

**Box 1.3.2: Upper secondary education is key to acquiring transferable skills**

Transferable skills, such as problem-solving, are vital for adapting knowledge to different work contexts, but there have been few attempts to measure how many people have acquired such skills.

One important step towards filling this gap is the OECD's Programme for the International Assessment of Adult Competencies (PIAAC). The results of the 2011 PIAAC survey confirm that upper secondary education is a vital way of improving transferable skills such as analysing information. Another key finding of the survey is that low literacy, associated with lower educational attainment, is as much of a barrier to effective engagement in the online world as lack of basic information and communication (ICT) skills. The digital divide may therefore also be a literacy divide.

Twenty-four countries participated in the 2011 PIAAC survey, which assessed the literacy, numeracy and problem-solving skills of 16- to 65-year-olds. It also collected information on the acquisition of problem-solving skills in technology-rich environments.

Across the 19 high income countries and regions where problem-solving skills in technology-rich environments were surveyed, 51% of those aged 16 to 24 were proficient at the two highest levels (2 and 3). At these levels of proficiency, individuals are typically able to solve problems involving several steps, evaluate the relevance of information and use several computer applications.

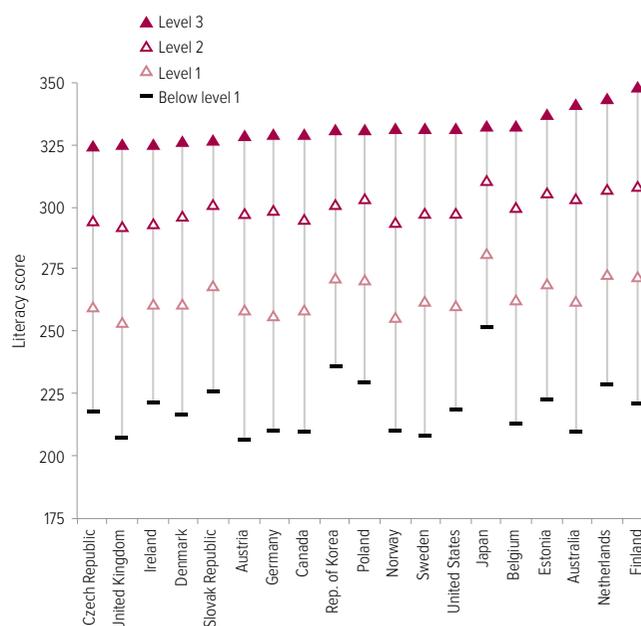
This leaves around half of young adults with low levels of such skills. These young adults are at most able to use familiar applications to solve problems that involve few steps and explicit criteria, such as sorting e-mails into pre-existing folders.

Proficiency in problem-solving in technology-rich environments among young adults is strongly associated with literacy skills. On average, moving from level 1 to level 2 in terms of performance in problem-solving skills is associated with an increase in the PIAAC literacy score from 264 to 300 points. This is equivalent to the difference in literacy skills between a person who can only draw lower level inferences from a text compared with a person who can interpret information from different sources (Figure 1.3.4).

Proficiency in problem-solving in technology-rich environments is also associated with the level of education completed. Nearly 47% of 16- to 24-year-olds who had not completed upper secondary education scored at level 1 or below, compared with 39% of those who had completed upper secondary education. In England and Northern Ireland (United Kingdom) 88% of those who had not completed upper secondary education scored at or below this minimum benchmark, compared with 54% of those who had completed it.

The PIAAC results show that countries need a more effective mix of policies and practices aimed at developing the skills necessary to manage information in digital environments. Policies should ensure that young people have solid foundation skills in literacy and numeracy, and that access to upper secondary education is expanded. In economies and societies in which access to resources and information is increasingly governed by digital ability, poor problem-solving skills increase chances of exclusion in the job market and other areas of life.

**Figure 1.3.4: Literacy is crucial to developing ICT skills**  
Mean scores of 16- to 24-year-olds on the literacy scale, by level of proficiency in problem-solving in technology-rich environments, PIAAC, 2011



Notes: A literacy score between 225 and 275 points means respondents could paraphrase or draw low level inferences from the text. A score between 275 and 325 points means respondents could identify, interpret, or evaluate one or more pieces of information that required varying levels of inference and where competing information was often present. The UK data refer to England and Northern Ireland. The Belgian data refer to Flanders. Source: OECD (2013c).