

Senate Committee: Education and Employment

**QUESTION ON NOTICE
Budget Estimates 2015 - 2016**

Outcome: Higher Education Research and International

Department of Education and Training Question No. SQ15-000468

Senator Carr, Kim provided in writing

STEM

Question

I refer to a list of STEM occupations that are on the Immigration Department's Skilled Occupations List – a list compiled for skilled migration purposes. It includes a wide range of occupations in Engineering and other science and technology-related fields.

- (a) What policy measures has the Government adopted – or will it adopt – to improve the supply of Australian graduates in STEM-related fields?
- (b) How does Australia compare to other countries in our region in the production of graduates in these fields? How does it compare with Singapore, for example?
- (c) And what is the trend in Australia in this regard?
- (d) Has the Department done any projections on the future labourforce needs for STEM graduates?
- (e) Won't these needs only grow?
- (f) What proactive steps has the Government taken to meet these growing needs?

Answer

- (a) The Government continues to support the Demand Driven System for higher education funding which has no caps on domestic bachelor student places for STEM courses. Since 2009, domestic bachelor STEM enrolments have increased by 27.1 per cent compared to 21.3 per cent overall.

There are many secondary school and higher education programmes currently operating within the Department of Education and Training that aim to improve the supply of Australian graduates in STEM related fields. A full list of programmes is provided in response to SQ15-000390.

On 22 June 2015 the Government released a consultation paper *Vision for a Science Nation* responding to the Chief Scientist's September 2014 report, *Science, Technology, Engineering and Mathematics: Australia's Future*. Stakeholder consultations on the initiatives proposed in the consultation paper are expected to inform the development of a comprehensive national approach on STEM policy across schools, vocational education and training and higher education.

- (b) and (c)

Between 2009 and 2013 the number of domestic bachelor STEM graduates in Australia increased from 20,414 to 24,824. Over the same period, the number of STEM graduates in Singapore increased from 3,269 to 4,226.

- (d) The Department of Employment prepares projections of the future labour force needs for STEM graduates.

- (e) The Department of Employment projections forecast strong growth in occupations requiring skills in Information Technology but weaker growth among occupations requiring Science and Engineering skills. The Department of Employment projections for November 2014 to November 2019 show:
- i. Information, Communications and Technology occupations are forecast to increase by 16.1 per cent or 36,800 positions.
 - ii. Science, Professional and Veterinarian occupations are forecast to increase by 7.2 per cent or 8400 positions.
 - iii. Engineering occupations are forecast to increase by 6.9 per cent or 9600 positions.
 - iv. Total professional occupations are forecast to increase by 14.2 per cent or 376,300 positions.
- (f) See the answer to a).