



# Executive summary

The capacity to manage information and solve problems using computers is becoming a necessity as ICT applications permeate the workplace, the classroom and lecture hall, the home, and social interaction more generally. The Survey of Adult Skills, a product of the OECD Programme for the International Assessment of Adult Competencies (PIAAC), was designed to measure adults' proficiency in several key information-processing skills, namely literacy, numeracy and problem solving in technology-rich environments. Adults who are highly proficient in the skills measured by the survey are likely to be able to make the most of the opportunities created by the technological and structural changes modern societies are going through. Those who struggle to use new technologies are at greater risk of losing out.

The results from the first round of the survey, covering 24 countries and economies, were reported in the *OECD Skills Outlook 2013: First Results from the Survey of Adult Skills*. Another nine countries and economies collected data during 2014-15. This report presents the main findings for all 33 countries and economies that participated in the study over the two rounds. It finds substantial variation across countries/economies in adults' average proficiency in the three domains assessed. More than 80 score points separate the highest- and lowest-scoring countries in literacy and numeracy, although many countries and economies score within a relatively close range of each other. Within countries and economies, proficiency scores in literacy and numeracy vary considerably: on average, 62 score points separate the 25% of adults who attained the highest and lowest scores in literacy; in numeracy, 68 score points separate those two groups.

In almost all countries/economies, a sizeable proportion of adults (18.5% of adults, on average) has poor reading skills and poor numeracy skills (22.7% of adults, on average). Around one in four adults has no or only limited experience with computers or lacks confidence in their ability to use computers. In addition, nearly one in two adults is proficient only at or below Level 1 in problem solving in technology-rich environments. This adult can only use familiar applications to solve problems that involve few steps and explicit criteria, such as sorting e-mails into pre-existing folders.

## SKILLS PROFICIENCY AND DEMOGRAPHICS

The survey finds that, in the cohorts examined, proficiency in literacy and numeracy peaks at around age 30, while proficiency in problem solving in technology-rich environments peaks at around age 25. On average, older adults (55-65 year-olds) score around 30 score points lower in literacy than 25-34 year-olds. A substantial share of age-related differences in proficiency is associated with other individual characteristics, particularly adults' level of educational attainment. This is likely because highly proficient adults are more likely to participate in higher levels of education, and because longer periods of study provide the opportunity to develop higher levels proficiency in information-processing skills.

Parents' educational background, a proxy for socio-economic status, exerts a significant influence on adults' proficiency in literacy. Having at least one parent with tertiary qualifications is associated with a 40 score-point advantage over adults with neither parent having attained an upper secondary degree. Gender gaps in proficiency – which are negligible in literacy and average around 10 score points, in favour of men, in numeracy – are more pronounced among older adults. This could reflect either the fact that gender gaps in educational attainment are wider among older adults, or that women's numeracy skills depreciate more over time, possibly because they participate less in the labour market.

## PROFICIENCY AND THE LABOUR MARKET

Adults with higher proficiency in literacy, numeracy and problem solving in technology-rich environments tend to have better outcomes in the labour market than their less-proficient peers. They have greater chances of being employed and, if employed, of earning higher wages. Across the countries that participated in the Survey of Adult Skills, an adult who scores one standard deviation higher than another on the literacy scale (around 48 score points) is 0.8 percentage point more likely to be employed than unemployed, on average, after accounting for other factors, including educational attainment. And an increase of one standard deviation in literacy proficiency is associated with a 6% increase in wages, on average across the 33 participating countries and economies.

Workers who use information-processing skills more intensely in their jobs also tend to earn higher wages, even after accounting for differences in educational attainment and skills proficiency. Writing and problem solving are the skills most frequently used at work; reading skills follow close behind, while numeracy and ICT skills are least used.

On average across the countries/economies that participated in the survey, the intensity with which workers use their information-processing skills in their jobs is also related to the likelihood of being extremely satisfied at work, even after taking into account proficiency, educational attainment, gross hourly wages and a number of socio-demographic characteristics. The way work is organised – through implementing High-Performance Work Practices like team work, autonomy, task discretion, mentoring, job rotation and applying new learning – can increase the frequency with which skills are used at work.

## SKILLS AND THE ENGAGED CITIZEN

Proficiency in information-processing skills is positively associated with many aspects of individual well-being, notably health, beliefs about one's impact on the political process, trust in others, and participation in volunteer or associative activities. In most countries, adults who scored at lower levels of proficiency in literacy were more likely than those who scored at high levels to have reported poor health, that they have little impact on the political process, and that they do not participate in associative or volunteer activities. Individuals with lower proficiency were also more likely than those with higher proficiency to have reported less trust in others.

Results from the survey show clearly that what people know and what they do with what they know have a major impact on their life chances. Skills have become the global currency of 21st-century economies; but this “currency” can depreciate as the requirements of labour markets evolve and individuals lose the skills they do not use. To ensure that people acquire the right skills and that economies and societies make good use of those skills, a concerted effort is needed by governments, which design financial incentives and favourable tax policies that are conducive to skills development; education systems, which foster entrepreneurship and offer vocational training; employers, who invest in learning and can motivate workers to put more of their skills to use; labour unions, which ensure that investments in training result in better-quality jobs and higher salaries; and individuals, who take advantage of learning opportunities and deploy their skills at work and in everyday life. The OECD is working with many of the countries who participated in the survey to develop national skills strategies that bring all of these players together to make this happen.



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