THE SURVEY OF ADULT SKILLS (PIAAC) - EVALUATING INFORMATION-PROCESSING SKILLS

Glenda Quintini, Senior Economist OECD
Directorate for Employment Labour and Social Affairs

Workshop on the evaluation of third mission of universities and public research organisations
ROME, 4 May 2015
THE SURVEY OF ADULT SKILLS: BACKGROUND
Origins of PIAAC

• **1980s - early 1990s**
  – Interest in literacy levels of workforce
  – ‘Competence’ movement
  – Developments in large-scale testing

• **Development of international adult literacy/skills surveys:**
  – Both managed by Statistics Canada

• **Work on PIAAC began in early 2000s**
  – Design finalised in 2007
  – International contractor (a consortium led by ETS) selected early 2008
Backdrop of changing skill requirements

Percentage change in employment (1995-2010)

Source: Handel (2012)
Objectives of PIAAC

• Provide high quality comparable information on the level and distribution of key information processing skills in the adult population

• Show the relationship of these skills to individual and social ‘outcomes’

• Better understand the processes through which skills are gained, maintained and lost over the lifecycle
Design features: content

• **Direct assessment of key information processing skills**
  – Literacy (including reading components), numeracy, problem solving in technology-rich environments (PS-TRE)
  – Linked to IALS and ALL in domains of literacy and numeracy

• **Background questionnaire:**
  – Information on the use of literacy, numeracy and problem solving at work and elsewhere
  – Information on use of a range of other generic skills at work: interaction with others, work organisation (self and others), learning and physical skills
  – Information on antecedents and outcomes
Design features

• Target population – 16-65 year olds resident in national territory
  – Frame must cover at least 95% of target population

• Sample: probability sample representative of target population
  – Minimum sample size = 5000
  – Response rate target = 70%

• Household survey

• Strict technical standards to ensure the comparability and quality of data

• Delivery
  – BQ in CAPI

• Assessment
  – CBA or paper-based (literacy and numeracy only)
Participation

  - 24 countries
  - Australia, Austria, Belgium (Flanders), Canada, Czech Republic, Denmark, Estonia, Finland, France, Germany, Ireland, Italy, Japan, Korea, Netherlands, Norway, Poland, Slovak Republic, Spain, Sweden, UK (England, Nth Ireland), US, Cyprus*, Russian Federation

  - 9 countries
  - Chile, Greece, Indonesia, Israel**, Lithuania, New Zealand, Singapore, Slovenia, Turkey

*: 1. Footnote by Turkey
The information in this document with reference to « Cyprus » relates to the southern part of the Island. There is no single authority representing both Turkish and Greek Cypriot people on the Island. Turkey recognizes the Turkish Republic of Northern Cyprus (TRNC). Until a lasting and equitable solution is found within the context of United Nations, Turkey shall preserve its position concerning the “Cyprus issue”.

2. Footnote by all the European Union Member States of the OECD and the European Union
The Republic of Cyprus is recognized by all members of the United Nations with the exception of Turkey. The information in this document relates to the area under the effective control of the Government of the Republic of Cyprus.”

**: The statistical data for Israel are supplied by and under the responsibility of the relevant Israeli authorities. The use of such data by the OECD is without prejudice to the status of the Golan Heights, East Jerusalem and Israeli settlements in the West Bank under the terms of international law.
KEY RESULTS
1) Education and literacy affect labour market participation

The odds ratio indicates statistically significant differences in labour market participation associated with years of education and proficiency in literacy. Differences are marked in a darker tone.

2) Education and skills are positively correlated with wages

Effect of years of education and literacy skills on gross hourly wages, 2012

Percentage change in wages associated with a one standard deviation change in years of education and proficiency in literacy

2) Many respondents have poor literacy skills

EVIDENCE THAT SKILLS DECLINE OVER THE LIFECYCLE AND FEW RE/UP-SKILL THROUGH EDUCATION AND TRAINING
4) Evidence that literacy declines along the lifecycle – unadjusted relationship

Trend scores in literacy, by age, foreign-born adults excluded

Source: Survey of Adult Skills (PIAAC 2012).
5) Even if cohort effects are controlled for (adjusted)

Trend scores on the literacy scale, by age, adjusted for educational attainment and language background, foreign-born adults excluded.

Source: Survey of Adult Skills (PIAAC 2012).
6) Few workers participate in learning activities (incidence)

Source: Survey of Adult Skills (PIAAC 2012).
7) Participation in training declines with age despite skills depreciation

Source: Survey of Adult Skills (PIAAC 2012).
8) On-the-job training is the most common form along with seminars and workshops.

Source: Survey of Adult Skills (PIAAC 2012).
9) Very few adults return to study to complete university

Adults 35+ with upper secondary education, actually studying a tertiary degree
(As a proportion of adults 35+ with upper secondary education)

Source: Survey of Adult Skills (PIAAC 2012).
What use for the public? Education and Skills Online – 3 August 2015

- Internet-delivered version of PIAAC
  - Designed to provide reliable measures of proficiency at the level of individual test-taker
  - Available for individuals, private firms, government department, training providers
  - Access based on a fee – cost-recovery level only
  - Available in English, Spanish, French, Czech, Italian and Japanese

- Components
  - Literacy and numeracy core
  - Optional: problem solving in technology-rich environments; reading components; skills use; behavioural performance competences; subjective well-being and health; and career interest and intentionality
  - Background information
Issues for use in evaluation:

• Results obtained upon completion: proficiency scales and levels; benchmarked against country of reference

• Full ownership of results: only shared with OECD or ETS if agreed; automatically provided to test-taker only if agreed

• BUT:
  ✓ Requires significant improvement in test scores given margin of error - suitable for longer courses

  ✓ Information-processing skills but not job-specific skills
Find Out More About PIAAC at:

www.oecd.org/site/piaac/

All international publications

The complete micro-level database and associated documentation

Data tools

Information on Education and Skills Online

Email
Glenda.Quintini@oecd.org

Thank you