

U.S. Adults With Low Literacy and Numeracy Skills: 2012/14 to 2017

DATA POINT
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This Data Point examines U.S. adults with low English literacy and numeracy skills—or low-skilled adults—at two points in the 2010s, in the years 2012/2014¹ and 2017, using data from the Program for the International Assessment of Adult Competencies (PIAAC).

Low-skilled adults in literacy in English are those with skills insufficient to complete tasks requiring comparing and contrasting information, paraphrasing, or making low-level inferences. Low-skilled adults in numeracy in English are those who would have difficulty making calculations with whole numbers and percentages, estimating numbers or quantity, and interpreting simple statistics in text or tables (OECD 2013).

A large-scale international² study of working-age adults (ages 16–65), PIAAC assessed the literacy and numeracy skills of the U.S. adult population in 2012/2014 and in 2017. Participants were interviewed about their background (e.g., education and work experiences) in either English or Spanish. They then completed an assessment of their skills in English. As U.S. PIAAC only tested literacy and numeracy skills in an English-language context, the results indicate only whether participants are literate or numerate in English. Adults unable to participate in PIAAC's background survey do not have estimates of their skills proficiency and

are marked as “Could not participate.”

This group includes adults who were unable to participate because of a language barrier or a cognitive or physical inability to be interviewed. Although no direct assessment of their skills is available, adults who could not participate are categorized as low-skilled adults in literacy and numeracy in this Data Point, as is done in international reports (e.g., OECD 2013).

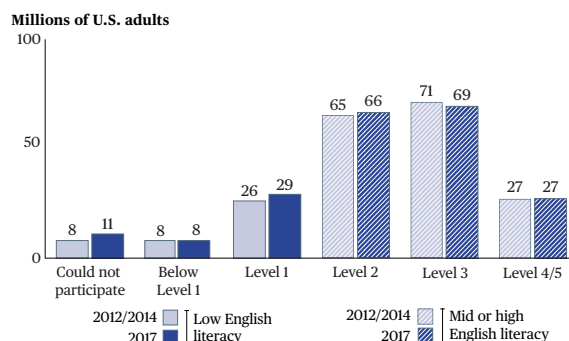
The results in this Data Point are presented as the number and percentage of adults at the PIAAC literacy or numeracy proficiency levels. PIAAC has five literacy and five numeracy proficiency levels: from below Level 1 to Level 4/5.³ These levels are described in terms of the types of tasks that adults are likely to complete successfully at a particular level. Those performing on PIAAC's literacy or numeracy assessment at “Level 1 or below” and those who could not participate are the low-skilled adults in this Data Point, consistent with international reports (e.g., OECD 2013).

Has the number of low-skilled adults changed between 2012/2014 and 2017?

In 2017, approximately 48 million U.S. adults had low English literacy skills and 69 million adults had low numeracy skills in English.

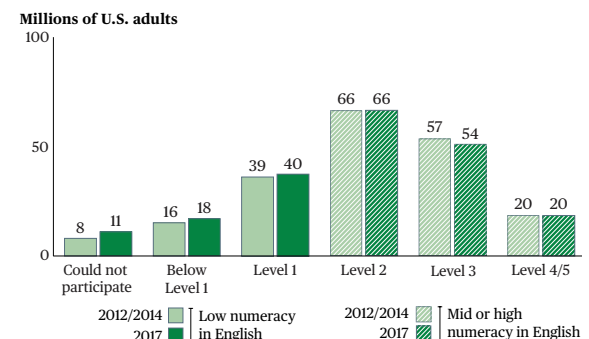
In both literacy and numeracy, the number of adults with low skills grew from 2012/2014 to 2017. While the number of adults at Level 1 or below Level 1 did not change significantly between the years in either literacy or numeracy, the number of adults who could not participate increased from 8 million in 2012/2014 to 11 million in 2017 (FIGURE 1 and FIGURE 2). The number of adults with a language barrier as the reason for nonparticipation (not shown) grew from 7 million in 2012/2014 to 9 million in 2017, while the number of adults with a cognitive or physical inability⁴ as the reason for non-participation, at about 2 million, did not differ significantly between the years.

FIGURE 1. Number of U.S. adults ages 16 to 65 at each level of proficiency on the PIAAC literacy scale and those who could not participate: 2012/2014 and 2017



NOTE: Standard error tables are available at <https://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2022004>. “Low English literacy” refers to those performing at PIAAC literacy proficiency Level 1 or below or who could not participate due to a language barrier or a cognitive or physical inability to be interviewed. “Mid or High English literacy” refers to those performing at PIAAC literacy proficiency Level 2 or above.
SOURCE: U.S. Department of Education, National Center for Education Statistics, Program for the International Assessment of Adult Competencies (PIAAC), U.S. PIAAC 2017, U.S. PIAAC 2012/2014.

FIGURE 2. Number of U.S. adults ages 16 to 65 at each level of proficiency on the PIAAC numeracy scale and those who could not participate: 2012/2014 and 2017



NOTE: Standard error tables are available at <https://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2022004>. “Low numeracy in English” refers to those performing at PIAAC numeracy proficiency Level 1 or below or who could not participate due to a language barrier or a cognitive or physical inability to be interviewed. “Mid or High numeracy in English” refers to those performing at PIAAC numeracy proficiency Level 2 or above.
SOURCE: U.S. Department of Education, National Center for Education Statistics, Program for the International Assessment of Adult Competencies (PIAAC), U.S. PIAAC 2017, U.S. PIAAC 2012/2014.

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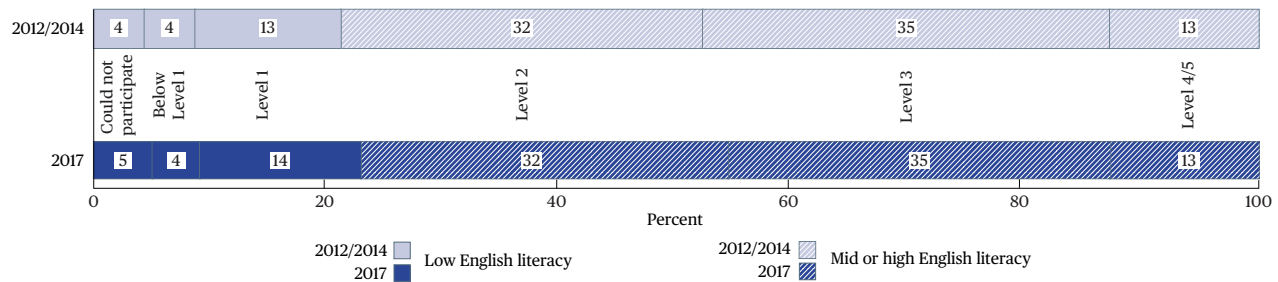
How has the percentage of low-skilled adults changed between 2012/2014 and 2017?

Between 2012/2014 and 2017, the overall percentages of U.S. adults with low skills did not change significantly in literacy (21 percent in 2012/2014; 23 percent

in 2017) or numeracy (30 percent in 2012/2014; 33 percent in 2017). The same was true for the percentages of adults at Level 1 or at below Level 1. However, the percentage of adults who could not participate in the assessment increased from 4 percent in 2012/2014 to 5 percent in 2017 (FIGURE 3 and FIGURE 4). The

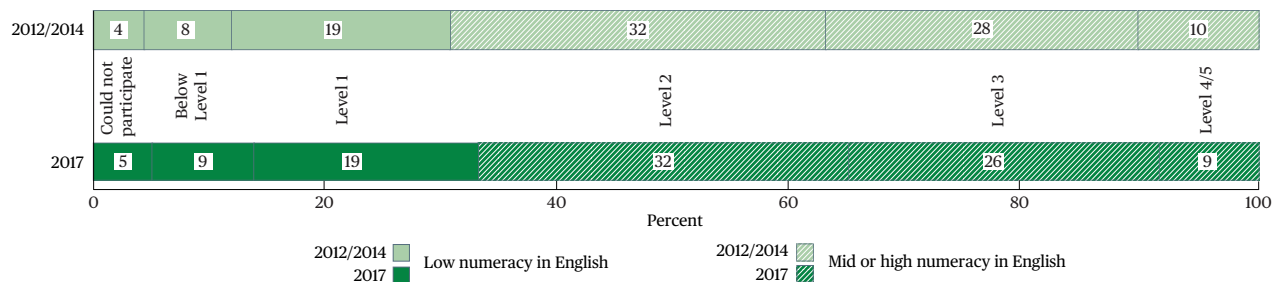
percentage of adults with a language barrier as the reason for nonparticipation (not shown) grew from 3 percent in 2012/2014 to 4 percent in 2017, while the percentage of adults with a cognitive or physical inability⁴ as the reason for nonparticipation, at about 1 percent, did not differ significantly between the years.

FIGURE 3. Percentage of U.S. adults ages 16 to 65 at each level of proficiency on the PIAAC literacy scale and those who could not participate: 2012/2014 and 2017



NOTE: Standard error tables are available at <https://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2022004>. "Low English literacy" refers to those performing at PIAAC literacy proficiency Level 1 or below or who could not participate due to a language barrier or a cognitive or physical inability to be interviewed. "Mid or High English literacy" refers to those performing at PIAAC literacy proficiency Level 2 or above. Detail may not sum to totals because of rounding. SOURCE: U.S. Department of Education, National Center for Education Statistics, Program for the International Assessment of Adult Competencies (PIAAC), U.S. PIAAC 2017, U.S. PIAAC 2012/2014.

FIGURE 4. Percentage of U.S. adults ages 16 to 65 at each level of proficiency on the PIAAC numeracy scale and those who could not participate: 2012/2014 and 2017



NOTE: Standard error tables are available at <https://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2022004>. "Low numeracy in English" refers to those performing at PIAAC numeracy proficiency Level 1 or below or who could not participate due to a language barrier or a cognitive or physical inability to be interviewed. "Mid or High numeracy in English" refers to those performing at PIAAC numeracy proficiency Level 2 or above. Detail may not sum to totals because of rounding. SOURCE: U.S. Department of Education, National Center for Education Statistics, Program for the International Assessment of Adult Competencies (PIAAC), U.S. PIAAC 2017, U.S. PIAAC 2012/2014.

References

Organization for Economic Cooperation and Development (OECD). (2013). OECD Skills Outlook 2013: First Results From the Survey of Adult Skills. Paris: OECD Publishing. Retrieved June 29, 2018, from <http://dx.doi.org/10.1787/9789264204256-en>.

Endnotes

¹ The U.S. 2012 data collection was administered to a national sample of 5,010 adults between the ages of 16 and 65. The United States also administered a data collection in 2014, with the goal of supplementing the 2012 sample with certain population groups of interest. The 2014 data collection surveyed 3,660 adults (ages 16-74) and was designed to be combined with the 2012 data.

² This international study is coordinated by the Organization for Economic Cooperation

and Development (OECD) and developed by the participating countries with the support of OECD.

³ This analysis combines the top two proficiency levels (Levels 4 and 5), following OECD's reporting convention (OECD 2013), because across all participating countries, no more than 2 percent of adults reached Level 5.

⁴ The reasons for nonparticipation include physical disability; however, in the United States, this reason was never reported.

This National Center for Education Statistics (NCES) Data Point presents information on an education topic of current interest. It was authored by Saida Mamedova and Emily Pawlowski of the American Institutes for Research. Estimates based on samples are subject to sampling variability, and apparent differences may not be statistically significant. All stated differences are statistically significant at the .05 level. In the design, conduct, and data processing of NCES surveys, efforts are made to minimize the effects of nonsampling errors, such as item response, measurement error, data processing error, or other systematic error.