

To: Qld Parliamentary Education and Innovation Committee

SMC&PA Submission 34
Received: 26 April 2013

Re: Assessment Methods for Senior Maths, Chemistry and Physics

26th April 2013

Please accept my submission for consideration accompanying your report into the assessment methods used in Senior Mathematics, Chemistry and Physics in Queensland schools.

About me: I am a teacher of Mathematics with 30 years of experience. I am currently employed at [REDACTED]. I have also worked in the state system in NSW, and in the private sector in NSW. I have not taught Science, my submission will relate only to Mathematics assessment.

Summary: I do not support the current assessment methods being used in Queensland as required by the QSA Maths A, B, & C syllabi as they are unnecessarily complex, unfair to the students, and a poor indicator of student performance.

I see that

" in undertaking this inquiry, the committee should consider the following issues:

- Ensuring assessment processes are supported by teachers
- Student participation levels
- The ability of assessment processes to support valid and reliable judgments of student outcomes."

1. Teacher Support.

I believe that the current assessment processes are *not* widely supported by teachers.

1.1 Meetings for teachers who are dissatisfied with the processes have been well attended. The Saturday meeting last year at Mansfield included people who had driven from Toowoomba and The Sunshine Coast.

1.2 In 2012 the Queensland Independent Education Union surveyed its members about QSA processes. The survey indicated that about a third of the Maths & Science teachers surveyed were dissatisfied with the processes. Significantly, more teachers responded negatively to the question relating to the external moderation processes working well, than the number who responded positively. The number of respondents is low, it should be noted.

The results of the survey can be found on line below:

http://www.qieu.asn.au/files/1013/6238/1739/Subject_specific_responses_QSA_Survey.pdf

1.3 I meet with other teachers regularly. It is quite difficult to find another Mathematics teacher who has confidence in the system. In chatting with other teachers, I am constantly amazed by stories of panel disagreements, lack of faith and general unhappiness with the system as designed and

implemented by the QSA. The most common point on which there is agreement is that the assessment system is unnecessarily complex. Ranking students is laborious. The simple process of allocating marks and percentages has been used for centuries, and indeed is still in use in institutions our students will attend when they have dusted off their secondary schooling.

2. Student Participation

Although I have no data relating to student participation levels, although I am concerned that standards are slipping. I am quite amused that the QSA uses phrases like ‘best practice’. I have not seen any data which would support the idea that best practice occurs in Queensland assessment.

3. Valid and Reliable Judgements

3.1 As far as student outcomes is concerned, I am not confident that the over-importance placed on assignments, as required by the syllabi, helps teachers to provide valid and reliable judgements of student outcomes.

Maths B Syllabus, Page 39, Educational equity; “All young people in Queensland have a right to gain an education that meets their needs, and prepares them for active participation in creating a socially just, equitable and democratic global society. Schools need to provide opportunities for all students to demonstrate what they know and can do. All students, therefore, should have equitable access to educational programs and human and physical resources. Teachers should ensure that particular needs of the following groups of students are met: female students; male students; Aboriginal students; Torres Strait Islander students; students from non–English-speaking backgrounds; students with disabilities; students with gifts and talents; geographically isolated students; **and students from low socioeconomic backgrounds.**”

3.2 An assignment completed with the assistance of an expensive tutor is unfair to the students who cannot afford such a luxury.

3.3 I fail to understand how an assessment process where such assisted assignments are equally weighted with solo examinations is not in breach of the QSA’s own equity code, as published in the syllabus. I am not against the prudent use of an assignment as an assessment task, however, the weighting of each task should be carefully scrutinised.

3.4 It is my opinion that many assignments in use are not even a good way for a student to improve their basic mathematical skills. Mathematics has quite a pronounced practical component, the practice of solving a variety of problems does for Mathematics what practicing scales does for Music. Time spent fudging these assignments is taking time away from basic mathematical practice and drill. Good teaching time is also being leached away by time spent on assignments.

Maths B Syllabus Page 29: “An extended modelling and problem-solving task or a report or similar must be included at least twice each year. These should contribute significantly to the decision-making process in each of the three exit criteria.” (Bold font as in the syllabus)

3.4 Note the syllabus only specifies “at least twice each year”. Some schools set four assignments per year, others two; this is another of the ‘vague-aries’ of the Queensland syllabi. How is this equitable when a syllabus does not set out *exactly* how we should assess? What about eight assignments per year? Twenty?

3.5 The syllabus does provide tips on authentication of student work, page 28. However it does not provide teachers with strategies for coping with the stress of lost time grading large amounts of useless work. How much time does the QSA think the Queensland teacher has at his/her disposal?

3.6 A system in use where teachers write all the assessment tasks is open to rorting. At various schools at which I have taught, I have experienced some puzzling exam practices, such as;

- Allotted examination time intervals extended, undeclared to panel
- Students allowed the use of extensive notes, undeclared to panel

With this experience, serious doubt needs to be cast on not only the assignment results, but the school *exam* results are dubious as being a good indicator of student performance. At this time of ‘blending in’ the National Curriculum, the timing is perfect to align Queensland with other systems and bring back some form of external subject exam. Such an exam would not have to be the sole contributor to student assessment, as has occurred in the past in Queensland, but a consistent, across-the-board test may be a sound way to compare students throughout the state.

Thank you for considering my submission.

Ian Watkins

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