11 June 2026

Committee Chair
House of Representatives Standing Committee on Education
Parliament of Australia

Dear House Standing Committee on Education

Submission to the Inquiry into the Factors Driving Educational Attainment

The Australian Academy of Technological Sciences and Engineering (ATSE) is a Learned Academy of independent, non-political experts helping Australians understand and use technology to solve complex problems. Bringing together over 950 of Australia's leaders in applied science, technology, and engineering, ATSE provides impartial, practical, and evidence-based advice on how to achieve sustainable solutions and advance prosperity. ATSE thanks the House Standing Committee on Education for the opportunity to make a submission towards the Inquiry into the Factors Driving Educational Attainment.

Building a diverse STEM workforce equipped with the skills to solve Australia's most complex problems is vital to Australia's economy, society and wellbeing. According to the Annual STEM Equity Monitor, women make up just 15% of those employed in STEM roles, despite substantial increases in the number of women in STEM-qualified occupations from 2013 to 2023. Furthermore, women's STEM skills remain underutilised, with only 31% of women STEM graduates working in occupations relevant to their skillset, compared to 56% of male graduates. In 2023, women occupied just 31% of STEM teaching and research positions in Australian universities, compared to 47% across all teaching and research disciplines. Boosting the involvement of women and other underrepresented groups in STEM education is therefore necessary to meet the 60,000-person shortage in the engineering workforce expected by 2035.

ATSE has long championed diversity and equity of access within STEM research, education, and practice. ATSE's 2022 report Our STEM skilled future - An education roadmap for an innovative workforce, highlights diversity in STEM as a key, evidence-based pathway to improving Australia's technology-powered, human driven potential. For STEM workplaces, our Diversity and Inclusion Toolkit supports the skills acquisition of under-represented Australian learners by helping Australian small businesses engage with diversity in hiring and training STEM-skilled workers.

These programs reflect the central understanding that structural barriers to educational attainment vary widely by institution, sector, and field. These barriers range from engagement or confidence in STEM subjects at schools to workplace flexibility around caring responsibilities. Evidence suggests that there are three key drop out points for women in highly technical fields: early high school, university enrolment, and mid-career. Each of these drop-out points is characterised by barriers specific to that 'phase' of career development. Any attempt to effectively address gender-based barriers in educational outcomes must therefore first identify institution-specific barriers, and then proceed to target these barriers through tangible, evidence-based strategies.

For example, variations in high-school subject selection significantly shape downstream gender-based differences within Australia's STEM-skilled workforce. Women are underrepresented in late high school enrolments for IT, physics, astronomy, engineering, and related technology subjects. Evidence suggests that

learners who have previously engaged with STEM-oriented education in their childhood are broadly more likely to pursue STEM-oriented subjects, courses and occupations. In line with this, equitable access to high-quality STEM education increases diversity for underrepresented students. ATSE's flagship STELR program comprises a set of high-quality, engagement-oriented learning modules aiming to bolster Australian learners' early engagement with STEM fields. STELR is widely perceived by teachers as a positive and inclusive tool for engaging female students in STEM, with 68% of respondents agreeing that female students are more actively engaged in STEM learning with STELR compared to other education resources.

ATSE's primary evidence-based approach to supporting diversity in tertiary STEM education is the Elevate: Boosting diversity in STEM program. The program awards scholarships to women and non-binary people, supporting them to study STEM degrees at university. Critically, Elevate provides untied payments, access to skill-building workshops, peer mentoring and networking events, as well as a wraparound system of 24/7 wellbeing and psychosocial support. The Elevate program aims to address inequities in STEM in targeting identified financial barriers through comprehensive scholarships, enabling more women and non-binary people to access tertiary STEM courses, professional skills development and STEM leadership opportunities within industry and academia.

In Elevate's four annual application rounds, ATSE has received over 5,000 applications, and currently supports more than 500 scholars, including those studying part-time until the end of 2032. Elevate has proven to be very successful, with a **96% scholar retention rate**, three times better than the national average rate of attrition. An independent review of diversity in STEM programs conducted for the Department of Industry, Science and Resources (DISR) found that a large majority of Elevate program scholars considered the program indispensable and believed that there is an ongoing need for the initiative. The Federal Government's Pathway to Diversity in STEM Review recognised Elevate as the 'gold standard' program for fostering gender equity in STEM education. The program was also a finalist for the 2025 Eureka Prize for STEM Inclusion.

Despite this success, ATSE will soon be forced to significantly scale back this provision of new scholarships, due to the absence of committed funding for new scholars beyond 2027. The initial investment to establish the program came from DISR and ATSE is working to grow a small group of industry partners. While ATSE can support existing scholars for the remaining duration of their studies, without additional Government funding, the program's viability will be in jeopardy. Considering that scholars have identified peer support as a key contributor to the program's high retention rate and overall success, reduction in cohort size may also significantly reduce the program's benefits for existing and future scholars.

Diversity programs seek to overcome centuries of inequality and require consistent long-term investment to pay dividends. Despite its success, Elevate cannot overcome gendered barriers to STEM education and attainment with just four scholarship rounds (2023-2026). Committed government funding to extend the Elevate program for additional scholars would ensure the continued operation of an evidence-based program with an exceptional track record in reducing gender-based barriers in Australian STEM education and of supporting a pipeline of women and gender-diverse learners into STEM careers.

More information on the Elevate scholarship program can be found on ATSE's website. ATSE would also be pleased to discuss more detail regarding our educational programs with the House of Representatives Standing Committee on Education or to connect the committee to any of our expert Fellows. For further information, please contact: academypolicyteam@atse.org.au.

Yours sincerely

Dr Cathy Foley AO PSM FTSE FAA
President

Professor Kylie Walker AM
Chief Executive Officer

Level 2, 28 National Circuit
Forrest ACT 2603
Australia

PO Box 4776
Kingston ACT 2604
Australia

+61 2 6185 3240
info@atse.org.au
atse.org.au

ABN 58 008 520 394
ACN 008 520 394

Australian Academy of Technological Sciences & Engineering