PIAAC: A New Strategy to Assess Adult Competencies and their Social and Economic Impact in the United States and Internationally

U.S. government agencies, public and private employers, and adult and workforce education and training programs have a new resource to understand the skills of the U.S. adult working-age population—the Program for the International Assessment of Adult Competencies (PIAAC). PIAAC is coordinated internationally by the Organization for Economic Cooperation and Development (OECD). Within the United States, PIAAC is sponsored by the U.S. Department of Education’s National Center for Education Statistics (NCES). The first release of PIAAC results will take place on October 8, 2013.

What is PIAAC?

PIAAC is a study that assesses key cognitive and workplace skills. Twenty-four participating countries and regions, the majority of which are OECD members, including the United States, assessed adults in 2011–2012 and will release results in October 2013. Nine countries will administer an additional round of PIAAC in 2014. PIAAC provides a new and rich international comparison of the adult workforce (ages 16–65) that will enable the United States to better understand its global competitiveness and benchmark how well education and training systems are meeting emerging skill demands.¹

A companion online assessment tool, called Education & Skills Online, allows individuals and organizations to assess these key competencies in real time, on demand (available December 2013).

What does PIAAC measure?

PIAAC is an assessment of literacy in the information age. It uses a broad definition of literacy that focuses on the “interest, attitude and ability of individuals to appropriately use socio-cultural tools, including digital technology and communication tools, to access, manage, integrate and evaluate information, construct new knowledge, and communicate with others.”

PIAAC directly assesses four sets of skills:

» Literacy
» Reading components (for assessing low literacy levels)
» Numeracy
» Problem-solving in Technology Rich Environments

¹ PIAAC has been developed and administered for the OECD and its member countries by a team of international experts, coordinated by ETS.
The **Background Questionnaire** administered to every participating adult also includes questions about a range of additional skills and competencies needed in the workplace. These include:

» Communication skills  
» Interpersonal skills needed for collaborative teamwork  
» Planning and self-management skills  
» Problem-solving skills  
» Personal traits important for success in work and learning

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**Taken together, the information provided through the cognitive assessment and background questionnaire provide a conceptually holistic, research-based picture of the strengths and weaknesses of the U.S. adult workforce.**

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**What is unique about PIAAC’s approach to assessment?**

**PIAAC is the first large-scale assessment that is computer-based.**

PIAAC is the first large-scale assessment of adults in their homes made available in two modes of administration—laptop computer and paper-and-pencil. While respondents with little or no familiarity with computers took a paper-and-pencil version of the assessment, most adults completed PIAAC on computer.

Because PIAAC is computer-based,

1. participants respond to items that are specifically targeted to their performance levels,  
2. an individual's ability to manage information and solve problems on a computer can be assessed,  
3. and information on how long it takes individuals to complete items (and the strategies they use to solve problems) can be collected.

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**PIAAC collects information on strategies and processes that adults use when navigating computer-based environments to conduct day-to-day tasks.**

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**PIAAC contextualizes information about skills proficiencies with a rich background questionnaire.**

PIAAC’s Background Questionnaire is much more extensive than those used in earlier adult assessments. In addition to collecting information about the usual range of demographic characteristics, PIAAC also collects detailed information about:

» workforce status  
» the kind of work individuals perform  
» the salary paid for that work  
» the skills required to carry out a particular job, and how frequently and extensively they are used  
» the education level of the individual  
» the kind of ongoing education and training the individual has participated in
who sponsored that training and

the extent to which that training is work-related

Besides information on these topics collected in every country and region, the U.S. background questionnaire collected information on health status, to better understand the relationships between skill level, other demographic information, and health.

Having information on the distribution of proficiency skills across the adult population enables national, state, and local governments to make better decisions about how to target resources for education and training.

How PIAAC can inform decision-making in the United States

Information in the Background Questionnaire helps policymakers and workforce leaders better understand questions such as these:

Skills and education

» How does the U.S. adult population compare to other countries and regions in terms of average levels of skills proficiency and skill use?

» What proportion of the adult population has low skills proficiencies?

» How are skills distributed among subgroups defined by sex, age group, or region? Are certain subgroups characterized by low skills proficiencies?

» How are skills proficiencies distributed across different levels of schooling?

» What is the range of skills at particular levels of education?

Skills and employment

» How are skills related to earnings and other indicators of labor market success?

» Is information about proficiency a better predictor of employment status than educational level or credentials?

Skills and industry sectors

» How are skills proficiencies distributed across sectors of industry?

» Are there certain sectors of industry that are characterized by particularly low levels of skills proficiency?

» How do the skills levels within these sectors in the United States compare to those in other countries and regions?

Skills and learning

» Are there differences, across subgroups of the U.S. adult population, in their participation in lifelong learning opportunities? What factors account for these differences?

» Are there differences, across subgroups of the U.S. adult population, in their reported strategies for learning? Do these differences affect their participation in learning?

» What factors contribute to the skills levels observed across various subgroups within the adult population? For example, what is the relationship between age and skills levels?

PIAAC enables businesses to make decisions about what kind of training they need to offer to foster a globally competitive workforce.
How PIAAC can help streamline instruction and training

Data from PIAAC can provide profiles of the skills adults display working in different occupations and industry sectors. Adult education and workforce training programs can use this information to assess the effectiveness of their curricula in meeting labor market needs and to develop customized learning plans for adults—including dislocated workers—to prepare them for employment in growing sectors and occupations.

Adult education and workforce training programs can also use Education & Skills (E&S) Online—a new online assessment tool aligned with PIAAC—to assess in real time the skills of individual adults on the PIAAC measures of literacy, numeracy, reading components, and problem-solving in technology rich environments. Individuals can compare their results with the skills profiles of workers in various occupations and sectors. Programs can use this assessment to help determine the best skills development pathways for adults, based on their workforce goals. Programs can also use Education & Skills Online to measure progress as adults move through a skills development program.2

Adult education and workforce training programs can also use the detailed frameworks for each of the cognitive assessment modules to develop curricula and guide instruction.3

These tools can help programs develop streamlined pathways for adult learners based on their work-related goals. At the same time, programs can use them to put in place a data-driven continuous improvement system to promote program effectiveness.

### Key dates

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<tr>
<th>Date</th>
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<tr>
<td>October 2013</td>
<td>International Release by the OECD</td>
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<td>National Release by the U.S. Department of Education</td>
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<td>November 2013</td>
<td>Data Conference for Researchers</td>
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<td>December 2013</td>
<td>Education and Skills Online Release</td>
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<td>U.S. Public and Restricted Data Files Release</td>
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<td>PIAAC Data Explorer Release</td>
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<td>This is an interactive online tool that will allow users to produce customized PIAAC reports.</td>
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<tr>
<td>January 2014</td>
<td>Technical Reports Release</td>
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<td></td>
<td>These reports will provide detailed information about the development and administration of PIAAC.</td>
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### More information

Visit the OECD website at [http://www.oecd.org/site/piaac/] for data files and analysis tools, reports, and more information about PIAAC internationally (data and results available October 2013).

Visit the NCES website at [http://nces.ed.gov/surveys/piaac/] for data files and analysis tools, reports, and more information from a U.S. perspective. To host a presentation on PIAAC results (web-based or in-person), please contact twerwath@air.org.

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2 For more information on E&S Online visit the OECD website at [http://www.oecd.org/site/piaac/ENG_Brochure%20Education%20and%20Skills%20Online%20SAS.pdf].

3 For a summary of the assessment domains in PIAAC see [http://www.oecd.org/site/piaac/Summary%20of%20assessment%20domains%20in%20the%20Survey%20of%20Adult%20Skills.pdf].