

Reliability and validity of NAPLAN

My School®

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The National Assessment Program – literacy and numeracy (NAPLAN) provides an assessment of the literacy and numeracy skills of students in Years 3, 5, 7 and 9. NAPLAN has a number of purposes, including reporting national- and state/territory-level achievements in literacy and numeracy, as well as providing accurate and reliable measures of student and school performance.

The processes below have been put in place to ensure that NAPLAN is a valid and reliable measurement of students' literacy and numeracy skills. View an infographic on [NAPLAN writing task development](#).

Development of NAPLAN tests

The development of NAPLAN is managed by ACARA in consultation and collaboration with experts in the areas of literacy and numeracy. Assessment experts, including teachers, education authorities in all states and territories, the Australian Government, and the non-government school sector are also involved in this process.

Tests are developed in five domains: reading, writing, spelling, grammar and punctuation, and numeracy. Specialist item writers are contracted to develop test questions. When constructing test questions, writers must meet nationally agreed specifications including curriculum coverage, spread of item difficulties, length of tests, and question types. Considerable attention is given to ensuring that tests are accessible to students with disability.

NAPLAN Online uses a tailored test design that automatically adapts to a student's test performance and asks questions that match the student's achievement level. These multi-step branched tests provide a more precise measurement of student performance. This allows for greater differentiation of students by using a wider range of question difficulty, without adding to the length of the test for each individual student.

Quality assurance

Proposed test questions are provided to all state and territory government and non-government education authorities for review. Assessment and curriculum specialists and classroom teachers, as well as specialists in Indigenous education, English as a second language, disabilities and inclusive education, then review the items to ensure that the test questions are accessible to all students. This process ensures that only those questions that meet stringent criteria proceed to trial.

NAPLAN trials

Samples of students from all jurisdictions participate in NAPLAN test trialling. The trial establishes whether test questions are suitable for inclusion in the NAPLAN tests, including whether there are enough items to cover the range of student abilities at each year level. The final NAPLAN test questions are selected using data from the trials, along with professional judgments of educational measurement and test construction by curriculum experts from all jurisdictions.

Expert advice

Educational measurement experts provide advice on test development and endorse the tests before they are finalised. These experts also provide advice and endorsement of key technical methods and specifications for reporting, equating and standards of the tests.

Common scales

In order to enable the comparison between years of testing, the tests must be placed on common scales. The use of common scales covering Years 3, 5, 7 and 9 for each domain assessed allows for an individual student's achievement to be mapped as he or she progresses through schooling. For more information visit ['How to interpret scales'](#).

Equating between test years

As no two tests can have exactly the same level of difficulty, a rigorous equating process is carried out so that the difficulty of a current year's tests can be adjusted, if necessary, to the same level of difficulty as all the previous years.

The process involves a sample of students from each year, covering all states and territories and school sectors, sitting the secure equating tests, as well as the current year's tests. Using a combination of methods, the equating tests and current year's tests are placed on the same scales established in 2008. For more information visit ['Schools' involvement in the National Assessment Program'](#).

Equating tests are delivered by specially trained independent test administrators. This ensures that the security of the equating tests is preserved.

The equating process for NAPLAN was developed following expert advice and enables ACARA to say with confidence that any test difference has been considered before making statements about one year's results compared to the next.

Comparison between NAPLAN online and paper tests

Following extensive research undertaken by ACARA, NAPLAN online and paper forms have been explicitly designed to be comparable. Results for both paper and online tests will be reported on the same NAPLAN assessment scale for each test. The use of a common assessment scale, covering Years 3, 5, 7 and 9 in each of the areas of conventions of language, numeracy, reading and writing, allows for an individual student's achievement to be mapped as the student progresses through his or her schooling.

Reliability

While no test is one hundred per cent reliable, there are well-established methods for estimating the reliability of tests. These methods indicate that the reliability of NAPLAN tests is high and that the tests can be used with confidence and are fit for purpose. The rigorous processes that are carried out during the development of NAPLAN each year ensure that the results are reliable and comparable between years.