NFER Briefings

Key findings from the Survey of Adult Skills (PIAAC) in England

What is the Survey of Adult Skills?

The Survey of Adult Skills is a product of the Programme for the International Assessment of Adult Competencies (PIAAC) led by the Organisation for Economic Cooperation and Development (OECD). The Survey of Adult Skills aims to measure the skills needed for adults to participate in society and for economies to prosper. The 2023 survey assessed skills in literacy, numeracy and adaptive problem solving, and further information was collected through a background questionnaire.

The 2023 Survey of Adult Skills offers crucial insights into how adult skills have changed since 2012, when England last participated. (See the final page of this brochure detailing points that need to be borne in mind whilst considering the findings.)

In England, the 2023 Survey of Adult Skills was carried out on behalf of the Government by a consortium led by Verian in partnership with the National Centre for Social Research (NatCen) and the National Foundation for Educational Research (NFER).

Who takes part?

The second cycle of the Survey of Adult skills involved 31 high-income countries (or sub-national regions). Data collection for these countries took place between 2022 and 2023.

England's report (and this brochure) makes comparisons to the OECD average. That is the average of the 29 participating countries who are members of the OECD (all countries in the survey excluding Croatia and Singapore).

|			
Austria		Latvia	
Canada	Germany	Lithuania	Singapore
Chile	Hungary	Netherlands	Slovak Republic
Croatia	Ireland	New Zealand	Spain
Czechia	Israel	Norway	Sweden
Denmark	Italy	Poland	Switzerland
England	Japan	Portugal	United States
Estonia	Korea		
	France		
Finland			
Flemish community (Belgium)			

G7 countries are indicated in blue
Countries which are not OECD members are indicated in red.

England's key findings from the Survey of Adult Skills

England OECD

350*   341
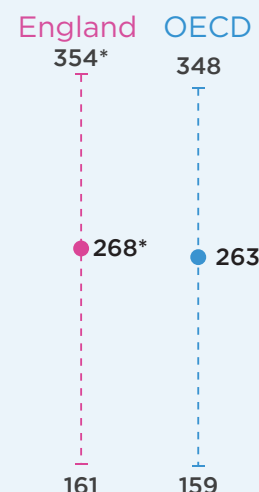
272*   260

168*   157

Literacy skills in England
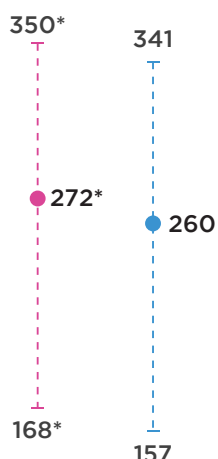
- Adults in England scored, on average, 272 points in literacy. This was significantly above the OECD average (260).

- Japan was the only G7 country to outperform England.

- In England, 18 per cent of adults achieved at PIAAC Level 1 or below, meaning they had low literacy proficiency (the OECD average was 26 per cent).

- Higher literacy skills are associated with higher educational attainment, being employed or a student, not having a health problem or disability which limited day-to-day activities, being born in the UK and learning English as a child. Men and women had similar scores, on average.
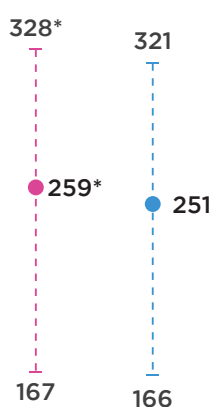
Numeracy skills in England

- Adults in England scored, on average, 268 points in numeracy. This was significantly above the OECD average (263).

- Japan and Germany were the only G7 countries to outperform England.

- In England, 21 per cent of adults achieved at PIAAC Level 1 or below, meaning they had low numeracy proficiency (the OECD average was 25 per cent).

- The patterns for educational attainment, employment status, country of birth / language first learned as a child were similar to those for literacy.

- In England, men scored 16 points higher than women, on average, which was a significant difference. A similar pattern was found internationally, with men scoring 10 points higher than women across the OECD, on average.

England OECD

354*   348

268*   263

161   159

England OECD

328*   321

259*   251

167   166

Adaptive problem solving skills in England

- Adults in England scored, on average, 259 points in adaptive problem solving. This was significantly above the OECD average (251).

- Consistent with literacy and numeracy, Japan (as the only G7 country) outperformed England.

- In England, 21 per cent of adults (OECD average was 30 per cent) achieved at PIAAC Level 1 or below.

- Of the 8 countries which outperformed England, 4 did so whilst achieving better equity between highest and lowest achievers (namely Japan, Sweden, Norway and Estonia).

- In England, men scored 5 points higher than women, on average, which was a significant difference. A similar pattern was found internationally, with men scoring 2 points higher than women across the OECD, on average.

*indicates the difference between England and OECD average is statistically significant at the 5% level.

Changes in literacy and numeracy skills since 2012

- England's numeracy score increased significantly since Cycle 1 (2012). However, the gap between England's highest and lowest achievers has also increased since Cycle 1. This is driven by an increase in performance of top performers, whilst the lowest achievers' skill level has remained unchanged.

- England's literacy score has been stable since 2012 (Cycle 1). The gap between England's highest and lowest achievers has increased since Cycle 1, but changes to the measurement of literacy mean that the gap has increased in all but 3 countries.
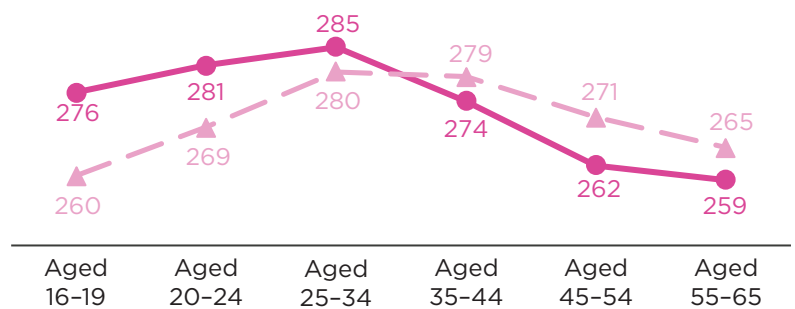
Young people's skills

England participated in the 2012 Survey of Adult Skills which identified that the youngest adults in England performed less well than the oldest adults (contrary to the international pattern) and performed poorly compared to their international peers. There has been considerable policy focus on raising standards of these key skills in school education, such as compulsory education to 18 and making maths and English a requirement of post-16 courses for those who did not attain National Qualifications Framework (NQF) Level 2 in English and Maths at 16.
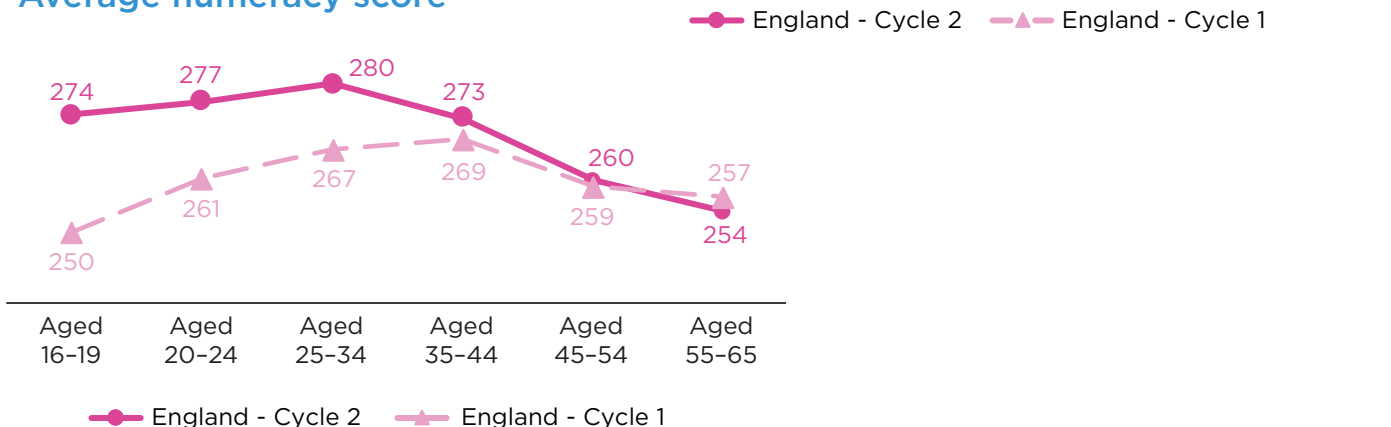
Young people (16-24 year olds) in England had significantly improved literacy and numeracy scores compared with young people in 2012. The distribution of skills in England by age was no longer an international outlier, as the pattern of performance by age broadly matched the pattern across the OECD, on average.

In England and across the OECD, there was a pattern of increasing literacy and numeracy skills with age, and then a decline, with youngest adults scoring more highly than the oldest adults, on average. The age-related decline in skills was also visible for adaptive problem solving.

Average literacy score

	Aged 16–19	Aged 20–24	Aged 25–34	Aged 35–44	Aged 45–54	Aged 55–65
England - Cycle 2	276	281	285	274	262	259
England - Cycle 1	260	269	280	279	271	265

England - Cycle 2   England - Cycle 1

Average numeracy score

	Aged 16–19	Aged 20–24	Aged 25–34	Aged 35–44	Aged 45–54	Aged 55–65
England - Cycle 2	274	277	280	273	260	254
England - Cycle 1	250	261	267	269	259	257

England - Cycle 2   England - Cycle 1

Adult skills and work in England

- Adults who worked in industry sectors including professional, scientific and technical activities had the highest average scores for literacy, numeracy and adaptive problem solving. These scores were higher than scores for adults working in the same professions across the OECD, on average.

- Adults in England working in professional occupations (including science and engineering professionals, health professionals and teaching professionals amongst others) had, on average, the highest literacy, numeracy and adaptive problem solving skills, and these scores were significantly above the OECD average.

- For the highest earners in England, there was a clear relationship between salary and skills for adults, but this relationship did not extend to the lowest earning adults. A similar pattern was found across the OECD and it is likely that findings are impacted by the uneven distribution of full-time and part-time workers across the deciles.

- More frequent use of certain skills in the workplace (for example reading or writing at work, ICT skills at work or problem solving at work, amongst others) was associated with higher average scores in literacy, numeracy and adaptive problem solving compared with adults using these skills infrequently at work.

Adult skills in everyday life

- Adults in England and internationally that read and write frequently in their everyday life tended to achieve higher standards of literacy, numeracy and adaptive problem solving. This is a finding that has been consistent over the past 10 years. For Cycle 2, adults in England generally read more often outside of work compared to the OECD average although 21% of adults in England reported never reading books.

- The most common form of writing in everyday life in England was writing letters, memos or emails, with a quarter of participants reportedly doing so on a daily basis.

- Literacy practices outside of work are important. The most frequent readers and writers in England achieved high literacy and problem solving scores (which were significantly above the OECD average), and the least frequent readers and writers had disproportionally lower literacy, numeracy and problem solving scores compared with the OECD average.

- A very high proportion of adults in England reported using a computer or digital device for accessing information and online banking or ecommerce at least once a week or even daily, greatly exceeding OECD averages.

Adult socio-emotional skills and wider non-economic outcomes

- Findings highlighted a particular relevance of education levels for non-economic outcomes. In England, participants with higher education levels had more positive non-economic outcomes, such as higher socio-emotional skills, greater life satisfaction, better perceived health status as well as increased levels of social trust and political efficacy. Please note that causality cannot be implied.

- Adults' levels of socio-emotional skills (agreeableness, conscientiousness, emotional stability, extraversion and open mindedness) in England are comparable to skills levels reported in other OECD countries. Some typical variation by age or gender was found, for example, older participants scored higher in each of the five socio-emotional skills.

- Life satisfaction in England was also largely comparable with the OECD average. In line with recent literature, self-reported health declined between 2012 and 2023 in England.

Characteristics of adults with low proficiency levels

The findings from the Survey of Adult Skills provide an estimate of 8.5 million working-age adults in England with low basic skills in 2023 (that is low proficiency in literacy, low proficiency in numeracy, or both).

Six characteristics were found to have significant associations with low proficiency (Level 1 or below) across all three domains:

having a low level of education

belonging to particular ethnic groups

being born outside the UK

having parents who have low levels of education

not having computer experience in everyday life

working in certain occupations

The characteristics that were most strongly associated with increased likelihood of low proficiency across the three domains were having less than secondary school education, being Black or Asian, being born outside the UK, and having no computer experience.

The characteristics most strongly associated with decreased likelihood of low proficiency across all domains was having a professional occupation, and for numeracy, also being educated above secondary school level.

The characteristics associated with low proficiency were generally very consistent between Cycles 1 and 2.

Where to find more information:

England's national report can be found here: **www.nfer.ac.uk/publications/survey-of-adult-skills-2023-piaac-national-report-for-england/**

Findings at the international level can be found in the OECD report: **www.oecd.org/en/about/programmes/piaac**

Interpreting the results

It is important to know what can reasonably be concluded from the data and which interpretations would be going beyond what can be reliably supported by the results. This section outlines some points that need to be borne in mind whilst considering the findings.

Using a sample (sampling error)

The data was collected from a sample of adults and are a best estimation of how the total adult population could be expected to perform. There are statistical methods to measure how good the estimation is. However, all data on human performance or attitudes that are based on a sample carry a margin of error.

Accounting for individual differences (measurement error)

Measurement error relates to the results obtained by each individual, and takes account of variations in their scores which are not directly due to underlying ability in the subject but which are influenced by other factors related to individuals or by the nature of the assessments. You can find more detail in the OECD Technical Report about the measures taken to minimise such error.

Comparisons between countries

Because of the areas of uncertainty described above, interpretations of very small differences between two sets of results are often meaningless. Were they to be measured again it could well be that the results would turn out the other way round. For this reason, it's important to focus on statistically significant differences between mean scores, rather than the simple rank order of countries. Statistically significant differences are unlikely to have been caused by random fluctuations due to sampling or measurement error.

Where significant differences between countries are found, these may be the result of a great number of factors.

Changes over time

England's report focuses on changes since the Round 1 data collection in Cycle 1 – that is, changes since data collected in 2012.

Cycle 1 collect data in 3 rounds, and England participated in Round 1 alongside 23 other countries. When comparing changes over time, we compare England with the other 21 countries who participated in 2012 and 2023. See Chapter 3 of England's national report for further details of which countries are in this comparison group.

Who is NFER?

NFER has a long history of involvement in international large-scale comparative studies like the Survey of Adult Skills, dating back over fifty years. NFER reported on the previous cycle of the survey, in 2012 (please see www.nfer.ac.uk/international/international-comparisons)

Identifying essential employment skills in England is the important focus of other NFER research. Involving a multi-disciplinary team led by NFER, the Skills Imperative 2035, looks at how essential employment skills can be developed through the education system and other mechanisms, identifying which groups of people are most at risk of not acquiring the necessary skills and therefore being excluded from the labour market. More information about the five-year project, as well as published findings can be found at: www.nfer.ac.uk/key-topics-expertise/education-to-employment/the-skills-imperative-2035
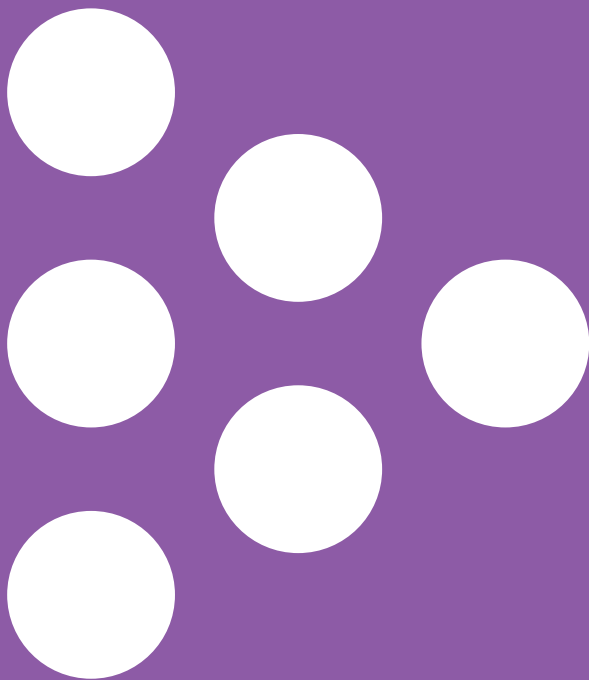
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