### PIAAC Overview

<table>
<thead>
<tr>
<th>Part 1</th>
<th>Part 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>What is PIAAC?</td>
<td>Reporting Results</td>
</tr>
<tr>
<td>What Does PIAAC Provide?</td>
<td></td>
</tr>
<tr>
<td>How is PIAAC Designed?</td>
<td></td>
</tr>
<tr>
<td>What Does PIAAC Measure?</td>
<td></td>
</tr>
<tr>
<td>How Is PIAAC Conducted?</td>
<td></td>
</tr>
<tr>
<td>Summary</td>
<td></td>
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</tbody>
</table>

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<thead>
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<th>Part 3</th>
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</tr>
</thead>
<tbody>
<tr>
<td>What Is Education and Skills Online</td>
<td>Uses and Benefits</td>
</tr>
<tr>
<td>Education and Skills Online Components</td>
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</tr>
<tr>
<td>Uses and Benefits</td>
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What is PIAAC?

- A large-scale, cyclical, direct assessment conducted in households
- Coordinated by the Organization for Economic Cooperation and Development (OECD)
- An international assessment administered:
  - 5,000+ individuals per country
  - Ages 16 to 65
- Round 1 involved 23 OECD and partner countries.
- Round 2 adds an additional 9 countries
## Participating Countries

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<th>Round 1 Countries</th>
<th>Round 2 Countries</th>
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<td>United Kingdom</td>
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<td>United States</td>
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What Does PIAAC Provide?

- Information on basic skills and competencies of adults in participating countries
- Comparing 21st century key cognitive and workplace skills, needed for individuals to participate in society and for economies to prosper
- Provides data and analysis on relationships between individuals’ skills and background variables such as:
  - Educational background,
  - Workplace experiences and skills,
  - Professional attainment, and
- International benchmarking on adult skills
- International comparative analysis of skill-formation systems and their outcomes
- Use of information and communications technology.
- Trends in literacy and numeracy based on shared items with ALL (numeracy only) and IALS
How is PIAAC Carried Out?

- Two modes of assessment: Laptop computer or Paper-and-Pencil
- Adaptive: Items targeted to respondents’ performance
- All participating countries must adhere to common technical standards
- Time: Approximately 2 hours
  - Background Questionnaire (45 minutes)
  - Assessment Core (5 minutes)
  - Assessment Items (60 minutes)
What Data Does PIAAC Collect?

- Background questionnaire
- Module on skill use
- Direct assessment of key information-processing skills
Focused on identifying:

- Skills that are critical to functioning successfully in today’s society,
- How participants acquire those skills, and
- How those skills are distributed.

Areas of BQ include:

- Education and training, present and past,
- Work experience,
- Skills used for work and outside of work,
- Literacy, numeracy and ICT skill use at work and at home,
- Personal traits, and background information.
Countries are allowed to:

- Add up to 5 minutes of country-specific items.
- Adapt items (subject to permission)
- US additions and adaptations are related to:
  - Education (current/past/required)
  - Country of origin/language/ethnicity
  - Training courses
  - Occupation
  - Health
  - Economic Sector
  - Earnings

In the US, assessment conducted in English only, with BQ both in English and Spanish
- **Numeracy**-- both p&p and computer
- **Literacy**-- both p&p and computer
- **Problem solving in technology-rich environments**-- only on computer
- **Reading components**-- only in p&p

All countries are required to administer literacy and numeracy

U.S. assessed all four domains
### Literacy:

“understanding, evaluating, using and engaging with written text to participate in society, to achieve one’s goals and to develop one’s knowledge and potential.”

### Numeracy:

“the ability to access, use, interpret, and communicate mathematical information and ideas, to engage in and manage mathematical demands of a range of situations in adult life.”
- **Problem solving in technology rich environments (PS-TRE):**
  “using digital technology, communication tools, and networks to acquire and evaluate information, communicate with others, and perform practical tasks.”

- **Reading components:**
  “measuring literacy skills of adults at the lower end of the literacy spectrum, focusing on reading components that are comparable across the range of languages (reading vocabulary, sentence comprehension, and basic passage comprehension and fluency).”
Items designed to be:

- Authentic (to the degree possible), and comparable across countries
- Culturally appropriate,
- Provide coverage across different levels of ability,
- Adaptive to conventions across the participating countries (in case of numeracy, measurement systems and currencies)
- Representative of home, work, and community contexts, and
- Representative of purposes adults pursue in their lives.
**Literacy**

- Continuous and non-continuous texts
- Cognitive Processes:
  - Access and Identify
  - Integrate and Interpret
  - Evaluate and reflect
- Medium:
  - Print-based texts
  - Digital texts including hypertext, or text in interactive environments, such as forms and blogs
Sample Literacy Task

cog. processes: access and identify; context: personal; medium: print

“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. Marlene or Ms. Tree.
Numeracy

- Cognitive processes:
  - Act upon and use
  - Identify, locate and access
  - Interpret and evaluate

- Content:
  - Data and chance
  - Dimension and shape
  - Pattern, relationship and change
  - Quantity and number
Sample Numeracy Task

cog. process: interpret and evaluate; content: data and chance; context: community and society

“Look at the graph about the number of births. Click to answer the question below.

During which period(s) was there a decline in the number of births? Click all that apply.

1957-1967
1967-1977
1977-1987
1987-1997
1997-2007"
Problem solving in technology-rich environments

Cognitive processes:
- Goal setting and progress monitoring
- Planning and organizing
- Acquiring and evaluating information
- Making use of information

Technology Dimension:
- Performed in simulated software applications.
- Use commands and functions commonly found in email, web pages, and spreadsheets.

Tasks:
- Range from online shopping to finding interactive health prevention information to managing personal information and business finances.
Sample PS-TRE tasks (3)
Comparing, extracting and transforming information

"You are helping some friends look for a kitchen table and have found this Web site. Using the tools available, compare the five tables with the highest user ratings and find the one that is least expensive. Email your friends a link to the page with the table you find."
**Reading components**
Measuring accuracy and fluency (shorter response time) on each of the three Reading Component sections:
- vocabulary,
- sentence processing
- passage comprehension

Will be performed consistently across languages and countries

Paper-and-pencil only
### Sample Reading Components Task

#### Sentence Processing

<table>
<thead>
<tr>
<th>Sentence</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Three girls ate the song</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>The man drove the green car</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>The lightest balloon floated in the bright sky.</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>A comfortable pillow is soft and rocky.</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>A person who is twenty years old is older than a person who is thirty years old.</td>
<td>Yes</td>
<td>No</td>
</tr>
</tbody>
</table>
Assessment Flow

ICT use from BQ

Some computer experience

No computer experience

CORE
4L + 4N

Pass

Fail

LITERACY
20 Tasks

NUMERACY
20 Tasks

Fail

Pass

CBA-Core
Stage 1: ICT

Fail

Pass

CBA-Core
Stage 2: 3L + 3N

LITERACY
Stage 1 (9 tasks)
Stage 2 (11 tasks)

NUMERACY
Stage 1 (9 tasks)
Stage 2 (11 tasks)

PS in TRE

NUMERACY
Stage 1 (9 tasks)
Stage 2 (11 tasks)

LITERACY
Stage 1 (9 tasks)
Stage 2 (11 tasks)

PS in TRE
Summary: How can PIAAC further the field of adult basic education?

PIAAC Provides:

- A deeper understanding of the distribution of human capital especially for those demonstrating high and low skill levels
- Comparisons across countries, modes and over time
- An investigation of the links between key cognitive skills and a range of variables
Reporting Schedule

Reports and Analytical Tools
Release Schedule

Releases on October 8th 2013 through the end of December:

- OECD PIAAC International Report
- US National Technical Report (NCES)
- OECD US Country Report
- Data Explorer (NCES)
- Public use data file (NCES)
- Restricted use data file (NCES)
- OECD Education and Skills Online (E & S Online)
1. Highlighted results for the U.S. population

2. Comparison of overall scores and proficiency levels for the U.S. and other countries

3. Trend scores for the U.S. and participating countries in both:
   - International Adult Literacy Survey (IALS)
   - Adult Literacy and Life Skills Survey (ALL)

Continued…
4. Literacy, numeracy, and problem-solving in technology-rich environments proficiency levels by:

- Age (10-year groups)
- Race/ethnicity
- Gender
- Educational attainment
- Employment
- Whether they are born in the United States
- Health status
- Literacy, numeracy, and ICT skills used at work
Percentage of adults age 16 to 65 at each level of proficiency on the PIAAC literacy scale, by participating country: 2012

<table>
<thead>
<tr>
<th>Country</th>
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*Mock Data*
Percentage of adults age 16 to 65 at each level of proficiency on the PIAAC literacy scale, by highest level of educational attainment: 2012
Percentage of U.S. adults age 16 to 65 at each level of proficiency on the PIAAC literacy scale, by whether they are born in the United States: 2012
US National Reports: NCES PIAAC Web Portal

- Further analysis of PIAAC results
- Expandable to add more figures and tables on a rolling basis
- Ability to select, view, and print pre-defined figures and tables
- First set of tables to be released October 2013
US National Reports: Early Content of the Web Portal

- Literacy, numeracy, and problem-solving in technology-rich environments proficiency levels by:
  - Country of birth
  - Informal training
  - Health status

- Profile of the employed by: age, gender, whether they are born in the United States, education, industry of employment, occupation, and earnings

- Profile of the unemployed by: age, gender, whether they are born in the United States, and education
US National Tools: NCES PIAAC Data Explorer

- Interactive online data tool that allows users to produce customized PIAAC reports

- Data displayed and exported in a variety of formats, including:
  - Tables
  - Charts
  - Maps
Additional Data Collection: U.S. National Supplement

- Additional household sample (3,600) for the following groups:
  - unemployed adults (ages 16–65)
  - two groups of young adults (ages 16–24 and 25–34)
  - older adults (ages 66–74)
- Separate sample for 1,200 incarcerated adults (ages 16–74)
- Data collection: August 2013 and April 2014
- Analysis and reporting: late 2015 or early 2016
Education and Skills (E&S)Online Assessment

- What Is Education and Skills Online
- Education and Skills Online Components
- Uses and Benefits
What Is Education and Skills Online

- A joint initiative of the OECD and the European Union;
- An assessment tool designed to provide individual level results linked to PIAAC;
- Measures both cognitive and non-cognitive skills;
- Downloadable on demand over the internet and includes technical support;
- Available in multiple languages/versions;
- In the US it is available both in English and Spanish.
Education and Skills Online Components

- Background Questionnaire
- Cognitive Items:
  - Literacy
  - Numeracy
  - Problem-solving in Technology rich environment (optional)
  - Reading Components (optional)
- Optional Non-Cognitive Module
- Reporting Scores
Reporting Scores

- Proficiency levels
- Descriptive reports of strengths and weaknesses in the skill areas assessed
- Summary information for each of the non-cognitive areas
- Comparative information for both the cognitive and non-cognitive areas
Uses and Benefits of Education and Skills Online

- Appropriate for use in both educational and workplace settings
- Can be used to evaluate classes, programs or any group of respondents
- Organizations will have access to their database for further analyses
- Tests cover a wide range of skills and domains
- Individuals and organizations have flexibility to determine which skills to assess
For More Information About PIAAC
Visit

http://nces.ed.gov/surveys/piaac/

Or

www.oecd.org/piaac
www.piaacgateway.com
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