



Introduction to the PIAAC

Module Objectives

- Introduce the Program for the International Assessment of Adult Competencies (PIAAC) and describe the study's
 - Target population
 - Sample and study designs
 - Data collection rounds, topics, sources, and methods
 - Publications and other resources
- Present history of national and international adult literacy assessments
- Highlight the topics for which data are available for analysis
- Identify the unique features of PIAAC administration
- Describe how PIAAC was implemented

Overview

PIAAC is an international, large scale assessment conducted in respondents' households

Program for the International Assessment of Adult Competencies (PIAAC)	
Developed by	Organization for Economic Cooperation and Development (OECD)
Managed by	International Consortium
Administration	2011 – 2012; administered in households
# Countries	24
Sample size	5,000+ individuals per country
Participants	Approx. 166,000, ages 16 - 65
# Languages	32 for direct assessment, 36 for background questionnaire
Reports	International and national reports, released October 2013

Participating Countries

Round 1 countries (2008-13)			
Australia	Denmark	Italy	Russian Federation
Austria	Estonia	Japan	Slovak Republic
Belgium	Finland	Korea	Spain
Canada	France	Netherlands	Sweden
Cyprus	Germany	Norway	United Kingdom
Czech Republic	Ireland	Poland	United States

Round 2 countries (2012-16)		
Chile	Israel	Singapore
Greece	Lithuania	Slovenia
Indonesia	New Zealand	Turkey

Participant Country Responsibilities

- Participating countries are responsible for
 - Sampling, assessment implementation, and results reporting based on guidelines and standards developed by experts in the International Consortium
 - Translating survey instruments and questionnaires
 - Collecting and processing data

History of U.S. and International Adult Literacy Assessments

Year	Survey	Sponsor	Sample
1985	The Young Adult Literacy Survey (YALS)	U.S. Department of Education (ED)	21-to 25-year-olds
1989-1990	Department of Labor Survey of Workplace Literacy	U.S. Department of Labor (DOL)	Eligible applicants for JTPA and jobseekers in state ES/unemployment insurance programs
1992	The National Adult Literacy Survey (NALS)	NCES	13,600 residents of households and prisons, 16 and older
1994	The International Adult Literacy Survey (IALS)	Statistics Canada and ETS	Adults aged 15-65 in 7 countries, including 3,846 U.S. participants

History of U.S. and International Adult Literacy Assessments (Continued)

Year	Survey	Sponsor	Sample
2003	Adult Literacy and Lifeskills (ALL) Survey	Statistics Canada	16- to 65-year-olds in 11 countries, including 3,420 U.S. participants
2003	National Assessment of Adult Literacy (NAAL)	NCES	19,000 adults aged 16 and older residing in households and federal and state prisons
2011	Program for the International Assessment of Adult Competencies (PIAAC)	NCES	5,000 adults (minimum sample size) aged 16 to 65 in U.S. and 24 other countries

Uses of PIAAC Data and Analysis

- Provide comparative data and analysis for economic, education, and social policy development within countries
- Provide information on basic adult skills and competencies
- Develop international benchmarks of adult skills
- Compare key 21st century cognitive and workplace skills for individuals to participate in society and for economies to prosper
- Facilitate international comparative analysis of skill-formation systems and their outcomes

Uses of PIAAC Data and Analysis (Continued)

- PIAAC provides data and analysis on relationships between individuals' cognitive skills and background variables
 - Educational background
 - Workplace experiences and skills
 - Professional occupational attainment
 - Use of information and communications technology

PIAAC in the United States

- Sponsored in the U.S. by the National Center for Education Statistics (NCES), in close collaboration with the Department of Labor (DoL)
- In the US, direct assessment was conducted in English
- In the US, background questionnaire was conducted in English and Spanish
 - 4% of participants could not complete the assessment because of language difficulties or learning or mental disabilities
 - 1% could not complete it for other reasons

Target Population

- Non-institutionalized adults, ages 16 to 65, who reside in participating country at the time of data collection, irrespective of nationality, citizenship or language
- Includes non-institutional collective dwelling units
 - Workers' quarters
 - Halfway homes
 - Dormitories, fraternity/sorority houses

Target Population (Continued)

- Excludes adults in institutional collective dwelling units: prisons, hospitals, nursing homes, military barracks and bases
- Nationally representative household sample was drawn in U.S. from most current Census Bureau population estimates
- Some adults who are unable to complete the assessment are considered in scope; however, they are excluded from PIAAC response rate calculations
 - Hearing impairment
 - Blindness/visual impairment
 - Physical disability

Target Population (Continued)

- In 2013-14, the U.S. conducted a National Supplement with a focus on
 - Unemployed adults, ages 16-65
 - Younger adults, ages 16-34
 - Older adults, ages 66-74
- 2014 Prison Study
 - Adults, ages 16-74, incarcerated in state, federal, or private prisons

U.S. Main Study Sample Design

- Probability sample designed to obtain a nationally representative sample of the target population (adults ages 16-65)
- Administration
 - Interviewed and assessed 5,010 completed cases in the U.S. from August 2011 to April 2012
 - 1 (maximum 2) sampled person(s) per household
 - 70% response rate achieved

U.S. Sample Design (Continued)

- National Supplement Study
 - Interviewed and assessed completed cases in the U.S. from August 2013 to April 2014
 - Goal was to select one sample person per household
 - Sampling rules within households are based on sample sizes, instead of sampling rates, so that the maximum number selected within a household can be controlled
 - Maximum per household was 7 persons (but it was rare to have more than two unemployed individuals in a household that also had the other necessary combination of characteristics)

Unique Features of PIAAC

- Innovative assessment design with two modes of administration
 - First large-scale household assessment conducted on laptop computers
 - Paper-based option available
- Adaptive: Items targeted to respondents' performance
- Integrated: Combines a computer-assisted personal interview (CAPI) with computer-administered cognitive instruments
- Automated measurement: Computer logs key strokes and time spent on items
- Centralized, well-defined and strictly monitored standards

PIAAC Administration

- Face-to-face interviews conducted in respondent's residence or a nearby public space
- Interviewers administer CAPI background questionnaire (BQ)
- Respondents complete a self-administered competency assessment via laptop computer (primary delivery mode) or paper-based booklet
 - Respondents who take the paper-based assessment, as well as those with very low literacy skills, also respond to a set of reading component measures
- Approximately 2 hours in duration



Data Collected through PIAAC

- Direct assessments and questionnaires are designed to maximize cross-cultural, cross-national, and cross-language validity

Background Questionnaire	Module on Skills Use	Direct Assessment Domains
<ul style="list-style-type: none">• Demographic characteristics• Education and training• Work experience (present and past)• Social and linguistic background• Literacy and numeracy practices• Use of information and communications technology	Skills participants regularly use in their job and home life	<ul style="list-style-type: none">• Literacy• Numeracy• Problem solving in technology-rich environments• Reading Components

Data Collected through the PIAAC (Continued)

Cognitive Skills	Physical Skills	Learning Skills	Interaction and Social Skills
<ul style="list-style-type: none">• Reading• Writing• Mathematics• Use of information and communication technologies	<ul style="list-style-type: none">• Use of gross and fine motor skills	<ul style="list-style-type: none">• Coaching• Formal/ informal learning• Updating professional skills	<ul style="list-style-type: none">• Collaboration and cooperation• Work and time planning• Communication and negotiation• Customer contact
			

PIAAC Domains

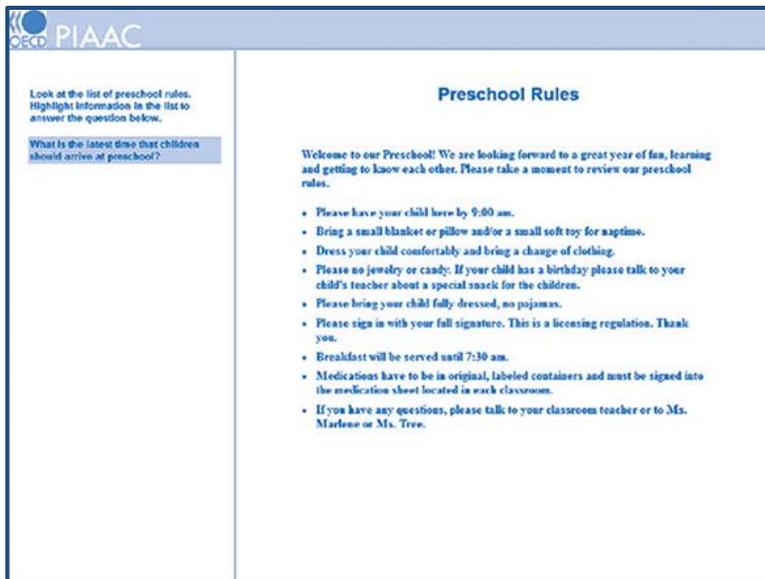
- PIAAC assesses 4 domains
 - Literacy: Both paper- or computer-based
 - Reading components: Paper only
 - Numeracy: Both paper- or computer-based
 - Problem solving in technology-rich environments: Computer only



PIAAC Domains (Continued)

- All countries were required to administer literacy and numeracy modules
- U.S. assessed all four domains
- All PIAAC cognitive assessment items are authentic, culturally appropriate, and drawn from real-life situations that are expected to be of importance or relevance in different contexts
- Items are intended to reflect the purposes of adults' daily lives across cultures, even if they are not necessarily familiar to all adults in all countries
- Items are designed to maximize cross-language validity

Literacy Domain: Sample Item



Look at the list of preschool rules. Highlight information in the list to answer the question below.

What is the latest time that children should arrive at preschool?

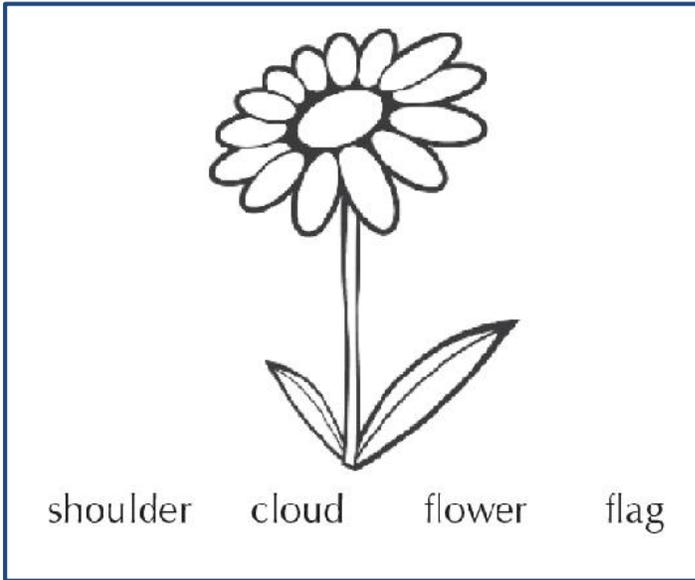
Preschool Rules

Welcome to our Preschool! We are looking forward to a great year of fun, learning and getting to know each other. Please take a moment to review our preschool rules.

- Please have your child here by 9:00 am.
- Bring a small blanket or pillow and/or a small soft toy for naptime.
- Dress your child comfortably and bring a change of clothing.
- Please no jewelry or candy. If your child has a birthday please talk to your child's teacher about a special snack for the children.
- Please bring your child fully dressed, no pajamas.
- Please sign in with your full signature. This is a licensing regulation. Thank you.
- Breakfast will be served until 7:30 am.
- Medications have to be in original, labeled containers and must be signed into the medication sheet located in each classroom.
- If you have any questions, please talk to your classroom teacher or to Ms. Madlene or Ms. Tive.

"What is the latest time that children should arrive at preschool?"

Reading Components: Sample Item



"Circle the word that matches the picture."

Numeracy Domain: Sample Item

OECD PIAAC

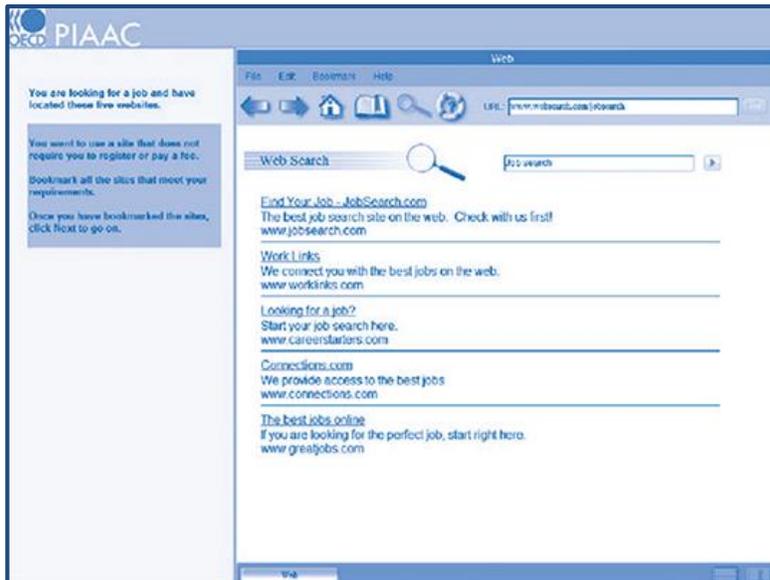
Look at the thermometer. Using the number keys, type your answer to the question below.

If the temperature shown decreases by 30 degrees Celsius, what would the temperature be in degrees Celsius (°C)?

 °C

"If the temperature shown decreases by 30 degrees Celsius, what would the temperature be in degrees Celsius (°C)?"

Problem Solving in Technology-Rich Environments Domain: Sample Item



"You want to use a site that does not require you to register or pay a fee. Bookmark all the sites that meet your requirements. Once you have bookmarked the sites, click Next to go on."

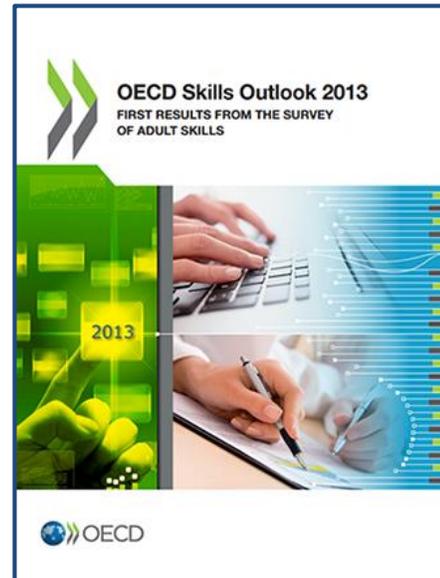
Specific Types of Information that PIAAC Provides

- Relationships between four domains: literacy, reading component skills, numeracy, and problem solving in technology-rich environments (PS-TRE)
- Component skills among lower-performing adults and those who report not being familiar with using a computer
- Accurate estimates of population distributions and a baseline measure PS-TRE for estimation of trend over time
- Strategies and processes adults use for PS-TRE tasks
- Trends in numeracy and literacy based on shared items with ALL (numeracy only) and IALS (and therefore, NAAL via NALS)

Publications: [OECD Skills Outlook 2013](#)

First results from the OECD Survey of Adult Skills

- Skills needed for adapting to change in the 21st century
- Cross-country comparisons of level and distribution of adult skills directly measured
- Distribution of skill proficiency among various socio-demographic groups in different countries
- Skill proficiency of workers and use of their skills in the workplace
- Link between foundation skills and economic and social outcomes



US National Report: [NCES "First Look" Report](#)

- Highlights of results for the U.S. population
- Comparison of overall scores and proficiency levels for the U.S. and other countries
- Trend scores for the U.S. and participating countries in both
 - International Adult Literacy Survey (IALS)
 - Adult Literacy and Life Skills Survey (ALL)
- Literacy, numeracy, and problem-solving in technology-rich environments proficiency levels by
 - Age (10-year groups)
 - Race/ethnicity
 - Gender
 - Educational attainment
 - Employment
 - Health status
 - Whether respondents born in U.S.
 - Literacy, numeracy, and ICT skills used at work

PIAAC Data Tools

Web-Based Tools

- [OECD International Data Explorer \(IDE\)](#) allows users to easily create statistical tables and charts
 - Contains national data files for all countries except Cyprus
- [NCES International Data Explorer \(IDE\)](#) is similar to the OECD IDE but includes U.S.-only variables in addition to the international variables
 - Contains U.S. national data as well as data for all countries except Australia and the Russian Federation
- [NCES PIAAC Web Portal](#) provides ready-made tables and charts for the most common PIAAC data analyses

Summary

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Resources

- [Program for the International Assessment of Adult Competencies \(PIAAC\)](#)
- [The Young Adult Literacy Survey \(YALS\)](#)
- [Department of Labor Survey of Workplace Literacy](#)
- [The National Adult Literacy Survey \(NALS\)](#)
- [The International Adult Literacy Survey \(IALS\)](#)
- [Adult Literacy and Lifeskills \(ALL\) Survey](#)
- [National Assessment of Adult Literacy \(NAAL\)](#)
- [OECD Skills Outlook 2013](#)
- [NCES "First Look" Report](#)
- [OECD International Data Explorer \(IDE\)](#)
- [NCES International Data Explorer \(IDE\)](#)
- [NCES PIAAC Web Portal](#)