SMC&PA Submission 38
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Education and Innovation Committee

From: Igor Bray [redacted]
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To: Education and Innovation Committee
Subject: Assessment Methods for Senior Maths, Chemistry and Physics

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Dear Members of the Education and Innovation Committee,

I would like to address you regarding Assessment Methods for Senior Maths, Chemistry and Physics in Queensland Schools. I've had the misfortune of having to deal with a similar issue here in Western Australia. I did so in my capacity as Chair of the WA Branch of the Australian Institute of Physics, and would like to communicate this unhappy experience to you should that prove to be helpful.

Over a decade ago now in Western Australia a new form of assessment was instigated with the introduction of Outcome Based Education (OBE). The idea was to define the required outcomes and assess in such a way so as to be sure whether the outcomes were achieved or not. I initially found the idea attractive, until I was informed that there would be only a few outcomes for every subject studied. For the quantitative sciences this makes no sense at all. There, a detailed syllabus essentially indicates hundreds of specific outcomes that students need to demonstrate so as to progress from one year to the next, and subsequently consider further study at university. The whole idea collapsed in a massive way once it hit senior secondary schools, where external examinations demonstrated the folly of the idea. In the end, the Minister of Education (Mark McGowan) essentially sacked the entire WA Curriculum Council, but not before too many senior maths and science teachers resigned in disgust. During the decade-long fight teachers were organised through the website http://platowa.com/, where they could (often anonymously) communicate with each other, and bypass the misinformation propagated by the authorities and the teacher's union.

Without wishing to take too much more of your time, I'd like to explain why using marks for assessment is very important in the quantitative sciences. The primary purpose of assessment is to additionally contribute to the learning by providing critical detailed feedback as to what is right and what is wrong. Marks are ideal for this. They give the student the very information they need to determine what they have understood and what they haven't. While marks in themselves have no absolute meaning, they are vital for effective feedback to the student. For that reason alone marks must be used in the quantitative sciences.

I sincerely hope that Queensland does not replicate the wasteful and damaging experiment that was OBE in Western Australia.

Yours Faithfully,

Igor Bray

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Igor Bray, John Curtin Distinguished Professor
PhD, FAPS, FInstP, FAIP
Head | Physics, Astronomy and Medical Imaging Science

Director | Institute of Theoretical Physics
Deputy Director | ARC Centre for Antimatter-Matter Studies