

Queensland data:

Over the past four years Queensland NAPLAN data has revealed some startling trends about the way that we teach in comparison to the rest of Australia. In this section we will discuss trends that we have found and present data that validates the following findings:

1. Queensland does a relatively good job at teaching routine processes and Fluency compared with the rest of Australia
2. Queensland does a comparatively poor job at developing deeper understanding compared with the rest of Australia
3. Queensland does a comparatively poor job at teaching students to approach unfamiliar problems compared with the rest of Australia

It is commonly recognised among teachers that the first five to ten questions in NAPLAN contain considerably more routine, easier questions than the rest of the paper. These questions are good indicators of teachers' ability to impart routine content and skills to students. The further through the test, the harder the questions become. These are not necessarily difficult because of the content involved, but because they ask more non-standard questions that involve deep understanding and problem-solving skills. These questions are better indicators of teachers' ability to impart deep understanding of mathematical concepts and problem solving skills.

Below are graphs that show the differences between the Australian average and Queensland average by question number for 2010, by test item sequence. The results have been organised into sequences of 10 questions to better illustrate the trends. Note the obvious decline in Queensland performance compared to the national average as the questions in the test become more unfamiliar.

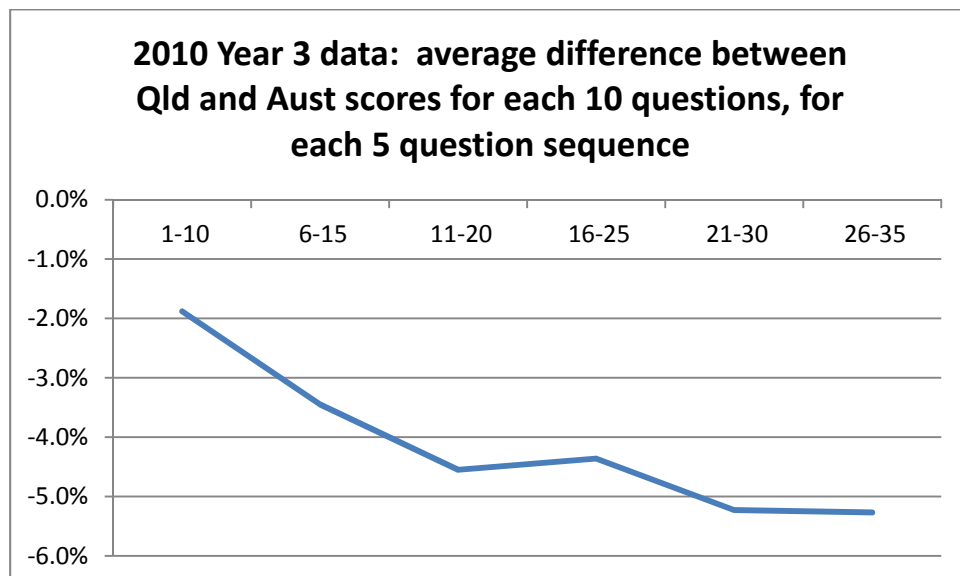


Figure 1: Year 3 results compared to the Australian average by item level for 2010

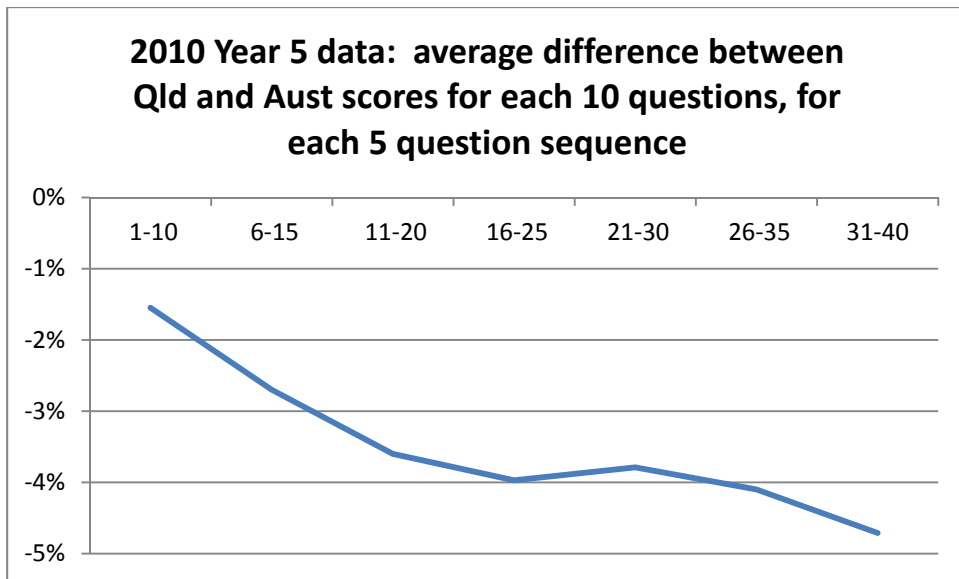


Figure 2: Year 5 results compared to the Australian average by item level for 2010

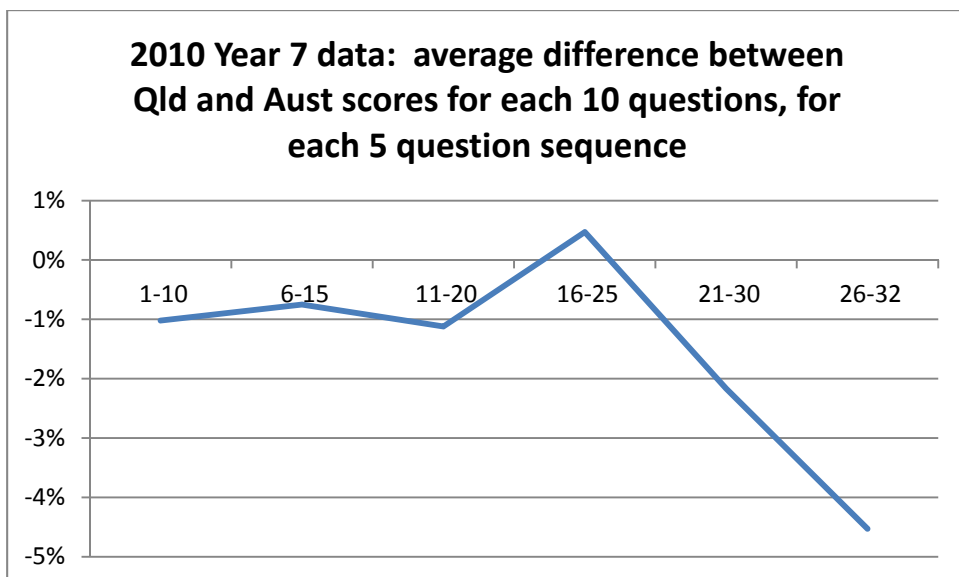


Figure 3: Year 7 results compared to the Australian average by item level for 2010 (non-calculator)

The following graph shows the average difference between the Queensland and Australian scores for the first 10 and last 10 questions for years 3, 5 and 7 during 2010 and 2011.

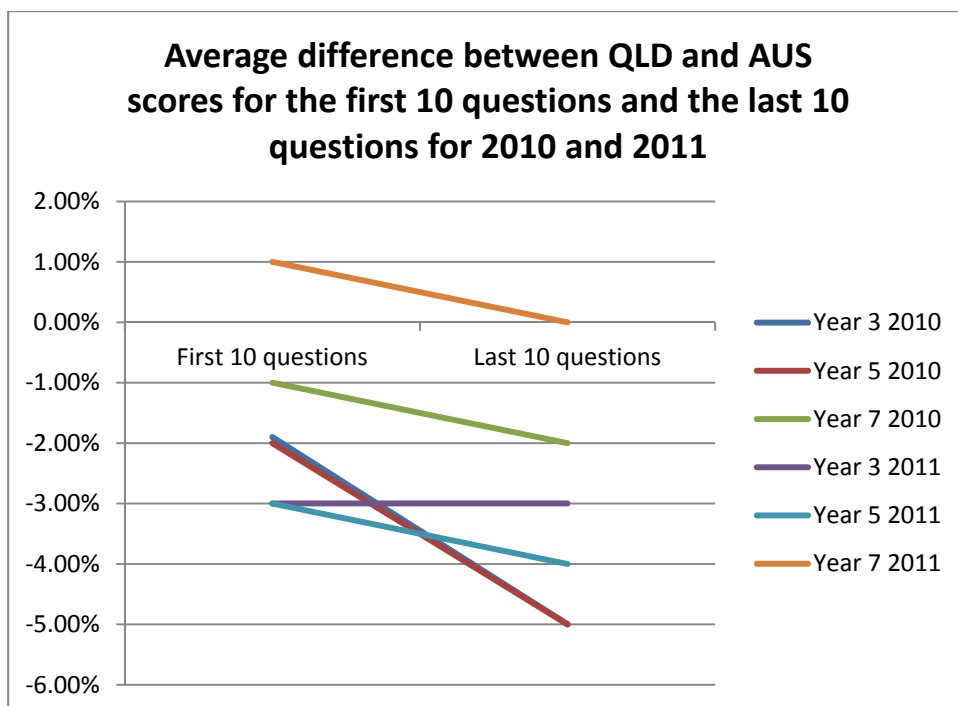


Figure 4: Year 3, 5 and 7 Queensland results compared to the Australian average for the first and last 10 items during 2010 and 2011

This analysis illustrates that Queensland students perform consistently higher at the first 10 questions than the last 10 questions when compared to the average performance for students across Australia.

This is a clear indication that teachers in Queensland are comparatively stronger at teaching routine content and procedures and comparatively weaker at developing the deep understanding needed to deal with unfamiliar and non-standard problems. Unfortunately as most of NAPLAN consists of unfamiliar or non-standard problems this trend does not serve our students well. It also raises the question of the validity of comparing the League table results of the 1960s and 1970s with current Queensland performance on NAPLAN tests as these appear to have been designed to assess completely different things.