



MINISTERIAL COUNCIL ON EDUCATION,  
EMPLOYMENT, TRAINING AND YOUTH AFFAIRS  
*Performance Measurement and Reporting Taskforce*

# **Measurement Framework for National Key Performance Measures**

**August 2008**

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## Introduction

In 1999, Ministers responsible for school education agreed to the new set of *National Goals for Schooling in the Twenty-First Century*, with the aim of providing high quality schooling in Australia which would secure for students the necessary knowledge, understanding, skills and values for a productive and rewarding life. As a consequence, the Ministerial Council on Education, Employment, Training and Youth Affairs (MCEETYA) set in train a process to enable nationally comparable reporting of progress against the *National Goals*.

The *Measurement Framework for National Key Performance Measures* takes account of all MCEETYA decisions related to measuring performance against the *National Goals* agreed to in 1999.

It sets out a basis for reporting progress towards the achievement of the National Goals by Australian school students by drawing on the agreed definitions of Key Performance Measures. The core of the Framework is a schedule setting out the Key Performance Measures and an agreed assessment and reporting cycle for the period 2006–2014.

A new set of National Goals is currently being developed for consideration by Ministers in late 2008. The Council of Australian Governments (COAG) will also finalise a set of national measures to monitor implementation of the national participation and productivity reforms. The 2009 Measurement Framework will be informed by the new goals and COAG measures and targets that relate to school education.

With the aim of driving school improvement and enhanced outcomes for students, Ministers responsible for school education have agreed to report on progress towards the achievement of the National Goals in the following priority areas, comparable by State and Territory, and using Key Performance Measures as the basis for reporting:

- literacy
- numeracy
- science
- civics and citizenship education
- information and communication technologies
- vocational education and training in schools
- participation and attainment.

Ministers noted the need to investigate the development of indicators of performance in enterprise education, and to develop an approach to reporting the outcomes for students with disabilities, but have since agreed that work in these areas should cease for the time being.

Following extensive work by the Performance Measurement and Reporting Taskforce (PMRT), Ministers agreed that it was not feasible to develop key performance measures in enterprise education or a definition encompassing all students with disabilities, that could be used for the purposes of nationally comparable reporting.

Definitions of student characteristics have been agreed by MCEETYA. Student outcomes will be reported for the student cohorts disaggregated by:

- sex
- Indigenous status
- language background
- geographic location
- socio-economic background.

In 2004, MCEETYA endorsed the following enhancements to national reporting and accountability systems:

- introducing benchmarking against international comparisons
- ensuring that reporting is reliable and nationally comparable for Years 3, 5 and 7
- collecting financial data that allows for comparable reporting
- developing plain English reporting
- using data collections to improve Australian education policy.

In December 2004, the Federal Parliament passed the *Schools Assistance (Learning Together – Achievement Through Choice and Opportunity) Act 2004*. The Act and the Regulations supporting it required PMRT to undertake further work in relation to developing and reporting against common instruments for literacy and numeracy, developing nationally comparable measures for attendance, and to incorporate the Trends in International Mathematics and Science Study (TIMSS) within the Measurement Framework. As a result, literacy and numeracy measures based on Programme of International Student Assessment (PISA) and TIMSS have been incorporated into the Measurement Framework, as has a national measure of attendance.

PMRT is responsible for developing and implementing a management strategy for the work outlined in the Framework. The resources to support PMRT's work are provided by the Australian Government and the States and Territories according to the MCEETYA funding formula.

## Key Performance Measures

National Key Performance Measures (KPMs) have been developed for each priority area within the National Goals to ensure that key indicators of the outcomes of schooling in Australia are publicly available. In March 2000, Ministers endorsed the definition of national KPMs as:

*a set of measures limited in number and strategic in orientation, which provides nationally comparable data on aspects of performance critical to monitoring progress against the National Goals for Schooling in the Twenty-First Century.*

Within that context, a KPM quantifies a dimension of student participation, attainment or achievement and enables progress to be monitored against the National Goals. KPMs are expressed as a percentage or proportion of students achieving a performance standard, or the number or proportion of students participating in or successfully completing programs of a particular duration, and/or standard.

KPMs reflect good assessment practice, support open transparent reporting and are published in a manner that facilitates access by the public. They are policy relevant, cost effective and practical to collect, and of interest to the public.

As a set, the national KPMs are balanced in coverage across the priority areas, and provide nationally comparable data.

The following principles underpin the development of KPMs:

- i. Information on student outcomes is the focus of the reporting agenda.
- ii. KPMs take account of State and Territory curriculum and assessment frameworks.
- iii. Assessment techniques are innovative and model good assessment practice and, wherever possible, assessment materials developed for national sample assessments are available for use by systems and schools. Collection and use of

data for national purposes will in all respects conform to the guidelines provided in the document, *Principles and Protocols for the Collection and National Reporting of MCEETYA Key Performance Measures for Schooling in Australia*.

- iv. Access to PMRT data collections will be available to interested parties subject to privacy and confidentiality considerations, the provisions of the *Census and Statistics Act 1905*, and agreed MCEETYA and PMRT processes and protocols. PMRT data will only be made available to researchers or other external agencies in a form that does not identify individual students, schools or education sectors.
- v. Where performance across different student age cohorts in a particular domain is the focus of measurement, a single scale should underpin the measurement of student achievement.
- vi. The KPMs enable the range of student achievement in each assessed area to be reported.

Prior to 2008, measures of literacy and numeracy performance based on national benchmarks did not meet all of these principles. However, a number of enhancements were introduced in parallel with the introduction of common national literacy and numeracy tests commencing in May 2008 to enable reporting of student performance in each of the assessed curriculum areas at a national minimum standard, across a range of achievement levels, and on a single scale.

Ministers expect that new areas will be proposed for measurement at the national level, as policies and priorities change. The process for establishing new measures, including those directly requested by MCEETYA or referred from COAG through MCEETYA involves, in the first instance, discussion and evaluation by PMRT and development of possible measures. This is followed by the provision of written advice to MCEETYA which would include an indication of the likely resource demand of establishing the measure and the timeline for implementation.

## Benchmarks and Standards

MCEETYA has advised PMRT that it requires student performance to be reported across the range of achievement levels. Prior to 2008, the approach in literacy and numeracy was restricted to reporting performance at or above the minimum standard which was described by the national benchmarks. However, implementation of the enhanced literacy and numeracy assessment processes in 2008 will ensure that the range of student performance can be reported. The Australian Education System Officials Committee (AESOC) recommended that where comparative data is required for national reporting, student achievement data should be aggregated to the State and Territory level, and by the agreed student sub-groups, and reported in relation to the 'national minimum standard'. In addition, data on the performance of students across all achievement bands at each of the Year levels 3, 5, 7 and 9 will also be prepared and made available.

MCEETYA has agreed that national standards for measures in all of the national and international sample assessments should be set at a 'proficient' standard, rather than a 'minimum' standard. This includes measures in science literacy, civics and citizenship and information and communication technologies (ICT) literacy, measures of the performance of 15 year old students based on PISA, and the Year 4 and Year 8 measures based on TIMSS. In addition, data on the performance of students across all achievement bands will also be prepared and made available.

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<sup>1</sup> The definition and application of the term 'nationally comparable' and further information about data management is discussed in MCEETYA's *Principles and Protocols for the Collection and National Reporting of MCEETYA Key Performance Measures for Schooling in Australia*, available from <http://www.mceetya.edu.au/mceetya/>.

<sup>2</sup> The PMRT Secretariat will advise jurisdictions through PMRT members of requests for data by external researchers.

At its March 2003 meeting, PMRT established a national standard setting process. Standards have been set and reported in:

- science literacy (Year 6)
- ICT literacy (Years 6 and 10)
- civics and citizenship (Years 6 and 10), and
- reading and mathematics literacy for 15 year old students.

During 2008, PMRT will complete work on standard setting for scientific literacy for 15 year old students, and for mathematics and science as measured using the Trends in International Mathematics and Science Study (TIMSS) for students in Years 4 and 8.

## Target Setting

MCEETYA has endorsed target setting as a means of expressing aspirations and providing motivation, guidance, support and monitoring for continuous school and system improvement.

The agreed definition of a national target is, *a measurable level of performance expected to be attained within a specified time.*

National targets are developed with two purposes in mind: to drive improvement in school and student outcomes, and to provide an indication of how the States and Territories are performing in relation to the relevant National Goals.

To date, Ministers have agreed to national targets in the areas of reading, writing, spelling and numeracy for Years 3, 5 and 7. The treatment of these targets in the reporting of the 2008 national test results will be revised in the context of the method announced by MCEETYA for incorporating national minimum standards in the new NAPLAN reporting framework.

Ministers have also agreed to consider establishing further national targets where KPMs are developed for other national goals. However, each national goal has different characteristics, which has implications for developing meaningful KPMs.

## Review of the Key Performance Measures

The set of KPMs outlined in this Measurement Framework will be reviewed from time to time in the context of MCEETYA's expectation that the measures will be few in number and strategic in orientation, the need to ensure appropriate coverage of the priority areas outlined in the National Goals, and to investigate implementation of additional measures required by MCEETYA and COAG. Following such reviews, written advice will be provided to MCEETYA proposing additional measures or reframing or removing existing measures.

During 2008, work is being undertaken by PMRT to review the two measures in civics and citizenship education.

## Changes to the Measurement Framework in 2008

The 2008 version of the Measurement Framework schedule has been updated to encompass the period 2006-2014. There have been some minor changes in the text to reflect the implementation of the NAP – Literacy and Numeracy tests (NAPLAN) and implications for the current national targets.

Measures 1a, 1c and 1d, and Measure 2a have been amended within the schedule to reflect AESOC decisions about the nomenclature for national literacy and numeracy standards.

Measure 1(d) Spelling has been further amended within the schedule to reflect the new Language Conventions component of the new NAPLAN tests.

Measure 2(b) in relation to achievement by 15 year old students against the PISA numeracy standard has been amended within the schedule to reflect PMRT's agreement that Band 3 be the proficient standard for PISA Mathematical Literacy.

## Managing the Reporting Demands on Schools

Managing the data collection demands on jurisdictions and schools has been an important consideration in developing the national KPMs. There are currently nine areas covered by national KPMs. Thirteen KPMs involve testing students, including the national literacy and numeracy tests.

PMRT's focus on managing the reporting demands on schools and jurisdictions is evident in the rolling triennial cycle for the assessment of science literacy, civics and citizenship and ICT literacy using a sample of students, and using data from TIMSS to provide information about the performance of Year 4 and Year 8 students in mathematics and science. PISA data is used to measure literacy, numeracy and science outcomes for 15 year old students.

In addition, the number of KPMs in the Vocational Education and Training (VET) area has been limited to one participation measure and one attainment measure to minimise the workload on jurisdictions.

Nevertheless, it is recognised that some schools may perceive national and international assessments to have a lower priority than other programs within the school, and that whatever the benefits of such assessments, there will be disruption and additional workload demands at the school level. This is particularly evident in smaller jurisdictions where schools are approached more frequently to participate in assessment programs. In some regions the literacy level of parents may be lower, and this presents challenges for the collection of student background data.

Whenever the Measurement Framework is reviewed, and where new measures are proposed, the impact on schools and smaller jurisdictions will be carefully weighed in reaching decisions about the scope of the proposed measures and the feasibility of introducing them.

## The National Assessment Program

The National Assessment Program (NAP) which has been agreed by MCEETYA, and outlined in the *Measurement Framework for National Key Performance Measures* has both national and international elements. It encompasses all of the MCEETYA endorsed tests which are developed nationally to measure student performance in relation to the *National Goals for Schooling*, and also Australia's participation in the international tests, the OECD's Programme for International Student Assessment (PISA) and Trends in International Mathematics and Science Study (TIMSS).

The term NAP is used within the titles of the nationally developed assessment programs to identify them as part of this suite of assessments. To avoid confusion, however, while

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<sup>3</sup> See Key Performance Measures 1–5 in the table on pages 7–9.

Australia's participation in PISA and TIMSS is characterised as part of the NAP, the titles of these international assessments remain unchanged.

## **National elements**

The assessments assist educators to interpret the performance of their own schools by providing nationally comparable information about the achievements of students in other States and Territories.

The common national literacy and numeracy test (NAPLAN) is a full cohort assessment of students in Years 3, 5, 7 and 9 that was implemented for the first time in May 2008, with the aim of improving literacy and numeracy achievement nationally. Student test results will be reported to parents and schools.

Each of the national sample assessment programs in science literacy, civics and citizenship and ICT literacy has, wherever possible, been designed to provide a set of items that any Australian school can use to measure its students' performance against national standards. In addition, the detailed reports prepared following each assessment cycle provide useful information to schools and jurisdictions and inform planning for improved student learning in these key curriculum areas.

## **International elements**

The results from Australia's participation in international assessment programs, specifically PISA and TIMSS, are used to provide data on the progress of Australian school students towards achieving the *National Goals*.

It should be noted that data collection for both national and international assessment programs will be expedited through jurisdictional approval processes. Jurisdictions and sectors have agreed that as these assessment programs are endorsed by Ministers and are part of the National Assessment Program, and that since agencies managing such programs are themselves bound by the highest ethical standards, approval processes applied to general research programs and 'one-off' studies do not apply.

PMRT will develop a process for evaluating future invitations to participate in international assessment programs to ensure that an appropriate cost-benefit analysis is undertaken.

## **Assessment Cycle**

A table summarising the agreed national Key Performance Measures and the assessment cycle is included on the following pages.

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<sup>4</sup> See <http://www.mceetya.edu.au/mceetya/> for benefits of participating in national assessments.

<sup>5</sup> See <http://www.mceetya.edu.au/mceetya/> for benefits of participating in international assessments.



## Current Key Performance Measures and Agreed Assessment and Data Collection Cycle

Measure		Year Level	Cycle	Type/Source	2006	2007	2008	2009	2010	2011	2012	2013	2014
<b>Literacy</b>													
1a	% achieving at or above the national minimum standard for reading <sup>6</sup>	Years 3, 5, 7 & 9 <sup>7</sup>	Annual	State and Territory full cohort literacy test to 2007; common tests from 2008	✓	✓	✓	✓	✓	✓	✓	✓	✓
1b	% achieving at or above the proficient standard on the OECD PISA combined reading scale <sup>8</sup>	15 year olds	Triennial	International test – national sample of students	PISA			PISA			PISA		
1c	% achieving at or above the national minimum standard for writing <sup>6</sup>	Years 3, 5, 7 & 9	Annual	State and Territory full cohort literacy test to 2007; common tests from 2008	✓	✓	✓	✓	✓	✓	✓	✓	✓
1d	Language conventions: % achieving at or above the national minimum standard for spelling <sup>9</sup> and % achieving at or above the national minimum standard for grammar and punctuation	Years 3, 5, 7 & 9 <sup>6</sup>	Annual	National test from 2008			✓	✓	✓	✓	✓	✓	✓

<sup>6</sup> Common national tests for NAPLAN (Years 3, 5, 7 and 9) were introduced in 2008.

<sup>7</sup> National assessments in Year 9 (reading, writing, language conventions and numeracy) commenced in 2008.

<sup>8</sup> For the PISA Reading scale, the proficient standard is agreed to be Level 3.

<sup>9</sup> National assessment of language conventions commenced in 2008.

Measure	Year Level	Cycle	Type/Source	2006	2007	2008	2009	2010	2011	2012	2013	2014
<b>Numeracy</b>												
2a	% achieving at or above the national minimum standard for numeracy <sup>6</sup>	Years 3, 5, 7 & 9	Annual	State and Territory full cohort numeracy test to 2007; common tests from 2008	✓	✓	✓	✓	✓	✓	✓	✓
2b	% achieving at or above the proficient standard on the OECD PISA combined mathematics scale <sup>10</sup>	15 year olds	Triennial	International test – national sample of students	PISA			PISA			PISA	
2c	% achieving at or above the proficient standard on the TIMSS mathematics scale <sup>11</sup>	Years 4 & 8	Quadrennial	International test – national sample of students	TIMSS				TIMSS			TIMSS
<b>Science Literacy</b>												
3a	% achieving at or above the proficient standard in science literacy <sup>12</sup>	Year 6	Triennial	National Assessment Program (NAP) – national sample of students	✓			✓			✓	
3b	Interim measure – % achieving at or above the OECD mean score <sup>13</sup>	15 year olds	Triennial	International test – national sample of students	PISA			PISA			PISA	
3c	% achieving at or above the proficient standard on the TIMSS science scale <sup>14</sup>	Years 4 & 8	Quadrennial	International test – national sample of students	TIMSS				TIMSS			TIMSS

10 For the PISA combined mathematics scale, the proficient standard is agreed to be Level 3.

11 National standard under consideration.

12 For Year 6 science literacy, the proficient standard is set at Band 3.2 within the National Assessment Program.

13 Standard to be based on the 2006 PISA results.

14 National standard under consideration.

Measure	Year Level	Cycle	Type/Source	2006	2007	2008	2009	2010	2011	2012	2013	2014
<b>Civics and Citizenship</b>												
4a	% achieving at or above the proficient standard in civic knowledge and understanding <sup>15</sup>	Years 6 & 10	Triennial	National Assessment Program (NAP) – national sample of students		✓			✓		✓	
4b	% achieving at or above the proficient standard in citizenship participation skills and civic values <sup>15</sup>	Years 6 & 10	Triennial	National Assessment Program (NAP) – national sample of students		✓			✓		✓	
<b>Information and Communication Technologies (ICT) Literacy</b>												
5	% achieving at or above the proficient standard in ICT <sup>16</sup>	Years 6 & 10	Triennial	National Assessment Program (NAP) – national sample of students			✓			✓		✓
<b>VET in Schools</b>												
6a	<b>Participation</b> – School students undertaking VET (with New Apprenticeships and Traineeships disaggregated) as part of their senior secondary school certificate in a calendar year as a proportion of all school students undertaking a senior secondary school certificate in that year	Senior secondary	Annual	Up to 2004 – State and Territory certification data. From 2005 – NCVET	✓	✓	✓	✓	✓	✓	✓	✓

<sup>15</sup> For Year 6 civics and citizenship, the proficient standard is set at Level 2, and for Year 10 at Level 3, within the National Assessment Program. Refer to the report MCEETYA National Assessment Program – Civics and Citizenship Years 6 & 10, pp 42 and 43 (<http://www.mceetya.edu.au/mceetya/>).

<sup>16</sup> For Year 6 ICT literacy the proficient standard is set at Level 2, and for Year 10 at Level 3. Refer to the report MCEETYA National Assessment Program – ICT Literacy Years 6 and 10, 2005, pp 46 and 47 (<http://www.mceetya.edu.au/mceetya/>).

	Measure	Year Level	Cycle	Type/Source	2006	2007	2008	2009	2010	2011	2012	2013	2014
6b	<b>Attainment</b> – School students enrolled in a senior secondary certificate in a calendar year who have completed at least one VET unit of competency/module as a proportion of all school students undertaking the senior secondary certificate in that year	Senior secondary	Annual	Up to 2004 – State and Territory certification data. From 2005 – NCVER	✓	✓	✓	✓	✓	✓	✓	✓	✓
<b>Student Participation</b>													
7a	The proportion of 15–19 year olds, by single year of age, in full-time education or training, in full-time work, or both in part-time work and part-time education or training		Annual	<i>ABS Survey of Education &amp; Work</i>	✓	✓	✓	✓	✓	✓	✓	✓	✓
7b	The proportion of 20–24 year olds by single year of age, in full-time education or training, in full-time work, or both in part-time work and part-time education or training		Annual	<i>ABS Survey of Education &amp; Work</i>	✓	✓	✓	✓	✓	✓	✓	✓	✓
<b>Student Attainment</b>													
8a	The proportion of 20–24 year olds who have completed Year 12 or equivalent or gained a qualification at AQF Level 2 or above <sup>17</sup>		Annual	<i>ABS Survey of Education &amp; Work</i>	✓	✓	✓	✓	✓	✓	✓	✓	✓

<sup>17</sup> The Australian Standard Classification of Education (ASCED) is a national standard classification which includes all sectors of the Australian education system. ABS introduced this new standard for reporting of the 2007 Survey of Education and Work released in Dec 2007. The new ASCED standard replaces the previous ABSCQ classification used by the ABS.

Measure		Year Level	Cycle	Type/Source	2006	2007	2008	2009	2010	2011	2012	2013	2014
8b	The proportion of 25–29 year olds who have gained a post-secondary qualification at AQF Level 3 or above <sup>17</sup>		Annual	ABS <i>Survey of Education &amp; Work</i>	✓	✓	✓	✓	✓	✓	✓	✓	✓
<b>Student Attendance</b>													
9	The number of actual full-time equivalent 'student days' attended <sup>18</sup> as a percentage of the total number of possible student days attended over the period	Years 1 to 10 <sup>19</sup>	Annual	Jurisdiction and sector data		✓	✓	✓	✓	✓	✓	✓	✓

<sup>18</sup> The period will be the first semester as defined by each State and Territory's school calendar, although in the transitional phase the collection period will vary between States, Territories and sectors but must include at least the last 20 days in May.

<sup>19</sup> Year 1 being the first year of compulsory schooling.