

NAPLAN online – ACARA’s research and findings

Background

ACARA is conducting a broad research program to inform work towards the transition from paper-based to computer-based assessments. The purpose of the research is to provide evidence-based information to education ministers and the broader education community about delivering NAPLAN in a computer-based, or ‘online’, environment from 2017.

Research studies

The research program consists of three elements: a pilot research study, a trialing study and a range of development studies.

2014: development studies

Between August and October 2014, ACARA conducted three research trials into student engagement with online assessment. Two trials looked at student engagement with technically enhanced items (one for reading and one for numeracy) and another with audio files (for spelling). The Australian Government, Department of Education and Training funded the trials.

While these trials were limited in terms of sample size, the results from them are promising and form part of an ongoing research program conducted by ACARA to support the move to NAPLAN online.

When working with the technically enhanced items, students were asked to interact with the technology in the context of NAPLAN test questions. This involved using drop down menus, moving items across the screen, highlighting text and objects or playing an audio or video file. Students were observed across all year groups engaging with the technology and appeared motivated by the experience of working online.

Participating students recounted the test as more engaging than paper-based NAPLAN tests and said they felt more confident. The audio delivery of the spelling test via headphones or speakers meant that ACARA was able to test spelling in the way that it is taught and assessed in everyday school practice.

Observations of students participating in the spelling test showed that they adapted rapidly to the dictated format, and found it easy and convenient to operate.

The trials also found that no students reported feeling penalised for typing their responses. Overall, students described typing as being easier for changing and correcting answers, and the audio delivery of the spelling words was widely perceived by students to be fair and valid.



ACARA will continue to refine NAPLAN test items based on this research. Further studies will look at:

- the interaction between lower levels of computer literacy, reading ability and lack of confidence in affecting the validity of the test for some students, and
- whether computer literacy skills form part of the measurement construct.

2013: trialing study

In August and September 2013, ACARA trialed online delivery of a multistage computer adaptive test, or 'tailored test' design.

More than 250 schools across Australia volunteered to participate in the study.

The study included remote schools as well as a trial with a small number of home-based and geographically remote students.

Approximately 23,000 tests were delivered to students in Years 3, 5, 7 and 9, in reading, numeracy and writing. The research study also investigated the cognitive and behavioural engagement of students with the tailored test and the effectiveness of the proposed test design in better targeting underperforming students.

ACARA's research has also investigated autoscoring technology and technically enhanced items that are designed to assess particular aspects of literacy and numeracy aligned with the Australian Curriculum.

2012: pilot research study

From September to November 2012, ACARA conducted a pilot research study into online assessment.

Approximately 125 schools across Australia participated in the study.

The study used literacy and numeracy questions from NAPLAN and questions from NAP sample assessments in civics and citizenship (NAP-CC).

The pilot research study comprised both a mode effect study and a cognitive interview study:

- The mode effect study investigated how the performance of items (questions) is affected by the mode in which the test is delivered, that is, whether items perform differently in paper-based and computer-based tests.
- In some schools, researchers conducted cognitive interviews with students. This study was a small qualitative study intended to gauge levels of student engagement with the computer-based assessments.

You can access research reports and findings on nap.edu.au – under online assessment

For more information, email: naplanonline@acara.edu.au

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