

Fact Sheet

2003 Programme for International Student Assessment

Introduction

The OECD Programme for International Student Assessment (PISA) assesses 15-year-old students' ability to apply their knowledge and skills to real-life problems and situations. The emphasis is on whether students, faced with problem situations that might occur in real life, are able to analyse, reason and communicate their ideas effectively. PISA was first introduced in 2000 and repeats every three years.

In Australia 321 schools and about 12 500 students from government, Catholic and independent sectors participated in the 2003 PISA. Apart from assessing student's performance in reading, mathematical and scientific literacy and problem solving, PISA also collects a range of information on the socio-demographic characteristics of students and their attitudes to schools and learning.

When interpreting the comparative assessment results it is important to remember that the result is an estimate of the population value referred from the results obtained from a sample of students assessed. Therefore the estimate should take account of the associated error margin.

Overall performance

The 2003 results showed that the average performance of 15-year-old Victorian students was significantly better than the OECD average in reading and problem solving, and similar to the OECD average in mathematical and scientific literacy.

The average performance of Victorian students was similar to the Australian average in reading, mathematical literacy and problem solving, but below in scientific literacy.

Reading literacy

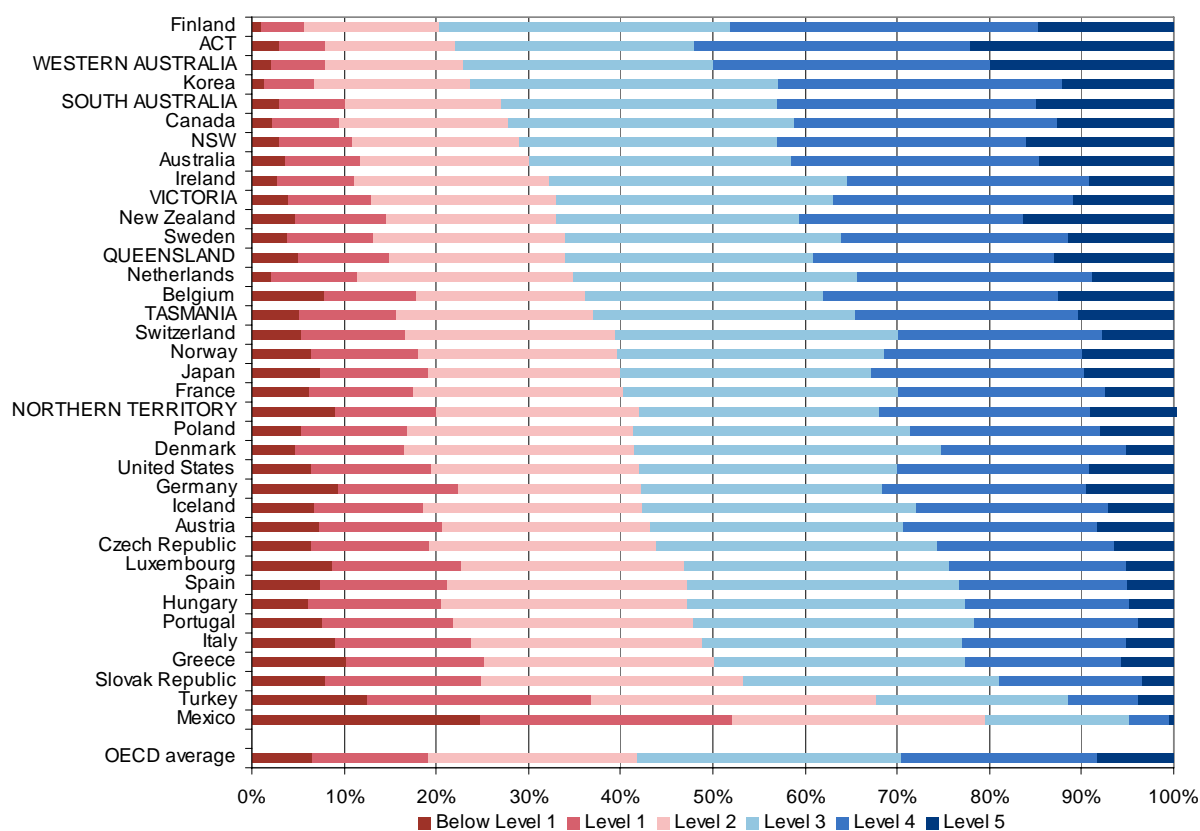
The PISA concept of reading literacy emphasises skills in using written information in situations which students may encounter in their life both and beyond school. It goes beyond the traditional notion of decoding information and literal interpretation of what is written towards more applied tasks.

Comparing the average performance of 15-year-old students in Victoria with other Australian states and territories is summarised in Chart 3. Three OECD countries that achieved significant better results than Victoria were Finland, Korea and Canada.

The alternative way of assessing performance is the proportion of students achieving a standard (proficient level). In 2003 around two thirds of Victorian students (67%) achieved proficient level 3 or above in reading literacy compared to 70% for the Australian average and 58% for the OECD average. Chart 1 presents the proportion of students achieving at each proficient level and positions Victoria among the OECD countries and Australian states and territories.

Setting PISA level 3 as a proficient standard for 15-year-old students in reading literacy in Australia has been endorsed by the Ministerial Council on Education, Employment, Training and Youth Affairs (MCEETYA) Performance Measurement and Reporting Taskforce (PMRT). Students at level 3 are capable of reading tasks of moderate complexity, such as locating multiple pieces of information, making links between different parts of a text and relating it to familiar everyday knowledge.

Chart 1: Proportion of 15-year-old students at each proficient level on the reading scale, OECD countries and Australian states and territories, 2003 PISA (sort by proficient level: 3 or above)



Source: Table 6.1, Learning for Tomorrow's World – First Results from PISA 2003 (OECD) and PISA in brief from Australia's perspective (ACER)

Mathematical literacy

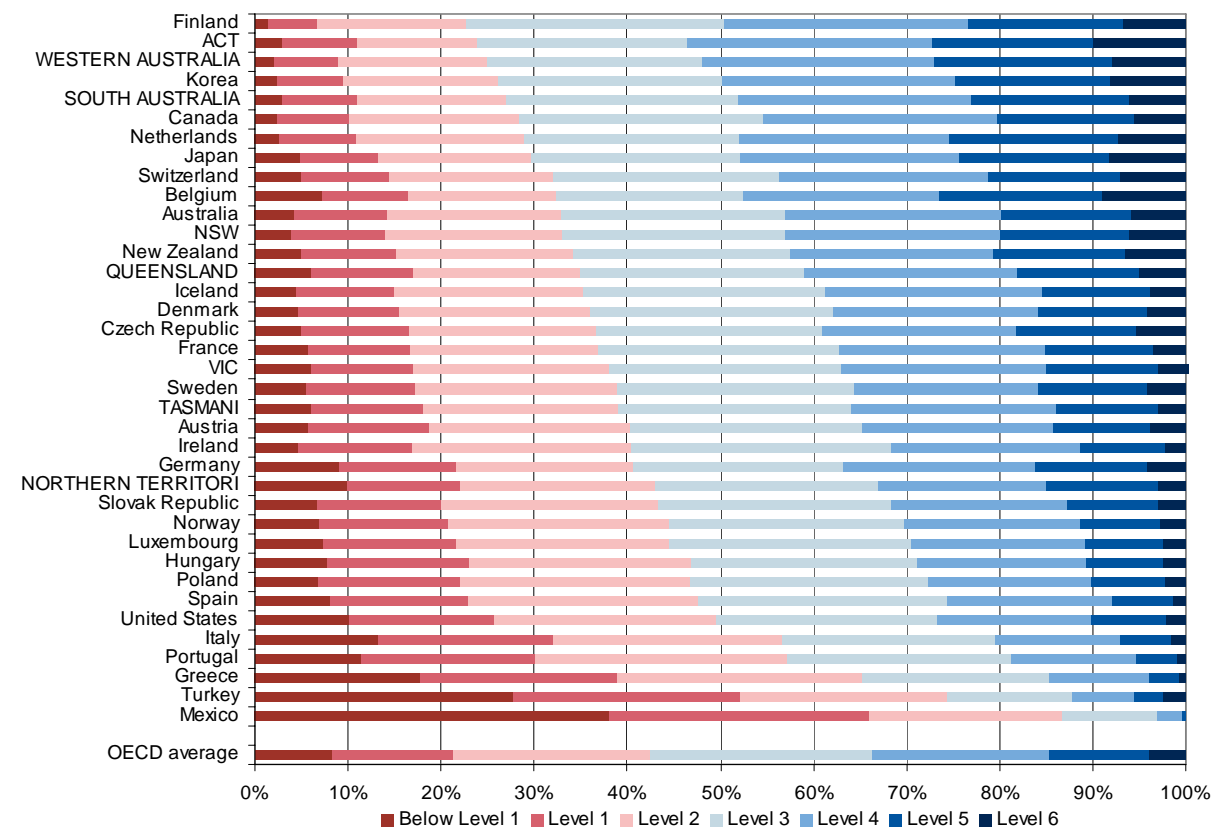
Assessment of mathematical literacy was the main focus in the 2003 PISA and comprised of quantity, space and shape, change and relationships and uncertain content areas.

The comparative analysis of the average performance of 15-year-old students in Victoria with other states and territories is summarised in Chart 3. Six OECD countries that achieved significant better results than Victoria were Finland, Korea, Netherlands, Japan, Canada and Belgium.

About 63% of Victorian students achieved proficient level 3 or above in the overall mathematical literacy compared to 67% for the Australian average and 58% for the OECD average.

Setting PISA level 3 as a proficient standard for 15-year-old students in mathematical literacy in Australia is currently under consideration by the PMRT. Students at level 3 are capable of executing clearly described procedures, selecting and applying simple problem solving strategies, interpreting and using representations based on different information sources and reasoning directly from them and developing short communications reporting their interpretations, results and reasoning.

Chart 2: Proportion of 15-year-old students at each proficient level on the overall mathematical literacy scale, OECD countries and Australian states and territories, 2003 PISA (Proposed proficient standard: level 3 or above)



Source: Table 2.5a, Learning for Tomorrow's World – First Results from PISA 2003 (OECD) and PISA in brief from Australia's perspective (ACER)

Scientific literacy

The PISA concept of scientific literacy is the capacity of students to use scientific knowledge to identify questions and to draw evidence-based conclusion. Scientific literacy was a minor domain in PISA 2000 and 2003, but is the major focus in PISA 2006 which aims to establish its proficient levels.

The average performance of 15-year-old students in Victoria relatively to other Australian states and territories is summarised in Chart 3. Three OECD countries that achieved significantly better results than Victoria were Finland, Japan and Korea.

Problem solving

Problem solving component was included in the 2003 PISA for the first time. It assesses how well prepared young adults are to solve the problems that they will encounter in life beyond schools. Students need to draw on knowledge and skills learned in particular parts of the school curriculum. Students also need to think flexibility and pragmatically on how to solve unfamiliar situations which are less obvious linked to school knowledge.

Korea, Finland, Japan and New Zealand achieved significant better results than Victoria. Comparing the average performance of 15-year-old Victorian students with other states and territories is summarised in Chart 3

Chart 3: Compared the average performance of 15-year-old Victorian students with other states and territories

