

To: The Education and Innovation Committee

Dear Committee Members,

I have taught Mathematics and Sciences, and Physics at the Senior level, for over 30 years. I have been on subject panels and a panel chair. I would like to make some comments for your consideration.

My basic notion is that we know that for effective teaching we need to take individuals from where they are at, offer a breadth of experiences, and recognise that have a wide variety of learning styles.

It does seem somewhat of an anomaly that the same style of assessment is required over all subjects. I would like to put the point of view that there should be room for assessments that include alternatives to the long written answers required under the present schemes. Many students, including boys and students whose first language is not English, would appreciate responding in less verbose forms.

I would also put the proposition forward that the sciences and the mathematics should be allowed to differentiate themselves in the market place by being able to offer not only a different experience but also a different way of assessment. Already students look for not only what senior subjects they require for pre-requisites for future studies, (and I'm not only talking about University here, but also trades, TAFE etc), but also subjects that give a breadth to an education, subjects that are of personal interest to them and subjects which are a little different to the bulk of those they are studying at a time. However, when it comes to assessment, there is no such variety. The sameness applied to assessment is not encouraging diversity, is not encouraging those who struggle with the extended answer form to excel. I believe that we would get greater participation for students who have facility in mathematics and science to study and then display their knowledge if we changed the assessment style.

The very nature of the subject matter is such that understanding can be validly found by assessment that could be quite different to that prevailing.

There are many countries in the world which use other methods of assessment and whose maths and science results on world-wide comparisons are comparable or better than those in Queensland, so I don't think it is simply a matter of type of assessment. I do believe that we would encourage an **extra** group to study these subjects if the assessment was changed .... and more and more governments, business groups and individuals are calling for more, not less, students to study mathematics and science..

As a father of five, now adult, children and seeing what is expected of students, I would rather see the excessive time spent on assignments spent on developing understanding – both at school and at home.

When I first started teaching, I very readily entered my students in such things as The Australian Mathematics Competition, and the various science competitions. These are national events. I found that they gave me a yardstick from an external source as to the abilities of students. I also believe that students appreciated that external yardstick. I believe that we could do the same again. We could have a mix of external and internal assessments in mathematics and science, and that they could have less of the extended styles and more of the shorter responses.

Thanking you for your time

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