

Science and Technology Australia

Objective 1

- 1. Are there further reforms governments should consider that will improve the quality and integrity of the sector?**
- 2. What more can providers do to improve the integrity of the international education sector?**

Objective 2

- 1. What factors should inform government's approach to allocating international student enrolments across sectors, providers, and locations in Australia?**

Skills gaps in Australia's STEM workforce

Australia requires a strong STEM-skilled workforce to progress initiatives such as a Future Made in Australia and to work towards our net zero goals. Jobs and Skills Australia's Clean Energy Generation report highlights the extent of new jobs, skills and qualifications in this sector in the next 30 years. This sector currently relies on migration, with migrants comprising more than a quarter (26%) of the existing clean energy workforce. There will be a pressing need to rapidly expand this workforce in the coming years.

A Jobs and Skills Australia 2023 report outlined shortages in 54% of design, engineering, science and transport professional jobs. AI, robotics and cybersecurity are also considered to be at critical risk of shortages.

An Office of the Chief Scientist report notes that 56% of Australia's university qualified STEM workforce and 26% of our VET STEM workforce were born overseas. In key professions such as engineering, the overseas-born component of the workforce is even higher, at 62.7%.

At a time when Australia is experiencing significant gaps in its STEM workforce, it is important to understand how international graduates can contribute to filling those skills gaps – both now and in the future – should they wish to stay in Australia to work after graduating. International students comprise nearly half of Bachelor students studying IT, more than a quarter of students studying engineering, and significant proportions of other STEM fields (Department of Education (2023), Selected Higher Education Statistics– 2022 Student data)

The draft framework identifies the potential to align migration and skilled visa pathways to better address Australia's skills shortages. While not all international students will want to stay in Australia to work following their studies, there is a clear opportunity to develop targeted and productive migration pathways that would be of mutual benefit to graduates wishing to stay in Australia, and the nation.

A clear starting point for such targeted work is aiming to fill the gaps in the STEM workforce. As shown in Table 1, considerable proportions of undergraduate students across the STEM fields that will be crucial for our future workforce are international. Deeper analysis of international graduates who transition to post-study visas (subclass 485) and/or to skilled visas following their studies would deliver essential understandings of the current level of interest for these graduates in staying in Australia to work to inform future policy settings.

The draft framework outlines the Government's intention to implement policy that will support 'sustainable growth over time', noting that this may include setting limits on enrolments at a provider or course level, or in specific locations. The framework paper also notes 'International students in postgraduate research degrees add significant value to Australia's broader innovation and skilled

migration objectives' and that the Government will consult further on any potential settings affecting postgraduate enrolments, including potentially exempting them from the new managed growth settings.

Science & Technology Australia strongly advocates for postgraduate research students (higher degree by research – HDR students) being exempted from any future 'caps' or managed growth settings. While HDR students are still exactly that – students – the key clue is in the rest of their title: higher degree by research. These HDR students comprise a significant proportion of Australia's STEM research workforce – conducting breakthrough work that contributes to Australia's high-quality research capabilities. They also make significant contributions to teaching and supporting all undergraduate students.

In 2022, more than half of STEM PhD completions were international students. In the field of IT – critical to maintain Australia's capacity to remain globally competitive in areas such as artificial intelligence – two-thirds of PhD completions were international students. Similarly, two-thirds of engineering PhD completions were international – a field that will underpin Australia's ability to develop the green tech needed to drive the transition to a zero-emissions economy under the Future Made in Australia initiative.

Recommendations

1. The Department of Home Affairs, Jobs and Skills Australia and the Department of Education should conduct deeper joint analysis and projections of Australia's workforce needs and how managed growth settings for international education can play in addressing critical skills and workforce gaps.
2. The Government conducts deeper analysis of international graduate transitions to post-study work visas and skilled visas to understand student pathways and motivations.
3. Exempt international higher degree by research (HDR) students from any future caps or managed growth settings that limit enrolments.

2. What considerations for government should inform the overall level of international students in Australia?

3. How will this approach to managing the system affect individual providers?

4. Should sectors other than higher education and vocational education and training, such as schools, ELICOS and non-award be included in approaches to manage the system for sustainable growth?

5. How should government determine which courses are best aligned to Australia's skills needs?

6. How should government implement a link between the number of international students and an increased supply of student housing?

7. What transition arrangements would support the implementation of a new approach?

Objective 3

1. What are the barriers to growth in offshore and transnational delivery of Australian education and training?

2. Where can government direct effort to support transnational education?