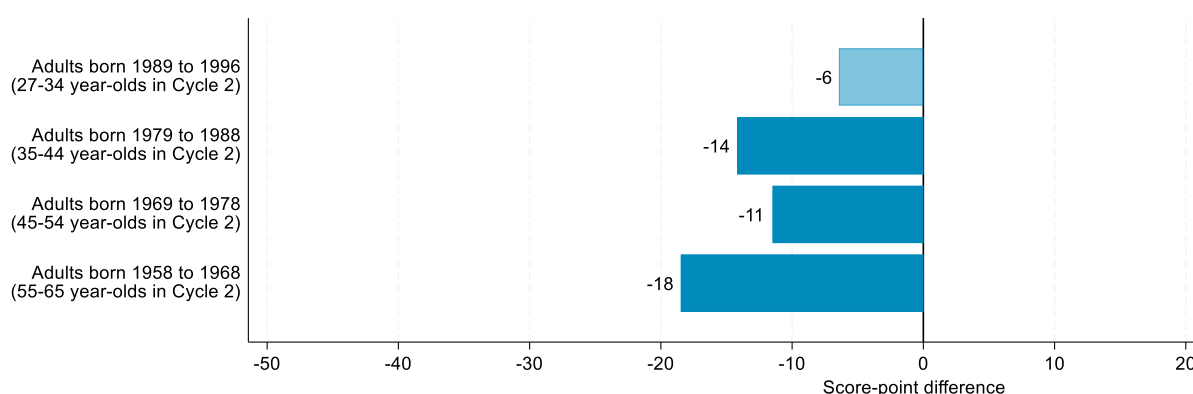
Italy, 2011-12 and 2022-23

Note: Does not include adults who in Cycle 2 were only administered the doorstep interview due to a language barrier, to maximise the comparability across cycles.
Source: Table A.3.2.

Comparing how adults born in the same years performed across different cycles, and, therefore, at different ages, provides insights into how skills change, on average, as people age. In most countries, these comparisons reveal substantial age-related skill losses after the age of 35 (but more rarely among younger adults). Age-related skill losses are also observed in Italy. Young adults born between 1989 and 1996 scored 6 points lower in literacy in 2022-23 (when they were 27-34 years old) than in 2011-12 (when they were 16-23 years old), a non-significant change. Meanwhile, older generations, aged 44 to 54 in 2011-12, scored 18 points lower in literacy in 2022-23 (when they were 55-65 years old), a significant decline (Figure 5).

Figure 5. Effect of ageing on literacy proficiency in Italy

Change in literacy proficiency within birth cohorts (2011-12 to 2022-23)

Note: Does not include adults who in Cycle 2 were only administered the doorstep interview due to a language barrier, to maximise the comparability across cycles; does not include foreign-born adults who had lived in the country less than 10 years. Any non-significant differences are shown in a lighter tone.
Source: Table A.3.10 (L).

Skill differences related to educational attainment, gender and immigrant background

In all countries and economies, higher levels of educational attainment are associated with greater proficiency in literacy, numeracy and adaptive problem solving. In Italy, among adults aged 25-65, those with tertiary education scored 19 points higher in literacy than those with upper secondary education (OECD average: 33 points), and those with upper secondary education scored 35 points higher than those with less than upper secondary education (OECD average: 43 points) (Table A.2.5 (L)).

However, this pattern of higher proficiency for tertiary-educated adults does not always hold across borders. In literacy, tertiary-educated adults in Italy, for example, scored lower than adults with upper secondary attainment in Finland (Table A.2.5).

On average, across participating OECD countries and economies, women displayed higher average proficiency than men in literacy (by 3 points), while men scored higher in numeracy (by 10 points) and adaptive problem solving (by 2 points). In Italy, no significant difference was observed in literacy; a significant 7-point difference in favour of men was observed in numeracy; and no significant difference was observed in adaptive problem solving (Table A.2.7).

Native-born adults of native-born parents displayed higher proficiency in literacy than foreign-born adults of foreign-born parents (Table A.2.10 (L)). Some of this gap, however, is accounted for by the different

socio-demographic characteristics of these two groups. After accounting for other relevant socio-demographic factors, in Italy the gap between the two groups shrinks from 30 to 13 points in literacy (Table A.2.10 (L)). In Italy, native-born adults of native-born parents make up 83% of the population that participated in the Survey of Adult Skills, while the second group (foreign-born adults of foreign-born parents) accounts for 12% of the population. (Table B.3.10).

Between 2011-12 and 2022-23, the proportion of foreign-born adults of foreign-born parents grew by about 6 percentage points in Italy (Table B.3.10 (Trend)). Over this same time period, the skills of immigrants evolved similarly to those of native-born adults (Table A.3.15).

In Italy, gaps in literacy and numeracy between adults with low-educated parents and adults with highly educated parents are less pronounced than on average across OECD countries and economies (Table A.2.12). Furthermore, these socio-economic gaps did not change significantly between 2011-12 and 2022-23 (Tables A.3.19 and A.3.20).

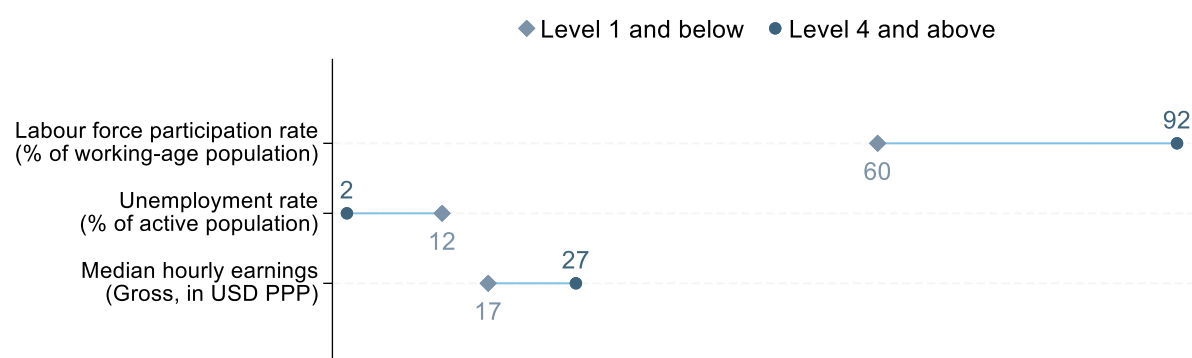## How do skills relate to economic and social outcomes in Italy?

Skills have a major impact on lives. In general, higher skills bring significant economic and social benefits. Adults with higher skills tend to have higher educational qualifications; however, the benefits of higher skills extend above and beyond the opportunities associated merely with formal educational qualifications.

Skills are key drivers of employability and wages

In Italy, as well as on average across OECD countries, adults who score at the highest levels of the numeracy proficiency scale have significantly better employment opportunities compared to adults who score at or below Level 1 (Figure 6).

Figure 6. Employment outcomes in Italy, by numeracy proficiency level

Adults aged 25-65 not in formal education

◆ Level 1 and below ● Level 4 and above

Labour force participation rate (% of working-age population)	60 ... 92
Unemployment rate (% of active population)	2 ... 12
Median hourly earnings (Gross, in USD PPP)	17 ... 27

Note: Does not include adults who were only administered the doorstep interview due to a language barrier.
Source: Tables A.4.2 (N) and A.4.7 (N).

In Italy, differences in employment outcomes by skill level persist even when comparing adults with similar education attainment (and after accounting for other differences that might be associated with higher skills). After accounting for these differences, a one-standard-deviation increase in numeracy proficiency is associated with a 7-percentage point higher likelihood of participating in the labour force (Table A.4.5); and, among the active population, with a further 3-percentage-point reduction in the risk of being

unemployed ([Table A.4.3](#)) And, among employed adults, a one-standard-deviation increase in numeracy proficiency is associated with wages that are 5% higher, a statistically significant difference. For comparison, a one-standard-deviation increase in education is associated with wages that are 14% higher in Italy ([Table A.4.8](#)).

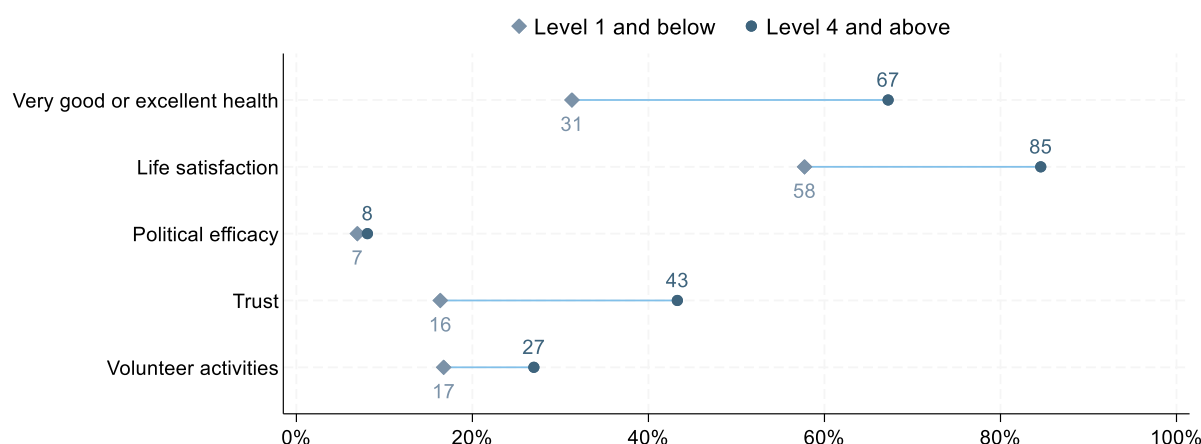### *How individual well-being and civic engagement relate to skills*

Skills are closely related to both individual well-being (e.g. self-reported health and life satisfaction) and civic engagement (e.g. political efficacy, trust and volunteering). Many low-skilled adults feel disconnected from political processes and lack the skills to engage with complex digital information, which is a growing concern for modern democracies.

Adults who score at the highest levels of the proficiency scale were significantly more likely to report high levels of life satisfaction and being in very good or excellent health than adults who score at or below Level 1, in Italy as well as on average across OECD countries (Figure 7 and [Table A.4.10 (N)](#)).

In Italy, this positive relationship between life satisfaction, health and numeracy holds even after controlling for a number of personal characteristics (age, gender, years of education, immigrant background, parental educational attainment, and whether an individual lives with a partner or has children) ([Table A.4.11 (N)](#)).

Figure 7. Well-being and civic outcomes in Italy, by numeracy proficiency level

Adults aged 25-65 not in formal education

Notes: Does not include adults who were only administered the doorstep interview due to a language barrier. All outcomes are based on self-reports. *Life satisfaction*, *Trust*, *Political efficacy*: Share of adults reporting a value of 7 or higher, on scales ranging from 0 to 10, in response to the following questions: 'All things considered, how satisfied are you with your life as a whole these days?'; 'Generally speaking, would you say that most people can be trusted [=10], or that you can't be too careful [=0] in dealing with people?'; 'How much would you say the political system in [your country] allows people like you to have a say in what the government does?'. *Volunteer activities*: Share of adults who reported any volunteer activity in the past 12 months.
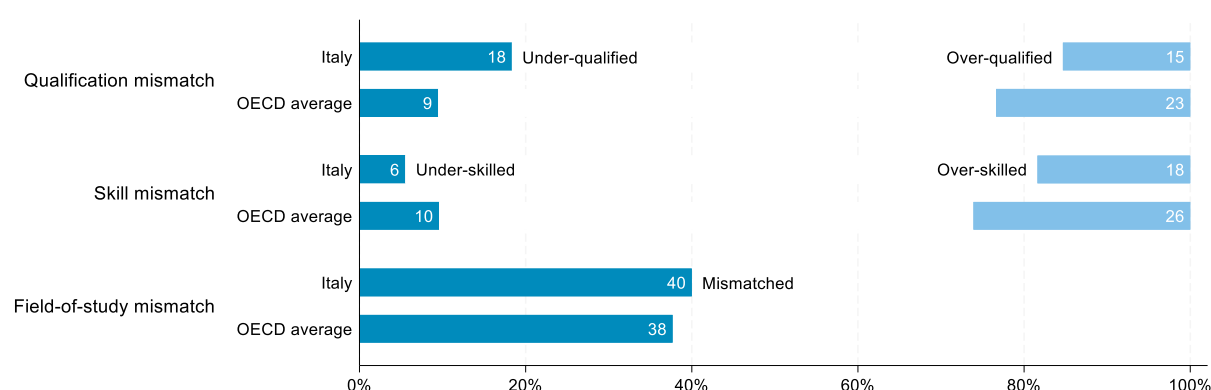Source: [Table A.4.10 (N)](#).

In Italy, adults who scored at the highest levels of the proficiency scales were also significantly more likely to report a high level of agreement with the statement "people can be trusted" (as opposed to "you can't be too careful") (Figure 7). The positive relationship of skills with trust holds even when accounting for a number of other social and demographic characteristics (age, gender, years of education, immigrant background, parental educational attainment, and whether an individual lives with a partner or has children) ([Table A.4.11 (N)](#)).

A good match between the skills and qualifications of workers and those required by their jobs is essential for a well-functioning and productive economy

In OECD countries, many workers are mismatched to their jobs, meaning that their qualifications, skills, or fields of study are different from what their current job would require. Mismatches can result from an inefficient allocation of workers to jobs. They can also reflect the fact that workforce skills and qualifications are not keeping pace with structural changes in the economy, driven by digitalisation, an ageing population, and the green transition.

Figure 8. Mismatches in qualifications, skills and field of study

Employed adults aged 25-65 who are not self-employed

Note: Does not include adults who were only administered the doorstep interview due to a language barrier.
Source: Table A.4.12.

In Italy, about 15% of workers are over-qualified (OECD average: 23%), and a further 18% are under-qualified (OECD average: 9%), meaning their highest educational qualification is above or below the level that is typically required for their current job (Figure 8).

About 6% of workers report that some of their skills are lower than what is required for their job (OECD average: 10%) (Figure 8). In Italy, they often say this is because they need to improve their project management or organizational skills (30%), followed by foreign language skills (29%) (Table A.4.13).

Finally, 40% of workers are mismatched in terms of field of study, because their highest qualification is not in the field that is most relevant to their job (Figure 8).

In OECD countries, adults who are overqualified for their job incur significant economic and social costs. This is not the case in Italy: on average, their wages are not significantly lower than peers in well-matched jobs who have similar educational attainment (OECD average: 12% lower) (Table A.4.16) and they are not significantly less likely to report a high level of life satisfaction (OECD average: 4 percentage points less likely) (Table A.4.17).

Key features of the Second Cycle of the Survey of Adult Skills

The survey and participants

The Survey of Adult Skills collects data through a personal interview and a self-completed assessment. As a household survey, data collection takes place in the respondents' own homes. In Italy, 4847 adults

participated in the survey (this reflects an overall response rate of 29%). The sample was drawn to be representative of about 37.4 million 16-to-65-year-olds residing in the country at the time of data collection, irrespective of nationality, citizenship or language status. Analyses were conducted to ensure that no significant bias would result from non-response (see the *Reader's Companion* for more details on these analyses).

The assessment

The 2023 Survey of Adult Skills assessed adults in three domains: literacy, numeracy, and adaptive problem solving. The assessments required adults to complete a set of tasks that reflect how these skills are applied across a wide range of situations in adults' lives. Many tasks involve data-intensive, complex digital environments, which are increasingly common in the workplace and everyday life in modern societies.

To this end, the assessment was exclusively administered on digital devices (tablets). This constitutes an important innovation over the previous cycle of the survey, where respondents had the option to sit the assessment using paper-based instruments.

The proficiency of respondents in each of these broad skill domains can be estimated based on their success and failure in completing assessment tasks. Proficiency estimates are reported on 500-point scales, and the same scales can also be used to describe the difficulty of assessment tasks. The analysis of how item characteristics vary as difficulty increases allows the OECD to identify and describe discrete levels of proficiency. If an individual's score is within a given level of proficiency, this implies that he or she is likely to successfully complete any task located at or below that same level.

The background questionnaire

Before completing the assessment on a tablet, participants in the Survey of Adult Skills were asked to provide information about themselves, including: their demographic and background characteristics, educational attainment, labour force status and employment, skills use, information on the working environment, non-economic outcomes, and social and emotional skills. The questionnaire was administered by a trained interviewer.

Some participants were not sufficiently fluent in the assessment language and were not able to communicate well enough with the interviewer to answer the background questionnaire. In these cases, a "doorstep" questionnaire was offered. This self-administered questionnaire, available in many different languages, collects key personal background information on gender, age, years of schooling, employment status, country of origin and duration of residence in the survey country. A statistical model was then used to estimate the proficiency of these respondents in literacy, numeracy and adaptive problem solving, based solely on the information available from this questionnaire.

In the first cycle of the survey, the doorstep questionnaire was not available. As a result, no information was collected on adults lacking sufficient language proficiency, and their proficiency could not be estimated. The inclusion of respondents to the doorstep interview can potentially affect the comparability of results between the first and the second cycle of the survey. In OECD reports, doorstep respondents are generally excluded when comparing results across cycles.

References

OECD (2024), *Do adults have the skills they need to thrive in a changing world? Survey of Adult Skills 2023*, OECD Publishing, Paris, https://doi.org/10.1787/b263dc5d-en

OECD (2024), *Survey of Adult Skills 2023 Reader's Companion*, OECD Publishing, Paris, https://doi.org/10.1787/3639d1e2-en

For more information about the Survey of Adult Skills visit www.oecd.org/en/about/programmes/piaac.html

Explore, compare and visualise more data and analysis using https://gpseducation.oecd.org.

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