Education and Innovation Committee

From: Shane S [redacted]
Sent: Monday, 6 May 2013 8:41 AM
To: Education and Innovation Committee
Subject: Senior math and science

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Dear Committee members

I am writing as a teacher and tutor who has witnessed the experience of students in senior science and math subjects from a wide variety of Queensland schools.

The current system of assessment in these subjects is confusing, complex, time consuming, unreliable and does not reflect the balance of skills required for students going on to continue these subjects at university.

The strictly enforced use of criteria to evaluate all assessments makes the process of preparing and marking assessment items unduly complex and time consuming for teachers. It also makes it very difficult for students to understand what they need to do to improve their performance in assessment items, and for teachers to advise them on how to improve. When I was in senior secondary school the use of percentages and cut offs gave a clear motivational framework where it was very easy to see that answering an exact number of extra questions correct would have put me over a threshold for a higher mark.

The use of extended experimental and written tasks has grown out of all proportions. These tasks require time and resources that are not available to high schools and skills that are simply not adequately developed in the students, and more so that are not required in university level studies of these subjects until third year or honors year studies. These tasks are not valid forms of assessment due to the highly variable amount of assistance that students receive from parents and tutors. Very few schools engage in follow up supervised assessment of the students to authenticate their level of performance. It is very rare of schools to take the time to give students any instruction in the art of scientific writing, let alone even provide examples of well written EEIs or ERTs before hand so the students understand what they look like. It is also very rare for students to be penalised for fabricating experimental experimental results despite the prevalence of this practice.

Substantial areas of science subjects has been removed from the curriculum (particularly thermodynamics) in order to make time for these extended written tasks. By contrast little enduring skill in scientific writing is developed in the students due to having such a small number of very large tasks: students tend to forget any lessons or feedback from their efforts the year before. Furthermore any scientific writing skills that are developed are left un-exercised until the students reach the later years of their science degrees.

One final factor that I often reflect upon is the incredible psychological toll that these extended written tasks take on science students. The missed lunches doing extra experiments and the many late nights spent writing the excessively long reports do not engender a generation of healthy young people with a genuine passion for research. The horror stories of EEIs are one of the primary reasons that students avoid senior science subjects.

I implore you to consider a return to a system where clear marking schemes and supervised assessments (tests, short writing tasks or practical exams) once again give structure and clarity to the senior science subjects. Incorporation of a simple content based externally set exam would also be of great value in rigorously moderating the performance of students state wide and comparing their preparedness for university.

Sincerely

Shane Simonsen