

1 May 2016

Dear Productivity Commission,

I read the document "New models of tertiary education" and found it thought provoking and interesting. I am dismayed however at the abandoned use of businesses jargon when discussing tertiary education. Tertiary education is first and foremost for the public good. As an academic, I don't think about my students as "products" that "consume" education (Table 5, p. 72 in "New models of tertiary education") but as human beings who I do my best to teach and inspire. When I do my research, which I like to think is innovative, I don't think about the profit making and whether it outweighs the likely cost (subtitle on p. 80 in "New models of tertiary education"). I am driven by curiosity and a desire to help improve people's health (in my research, I write and analyse mathematical equations that describe how the respiratory and cardio-vascular systems function and are regulated). Of course the cost of running universities and other tertiary education has to be considered, however, I believe that such a discussion is strongly affected by the perspective taken (a business for profit Vs an institute for the public good). In this context (and in response to Q30) I want to point out that outcomes in education and research are very difficult to measure, that some cannot be measured at all or cannot be measured directly and that many measurements influence the outcome. I think that there is a real danger that if too much emphasis is put on measurements that can be made, we will lose important qualities in teaching and research that cannot be measured (for example, inspirational teachers and researching hard problems).

Regarding your questions Q59 and Q60:

I disagree that there is "considerable inertia" in the system compared to other countries and I believe that I have been innovative in both my teaching and my research. For example, this semester I teach a 1st year mathematics paper, which we introduced last year, where I use a range of methods including new technologies to teach my students. I also teach a 4th year paper in mathematics as a "flipped classroom". Different methods suit different students, different class sizes and different subjects and teachers should be given the freedom to choose the method that best suits a particular class. History shows that innovation flourish in free and open societies and that innovation often appear unexpectedly. To be innovative, we need an environment that support free thinking and collaboration and provides job security. What we don't need is to be micromanaged by the government or university administrators.

Regarding your question Q32:

I don't know the answer to this question and it might be that universities and employers should have more conversations over this; however, I do think that universities cannot be expected to meet specific technical skills of every employer in the country (also because over the course of a degree that takes 3-4 years, the work market can change). Instead, universities should provide a set of basic skills that could be useful for a range of jobs. Graduates should then be expected to pick up the specific skills they need for a specific employer over a short period of time but also to be self-learners over their working life. This arrangement has a better potential to benefit both the employers and the graduates as it adds flexibility and robustness to an ever changing work market.

Here I can draw from my personal experience. I graduated as a mechanical engineer from the Technion, Israel Institute of Technology (currently ranked 44 in the world in Engineering). I remember feeling under-skilled when I started my first job and thinking that my degree had provided me with a lot of theoretical background but with very little specific skills for the industry I joined. However, I learned the new skills I needed very quickly and later appreciated the education I received; the theoretical background I was given enabled me to come up with new, innovative ways of doing things and the wide range of knowledge I was given enabled me later to move into mathematics and physiology when the circumstances of my life changed.

Finally, I would like to add my support to bundling together research and teaching at universities (Q11). I feel that my background in research enables me to be a better teacher (I can motivate the things I teach better) and my teaching enables me to attract potential students to my field of research.

Kind regards,

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* Note that all the views expressed in this letter are my own and do not intend to represent the views of Massey University.