

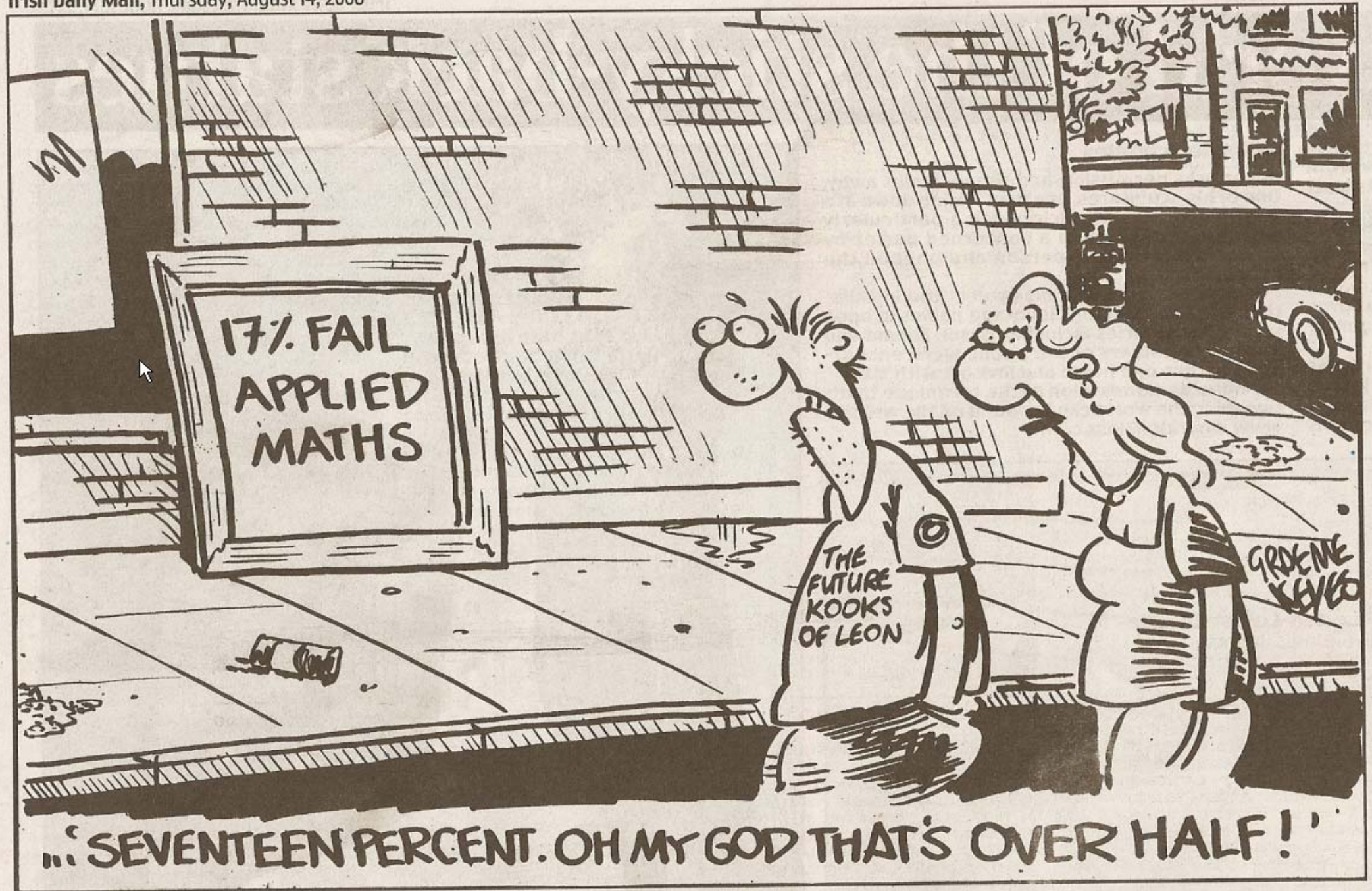
# Measuring Adult Literacy

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ACAL Conference Darwin 2010

statistics for informed  
decision making





# Topics covered

- History of ABS Literacy surveys
- Survey of Aspects of Literacy (SAL)
- Adult Literacy and Life Skills Survey (ALLS)
- Program for the International Assessment of Adult Competencies (PIAAC). Known in Australia as the Survey of Adult Competencies (SAC)
  - ▶ Governance
    - Content
  - ▶ Objectives
    - Assessment items
  - ▶ Methodology



# Development of international literacy surveys

- In 1992, the Organisation of Economic Cooperation and Development (OECD) concluded that low literacy levels were a serious threat to economic performance and social cohesion on an international level.
- The OCED concluded that a broader understanding of literacy problems across industrialised nations was hindered due to a lack of comparable international data.

# Survey of Aspects of Literacy

- The International Adult Literacy Survey (IALS) was the first comparative study of adults designed to profile and explore comparative literacy distributions among participating countries.
- Coordinated by Statistics Canada and the OECD
- Conducted in Australia in 1996 as the Survey of Aspects of Literacy (SAL)
- (cat. no. 4228.0).

# SAL continued...

- SAL measured:
  - ▶ Prose Literacy
  - ▶ Document Literacy
  - ▶ Quantitative Literacy

# Adult Literacy and Life skills Survey

- Adult Literacy and Life Skills Survey (ALLS) was coordinated by Statistics Canada and the OECD.
- Conducted in 12 countries in two waves.
- Conducted in Australia in 2006, as part of the second wave.

# ALLS cont...

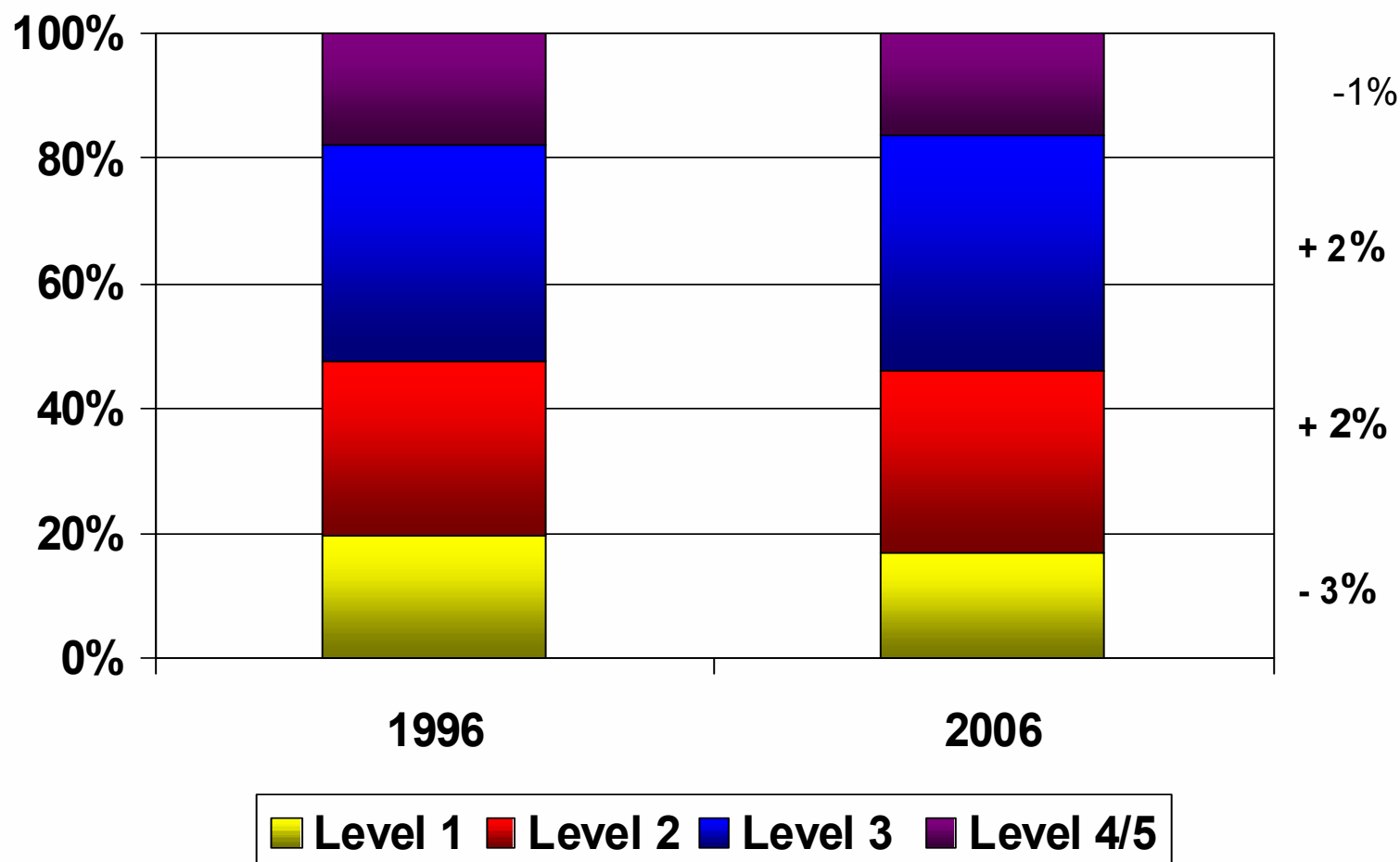
- ALLS measured:
  - ▶ Prose Literacy
  - ▶ Document Literacy
  - ▶ Numeracy
  - ▶ Problem-solving
  - ▶ (Health Literacy)



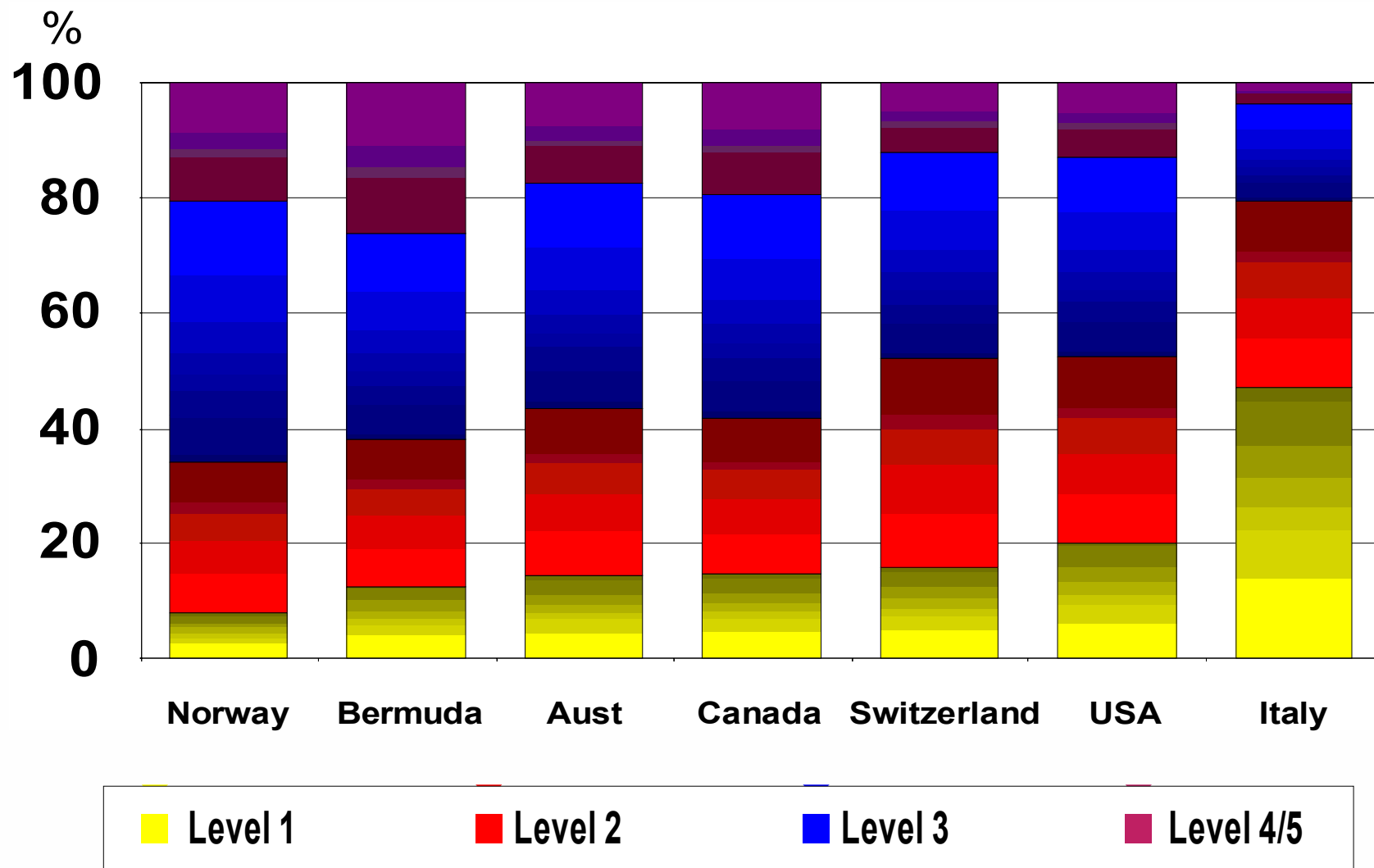
# ALLS/SAL Methodology

- Personal interview of one randomly selected person from each household selected.
- Persons aged 15-74 years.
- ALLS: 8,988 fully responding records, response rate of 81%.
- Average contact time: 100 minutes, per fully responding record.

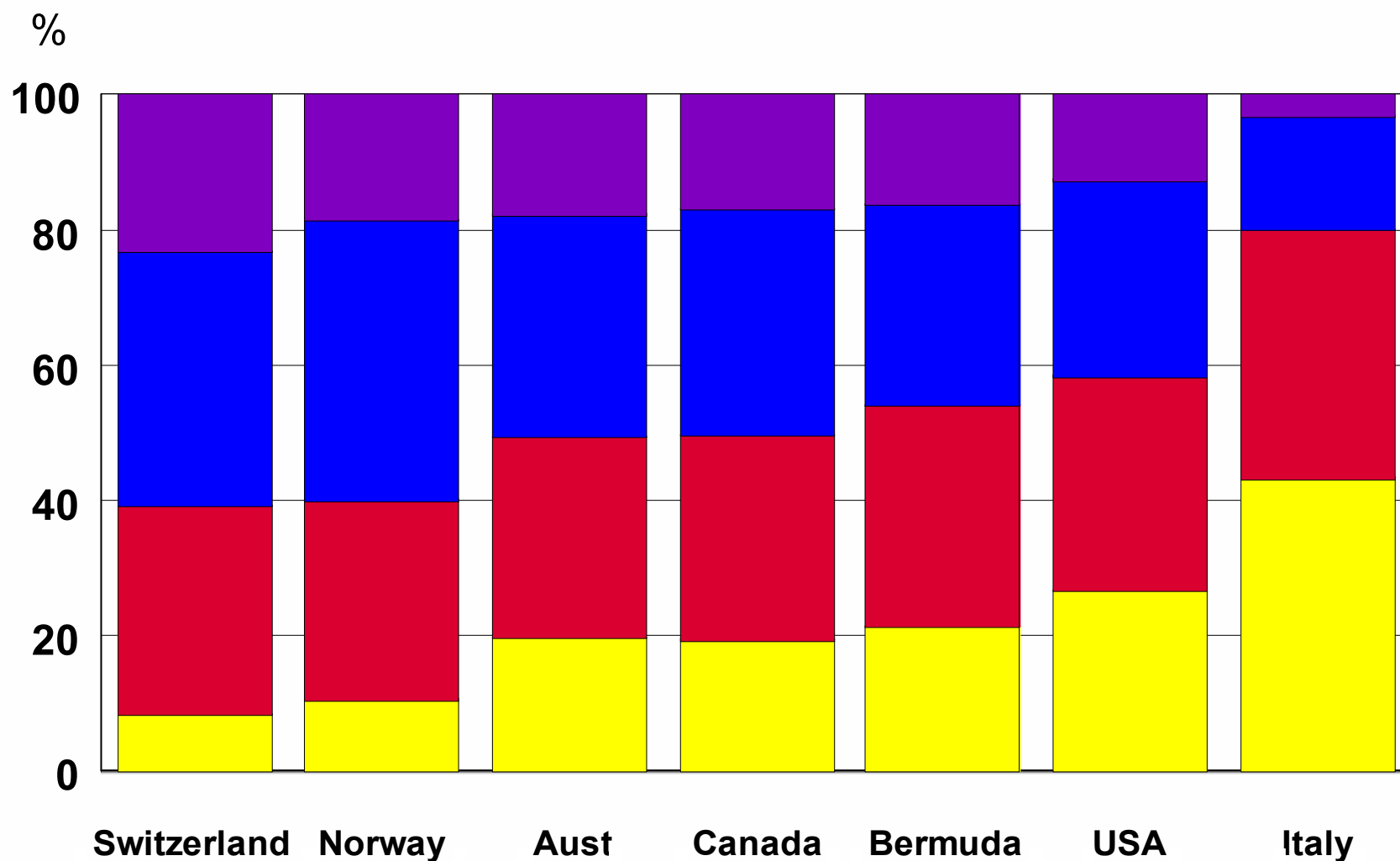
# Prose literacy distributions, Australia: SAL (1996) and ALLS (2006)



# Per cent of Adult population (16 to 65) at prose literacy levels 1-5: ALLS



# Per cent of Adult population (16-65) numeracy levels 1-5: ALLS





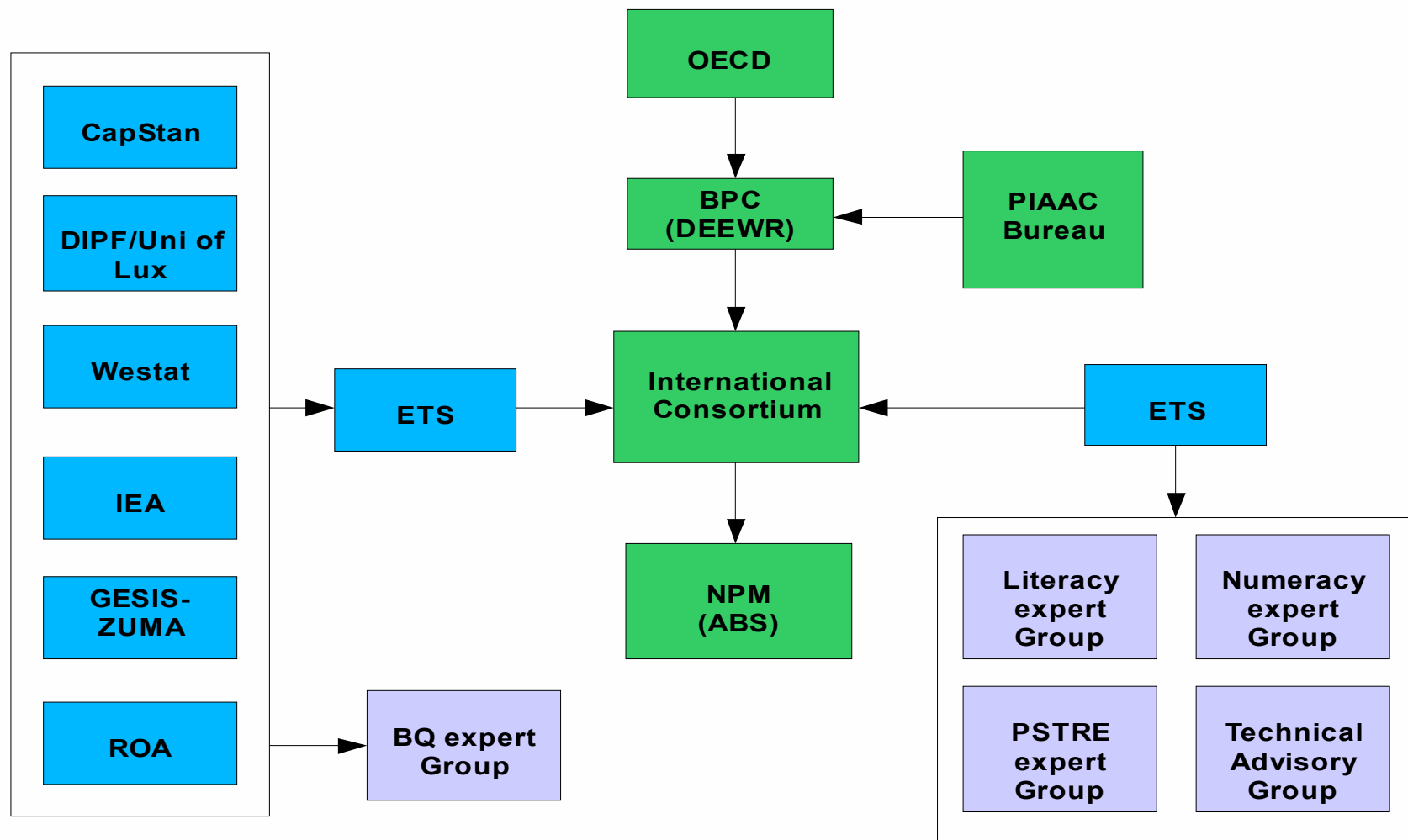
# Survey of Adult Competencies (SAC)

- Programme for the International Assessment of Adult Competencies (PIAAC)
- Organisation for Economic Co-operation and Development (OECD)
- Evolved from the previous two literacy surveys. Seek to ensure continuity from these as well as to extend measures.

# Participating countries

- Australia
- Austria
- Belgium
- Canada
- Chile
- Czech Republic
- Cyprus
- Denmark
- Estonia
- Finland
- France
- Germany
- Ireland
- Italy
- Japan
- Korea
- Netherlands
- Norway
- Poland
- Portugal
- Russian Federation
- Slovak Republic
- Spain
- Sweden
- United Kingdom
- United States

# SAC governance model



# SAC Methodology

- Personal interview with one randomly selected person from each household.
- Australian scope: persons aged 15-74 years.
- International scope persons aged 16-65 years.
- Main survey: 9,000 fully responding
- Average contact time: 118 minutes, per fully responding record.
- Run October 2011 to February 2012



# SAC Objectives

- Identify and measure cognitive competencies believed to underlie both personal and societal success;
- Assess the impact of these competencies on social and economic outcomes at individual and aggregate levels;
- Gauge the performance of education and training systems in generating required competencies; and
- Help to clarify the policy levers that could contribute to enhancing competencies.

# COAG outcomes

- Data from SAC will be used to assess COAG outcomes. The two most relevant outcomes are:
  - ▶ the working age population have gaps in foundation skills reduced to enable effective educational, labour market and social participation; and
  - ▶ the working age population has the depth and breadth of skills and capabilities required for the 21st century labour market.

# COAG indicators

- Progress towards these outcomes will be measured by:
  - ▶ proportion of the working age population at literacy level 1, 2 and 3 (ALLS or similar)
  - ▶ proportion of 20-64 year olds who do not have a qualification at or above Certificate III
  - ▶ SAC data will be used to measure the first indicator.

# SAC Content

- The Background Questionnaire (BQ) will collect information on:
  - ▶ Education and training;
  - ▶ Employment details;
  - ▶ Work details and other work skills;
  - ▶ Literacy, numeracy and ICT skill use;
  - ▶ Health and well-being;
  - ▶ Demographic information.
  - ▶ Income



# The SAC Assessment

- SAC will measure:
  - ▶ Literacy (combined prose and document);
  - ▶ Numeracy; and
  - ▶ Problem-solving in technology rich environments
- Key difference, will be collected across two modes: paper-based and computer-based.

# Literacy

- Literacy is understanding, evaluating, using and engaging with written texts to participate in society, to achieve one's goals, and to develop one's knowledge and potential.
- Will include 'Reading Components' to help us better understand the reading profiles of adults at the low end of the literacy spectrum.

# Numeracy

- Numeracy is the ability to access, use, interpret and communicate mathematical information and ideas to effectively manage and respond to the mathematical demands of diverse situations in the information age.

# PS-TRE

- Problem solving in technology-rich environments involves using digital technology, communication tools and networks to acquire and evaluate information, communicate with others and perform practical tasks.
- The problem solving component of SAC will focus on the abilities to solve problems for personal, work and civic purposes by setting up appropriate goals and plans, accessing and making use of information through computers and computer networks.

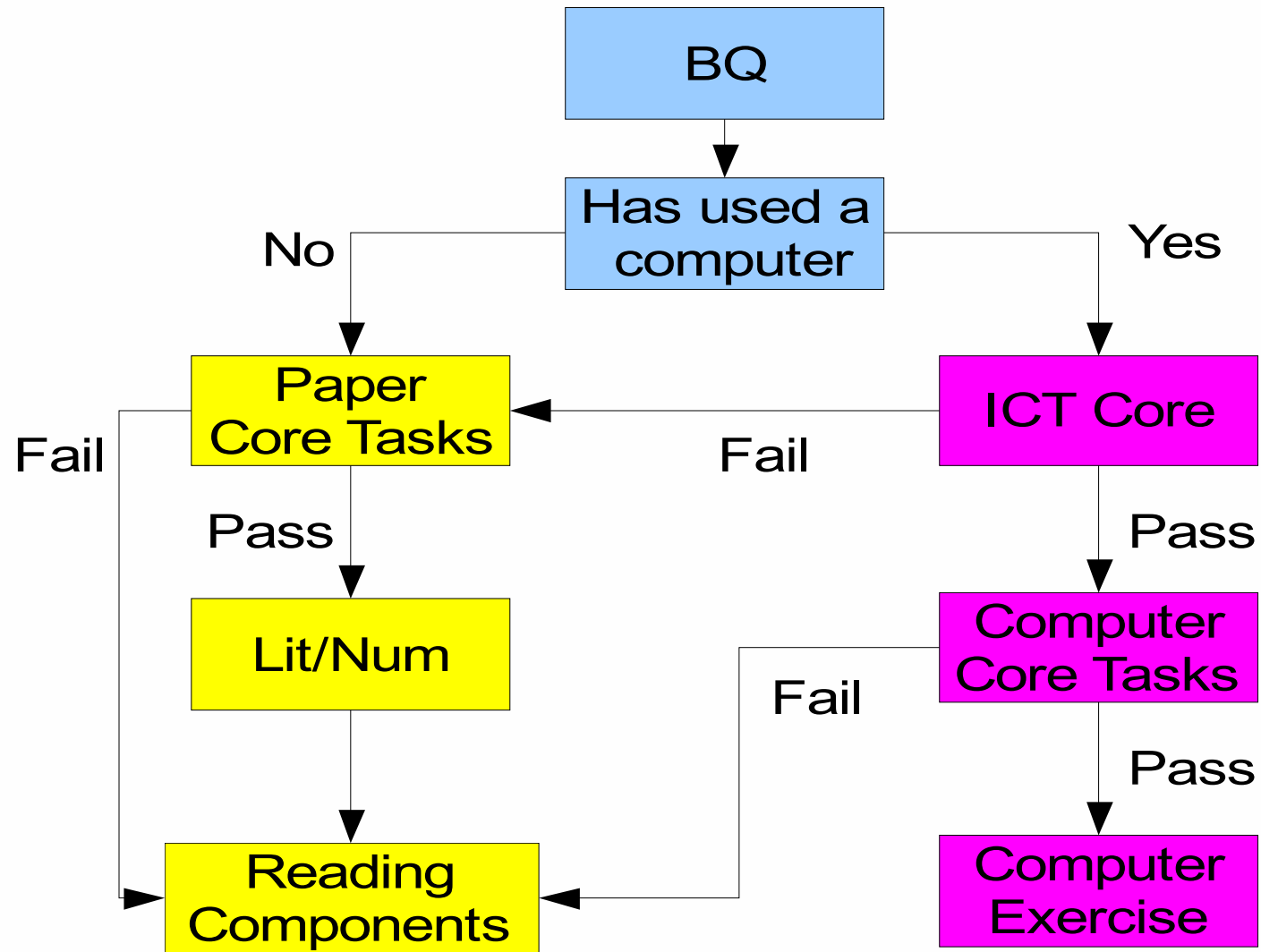


# Comparability of ABS literacy surveys

SAL 1996	ALLS 2006	SAC
Prose Literacy	→ Prose Literacy	→ Literacy
Document Literacy	→ Document Literacy	→ Literacy
Quantitative	— Numeracy	→ Numeracy
	Problem solving	— Problem solving in technology-rich environments

- Similar measure with common items
- Loosely related measure based on different conceptual frameworks

# Flow of the questionnaire



# Background Questionnaire

- Contains 11 Modules
  - ▶ Module A – General Information
  - ▶ Module B – Education & Training
  - ▶ Module C – Current Status and Work History
  - ▶ Module D – Current Work
  - ▶ Module E – Last Job
  - ▶ Module F – Skills used at work
  - ▶

# Background Questionnaire

- ▶ Module G – Literacy, Numeracy and Information and Communication Technology at work
  - ▶ Module H – Literacy, Numeracy and Information and Communication Technology in everyday life
  - ▶ Module I – About yourself
  - ▶ Module J – Background Information
  - ▶ Module K – Income
- 
- Information for analysis of exercise data

# ICT Core – Skills measured

- Clicking
- Typing
- Selecting from pull down menu
- Scrolling
- Dragging and dropping text
- Highlighting text
- Need to successfully complete four tasks (out of six), including highlighting text to be considered for a computer-based Exercise.



# Introduction to the Exercise

- Exercises measure:
  - ▶ Literacy
  - ▶ Numeracy
  - ▶ Problem solving in a technology-rich environment (computer-based only)
  - ▶ Reading components (paper-based only)
- Everyday activities

# Exercises

- Examples of the exercises include:
  - ▶ Reading email
  - ▶ Using a spreadsheet
  - ▶ Conducting a book search on a library catalogue
  - ▶ Navigating websites
  - ▶ Understanding instructions on a medicine label
  - ▶ Reading a map
  - ▶ Measuring with a ruler
  - ▶ Calculating discounts

# Computer-based Exercise

- If respondent passed ICT Module and the Core assessment items, assigned a computer-based Exercise
- Consists of 2 Sections, combinations of
  - ▶ Literacy
  - ▶ Numeracy
  - ▶ Problem solving in technology-rich environments
- On average 60 minutes to complete

# Paper-based Exercise

- Two booklet types covering;
  - ▶ Literacy
  - ▶ Numeracy
- Self administered by the respondent
- On average, 60 minutes to complete

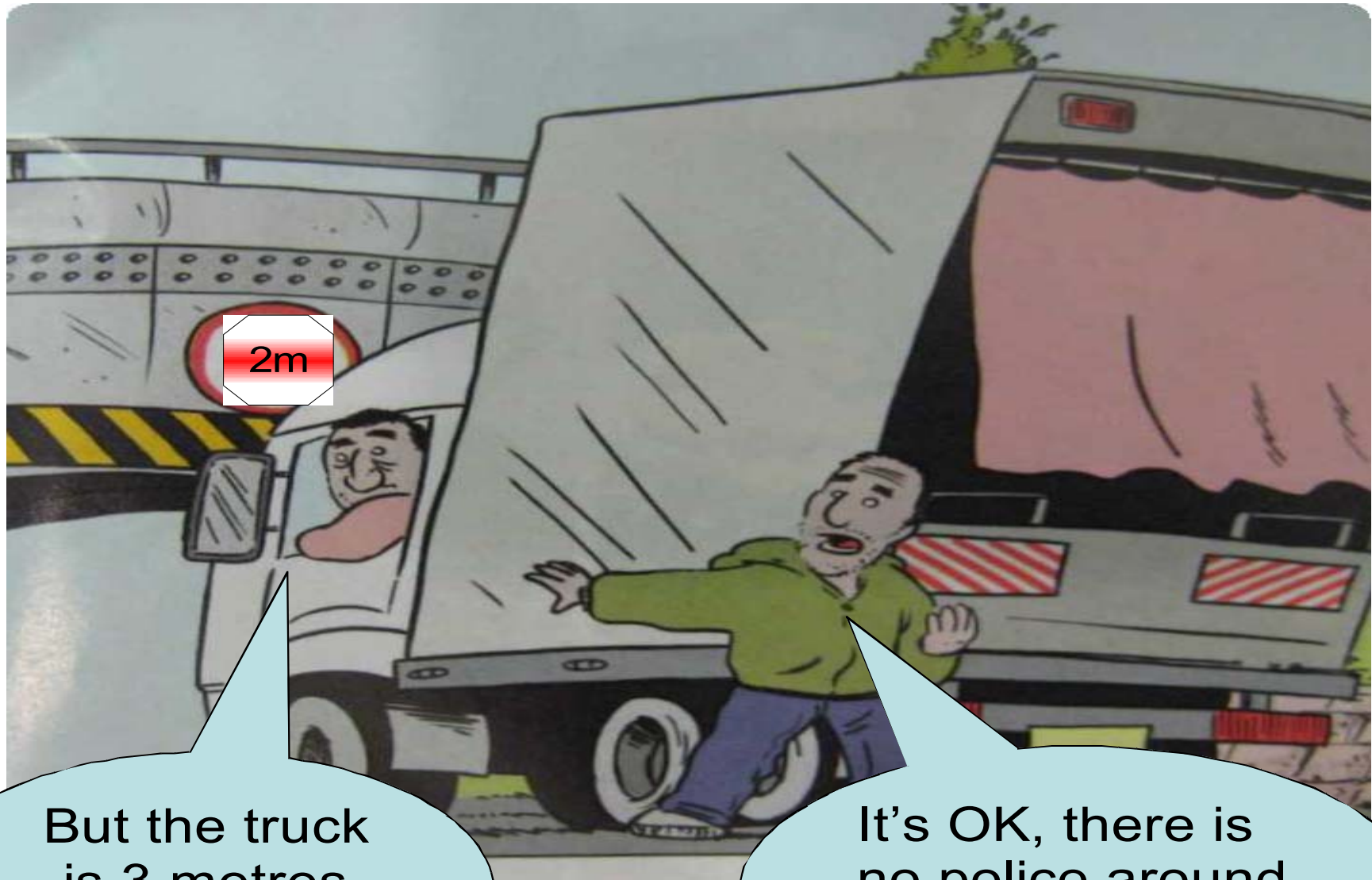
# Reading Components

- Only completed by those respondents completing a paper-based Exercise or failed the Computer Core Tasks.
- Measures 3 basic reading skills:
  - ▶ Word meaning (print vocabulary);
  - ▶ Sentence processing;
  - ▶ Basic passage comprehension.



# Results and further information

- First results expected in September 2013
- ABS website ([www.abs.gov.au](http://www.abs.gov.au))
- Results from ALLS, catalogue 4228.0
- OECD website ([www.oecd.org/piaac](http://www.oecd.org/piaac))



But the truck  
is 3 metres  
high !

It's OK, there is  
no police around,  
go ahead!

# Questions