

7 September 2023

Ms Sally-Ann Williams
Chair
Diversity in STEM Review Panel

Email: diversityinSTEM@industry.gov.au

Dear Ms Williams,

Re: Universities Australia's response to the Diversity in STEM Review: draft recommendations

Universities Australia (UA) welcomes the opportunity to provide feedback on the draft recommendations as part of the *Pathway to Diversity in STEM* review. Representing Australia's 39 comprehensive universities, UA believes in building a strong STEM pipeline, and that improving equity and inclusion from all under-represented groups to access STEM education and employment will only further strengthen Australia's future skilled workforce.

The draft report effectively outlines recommendations aimed at improving coordination across government, taking a long-term strategic approach to diversity in STEM initiatives and shifting public perception of STEM degrees to drive cultural change. While much has already been done to improve diversity in STEM, more can be achieved to ensure Australia is attracting and retaining people to STEM degrees and professions.

Recommendations relating to Objective 8 of the draft report focus on universities' role in supporting pathways for diverse cohorts into university STEM education. While UA agrees that more can be done to improve diversity in STEM from early childhood education to workplaces, including in higher education, it is important to note that universities are already committed to addressing barriers to STEM university education for equity groups through different programs, scholarships and pathways. Universities remain committed to supporting diversity and access to education.

It is important to note that all education providers (including universities) are required by the *Disability Standards for Education 2005* to take steps to ensure Australians with disability can seek admission to, and participate in, their course offerings on the same basis as a student without a disability, and without experiencing discrimination. This extends to support services, including any specialised support services necessary for a student with disability to participate in their chosen course. This is important in the context of STEM courses where the need for (and level of) such support is potentially greater. Universities understand these obligations and take them seriously.

Universities also have obligations through Workplace Gender Equality Agency, states and territory-based legislation, and most universities participate in SAGE/Athena SWAN in addressing women in STEM as research students and employees. Given the focus on equity representation as part of the Accord process, UA supports a coordinated approach to diversity in STEM to avoid duplication of data collection, as suggested in Objective 1. Such a coordinating body may also improve current challenges associated with consistently and accurately reporting of data on diversity employment for universities and other organisation.

Our data indicate that universities are effectively supporting equitable access to STEM courses and supporting students to succeed. Once students decide to go down a university STEM pathway, they tend to finish – completion rates are at 80 per cent or above across different fields of education. Overall, completion and retention rates for STEM-related areas have also been improving over time¹.

¹ Overall demand and retention rates in higher education dropped between 2019 and 2020 due to the pandemic. This trend was also seen in STEM degrees. This drop also includes a rise in university deferrals, leading to increased non-completion.

The improved demand and completion rates also indicate that universities have managed to reduce barriers to access for all groups.

UA data also indicate that an increasing proportion of students undertaking degrees in STEM fields are from equity groups. In 2021, 36.2 per cent of STEM students were female, up from 34.1 per cent in 2011. The number of Indigenous students completing a STEM education are very low, however numbers have more than doubled from 2011 to 2021, up from 124 students in 2011 to 366 in 2021. In 2011, 8 per cent of Indigenous students graduated with a STEM degree, whereas in 2021 this number had increased to 11 per cent. Students with disabilities studying STEM subjects made up 2.8 per cent of STEM students in 2011, which has increased to 4.6 per cent in 2021. While these are positive improvements over the past decade, more can and should be done to ramp up access to STEM education for underrepresented groups.

With respect to the recommendations under Objective 11, UA would like to note that in our latest submission² to the University Accord, we call for an immediate increase in the base stipend for PhD students (while maintaining the current numbers funded). While this would have a profound impact on improving living standards of all PhD students, this would especially have an impact in reducing barriers for underrepresented cohorts seeking to undertake a PhD. Indigenous graduates generally experience strong employment outcomes, comparable to non-Indigenous graduates and often better. While this is positive, it can make undertaking a PhD less appealing from a financial perspective. Establishing conditions and remuneration for PhD students that allow them to undertake a Higher Degree by Research while receiving a reasonable living wage is one way to reduce barriers to participating in STEM research.

Removing financial barriers to undertaking a PhD must be complemented by clear career pathways for STEM researchers beyond graduation. This is of particular relevance to many early and mid-career researchers who are employed on short-term contracts linked to research grants, who have concerns about job security and career progression. As a result, scientists leave Australia, or leave the research workforce completely, and Australia misses out on new scientific discoveries and economic opportunities. While researcher mobility is a core part of the research enterprise, job insecurity should not be a driver for going overseas. Further clarity on what a STEM career outside academia may look like and increased mobility between industry and academia will have a positive impact on attracting and retaining all STEM researchers.

UA looks forward to reading the final report later in the year, and we stand ready to work with the government, industry and community to diversify our future STEM workforce.

Yours sincerely



Catriona Jackson
Chief Executive

² <https://www.universitiesaustralia.edu.au/submission/response-to-the-australian-universities-accord-interim-report-submission-3/>