



Education and Innovation Committee
Queensland Parliament

I make this submission as a PhD student in education at Queensland University of Technology. My thesis, due for completion in six months, is a case study of the changes in three Brisbane secondary schools in the context of Year 9 National Assessment Program Literacy and Numeracy (NAPLAN) testing. In the course of my research I have closely examined the resources provided to support NAPLAN testing in schools by the Queensland Studies Authority (QSA). This submission argues that, regardless of the future of the QSA as an entity, the NAPLAN resources that they provide for teachers are essential and must be maintained.

NAPLAN testing was introduced in 2008 and at that time, the Commonwealth Government announced that the primary purpose of the testing was as a diagnostic tool for teachers. Since then, with the release of data on the MySchool website, NAPLAN data has been used for many other purposes, mostly inappropriate. However, for NAPLAN data to continue to be a useful diagnostic tool then schools and teachers need information about the tests and the students' results.

The QSA provides each school with an electronic comma separated values (csv) file that gives, for each relevant student:

- the student's details
- the student's NAPLAN scale scores and achievement bands in each of the five domains: Reading, Writing, Spelling, Grammar and Punctuation and Numeracy;
- the student's responses to every question in the Reading, Language Conventions and Numeracy tests, and in the case of an incorrect response what that incorrect response was; and
- the marks awarded to the student for each of the ten criteria used to mark the writing test.

The QSA also provides free downloadable software (called SunLANDA) that schools can use to analyse this data. More importantly, the csv file can be loaded into Microsoft Excel and analysed. This creates the flexibility for schools to analyse the data in any way they choose.

I have seen the way in which the equivalent data is presented to schools in NSW and the ACT. Those schools are able to examine and print a range of impressive looking graphs and tables. However, unlike Queensland schools, they cannot access the raw data in electronic form that is used to develop those tables and graphs. This limits the way in which schools can analyse their own data to the presentations created for them. If these presentations do not address a particular school's needs, then the school cannot obtain the electronic data in any other form.

Each year the QSA also provides a booklet called *NAPLAN Test Reporting Handbook*. It is sent to schools in hard copy and also downloadable from the QSA website at http://www.qsa.qld.edu.au/downloads/p_10/3579_handbook_reporting_13.pdf. This handbook gives teachers valuable information about interpreting the NAPLAN data that the QSA provides,

details of the tests and what skills were assessed and, most importantly, advice for teachers about students' performances in each of the tests and how teachers can assist them to improve.

A final resource provided by the QSA is the annual NAPLAN question analysis, again downloadable by teachers from the QSA website. This is an analysis of every question in each of the tests except writing, giving valuable information such as:

- a copy of the question
- the correct answer and the percentage of Queensland students that gave that answer
- the incorrect answers and the percentage of Queensland students that gave those answers
- suggestions as to the kind of error that students made if they gave an incorrect answer
- details of the skills and concepts tested in the question
- teaching ideas to assist in developing those skills and concepts; and
- curriculum references relevant to the question.

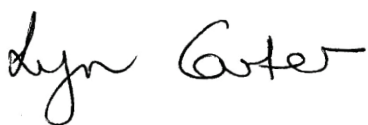
I have attached an example of the question analysis to this submission.

If NAPLAN tests are intended to assist teachers in diagnosing students' strengths and weaknesses then teachers need to know more about each student than a single score or achievement band. Teachers need to know which questions the students were able to answer correctly. If a student answered a question incorrectly, teachers need to know what the question was and what answer the student gave. Schools need to be able to look for trends in their students' performances in any manner they choose. If the QSA, or its successor, cannot continue to provide this information then NAPLAN testing ceases to be a useful diagnostic tool for schools and teachers.

I remind the committee that Professor Geoffrey Masters in his report to the then Queensland Government (*A shared challenge: Improving literacy, numeracy and science learning in Queensland primary schools*) recommended that "access to ongoing expert advice and support for the teaching of literacy, numeracy and science" (p.viii) be available to teachers. The QSA publications contribute to meeting this recommendation.

There may be an intention to privatise the NAPLAN reporting and analysis functions of the QSA, as has occurred in other states and territories. There is no problem with privatisation, but the contract with a private sector provider must ensure that the same level of service is provided to Queensland schools and teachers, in the form of electronic data files and the other NAPLAN resources described in this submission. Without this support, more schools will choose to pay for their own testing of students - surely an unnecessary duplication of resources and waste of educational funding. Further, the NAPLAN performance of Queensland students will be adversely affected.

I am happy to assist the committee in any way I can.



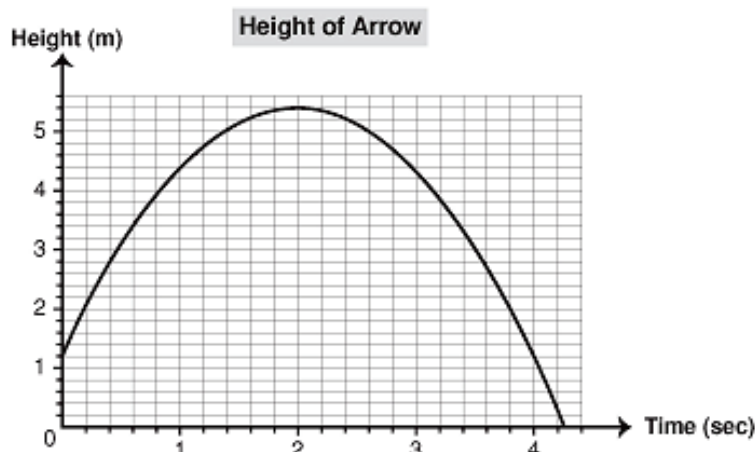
Mrs Merilyn (Lyn) Carter

NAPLAN 2013

Calculator Year 9 Question 20

20

Mia shoots an arrow into the air. This graph shows the height of the arrow above ground level for the time that the arrow is in the air.



For how long is the arrow at a height of more than 2 metres above the ground?

3.4 sec



3.6 sec



3.8 sec



4.3 sec



Answer and discussion

Response	Proportion	Reasoning
A	17.5%	Students selecting this option may have read the graph correctly at the 2-metre mark but then incorrectly subtracted 0.2 for the time it took the arrow to reach this height. Alternatively, students may have miscounted the intervals used.
B	30.9%	Key
C	39.1%	Students selecting this option may have correctly interpreted and counted the intervals at the 2-metre mark from the y-axis to the point where the graph crosses it to show the descent of the arrow, but they have not accounted for the time it took the arrow to reach 2 metres ($3.8 - 0.2$).
D	11.7%	Students selecting this option have interpreted the intervals correctly but they have taken their reading from the x-axis and identified the total time that the arrow was in the air.

Item Description	Interprets the graph of a simple non-linear function to solve a time/height problem.
Strand	Algebra, function and pattern
Concept	Representation of data

Process	Interpreting (graphical representations)
Teaching Ideas	Activities that may assist in developing students' abilities to interpret graphs include: • identifying and interpreting elements of data displays. Show students data displays from different sources such as newspapers and facilitate class discussions of the key features of these, e.g. headings, scale, measurement units and type of data. Also discuss the information shown in the graph such as the highest and lowest values • having students plan and carry out data collection involving discrete and continuous data, then representing the data in an appropriate graphical form • translating information presented in text or tables into graphical forms.
Curriculum References	
Statements of Learning	Year 9: Students have the opportunity to draw graphs of some simple non-linear functions interpreted in a practical context and describe the effect of changing constants used to specify the rule of the function on the corresponding graphs.
Australian Curriculum	Year 7/Number and Algebra/Linear and non-linear relationships: Investigate, interpret and analyse graphs from authentic data.