

10th May 2013

Personal Submission,

Education and Innovation Committee,

Assessment Methods for Senior Maths, Chemistry and Physics.

To whom it concerns,

After reviewing the issues this committee would consider I felt compelled to make a submission. I have been a teacher for more than twenty five years. During this time I have taught Science and Maths at both State and Catholic Schools . I have also gained valuable laboratory experience from my time in the Sugar Industry where I worked in various capacities including a short stint at Sugar Research Mackay.

I would like to address the following key issues and my comments relate more to Chemistry as this is my specialist senior teaching area.

1. Student participation levels. When the 2007 syllabus was introduced I attended several QSA workshops in which teachers were told that the new syllabus was needed to increase the numbers of students taking Senior Science subjects. This has certainly not happened at my school where numbers have actually declined. Student feedback seems to indicate the onerous demands of the extended experimental investigation report is one area that has contributed to this decline in the number of students studying Chemistry.

2. Ensuring assessment processes are supported by teachers. To obtain a deep understanding of Chemistry students need to dedicate significant time to learning and studying an array of complex concepts. My worry is that the assessment requirements of the present syllabus seems to narrow the aspects of Chemistry that students are exposed to. Students wanting to further their studies need a solid foundation and this is best obtained by spending more time on a broader range of subject matter.

Assessment setting and marking now takes a massive amount of time. Each assessment item must have an accompanying criteria sheet. When setting exams thought must be given to the standard of each question and whether there is a suitable mix of questions keeping in mind the descriptors associated with the exit standards matrix. The grading of papers involves assigning a standard to each question. The assignment of these grades is often not clear cut as the descriptors associated with the standards are subjective. Overall grades for each criterion must then be worked out before placing this information on an exit standard matrix to give the student their “fullest and latest” overall grade.

As outlined above, the present syllabus is extremely work intensive and in my opinion it does not deliver grades that are any more valid than those obtained under the previous regime. My Senior classes are small so I’m blessed at present. For teachers who have 3 or 4 Senior classes, each having about 25 students, the workload would be immense. Many of my colleagues have similar concerns, which make me question whether the assessment processes are supported by teachers.

It is interesting that Queensland seems to be placing less importance on formal examinations at a time when the Federal Education Department seems to be emphasising student performance on written examinations. The Australian Government has stressed the importance of students performing well on Naplan and the Trends in International Mathematics and Science Study (An International assessment of the mathematics and science knowledge of fourth and eighth grade students from around the world.) I will leave it to persons of greater wisdom than I to contemplate on whether a more uniform approach from both levels of government would give better educational outcomes for students.

Finally, the Extended Experimental Investigations have been the centre of much discussion in the press. I think the idea behind using such investigation as part of the Chemistry course is commendable. My only worry is that a large number of Senior students lack the necessary background knowledge and maturity which these tasks require. I think students would benefit more from completing a series of practicals which relate to key concepts. These practicals would be written up to hone reporting skills. This would return valuable

teaching time to teachers and allow students to gain a better working knowledge of the subject. These investigations also add extra pressure on school laboratory assistants and tie up scarce school resources for long periods of time.

3. The ability of assessment processes to support valid and reliable judgements of student outcomes. The work programmes of schools throughout Queensland now vary markedly. I have concerns about how to ensure comparability of the application of the syllabus objectives and exit standards across work programmes that vary widely in content, approach and assessment techniques. This is evidenced by how the submission of the same work programme and similar assessment packages to panel each year can receive markedly different feedback from year to year dependent on which panellist reviews it.

I trust my submission will add to the committee's knowledge and will be given due consideration when the committee makes its recommendations to parliament.

William Hall

