

Submission to:

The Parliamentary Inquiry into assessment methods used in Senior Mathematics, Chemistry and Physics in Queensland schools

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Position: Head of Department – [REDACTED]

I am currently a member of the State Review Panel – Biology.

I was a District Review Panel Chair (DRPC) for Biology for the Queensland Studies Authority for 10 years and was a member of the syllabus sub-committee that produced the current Queensland Biology syllabus in 2004.

Although my background is in Biology I believe that my long involvement with QSA procedures and my role as a supervisor of Science teachers has enabled me to make several observations relevant to this enquiry.

Ensuring assessment processes are supported by teachers

The current Science syllabi identify a range of possible assessment tasks but only mandate EEIs and SAs in Physics and Chemistry. During the trials of these syllabi it became clear that successful implement of them would require a change in pedagogy by teacher. This was supported by QSA workshops across the state and additionally in the case of Biology the release of a CD titled Biology Resources Project 2006 which was supported by Education Queensland, QSA, Independent Schools Queensland, Queensland Catholic Education Commission and Science Teachers Association of Queensland. The QSA workshops continued with the final release of the syllabi and provided a valuable forum for teachers to discuss and develop a shared understanding to the assessment requirement of the new syllabi. Over time teachers developed supportive networks of their peers and the development of websites like <http://seniorphysics.com/physics/eei.html> assisted teachers to develop comparable EEI assessment tasks.

Observations from my position of DRPC and State Panel Member clearly showed that most teachers had positively engaged with the new syllabi and clearly understood the assessment processes. However in regard to the length of assessment tasks some schools were placing demands on their students that were outside the requirements of the syllabus. This I see as a school management issue rather than a syllabus failure. A reading of State Review Panel Reports 2012 suggests that this is still problem, but such statements should be read with caution as students do not always adhere to the requirements set out in task sheets. It should also be kept in mind that in response to teacher feedback from pre-development consultations and the trial pilots of the syllabi the science syllabi provide schools with the flexibility to develop scientific concepts and skills in a context which suits their students. This flexibility is also extended to the type of assessment task which is employed to determine student learning and understanding of any unit of work. EEIs are tasks which allow students to be scientifically creative. These need to be managed by teachers so that students are provided with suitable opportunities to address the criteria of the task within the syllabus requirements. However sometimes a student will become so engaged with their investigation that they lose sight of the assessment requirements. In my own school there have been instances where highly motivated students have expanded their EEIs well beyond task and syllabus requirements. The level of did not provided the students any advantage over their peers because the piece of work was graded according to the same criteria and standards present in the syllabus.

The ability of assessment processes to support valid and reliable judgments of student outcomes.

As a Head of Department I am fully aware that Queensland's assessment methods allow and encourage variety in assessment tasks and similar units of work may be assessed differently across the State. Therefore the assessment processes in senior science must:

- a) provide clear statements of assessment standards and the criteria by which these standards are judged,
- b) have a method for determining the comparability of tasks
- c) ensure that syllabus requirements are met, and
- d) ensure that teacher judgements consistent across the state.

QSA has adopted criteria based assessment to meet these ends allied with subject based moderation from expert teachers within those subjects. At Beerwah State High School teachers have a clear understanding of the criteria and standards for the science they teach. My observations as a DRPC were that the criteria and standards were well understood that assessment tasks although different were comparable. Teachers were able to recognise weakness when they appeared in some tasks and would provide relevant feedback to schools. Also exceptional tasks were recognised and through their networks would often contact schools for copies of these tasks.

With regard to the consistency of teacher judgement the most common issue encountered was with the interpretation of certain terms used as descriptors within the assessment criteria. The QSA has invested significant amounts of time through workshops and panel training ensure a state wide common understanding of such terms and the inclusion of a glossary of terms in the Physics and Chemistry syllabi provides a reference point for teachers.

Each year the State Panels in each of the sciences conducts comparability reviews of student work across the State. The purpose of this panel is to verify the comparability of tasks and teacher judgements across the State. The conclusions from this review is published each year as the State Review Panel Report. In general reports from the last few years have recorded a high degree of comparability across all districts in Biology, Chemistry and Physics.

In summary, I support the current system of externally moderated school based assessment. This assessment model is based on standards which are accessible to all students and teachers and are clearly stated prior to the administration of an assessment task. Such transparency promotes consistency in decision making with regard to student work and comparability in across Queensland

Paul Sullivan



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