

Submission to the Education and Innovation Committee re Assessment in Physics and Chemistry

From my own research and from my knowledge of the research about assessment of physics and chemistry, I would like to put before the Committee the following assertions in favour of the current and long standing Queensland procedures for the assessment of these subjects.

Curricular intentions: Compared with the assessment procedures in use in other states (a mix of external and internal assessments) the Queensland approach enables a wider range of the subjects' declared intentions to be given weight in the students' assessments and hence will be give serious attention by teachers.

Science as investigation: The very central intentions in these science subjects of developing investigative skills and an appreciation of the role investigation plays in science is more strongly supported by the Queensland assessment procedures than is the case in say, Victoria and New South Wales. These are given status through the criteria set out for the required ERIs.

Gender equity: The mix of tasks in the Queensland assessment procedures and their independent status through criterion referencing means that these are less prone to gender bias than has been the case in assessments that are dominated by multiple choice and short answer type test items, especially when the students' scores on these are used to statistically moderate other performance measures, as is the case in most other states. Mixed task assessment has been found in a number of studies to provide a fairer and more balanced account of the learning in these subjects by boys and girls.

Depth of Learning: All the state curricula for these two subjects indicate that there should be depth in the students' learning rather than a superficial recall-only type of learning. The assessment procedures in most other states, however, emphasise them latter and provide little encouragement for students and their teachers to develop deeper understanding of the content for learning. In comparison there is very clear encouragement in the quality criterion statements for the various assessment tasks in Queensland for such deeper learning.

I would be happy to discuss these claims and my evidence for them at the Forum.

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15 April 2013