

SCIENCE & TECHNOLOGY AUSTRALIA

POLICY SUBMISSION

7 MARCH 2025

Response to the Jobs and Skills Australia consultation on the Gender Economic Equality Study

Science & Technology Australia thanks Jobs and Skills Australia for the opportunity to respond to the Gender Economic Equality Study consultation.

Science & Technology Australia is the peak body for the nation's science and technology sectors, representing over 140 member organisations and more than 235,000 scientists and technologists. We connect science and technology with governments, business and the community to advance science's role in solving some of humanity's greatest challenges.

Key points

1. Australia's STEM workforce pipeline is unable to reach its full potential affecting our ability to develop and retain some of the best talent – the best science and innovation is fueled by strong diversity of ideas and perspectives.
2. Gender inequity isn't uniform across all STEM disciplines.
3. A targeted approach is required to rectify these inequities with a number of opportunities available and models to draw on.
4. STA's Superstars of STEM breaks down stereotypes by getting more STEM women in the media and inspiring kids to follow a STEM career during school visits.
5. Government funding for STEM program should have a diversity lens, e.g. targeted funding to support women.

Science & Technology recommendations

Science & Technology Australia makes the following recommendations to the study:

1. Continue to support effective programs like Superstars of STEM to change perceptions and inspire young people. Systemic change is a long-term process and established programs like Superstars of STEM have data that can inform this.
2. Establish clear targets and equity policies for all Government grants and funding programs, e.g.:
 - a. the NHMRC grant policy.
 - b. Eligibility requirements, rules and guidelines in grant programs should be explicitly and transparently stated to provide equal and fair access to all, regardless of existing connections, language barriers, or lack of assumed or implicit knowledge about how the system works.
 - c. Deploy targeted funding rounds that are clearly advertised for women (or other underrepresented groups) only.
 - d. Quarantine a set proportion of funding to be awarded to women or other underrepresented groups (and statistical data used to ensure equal success rates).
3. Work with STEM employers to publish recruitment practices that are inclusive and focus on applicants' ability to do the job.

Gender gaps throughout the STEM pipeline

Stereotypes start young. For all under-represented groups, if children can't see examples of people working in STEM who look like them, or come from similar backgrounds, aiming for a career in STEM when they grow up seems much less possible. It's hard to be what you can't see.

This lack of role-models is particularly relevant to the chronic under-representation of women in STEM. Science & Technology Australia's acclaimed world-leading program Superstars of STEM has been a game-changer to start to boost the visibility and prominence of women – from many different backgrounds – in STEM.

Since 2017, [Superstars of STEM](#) has created 270 diverse visible powerful role models of women and non-binary leaders in STEM who appear regularly in the Australian media, on stage and on screen. It has generated more than 8,800 media mentions of diverse role models in STEM, demystified STEM careers for more than 85,000 Australian kids at 750 schools and reached a global audience of 38 million through traditional media in the last six months. The program has vast reach across Australia, showcasing women and non-binary role models with successful STEM careers to school children, their parents, teachers and other influencers of career choices.

And this work is sorely needed. The Australian Government's [STEM Equity Monitor 2024](#) report highlights the disparities faced by women and girls stretching from schools to jobs. A lack of support and guidance – and inspiration – can translate into subject choices leading girls away from STEM, which has downstream effects when it comes to tertiary education and career choices:

- In year 12, 24%, 26% and 37% of Engineering, Technology and Higher Maths subject enrolments respectively are girls.
- Only 40% of university STEM course completions are women.
- Only 15% of STEM qualified occupations are filled by women.
- Only 29% of the STEM research workforce are women.

We need sufficient and evidence-based programs, supports and resources for school teachers to inspire and build confidence in maths and science. There is an ever-growing litany of reports, the most recent being by the Australian Mathematical Sciences Institute (AMSI) in 2024, highlighting the decline in higher-level maths enrolments. It seems many adults, including parents, wear a lack of maths skills as a 'badge of honour', when the same would not be said about reading or writing skills.

A stark difference is also seen in the pipeline of schools in regional and remote where teachers are rarely mathematics trained. We know students without speciality trained teachers often perform more poorly and are not inspired to persevere in high-level STEM studies. In Australia, 32% of high school maths teachers were out-of-field teachers meaning they are not qualified to teach the subject. Maths is increasingly vital to Australia's future to support future and emerging industry growth from net zero initiatives to AI and quantum computing. A consistent national upskilling program to deliver maths teaching qualifications for out of field teachers is needed to support student education and STEM pipeline growth.

There are also barriers to collecting the right information to support gender equity in the STEM workforce. For instance, the [WGEA Employer Gender Pay Gaps Report](#) and the [ABS](#) use the 'Professional, Scientific and Technical Services' classification to record data about STEM professionals. This classification also includes accountancy, advertising, management and other consultancy, veterinary science and professional photography. Without data specific to STEM professionals, it is difficult to support understanding of this workforce and its gender equity issues.

Awards and recognition programs like the Prime Ministers' Prizes for Science, including the new prize for Indigenous Knowledge, and Eureka Awards provide a valuable vehicle to identify, recognise and celebrate the current and emerging leaders in STEM, which can also help build the pipeline.



Workforce shortages

There are clear consequences resulting from the additional barriers that women and girls face to remain in a STEM role. These factors entrench lower workforce rates in the STEM sector: only [13% of the engineering workforce](#), [7.5% of AI researchers](#) and [17% of the cybersecurity workforce](#) are women.

There are also significant challenges for women who are currently in the STEM research workforce, making retention of highly qualified and experienced STEM professionals difficult.

These are illustrated by Science & Technology Australia's [STEM Career Pathways report](#), prepared for the National Science and Technology Council in 2024:

- 58% of women, compared to 78% of other genders were on permanent full-time contracts, and 31% of women, compared to 19% of other genders, were on fixed-term contracts.
- 1 in 5 women identified a lack of support after returning from a career break as a 'high-impact' career barrier.

The [2024 STEM Equity Monitor](#) found women earned less than men in three of four STEM fields following undergraduate and postgraduate study. Across all STEM industries, there is a \$26,420 gender pay gap.

Compounding these issues, chronic job insecurity is a significant barrier to attracting and retaining women in the STEM research workforce. Repeated cycles of short-term funding contracts – especially during the early years of a science research career – undermine the conditions for Australia's scientists to make truly ground-breaking discoveries and seize new opportunities for Australia.

The STEM Careers Pathways report also found that clearer and more transparent criteria for both recruitment and promotion procedures could support women and other underrepresented groups in applying for jobs and progressing in their careers. Recruitment, criteria that emphasise an applicant's ability to do the job, rather than demonstrating they had already done it in a previous role, or targeted recruitment rounds for women only, demonstrating the employers' commitment to a diverse workforce are two such examples.

To get maximum benefit from Australia's R&D investments, it's critical to have a diversity of people to build on new innovations and discoveries and take research and ideas through the translation and commercialisation pathways. Here too, in start-up and venture capital projects, women, and particularly women of colour, are traditionally significantly underrepresented. There are several systemic reasons behind this – a predominance of men in the start-up and venture capital ecosystem; a perception that women lack the confidence, competitiveness and drive to succeed in entrepreneurship; and deep-rooted systemic bias that exists across Australian society that poses significant challenges to women and people of colour.

Again, this is illustrated by the [2024 STEM Equity Monitor](#) report – women hold just 25% of senior management roles in STEM industries, and only 10% of CEOs in STEM industries are women.

Finally, we applaud the Australian Government announcing on 5 March 2025 that it has finally accepted all 11 recommendations of the *Pathways to Diversity in STEM* review conducted during 2023. The implementation of these recommendations will provide a strong down payment on shaping policies that support gender economic equality in Australia, from addressing STEM in schools, organisational context for workers, tertiary reforms to wider government programs that support diversity in STEM careers.



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