

Submission
Inquiry into the Academic Standards of School Education
by [retired] Associate Professor Stephen R Kessell

I welcome the opportunity to make some brief comments on your Terms of Reference 1 b and 3.

1 b: ... the extent to which schools provide students with the core knowledge and skills they need to participate in further education and training, and as members of the community.

I was the undergraduate coordinator at Curtin University's School of Computing from 1987-96. [I then moved to Curtin's Science & Mathematics Education Centre, which is postgraduate only, and retired in 2004.]

During the period 1987-96, we saw a significant reduction in the preparation of our undergraduate students to undertake a science or engineering degree. This occurred despite a progressive increase in our TER cut-off scores during that period.

I believe there were two primary reasons for this declining preparation of students.

Firstly, most universities [including mine] had either relaxed or completely dropped the requirement of specified subject prerequisites [such as calculus and physics] for entry to science and engineering degrees.

This meant that students were not adequately prepared to commence such degrees, and instead needed to enroll in remedial, bridging or catch-up subjects (primarily in mathematics). Sadly, very few really did "catch up", and the majority required four years of full-time study to complete a "three-year degree".

Secondly, their preparation in school subjects appeared to decline significantly during this same period. We found it necessary to introduce a mandatory first-year technical writing unit, where it was necessary to review "what is a sentence, what is a paragraph, why nouns and verbs must agree", basic grammar, basic punctuation... the sort of things my generation learned in primary school. This unit was deemed necessary for their survival in an undergraduate science degree, where written reports are required in most technical subjects.

We found that this first-year technical writing was necessary but not sufficient, and thus had to add a second mandatory technical writing unit, in third year, to prepare them for the workforce and/or postgraduate study.

I believe this situation has deteriorated during the past decade, and that it is becoming the norm for many students to require an extra year (or even two) to

complete a basic three-year degree in the sciences, mathematics and engineering.

3: How such academic standards compare between states and territories and with those of other countries.

The utter fiasco of the attempted implementation of Outcomes-Based Education in Western Australia at the Year 11-12 level will exacerbate the situation noted above considerably. Despite “patch up” changes being announced on a weekly basis, it currently appears that:

Completion of Year 11 subjects will be deemed acceptable for university entry; and

Completion of non-academic subjects [physical education, woodworking, cooking...] can be used to determine a TER, for entry to a specialist degree.

If this implementation and these policies continue, I believe that universities will need to offer, at a minimum, a full-year bridging course to secondary school graduates, before they can even contemplate attempting a rigorous three-year degree. The alternative would be to water-down university subjects, to the point where a bachelors degree has about the same worth as a secondary graduation certificate of a generation ago, and that postgraduate study will become essential before one can enter any profession with competence.

Stephen R Kessell
