

The Survey of Adult Skills

PIAAC

2012

**Basic skills of
Finnish adults
one of the best
in the OECD
countries**



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The Programme for International Assessment of Adult Competencies (PIAAC 2012) assesses the basic level and use of competencies of people aged between 16 and 65. The key elements required for processing and managing information are proficiency in literacy, numeracy and problem-solving in technology-rich environments. Besides comparative international data, the survey also provides new information on the use of these skills in the workplace and everyday life, and how well the skills match the needs of the job.

Finnish adults have excellent literacy skills

The mean literacy rate of Finnish adults is excellent by international standards. Finland's mean score for literacy was 288 points, which is significantly better than the average score for the OECD countries (273 points). The only country to score higher was Japan, where also the distribution in the score points was the smallest across the OECD countries. Finland had the highest distribution in score points among the participating countries.

Two thirds of the adult population in Finland are either good or excellent readers. This is much better than the average for the OECD countries, which is 50%. In Finland, 11% of those aged between 16 and 65 are poor readers, in other words about 370,000 people. In Japan the percentage of poor readers is a mere 5%. By contrast, in Spain and Italy the equivalent percentages are between 27% and 28%.

Top-rate numeracy skills too

Mean proficiency in numeracy in Finland is one of the best in the survey. The mean score (282 points) is substantially higher than the OECD average (269 points). Japan was the only country that exceeded Finland in proficiency in numeracy (288 points). Differences in numeracy skills within the Finnish population are at the average international level. Over one half of all adult Finns (57%) have either good or excellent skills in numeracy. At the same time, though, 13% of the adult population experiences great difficulties with basic mathematical content. This figure is smaller than the OECD average (19%), but there are nonetheless about 450,000 people in the Finnish adult population with poor skills in numeracy. Spain and Italy are at the tail end in the survey in numeracy too, with nearly one third of the working-age population being poor performers in numeracy.



40 per cent of subjects have good or excellent ability to solve problems in a technology-rich environment

Altogether 41% of all Finns are either good or excellent at solving problems in technology-rich environments. This is well over the OECD average (34%). The only country to score higher than Finland in this domain is Sweden. Japan, which ranks top in literacy and numeracy, rates close to the OECD average in its ability to solve problems in a technology-rich environment.

Some of the participants in the survey did not want to or were not able to use the computer to complete the tasks. This means they did not participate in the section on the ability to solve problems in technology-rich environments. They account for an average of 24% in the OECD countries and about 19% in Finland. Differences were large across the countries in this domain of the survey. For instance, only 12% in Sweden failed to use the computer to execute the tasks whereas in Poland the corresponding figure was 50%.

Around 30% of the Finnish adult population, in other words about one million adults, have insufficient skills in solving problems in technology-rich environments, when adding together those who performed poorly in this domain and those who did not do the tasks by computer at all.

Young adults highly proficient

Finland's good average scores in the PIAAC survey are largely thanks to the good performance of the population aged between 20 and 39. There is no direct link between age and proficiency levels. Those aged 30 to 34 were the best in both literacy and numeracy, whereas those aged 25 to 29 had the best ability to solve problems in technology-rich environments. The youngest age group, those aged 16 to 19, did not score as high in the different domains of the survey as did those aged 20 to 24. Performance was weaker in all domains in the study in the youngest age group, among those aged between 16 and 19, than it was in the next age group.

Finnish participants aged 20 to 34 were, together with their Japanese counterparts, the best in both literacy and numeracy. In the ability to solve problems in technology-rich environments, this age group came in shared first place with the Swedes.

Large differences between age groups in Finland

The skills of older age groups are generally weaker than those of younger ones, but the differences between age groups vary considerably by country. In Finland, the performance gap in literacy and problem-solving in technology-rich environments between the oldest age groups to the best performing age groups is the widest in the survey, and second widest in numeracy too.

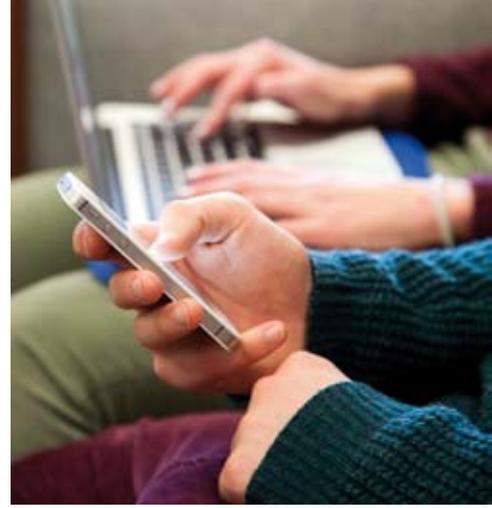
Literacy skills among 60 to 65-year-old Finns is at the same level as the equivalent OECD average for the same age group, while numeracy skills are somewhat better while the ability to solve problems in technology-rich environments is weaker than the OECD average.

All age groups included both excellent performers and poor performers, however.

The literacy proficiency in this survey can be reliably compared to those of the 1998 International Adult Literacy Survey (IALS). When making the comparison, it can be observed that average scores have slightly improved in all age groups in the population aged over 25, and the most in the 55-year-olds age group. In the youngest age groups, instead, the mean score has fallen marginally.

Small differences between men and women

There are no major differences in literacy between men and women in Finland, not even among young adults aged between 16 and 29. In the PISA studies, Finnish 15-year-old girls are much more proficient in literacy than are boys, but the discrepancy appears to vanish with age. Men are slightly better than women in numeracy. The average difference was ten points in favour of men, and a larger proportion of men ranked in the higher performance levels in the survey. There were no significant differences between men and women in the ability to solve problems in technology-rich environments. These gender differences are close the OECD average.



Strong link between educational level and proficiency, parents' educational background has a bearing too

Education is strongly connected to skills proficiency. Skills proficiency is linked not only the subjects' own educational attainment and the educational background of parents but also to participation on education and training in adult life too. These are all strongly interrelated. The educational level of parents is connected to their children's educational attainment while the subjects' own educational attainment affects access to jobs that involve opportunities for further learning and training. Proficiency in foundation skills is strongly connected to educational background in all countries in the survey. Finland is no exception in the OECD average.

In Finland, nearly half of all those with tertiary level education are either good or excellent in literacy (levels 4/5), whereas of those with only lower secondary level education only 9% reached the higher ranges in literacy. For those whose highest educational level was upper secondary or post-secondary level education, average scores were good too. However, for those with vocational qualifications, the average score was weaker and closer to the scores of those with lower secondary education in all domains of the survey. There are differences between the groups in ways other than education too. For instance, the average age in the groups varies. Those who have completed vocational education were on average ten years older than those who had an upper secondary level qualification. By international standards, young Finnish adults (ages 16 to 29) with vocational qualifications had excellent scores in literacy, with only their Japanese counterparts being more proficient.

The educational background of parents is reflected in the competencies of adult subjects. Among the participants in the study, those with one parent with tertiary education, 40% rank in the highest ranges (4/5) in literacy proficiency and 34% in numeracy proficiency. Where both parents had lower secondary level education or lower, the corresponding percentage was one tenth. The connection to the parents' educational attainment is clear also in the case of problem-solving skills in technology-rich environments. The link between parents' educational level and proficiency in foundation skills is slightly higher in Finland than the OECD average.

Besides basic formal education, participation in education later in life is connected to foundation skills. Those who had participated in work-related training over the past 12 months had much better foundation skills on average than those who had not participated in any training. However, these two groups also differ considerably in terms of educational attainment, age and participation in working life.

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Participation rates in education and training in Finland are one of the highest in the world.

Strong link between proficiency and occupation to use of skills at work

The participants of the study were asked to what extent they use different skills for processing information in their work, i.e. reading, writing, computation, information technology and problem-solving. They were also asked about the use of a range of generic skills, such as task discretion and self-organising skills, influencing skills, cooperative skills, learning at work, dexterity and physical skills.

The responses of Finnish participants in the use of these skills are close to the international average. The following showed the biggest differences: In Finland there is more task discretion at work whereas there is less collaboration with colleagues and physical exertion than in the OECD on average. Task discretion in Finland was among the four highest scoring countries.



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The proficiency level and use of information-processing tasks are closely related to occupation and its requirements. The better the basic competencies, the more they are also used at work. Those with good basic competencies are involved in information-processing tasks more often in their work – they read, write and compute, resolve complex problems and use information technology. They are typically also more self-organising at work and their job involves influencing others. By contrast, those with weaker foundation skills need dexterity and physical skills more often in their jobs.

There are no significant differences in learning at work or cooperative skills, instead, between the different proficiency levels.

Those aged under 25 or over 55 are involved in information-processing tasks in their work less than the other age groups. For young adults, the gap is wide relative to the rest of the age groups while for those aged 55 or over it is smaller. However, the differences between age groups are much smaller in terms of information-processing tasks than it is in proficiency in foundation skills. In the case of generic skills, the oldest age group have jobs that require dexterity. Jobs that require physical skills are predominant among the youngest age group (ages 16 to 24). They also have much less task discretion and influencing of others. The most active age group in the category of influencing others is those aged between 35 and 44.

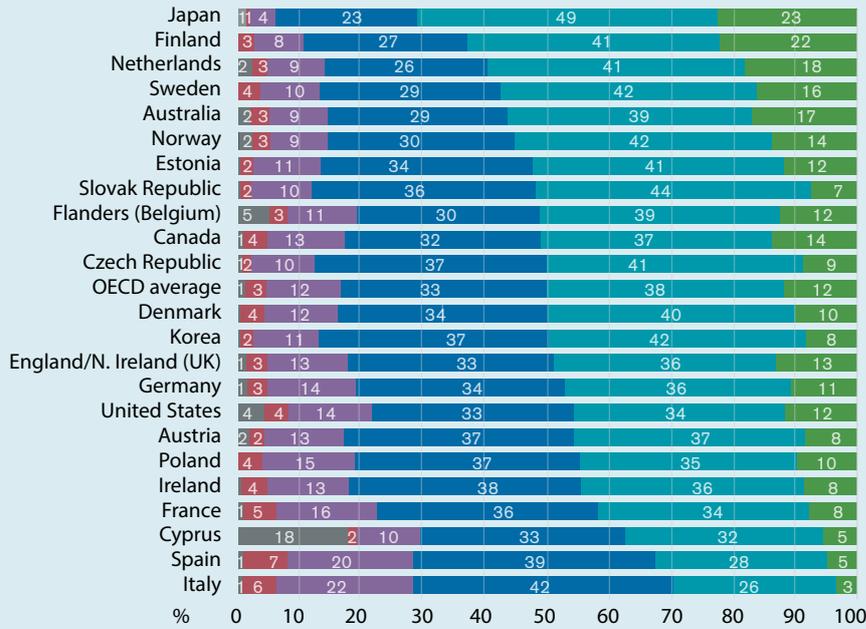
Qualifications meet requirements at work

In Finland, the qualifications of employees and the self-reported qualifications required for their work was appropriate in 69% of the cases. This is a slightly higher figure than for the OECD countries on average (66%). Proficiency acquired through education was under-used among 17% of the participants, which is slightly less than the OECD average (21%). Only five participating countries showed a lower proportion than Finland, with Italy having the lowest figure (13%). In Japan, instead, nearly one third of employees (31%) had qualifications that were under-used at work.

Altogether 14% of the Finnish participants had lower qualifications than their self-reported job requirement was. This is close to the same figure as for the OECD countries on average (13%). The highest qualification deficit is in Italy (22%) and Sweden (21%).

On the basis of the score points reported for job requirements, the survey also examined how well literacy and numeracy matched job requirements. In Finland, literacy and numeracy meets job requirements better than formal education. Less than 5% of employees had shortages in these skills in terms of their job requirements. About 7% were not using all their full potential in skills at work. The skills deficit in Finland is close to the average for the OECD countries, while the under-use of foundation skills is below average. Germany has the most employees whose literacy and numeracy skills are not used to their full potential (19%).

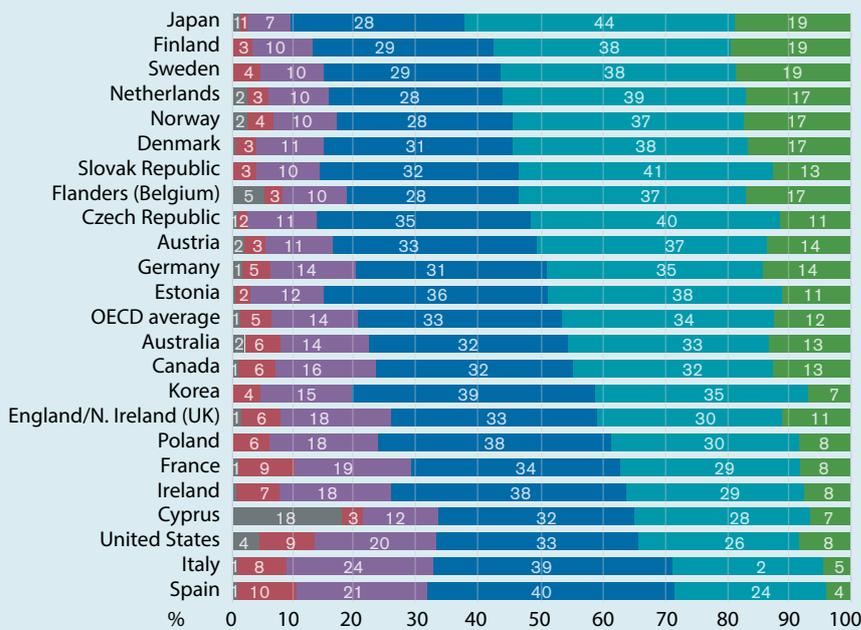
Percentage of adults scoring at each proficiency level in literacy



Missing
Below level 1
Level 1
Level 2
Level 3
Level 4/5

Countries are ranked in descending order of the percentage of adults at levels 3, 4 and 5.

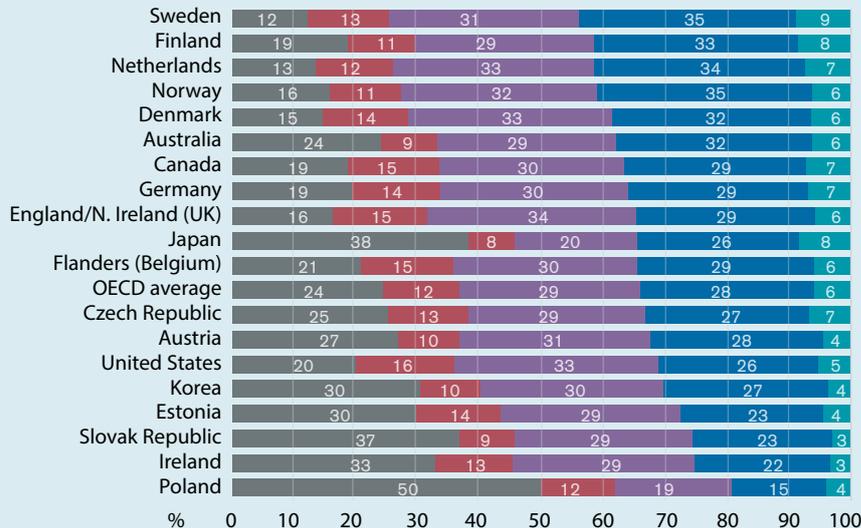
Percentage of adults scoring at each proficiency level in numeracy



Missing
Below level 1
Level 1
Level 2
Level 3
Level 4/5

Countries are ranked in descending order of the percentage of adults at levels 3, 4 and 5.

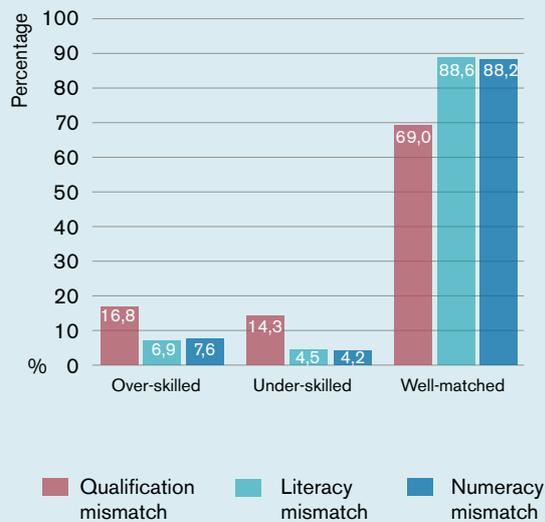
Percentage of adults scoring at each proficiency level in problem solving in technology-rich environments



Missing
Below level 1
Level 1
Level 2
Level 3

Countries are ranked in descending order of the percentage of adults at levels 2 and 3.

Percentage of workers in each category of qualification and skills mismatch



Information on the survey

Literacy and numeracy skills and the ability to solve problems in technology-rich environments were assessed mainly by answering practical questions by computer, although the survey could also be carried out by pencil in notebooks where necessary. The assessment tasks consisted of various everyday work and daily life situations where the respondents are expected to use the pertinent skills. The tasks did not require any specific expert knowledge or skills.

On the basis of the tasks completed in each domain of fundamental skills, the respondents were given score points that reflect their proficiency score. A scale was drawn up for each skills domain ranging from 0 to 500. The proficiency scores were used to place each respondent in proficiency levels. The proficiency levels were structured on the basis of how demanding they were. There are five levels in literacy and numeracy and three levels in the domain of problem-solving in technology-rich environments. There was a group of subjects who were excluded from the domain of problem-solving in technology-rich environments because they did not want to or were not able to use the computer to complete the tasks.

Information on the OECD's Survey of Adult Skills (PIAAC)

- Altogether 24 countries took part in the survey.
- The target group was all those aged between 16 and 65 living in the country.
- At the time of the survey in spring 2011, there were about 3.5 million in this population group in Finland.
- Altogether 5,464 people took part in the survey.
- The response rate in Finland was 66%.
- The data was collected by interviewers of Statistics Finland, who made home visits for interviews that consisted of two parts. The first part involved a computer-assisted background interview and the second part consisted of the participants executing independently the tasks that measured proficiency in fundamental skills.

Fundamental skills in information processing and management:

- Literacy denotes the ability to understand, evaluate, use and engage in written texts. Written texts include not only texts printed on paper but also different texts displayed on electronic screens.
- Numeracy refers to the ability to access, use, interpret and communicate mathematical information and ideas.
- The ability to solve problems in technology-rich environments means being able to use digital technology, communication tools and networks to acquire and evaluate information, communicate with others and perform practical tasks.

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The implementation of the Survey and the national results are available at: www.piaac.fi

The international adult education survey and its results can be accessed through the OECD webpages at: www.oecd.org/site/piaac/ It also includes the research material and a database analyser that facilitates processing of data.

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