



## SAGE Cygnet Award Application

|                                |                                                              |
|--------------------------------|--------------------------------------------------------------|
| <b>Name of Institution</b>     | University of the Sunshine Coast                             |
| <b>Date of Application</b>     | 27 February 2026                                             |
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# Acknowledgement of Country

UniSC acknowledges the Traditional Custodians of the land on which we work and live, and recognise their continuing connection to land, water, and community. We pay our respects to Elders past, present, and emerging. UniSC deeply values and seeks to uplift, empower, and give a voice to Aboriginal and Torres Strait Islander people and perspectives.

## Acknowledgement of Country

UniSC is a place where Aboriginal and Torres Strait Islander people's perspectives, culture and knowledge is acknowledged, valued, and respected. We share deep pride in, and seek to uplift, empower, and give a voice to Aboriginal and Torres Strait Islander people and perspectives.

If you are an Aboriginal and Torres Strait Islander person, we encourage you to join the long tradition of trailblazers at UniSC, impacting our University and our world.

We acknowledge the Traditional Custodians of the land on which we work and live, and recognise their continuing connection to land, water, and community. We pay our respects to Elders past, present and emerging.



## Artwork

*Knowledge is Sacred*  
Lyndon Davis





UniSC  
Australia

## UniSC: SAGE Cygnet 5

|                          | ✓<br>Current<br>Cygnet | <b>Barrier</b><br>• List the Barrier addressed in this Cygnet<br>• List the Barrier for Cygnets already submitted |
|--------------------------|------------------------|-------------------------------------------------------------------------------------------------------------------|
| Institution-wide barrier |                        | Recruitment (under review)                                                                                        |
| Sub-group barrier        | ✓                      | Gender equity across the STEM pipeline and academic workforce (School of Science, Technology and Engineering)     |
| Institution-wide barrier |                        | Academic Promotion                                                                                                |
| Institution-wide barrier |                        | Parents and Carers                                                                                                |
| Institution-wide barrier |                        | Career Support & Development                                                                                      |

### School structure

Prior to 2018, the University of the Sunshine Coast (UniSC) operated under a two-faculty model comprising the Faculty of Science, Health, Education and Engineering, and the Faculty of Arts, Business and Law with nine schools sitting within these faculties. The School of Science and Engineering (SSE) operated as one of these nine Schools.

In 2018, UniSC undertook a University-wide restructure that dissolved the faculty model and reduced the number of Schools from nine to six. Following this restructure, individual Schools began reporting directly to the Deputy Vice-Chancellor (Academic) (DVC(A)). Under the revised structure, the SSE transitioned to direct reporting to the DVC(A).

Subsequent institutional changes further reduced the total number of Schools to five; however, these changes did not alter the structure or composition of the SSE. In 2021, Information and Communication Technology (ICT) disciplines were incorporated into the School, and SSE was renamed the School of Science, Technology and Engineering (SSTE).

An inaugural Dean was appointed in January 2022, with a subsequent Dean appointed in 2025. These leadership transitions occurred during a period of sustained focus on workforce composition, recruitment reform and equity-informed governance within the School.

Where data pre-date the incorporation of ICT disciplines, the term School of Science and Engineering (SSE) is retained to reflect the structure at the time of data collection. For consistency, the term SSTE is otherwise used throughout this document.

### A note on data

The University's current data systems categorise gender as 'F', 'M', and 'X'. In instances where data relating to non-binary or gender-diverse individuals has not been captured, either due to system constraints or the absence of respondents identifying as such, the 'X' category has been excluded from analysis. In recognition of gender diversity, this document uses the terms 'women' and 'men' rather than 'female' and 'male' throughout.

## Glossary

|                      |                                                                                                                                                                                                                                                                               |
|----------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>AS</b>            | Athena Swan                                                                                                                                                                                                                                                                   |
| <b>ASIC</b>          | Athena Swan Implementation Committee                                                                                                                                                                                                                                          |
| <b>CLT</b>           | Centre for Learning and Teaching                                                                                                                                                                                                                                              |
| <b>DEI</b>           | Diversity, Equity and Inclusion                                                                                                                                                                                                                                               |
| <b>DVC (A)</b>       | Deputy Vice-Chancellor (Academic)                                                                                                                                                                                                                                             |
| <b>DVC (R&amp;I)</b> | Deputy Vice-Chancellor (Research & Innovation)                                                                                                                                                                                                                                |
| <b>EFTSL</b>         | Equivalent Full Time Student Load                                                                                                                                                                                                                                             |
| <b>Headstart</b>     | Program enabling secondary school students to undertake university level courses prior to formal enrolment                                                                                                                                                                    |
| <b>ICT</b>           | Information and Communication Technology                                                                                                                                                                                                                                      |
| <b>MindSET-do</b>    | STEM outreach initiative led by the School of Education and Tertiary Access supporting participation and confidence in STEM pathways across primary, secondary and community cohorts.                                                                                         |
| <b>MyUniSC</b>       | UniSC staff intranet                                                                                                                                                                                                                                                          |
| <b>PDP</b>           | Performance and Development Planning                                                                                                                                                                                                                                          |
| <b>PDC</b>           | Performance and Development Cycle                                                                                                                                                                                                                                             |
| <b>PISA</b>          | Programme for International Student Assessment. An international assessment run by the OECD (Organisation for Economic Co-operation and Development) of 15-year-old students' reading, mathematics, and science literacy, including survey data on attitudes and aspirations. |
| <b>P&amp;C</b>       | People & Culture                                                                                                                                                                                                                                                              |
| <b>SAGE</b>          | Science in Australia Gender Equality                                                                                                                                                                                                                                          |
| <b>SETA</b>          | School of Education and Tertiary Access.                                                                                                                                                                                                                                      |
| <b>SSE</b>           | School of Science and Engineering                                                                                                                                                                                                                                             |
| <b>SSTE</b>          | School of Science, Technology and Engineering                                                                                                                                                                                                                                 |
| <b>STEM</b>          | Science, Technology, Engineering and Mathematics                                                                                                                                                                                                                              |
| <b>STEMM</b>         | Science, Technology, Engineering, Mathematics and Medicine                                                                                                                                                                                                                    |
| <b>TF</b>            | Teaching Focused                                                                                                                                                                                                                                                              |
| <b>T&amp;R</b>       | Teaching and Research                                                                                                                                                                                                                                                         |
| <b>UniSC</b>         | University of the Sunshine Coast                                                                                                                                                                                                                                              |
| <b>WG</b>            | Working Group                                                                                                                                                                                                                                                                 |
| <b>X</b>             | unspecified, intersex, gender diverse                                                                                                                                                                                                                                         |

# 1. KEY BARRIER

A longstanding barrier to gender equity at UniSC has been the underrepresentation of women within the School of Science, Engineering and Technology (SSTE). During the Bronze reference period (2015–2017), this imbalance was evident across both academic staffing profiles and the student pipeline feeding into STEM disciplines. These patterns reflect broader, sector-wide challenges, but addressing this barrier is critical to improving workforce diversity, strengthening the sustainability of the STEM talent pipeline, and supporting long-term gender equity outcomes at UniSC.

Sub-issues identified during the Bronze reference period (2015–2017):

## **1.1 Low representation of women among academic staff in SSTE**

Workforce data analysed during the Bronze reference period indicated that women were underrepresented within academic staff profiles in SSTE. This underrepresentation was observed across multiple academic levels, with particularly low representation at senior levels.

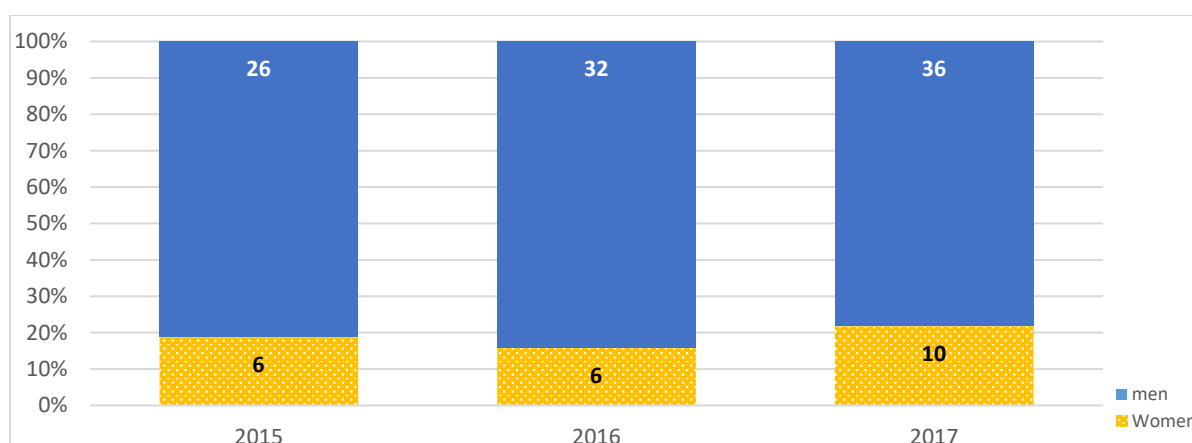
## **1.2 Underrepresentation of women in the STEM student pipeline, contributing to a “leaky” talent pathway**

Student participation data examined during the Bronze reference period showed lower representation of women across STEM enrolments and progression pathways resulting in a reduced proportion of women progressing through the STEM pipeline. These trends were identified as a contributing factor to the limited pool of women available for future academic and research roles within SSTE.

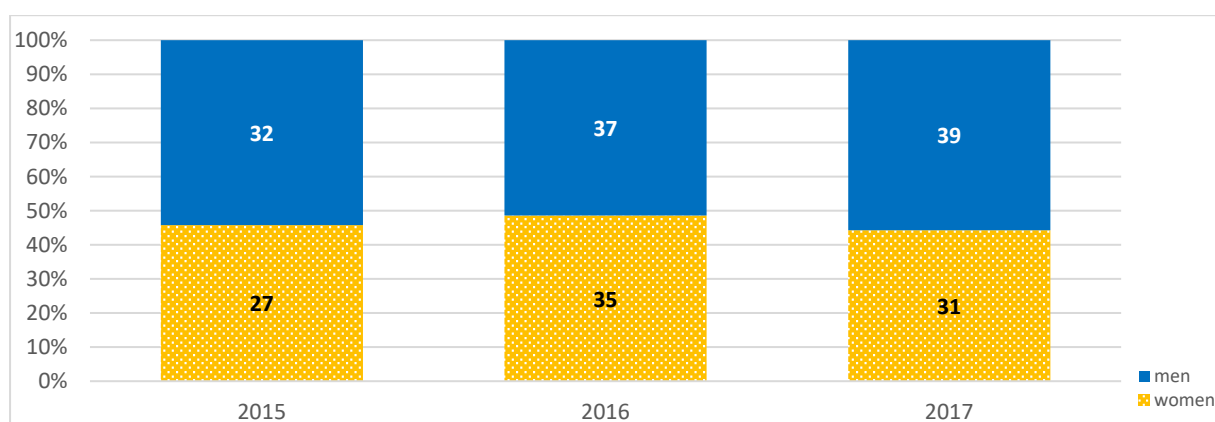
## 2. EVIDENCE OF BARRIER

### Barrier 1: Low representation of women among academic staff

UniSC workforce data examined during the Bronze reference period (2015– 2017) indicated low representation of women among academic staff in the then School of Science and Engineering (SSE) at UniSC. Institutional data (Figure 1) showed that women comprised 19% of academic (fixed term and ongoing) staff in 2015, 16% in 2016, and 22% in 2017, representing an average of 19% across the three-year reference period.



**Figure 1: School Science and Engineering Academic Staff (fixed term and ongoing), excluding Sessional Staff, 2015-2017**



**Figure 2: School Science and Engineering Sessional (casual) Staff, 2015-2017**

The higher representation of women among sessional (casual) academic staff (44–49% between 2015 and 2017) (Figure 2) contrasts with their lower representation in fixed term and continuing academic roles (Figure 1). This pattern highlights a structural difference in gender distribution across employment types within the School during the Bronze reference period.

## Barrier 2: Underrepresented student groups in the “leaky” STEM talent pipeline

Student enrolment and completion data (Table 1) analysed during the Bronze reference period further evidenced gender imbalance across the STEM pipeline. At the 2017 census point, women comprised approximately 34% of enrolments within SSE disciplines, substantially lower than women’s representation in other schools

**Table 1: Number of all students by, School and gender, STEM vs Non-STEM (enrolments at Census 1, 2017)**

|                                             | Women       | %W         | Men         | X        | Total        |
|---------------------------------------------|-------------|------------|-------------|----------|--------------|
| <b>STEM</b>                                 | <b>3870</b> | <b>65%</b> | <b>2116</b> | <b>3</b> | <b>5989</b>  |
| School of Health & Behavioural Sciences     | 1636        | 70%        | 698         | 2        | 2336         |
| School of Nursing, Midwifery & Paramedicine | 1708        | 82%        | 373         | 1        | 2082         |
| School of Science & Engineering (SSE)       | 526         | 34%        | 1045        | 0        | 1571         |
| <b>Non-STEM</b>                             | <b>4232</b> | <b>61%</b> | <b>2721</b> | <b>2</b> | <b>6955</b>  |
| School of Business and Creative Industries  | 1738        | 54%        | 1506        | 0        | 3244         |
| School of Education and Tertiary Access     | 1371        | 65%        | 748         | 1        | 2120         |
| School of Law and Society                   | 1123        | 71%        | 467         | 1        | 1591         |
| <b>Grand Total</b>                          | <b>8102</b> | <b>63%</b> | <b>4837</b> | <b>5</b> | <b>12944</b> |

%W = percentage of women; X = unspecified, intersex, gender diverse

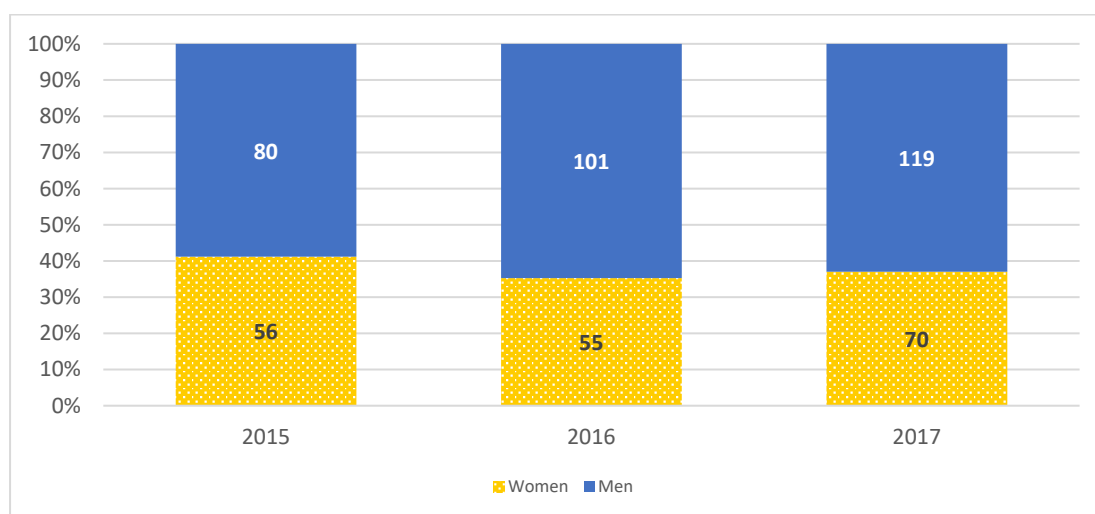
HDR enrolment data (Table 2) further suggested constrained progression into advanced study in SSE, with women comprising 53% of HDR enrolments in 2015 and 2016 before declining to 45% in 2017. Collectively, these enrolment patterns indicated a “leaky” pipeline in the disciplines most closely aligned with SSE, limiting the pool of women progressing into honours/HDR pathways and, over time, into academic and research roles.

**Table 2: Number of HDR students by gender and STEM Schools, 2015-2017**

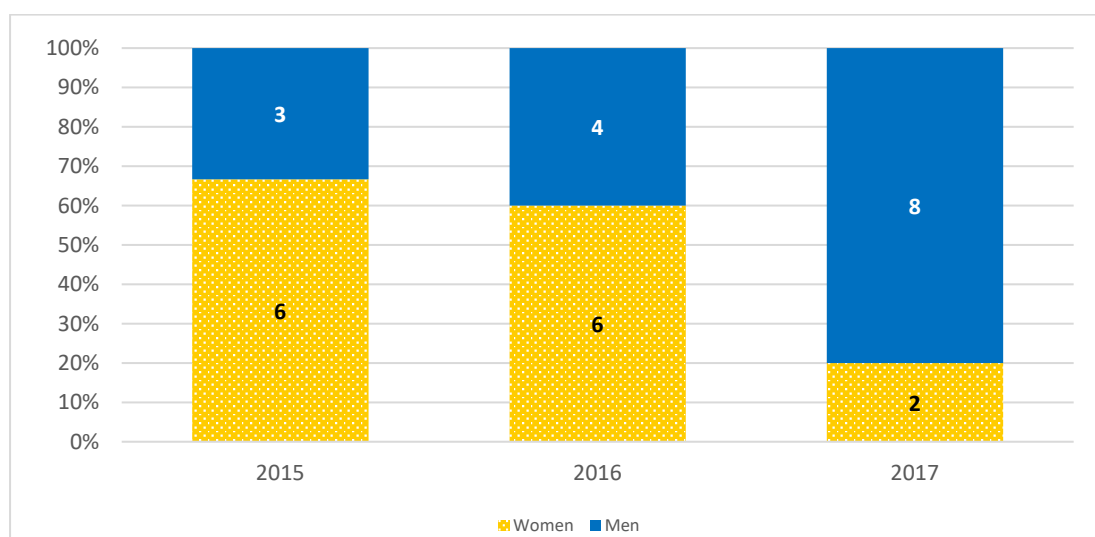
|                                         | 2015 |    |   |     |       | 2016 |    |   |     |       | 2017 |    |   |     |       |
|-----------------------------------------|------|----|---|-----|-------|------|----|---|-----|-------|------|----|---|-----|-------|
|                                         | W    | M  | X | % W | Total | F    | M  | X | % W | Total | W    | M  | X | % W | Total |
| School of Health & Behavioural Sciences | 32   | 17 | 0 | 65  | 49    | 42   | 18 | 1 | 69  | 61    | 45   | 26 | 1 | 63  | 72    |
| Nursing, Midwifery & Paramedicine       | 21   | 2  | 0 | 91  | 23    | 22   | 5  | 0 | 81  | 27    | 21   | 5  | 0 | 81  | 26    |
| Science & Engineering                   | 31   | 27 | 0 | 53  | 58    | 37   | 33 | 0 | 53  | 70    | 40   | 49 | 0 | 45  | 89    |

### Completions in Science and Engineering Programs

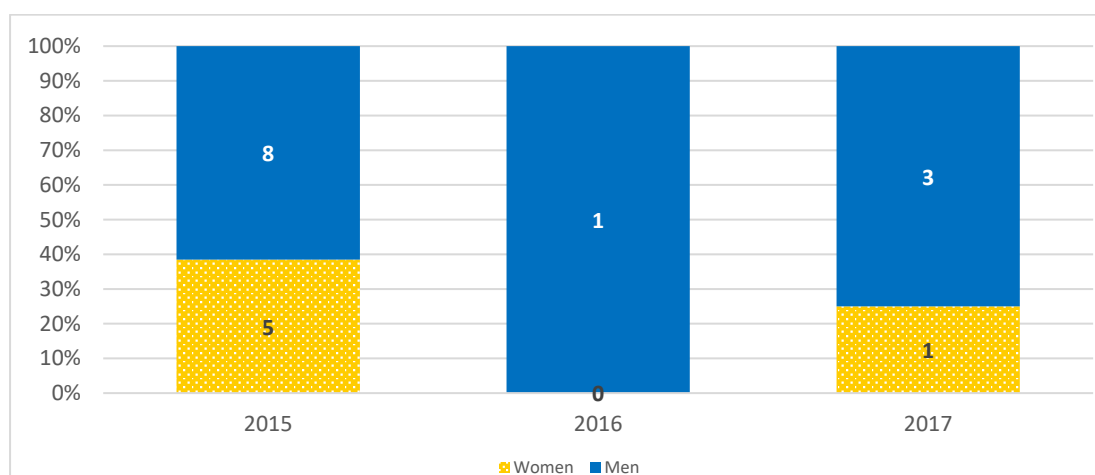
While women who enrolled in SSE programs generally completed undergraduate study at meaningful and stable rates (Figure 3), this representation was not sustained at subsequent transition points, particularly into honours, postgraduate, and HDR study (Figures 4 & 5).



**Figure 3: School Science and Engineering, Undergraduate Completions (2015-2017)**



**Figure 4: School Science and Engineering, HDR Completions (2015-2017)**



**Figure 5: School Science and Engineering, Postgraduate Completions (2015-2017)**

Together, enrolment and completion data supported the Bronze application's conclusion that women were underrepresented in the SSE-aligned student pipeline, limiting the pool of women progressing into higher qualifications and future academic and research pathways. This interpretation aligns with national and international evidence of a persistent "leaky" STEM pipeline, in which gendered participation patterns emerge prior to university entry and continue into higher education. Australian and Programme for International Student Assessment (PISA) evidence shows that senior secondary STEM subject selection remains strongly gendered even where girls and boys have comparable prior achievement, indicating that participation gaps are shaped by factors such as confidence, self-efficacy and attitudes rather than performance alone (McMaster et al., 2023).

### 3. PROGRESS (ACTIONS AND OUTPUTS)

For context on the transition from SSE to SSTE, see the School Structure section (page 4); SSE is retained where data pre-date this change, with SSTE used otherwise.

#### Barrier 1: Low representation of women among academic staff

To address and sustainably improve the representation of women among academic staff within the School of Science, Technology and Engineering (SSTE), a range of initiatives were implemented in the post-Bronze period (2018 - 2025), see Table 3. These initiatives were designed to both support and retain existing women academics, and to attract more women into academic roles within SSTE.

**Table 3: Initiatives to overcome Barrier 1**

| Initiative number | Description                                              |
|-------------------|----------------------------------------------------------|
| 1.1               | Women's representation in leadership roles within SSTE   |
| 1.2               | Appointment of a DEI portfolio lead on SSTE School Board |
| 1.3               | Inclusive recruitment practices                          |
| 1.4               | Targeted women-only engineering recruitment              |
| 1.5               | Promotion of academic women                              |

#### 1.1 Women's representation in leadership roles within SSTE

Women in leadership can serve as role models, challenge negative stereotypes and amplify gender diversity outcomes. Since 2018, SSTE took deliberate steps to achieve more substantive representation of women in leadership, across both academic leadership roles and on industry advisory committees for all three disciplines – science, technology and engineering. During this period, women leaders were appointed in the roles as outlined in Table 4.

**Table 4: Examples of women's leadership roles within SSTE, 2019–present**

| Leadership role type            | Role/s                                                                                | Period covered |
|---------------------------------|---------------------------------------------------------------------------------------|----------------|
| School executive leadership     | Head of School                                                                        | 2019- 2021     |
| Academic leadership (portfolio) | Associate Dean Learning & Teaching<br>Associate Dean Research                         | 2020-2025      |
| Discipline leadership           | Science Discipline Lead<br>Technology Discipline Lead                                 | 2022- present  |
| Equity / inclusion leadership   | Diversity Equity Inclusion Lead                                                       | 2023- present  |
| Engagement leadership           | International & Engagement Lead                                                       | 2023- present  |
| Advisory leadership             | Industry Advisory Committee (IAC) Chairs/Co-Chairs (Science, Technology, Engineering) | 2020 - present |
| Student leadership interface    | Student Staff Liaison Committee (SSLC) Chairs/Co-Chairs                               | 2019-2022*     |

\*Committee was disbanded and replaced with student senate

## **1.2 Appointment of a Diversity, Equity, and Inclusion portfolio lead on SSTE School Board**

Recognising that an inclusive workplace culture is necessary to encourage more STEM academic women, a new Diversity, Equity, and Inclusion (DEI) portfolio lead was created on the SSTE School Board in 2023. This lead works alongside the Dean and School leadership to champion DEI initiatives within the School and connect these with University-wide programs. The role focuses on fostering an inclusive culture for staff and students and ensuring gender representation across disciplines and campuses. As a member of the School Board, this role ensures that DEI priorities and considerations are embedded in governance and strategic decision making.

The inaugural DEI Lead prepared a DEI report for SSTE, which identified priority actions and made concrete recommendations on fostering a sense of belonging for all staff members. With the Dean's support, this led to the promotion of more flexible working conditions within the School. For example, online participation in meetings outside standard school hours was enabled, supporting staff with caring and parenting responsibilities.

Through collaboration with School leadership, the DEI Lead also supported equity informed recruitment practices, including input into inclusive language in role descriptions and contributing to the rationale for targeted recruitment approaches in areas of persistent gender underrepresentation. The role further provided a coordinating link between School initiatives and Athena Swan activity, supporting alignment with institutional equity priorities.

## **1.3 Inclusive recruitment practices**

From 2022, SSTE implemented a suite of inclusive recruitment practices to strengthen equity at each stage of the academic recruitment process.

All recruitment panels are required to be gender balanced, and this requirement is monitored across recruitment rounds. Shortlists must include women; where no suitably qualified women are identified, the recruitment process is paused and re-advertised to ensure equitable opportunity. In addition, the Dean has mandated the use of gender-neutral language in all SSTE recruitment materials.

This approach was intentionally designed to maximise the likelihood of achieving gender equity outcomes in recruitment and was informed by consultation with the Faculty of Engineering at Monash University, which has demonstrated a strong track record in attracting and retaining a diverse academic workforce.

Key actions included:

- Ensuring all advertisements minimise the use of gendered language
- Advertising across multiple academic levels (e.g. B/C, D/E) to maximise the pool of eligible candidates
- Advertising roles across a wide range of platforms, including those that specifically target women candidates
- Actively encouraging staff to reach out to professional networks to promote opportunities and support applications
- Ensuring credible women candidates are represented at all stages of recruitment (long-listing, shortlisting, and interview); where this is not achieved, recruitment is recommenced
- Ensuring recruitment panels are gender balanced
- Implementing and clearly communicating a structured onboarding process to support new staff

## 1.4 Targeted women-only engineering recruitment

In 2025, SSTE implemented women-only academic recruitment within Engineering. This marked the first time women-only recruitment had been implemented by the University. The intervention was introduced in response to persistent underrepresentation of women in Engineering and was framed as a targeted, evidence-based measure to accelerate change where incremental approaches had not delivered sufficient progress. These were for (1) an Associate Professor of Mechanical Engineering and a Lecturer/Senior Lecturer in both (2) Civil Engineering and (3) Renewable Energy Engineering. Screenshots of the advertised positions are shown in Figure 6.

The figure displays three screenshots of recruitment advertisements for women-only engineering roles at the University of Southern Queensland (UniSC). Each advertisement is for a position within the School of Science, Technology and Engineering, located on the Sunshine Coast or Moreton Bay Campus.

**Advertisement 1: Lecturer / Senior Lecturer in Civil Engineering (Women only)**  
Job ID: 492553  
Locations: 90 Sippy Downs Drive, UniSC Sunshine Coast, QLD, Australia, 4556; 1 Moreton Parade, UniSC Moreton Bay, Queensland, Australia, 4502  
Academic Level: B, C  
School of Science, Technology and Engineering  
Full-Time  
Salary: Level B \$114,751 - \$136,143 or Level C \$140,415 - \$161,809 p.a., plus up to 17% employer superannuation  
Appointment: Full-time, ongoing appointment  
Recruitment Strategy: This targeted recruitment strategy is part of an ongoing commitment to support gender balance within the School of Science, Technology and Engineering, closing the gender pay gap across UniSC, and ensuring Australia has an engineering workforce that more equitably represents our society. This position is open only to applicants who are women to improve the under-representation of women in Engineering, as a genuine equal opportunity measure under section 105 of the Anti-Discrimination Act 1991 (Qld).

**Advertisement 2: Associate Professor, Mechanical Engineering (Women only)**  
Job ID: 492549  
Locations: 90 Sippy Downs Drive, UniSC Sunshine Coast, QLD, Australia, 4556; 1 Moreton Parade, UniSC Moreton Bay, Queensland, Australia, 4502  
Academic Level: D  
School of Science, Technology and Engineering  
Full-Time  
Salary: Level D, \$168,933 - \$186,045 p.a., plus up to 17% employer superannuation  
Appointment: Full-time, ongoing appointment  
Recruitment Strategy: This targeted recruitment strategy is part of an ongoing commitment to support gender balance within the School of Science, Technology and Engineering, closing the gender pay gap across UniSC, and ensuring Australia has an engineering workforce that more equitably represents our society. This position is open only to applicants who are women to improve the under-representation of women in Engineering, as a genuine equal opportunity measure under section 105 of the Anti-Discrimination Act 1991 (Qld).

**Advertisement 3: Lecturer / Senior Lecturer in Renewable Energy Engineering (Women only)**  
Job ID: 492555  
Locations: 90 Sippy Downs Drive, UniSC Sunshine Coast, QLD, Australia, 4556; 1 Moreton Parade, UniSC Moreton Bay, Queensland, Australia, 4502  
Academic Level: B, C  
School of Science, Technology and Engineering  
Full-Time  
Salary: Level B \$114,751 - \$136,143 or Level C \$140,415 - \$161,809 p.a., plus up to 17% employer superannuation  
Appointment: Full-time, ongoing appointment  
Recruitment Strategy: This targeted recruitment strategy is part of an ongoing commitment to support gender balance within the School of Science, Technology and Engineering, closing the gender pay gap across UniSC, and ensuring Australia has an engineering workforce that more equitably represents our society. This position is open only to applicants who are women to improve the under-representation of women in Engineering, as a genuine equal opportunity measure under section 105 of the Anti-Discrimination Act 1991 (Qld).

Figure 6: Recruitment advertisements for women-only engineering roles

Following some negative media coverage after release of the first position advertisement (Associate Professor of Mechanical Engineering), a media strategy was developed to highlight the benefits of gender equity in academic disciplines where women are traditionally underrepresented and to emphasise UniSC's commitment to equity, diversity and inclusion.

### 1.5 Promotion of academic women

To support applicants through the promotion process SSTE established a Promotion Support Committee in 2018 to provide structured peer mentoring to applicants in each annual promotion round. The membership of the Support Committee was deliberately constituted to reflect diversity across gender, discipline and career stage.

Each applicant is paired with two mentors from the Support Committee, with mentor–mentee matching again guided by gender balance, career stage, and relevant expertise. Applicants may also request specific mentors, either from within the Committee or from across the School.

Applications from women and gender-diverse staff, particularly early and mid-career researchers, are actively encouraged through targeted discussions with supervisors as part of the Performance and Development Planning (PDP) process. Feedback on draft promotion applications is provided by both PDP supervisors and Promotion Support Committee mentors, ensuring applicants receive constructive guidance informed by diverse perspectives.

## Barrier 2: Underrepresented student groups in the “leaky” STEM talent pipeline

To address gendered participation patterns across STEM enrolment and progression, several key initiatives (Table 5) were carried out to attract, and better support, prospective and current students.

**Table 5: Initiatives to overcome Barrier 2**

| Initiative number | Description                                                                                             |
|-------------------|---------------------------------------------------------------------------------------------------------|
| 2.1               | Attract and support underrepresented student groups from high school through alumni stages              |
| 2.2               | Empowering Future Educators: Building STEM Capability and Career Awareness in Primary School Classrooms |

### 2.1 Attract and support underrepresented student groups from high school through to alumni stages

UniSC has implemented a coordinated and research-informed suite of initiatives (Table 6) designed to both attract women and girls into STEM and support their progression across key educational transition points. These initiatives are underpinned by a strong institutional commitment to evidence-based practice and are embedded within UniSC's broader strategy to address systemic gender inequities across the STEM pipeline.

**Table 6: Initiative 2.1 research-informed initiatives**

| Initiative number | Description                                              |
|-------------------|----------------------------------------------------------|
| 2.1.1             | STEM education research informing gender equity outcomes |
| 2.1.2             | MindSET-do outreach and equity project                   |
| 2.1.3             | Outreach events delivered by the Future Students team    |
| 2.1.4             | STEM Club, Women in Engineering, Girls in ICT            |
| 2.1.5             | STEMM strolls                                            |
| 2.1.6             | Media visibility                                         |

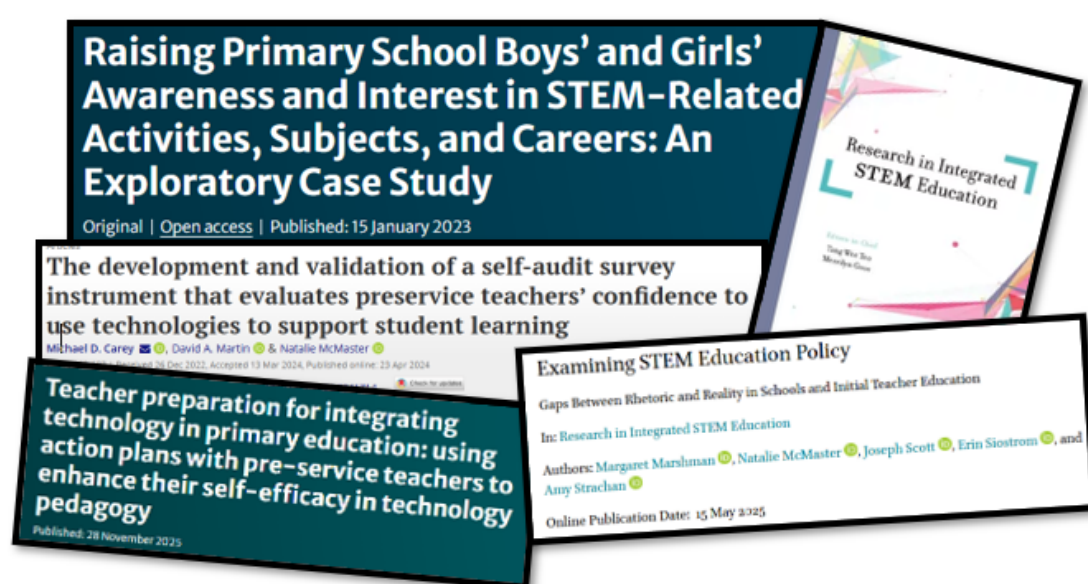
### **2.1.1 STEM education research informing gender equity outcomes**

UniSC undertakes STEM education research informing initiatives aimed at strengthening participation of women, girls in STEM pathways. The MindSET-do longitudinal study is tracking more than 1000 students from primary to secondary schooling to examine attitudes, confidence and subject selection patterns related to STEM participation, including the influence of school and home environments. The study also evaluates targeted interventions designed to address points where students may be at increased risk of disengaging from STEM learning.

Complementing this work, the research team has developed a technology self-audit tool for pre-service teachers that identifies variation in technology confidence and supports targeted professional learning to strengthen inclusive classroom practice.

Further contributing to this pipeline focus, UniSC's STEM Education research theme, led by A/Prof Margaret Marshman, examines policy, curriculum and teaching practice factors influencing STEM participation. Findings highlight the role of teacher professional learning, curriculum integration and structural supports in facilitating inclusive STEM education.

Collectively, this research informs evidence-based approaches to strengthening STEM participation across the education pipeline. Examples of international research outputs are shown in Figure 7.



**Figure 7: UniSC research outputs addressing gender equity and STEM pipeline interventions**

### 2.1.2 MindSET-do STEM Outreach Initiative

MindSET-do is a STEM outreach initiative led by the School of Education and Tertiary Access at UniSC, that commenced in 2019 as Make, Integrate & Explore (MIE Lab). The initiative supports participation in STEM education and careers, including engagement with girls and students from low socio-economic status backgrounds, regional and remote communities, and First Nations learners.

**Table 7. MindSET-do Program Streams**

| Program Stream           | Target Audience / Cohort                                                                        | Delivery                                                                                              | Activities                                                                                                                                          | Objectives / Focus                                                                                                                            |
|--------------------------|-------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Primary Program</b>   | Years 4–6 students in low SES schools                                                           | Hands-on STEM workshops delivered in primary school settings by UniSC staff and preservice teachers   | Series of STEM lessons aligned with the Australian Curriculum delivered across a week                                                               | Build STEM self-concept; Challenge gender stereotypes in STEM; Increase knowledge of STEM study pathways and careers                          |
| <b>Secondary Program</b> | Years 7–10 students in low SES schools                                                          | Hands-on STEM workshops delivered in secondary school settings by UniSC staff and preservice teachers | Series of STEM lessons aligned with the Australian Curriculum delivered across a week and/or full-day immersion experiences                         | Reinforce engagement and self-efficacy during middle school transition; Support informed subject selection for senior secondary STEM pathways |
| <b>Community Program</b> | Parents/carers, community stakeholders and teachers                                             | Hands-on STEM workshops delivered in community settings by UniSC staff and preservice teachers        | Robotics clubs; Coding clubs; School holiday programs; Homeschool programs; STEM careers workshops                                                  | Support community awareness of STEM career opportunities; Address sociocultural barriers to participation                                     |
| <b>Events Program</b>    | Students in Years 4–10, teachers, parents/carers, community stakeholders, business and industry | STEM workshops delivered at UniSC campus locations by UniSC staff and preservice teachers             | Science and Engineering Challenges; Superstars of STEM; Engineers Australia Dream Big Workshops; Maths Modelling Challenges (National Science Week) | Provide campus-based STEM engagement experiences                                                                                              |



**Figure 8. Students participating in MindSET-do outreach activities across program streams**

Participation data for the MindSET-do project (2020–2024) provides an overview of program delivery and reach across the reporting period (Figure 9), with girls and young women consistently representing a substantial proportion of participants. Although the initiative commenced in 2019, gender-disaggregated data were not systematically collected during the initial year and are therefore not included in Figures 9 and 10.

Between 2020 and 2024, available records indicate engagement with approximately 7,800 girls and young women, with broader program estimates suggesting total participation of girls and young women exceeded 8,000 across the period (Figure 9). These data provide context regarding program scale.

Participation volumes were highest within Primary programs (Years 4–6), consistent with the initiative’s early-intervention design (Figures 25). Primary and Secondary activities are primarily delivered through whole-of-class school engagement, as a result, gender representation largely reflects school cohort composition rather than individual self-selection. Secondary programs contributed sustained reach across the Years 7 to 10 of schooling.

Events and Community activities operate on a voluntary sign-up basis. Although smaller in scale than school-based delivery, these activities extend engagement beyond formal classroom contexts and provide additional pathways for participation.

Since 2019, MindSET-do has engaged 53 UniSC students as program presenters, including 35 women (66%). This contributes to gender representation within delivery teams and supports workforce capability development across Sunshine Coast and Fraser Coast communities.

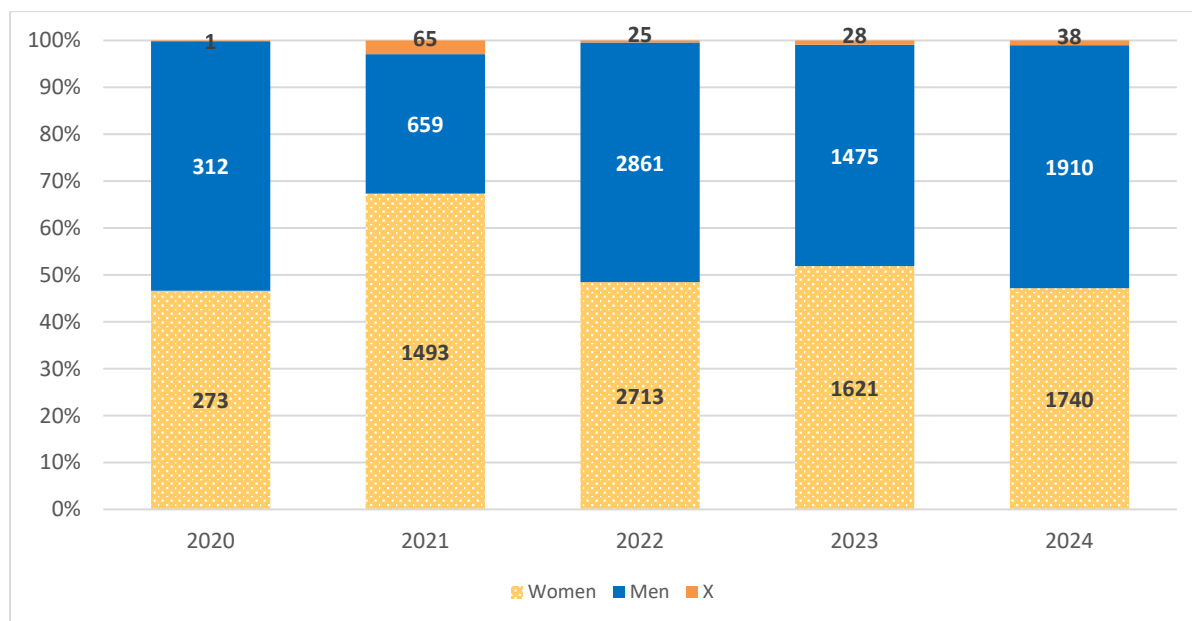


Figure 9. MindSET-do participation data by gender 2020 – 2024

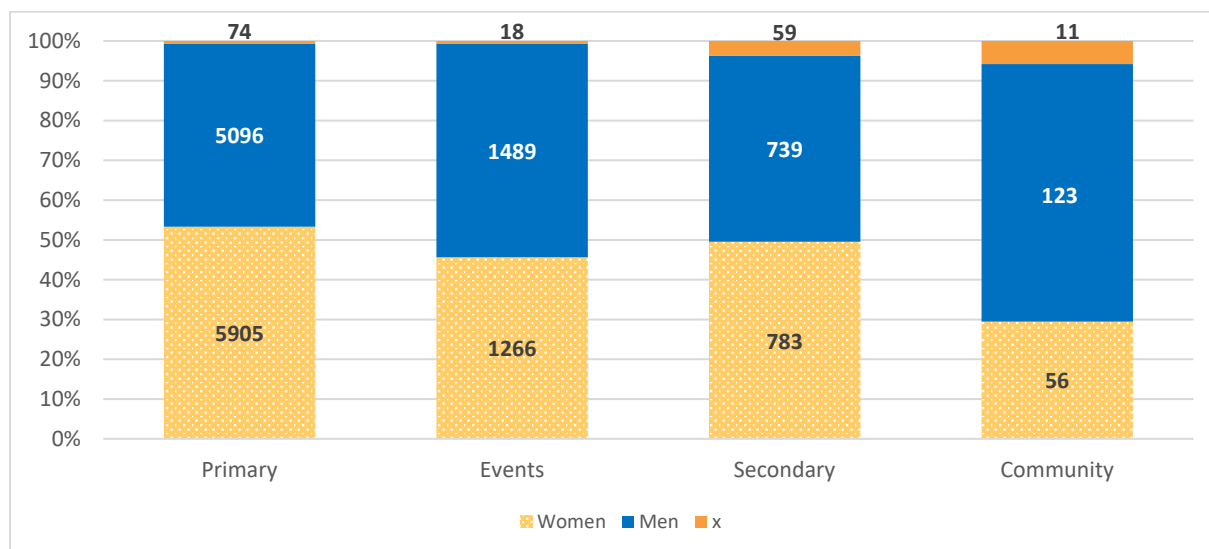


Figure 10. MindSET-do program participation data 2020 - 2024

### 2.1.3 Outreach events delivered by the Future Students team

The Future Students outreach program delivers a coordinated suite of equity-focused outreach activities designed to build aspiration, awareness, and confidence in relation to tertiary study pathways.

**Table 8. Future Students Outreach Programs**

| Program        | Target Audience                                                                            | Delivery                                                                                        | Activities                                                       | Objectives                                                                      |
|----------------|--------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|------------------------------------------------------------------|---------------------------------------------------------------------------------|
| <b>Explore</b> | Students in Years 4–6 from low SES, regional or remote, and/or Indigenous backgrounds      | Career-themed activities delivered into primary schools by UniSC staff and community volunteers | Career identification art and writing competition; Careers expo  | Increase awareness of student skills and interests and introduce career options |
| <b>Emerge</b>  | Students in Years 7–12 from low SES, regional or remote, and/or Indigenous backgrounds     | Suite of scaffolded lessons delivered by UniSC staff and collaborators                          | Career-based outreach; STEM career engagement; QTAC fee vouchers | Support career identification and student development planning                  |
| <b>Equip</b>   | Prospective adult learners from low SES, regional or remote, and/or Indigenous backgrounds | Short workshops, one-on-one consultations and financial support delivered by UniSC staff        | Coaching consultations; Transition workshops; QTAC fee vouchers  | Provide information and support for tertiary study pathways                     |

Between 2023 and 2024, Future Students engaged approximately 22,200 students (non-distinct), across 273 Queensland schools in collaboration with industry partners, community groups and other tertiary education institutions

### 2.1.4 Women in Headstart

UniSC provides opportunities for high school students to undertake extension studies beyond their school curriculum through the Headstart program. Designed for motivated students in Years 10–12, the program offers exposure to university-level learning, enabling participants to develop advanced academic skills, gain credit towards a UniSC degree, and experience university study while completing secondary education.

Over the past five years, girls from 141 secondary schools have enrolled in 40 STEM-related Headstart courses, demonstrating broad regional reach and sustained engagement in STEM pathways. Participation by girls in STEM-related Headstart courses has increased steadily, with enrolments rising from 88 in 2021 to 217 in 2025, reaching a total of 735 enrolments across the five-year period.

**Table 9. Women enrolments, science-related Headstart courses**

| Year              | 2021 | 2022 | 2023 | 2024 | 2025 |
|-------------------|------|------|------|------|------|
| <b>Enrolments</b> | 88   | 94   | 148  | 188  | 217  |

### 2.1.5 STEM Club, Women in Engineering Student Club, Girls in ICT Day

UniSC supports student connection, leadership, and progression through a range of student-led and partnership-based initiatives designed to strengthen engagement in STEM.

**Table 10. Student support initiatives**

| Program                                                            | Target Audience                    | Delivery                                                   | Activities                                                                         | Objectives                                               | Participation                                                                                                                                                               |
|--------------------------------------------------------------------|------------------------------------|------------------------------------------------------------|------------------------------------------------------------------------------------|----------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>STEM Club</b>                                                   | Undergraduate STEM students        | Student-led club operating across UniSC campuses           | Networking events; Student engagement activities; Leadership opportunities         | Support student connection and leadership                | Women represent 23 of 55 members                                                                                                                                            |
| <b>Women in Engineering Student Club</b>                           | Undergraduate engineering students | Student-led club established 2021                          | Career breakfast panels; Networking events; Collaboration with Engineers Australia | Provide networking and industry engagement opportunities | Approximately 50 members involved (2021-2025)                                                                                                                               |
| <b>Girls in Information and Communication Technology (ICT) Day</b> | Years 9–11 students and teachers   | Annual event delivered from 2024 in partnership with Cisco | Industry speakers; IoT, robotics and ethics workshops; Campus tours; Networking    | Encourage participation in technology and STEM pathways  | Participation increased from 1 school (2024) to 3 schools (2025); Two participants progressed to post-school STEM/technology study; Outreach extension engaged ~50 students |

Girls in ICT Day outreach activities supported participation by girls across secondary schools and facilitated engagement between students, UniSC staff and industry partners. In 2024, the activity involved 10 girls from Wavell State High School, supported by UniSC staff and industry partners including Cisco and Splunk. In 2025, participation expanded to 32 girls across Wavell State High School, Mt Maria Petrie and Grace Lutheran College, with increased involvement from UniSC staff and a broader range of industry partners, including Cisco, Truis, Dell, Splunk and Rivernet Communications.



Figure 11. Bend and Snap the Industry's LinkedIn Post from Girls in ICT Day 2025.

### 2.1.6 STEMM Strolls

In 2024 and 2025, UniSC partnered with Inspiring Australia (Queensland) and Women in STEMM Australia to deliver two STEMM Stroll<sup>1</sup> networking events. These low-barrier activities combined guided walks with informal networking and were designed to support cross career stage connection between students, academics and external STEMM professionals.

The 2024 STEMM Stroll attracted 20 attendees. Participants represented Science, Engineering and Technology, with science the most identified discipline, followed by engineering. Attendees were from UniSC, Queensland Government (environment and agriculture portfolios), industry and infrastructure organisations, environmental and landcare organisations, STEMM engagement bodies, self-employment, and the student cohort.

The 2025 STEMM Stroll attracted 15 attendees, with strong cross-sector participation. Participants identified across Science, Engineering, Technology, Mathematics and STEM Education. Attendees were from UniSC; Queensland Government agencies (including environment, science and primary industries); national STEMM engagement organisations; medical research institutes; self-employed professionals; and students.

<sup>1</sup> STEMM refers to science, technology, engineering, mathematics and medicine



**Figure 12. Sunshine Coast, STEMM Stroll 2024**



**Figure 13. Sunshine Coast, STEMM Stroll 2025**

### **2.1.7 Media Visibility**

Media visibility strategies have been deployed to challenge stereotypes and support STEM identity formation, including social media sites, a series of videos and posters featuring local role models available on the MindSET-do website, keynote addresses, open day panels, and online content showcasing diverse STEM role models.

From 2019-2025 UniSC has invested \$2,988,473.83 in serving ads to women on Google (note, Google Ads demographic data is inclusive of all disciplines/programs) From Nov 2023 – Dec 2025 UniSC has invested \$734,824.59 in serving ads to women on Meta This has resulted in 76,680,187 Impressions and 2,364,358 clicks. Meta ad channels and placements including Facebook, Instagram, Messenger and other Meta networks.

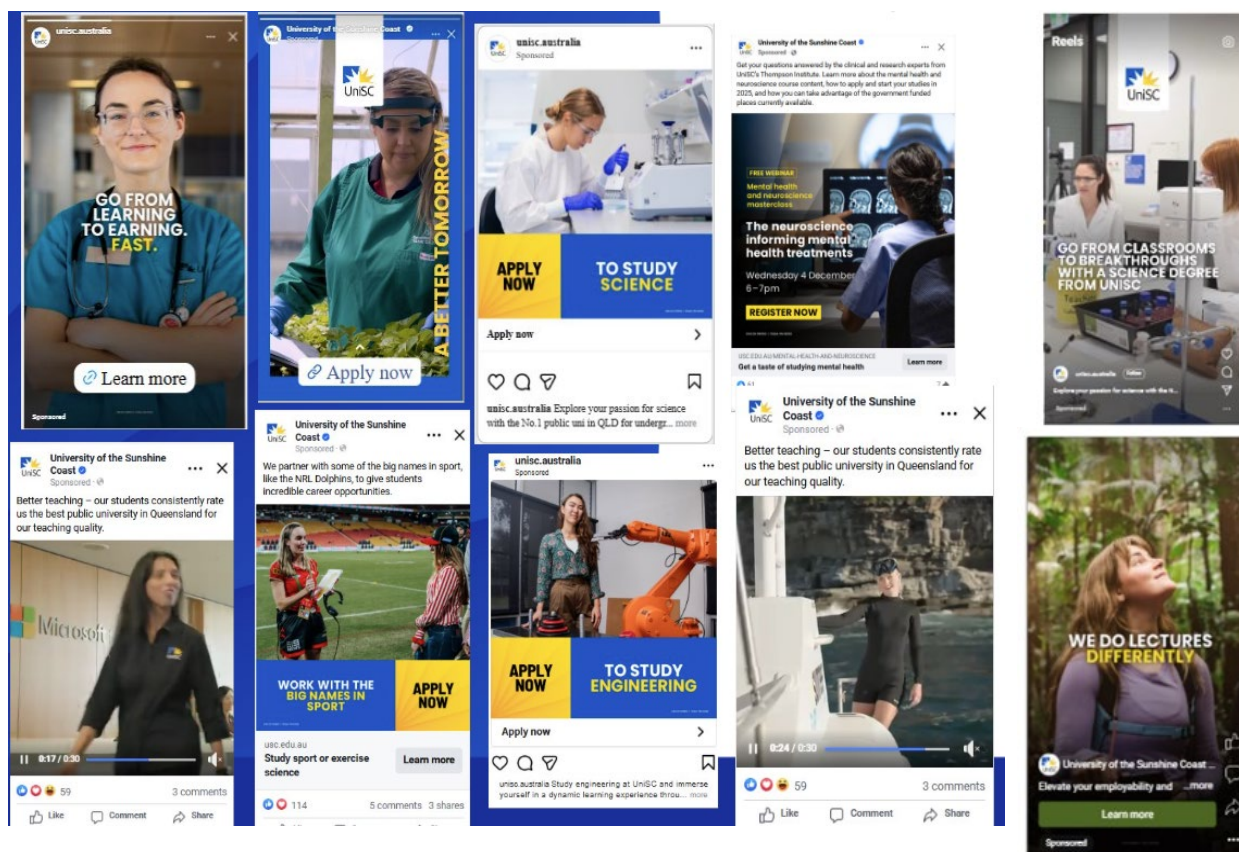


Figure 14. Example of Meta advertising channels and placements used to target women in STEM across Facebook, Instagram, Messenger, and other Meta networks

As part of Open Day promotions and the University's broader student recruitment activities, large-format bus and billboard advertising was deployed across the Sunshine Coast region throughout the reporting period, featuring women prominently within SSTE disciplines. Campaign imagery included women depicted in engineering, laboratory and environmental science field settings, positioning women as active participants within STEM disciplines. These visuals were placed in high-traffic public advertising locations, extending visibility beyond campus and into the broader community.



Figure 15. Examples of large-format Open Day and student recruitment advertising featuring women in SSTE disciplines

UniSC research led by women has drawn international media attention across conservation, climate and animal behaviour. During the Australian 2019–20 bushfires, woman academic in SSTE led the use of detection dogs to locate unwell or injured koalas in burned habitats, drawing global praise and recognition from celebrities such as Tom Hanks and Leonardo Di Caprio, who amplified the team’s work, helping to indirectly lead to offers for documentaries, book deals and films, ultimately culminating in the production of Foxtel’s documentary, *Bear: Koala Hero*.

Online, nine of the top 20 articles for traffic to the website from 2019-2025 were written or led by women-in-SSTE, including the top-performing article, an informational-piece dispelling myths about white-tail spiders, written by PhD candidate.

Using the same metric of web traffic, the combined number of page views for the top 20 performing articles during that same period reached 176,700 of those, 98,100 were articles written by or featuring women-led research.

## **2.2 Empowering Future Educators: Building STEM Capability and Career Awareness in Primary School Classrooms**

In 2025, the School of Education and Tertiary Access introduced a STEM specialisation within the Bachelor of Primary Education to strengthen early STEM pipeline participation and address gender disparities in STEM engagement. The specialisation provides preservice teachers with a dedicated pathway focused on integrated STEM curriculum, pedagogical content knowledge, culturally responsive practice, and STEM assessment, with the aim of preparing graduates to champion STEM teaching and career awareness from the primary years.

The specialisation builds on foundational curriculum studies in Science, Mathematics and Technologies through two targeted components. Students complete Designing STEM Learning, which develops capability to design and deliver inquiry-based, authentic STEM learning experiences. Students also complete an SSTE elective (Figure 16), enabling deeper disciplinary knowledge and interdisciplinary engagement with science, engineering and technology fields.

By equipping a predominantly women preservice teacher cohort with the confidence, disciplinary knowledge and pedagogical skills to lead integrated STEM learning, the specialisation supports teacher capability to deliver inclusive STEM education and embed career awareness in primary classrooms. Strengthening teacher confidence and representation is recognised as an important contributor to shaping positive STEM identities, particularly for girls.

| Course                                                           | Semester of offer                                                                                                                                             | Units | Requisites                                                                                                                                                     |
|------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <a href="#">ENG100</a> Materials in Engineering                  | <b>Sunshine Coast:</b> Trimester 1<br><b>Moreton Bay:</b> Trimester 1                                                                                         | 12    |                                                                                                                                                                |
| <a href="#">ENS103</a> Earth's Surface Processes                 | <b>Sunshine Coast:</b> Trimester 1<br><b>Moreton Bay:</b> Trimester 1                                                                                         | 12    |                                                                                                                                                                |
| <a href="#">ICT112</a> Programming Fundamentals                  | <b>Sunshine Coast:</b> Trimester 1<br><b>Moreton Bay:</b> Trimester 1<br><b>Online:</b> Trimester 1<br><b>Adelaide:</b> Trimester 1, Trimester 2, Trimester 3 | 12    | <b>Anti:</b> SGD203                                                                                                                                            |
| <a href="#">MTH103</a> Introduction to Applied Mathematics       | <b>Sunshine Coast:</b> Trimester 1<br><b>Moreton Bay:</b> Trimester 1                                                                                         | 12    | <b>Anti:</b> MTH102                                                                                                                                            |
| <a href="#">SCI100</a> Cell Diversity                            | <b>Sunshine Coast:</b> Trimester 1<br><b>Moreton Bay:</b> Trimester 1<br><b>Fraser Coast:</b> Trimester 1                                                     | 12    |                                                                                                                                                                |
| <a href="#">SCI105</a> Introductory Chemistry                    | <b>Sunshine Coast:</b> Trimester 1, Trimester 2<br><b>Moreton Bay:</b> Trimester 1, Trimester 2                                                               | 12    | <b>Anti:</b> SCI505                                                                                                                                            |
| <a href="#">SCI107</a> Physics                                   | <b>Sunshine Coast:</b> Trimester 1<br><b>Moreton Bay:</b> Trimester 1                                                                                         | 12    | <b>Anti:</b> SCI108 or SCI507                                                                                                                                  |
| <a href="#">ANM102</a> Endangered Animals and their Conservation | <b>Sunshine Coast:</b> Trimester 1<br><b>Moreton Bay:</b> Trimester 1<br><b>Fraser Coast:</b> Trimester 1                                                     | 12    | <b>Pre:</b> Enrolled in Program <a href="#">SC012</a> , <a href="#">SCI07</a> , <a href="#">ED112</a> , <a href="#">ED304</a> , SB303 or <a href="#">SC320</a> |

**Figure 16. STEM specialisation electives from SSTE in the Bachelor of Primary Education**

# OUTCOMES

## Barrier 1: Low representation of women among academic staff

### Workforce composition

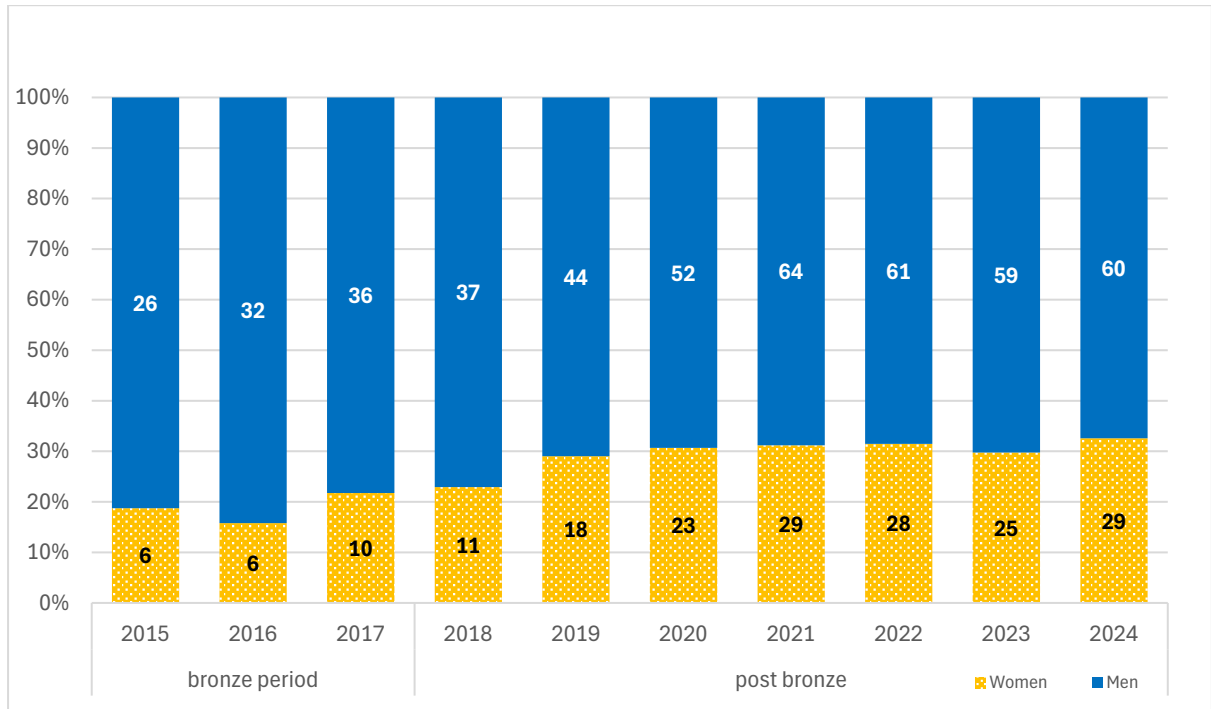
Since the end of the Bronze reference period, SSTE has experienced a sustained increase in the representation of women within non-sessional academic roles. The proportion of women among continuing and fixed-term academic staff increased from 21% in 2017 to 32% in 2024 (Figure 17). Over the same period the proportion of women among sessional (casual) staff, declined from 44% in 2017 to 33% in 2025 (Figure 18).

While the increase in women in ongoing and fixed-term roles represents a positive shift, analysis of overall workforce composition indicates that the total proportion of women in the School has declined slightly over time, from 36–37% in 2015–2016 to 31–33% in 2023–2024. While women remain underrepresented overall, this represents a material shift in workforce composition over the post-Bronze period.

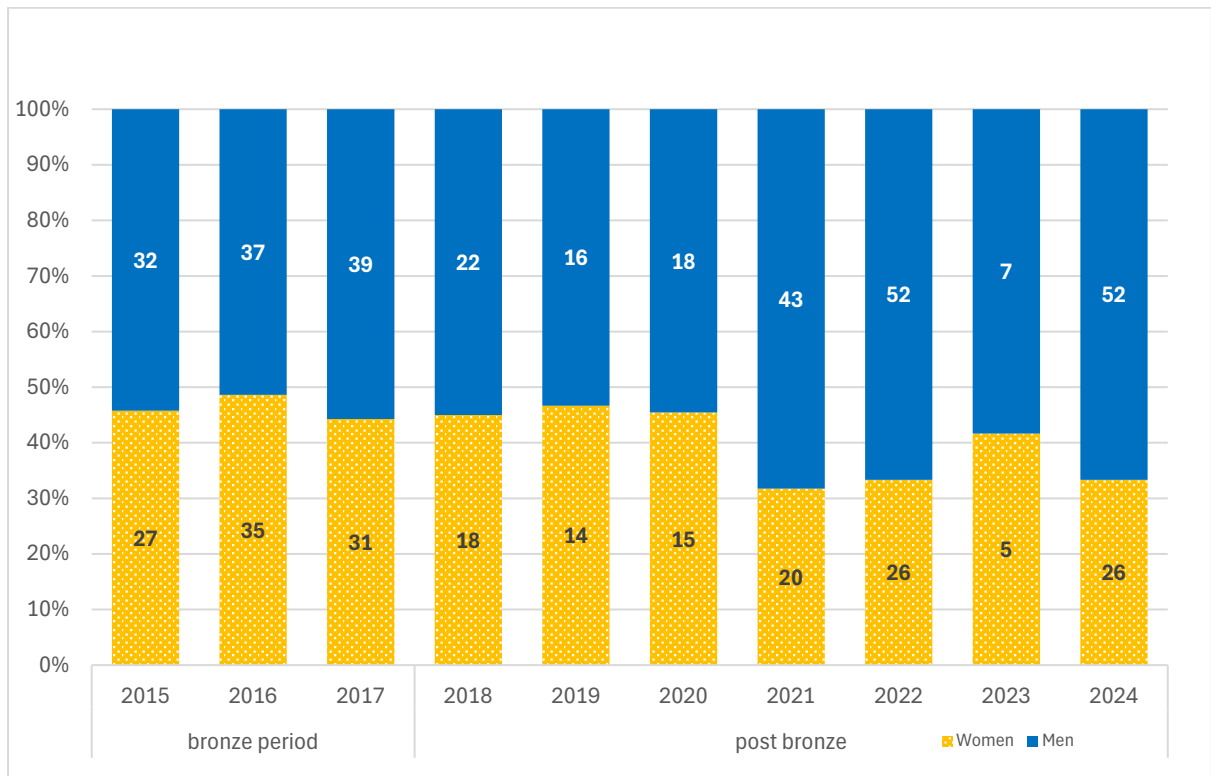
The marked reduction in casual staff in 2023 is also noted, with casuals (across all genders) comprising only 13% of the academic workforce in SSTE that year. This decline may partly reflect broader sector-wide responses to the Fair Work Amendment Act 2021, which clarified the definition of casual employment and strengthened obligations regarding casual conversion. These changes prompted organisations to review workforce composition and may have contributed to reduction in casual employment and/or the reclassification of some roles in this transition period.

Women have historically been more highly represented in sessional (casual) academic roles, and the proportion of casual staff within the School has decreased over the period (from 65% in 2015 to 47% in 2024). As a result, reductions in casual employment may have had a disproportionate impact on women's overall representation, representing a potential unintended consequence of decasualisation.

Further analysis of appointment and progression pathways will be undertaken to determine whether transitions are occurring between sessional and more secure academic roles, and whether these are operating equitably for women, including in terms of work preference. (Further Action 1.)



**Figure 17. School of Science, Technology and Engineering (SSTE) Academic (fixed and ongoing) Staff, excluding Sessional Staff, 2015-2024**



**Figure 18. School of Science, Technology and Engineering (SSTE) Sessional (casual) Staff, 2015-2024**

## Representation across academic levels and disciplines

When examining representation within Academic Levels A – E, the number of women has increased in the last decade for Levels B to E, which represents positive progress against Barrier 1 (Figure 19). Reassuringly, the total percentage of women in Levels A & B within SSTE has now increased to 50% and above (Figure 20).

However, while Level D has seen an increase in the representation of women from 2015 to 2024, overall representation remains lower (<50%) across levels C to E, demonstrating that there are further opportunities for improved representation in these senior levels. (Further Action.2) When breaking this down further by discipline, Engineering currently has 50% representation at Level E (Figure 22), although this only translates to one academic staff member in real terms (Figure 21). Importantly, current women-only recruitment strategies are in place to redress under-representation in this area, that will be reflected in 2025 and 2026 data.

Within Technology, Levels A to C have greater than or equal to 50% representation, with 100% women academic staff in Level D (Figure 19), although again this is only one staff member in real terms (Figure 21). For Science, the number of women academics has increased throughout the last decade in all academic levels (Figure 19), however only Levels A & B have representation higher than parity (Figure 22).

Overall Counts by Gender and Level (A–E), 2015–2025

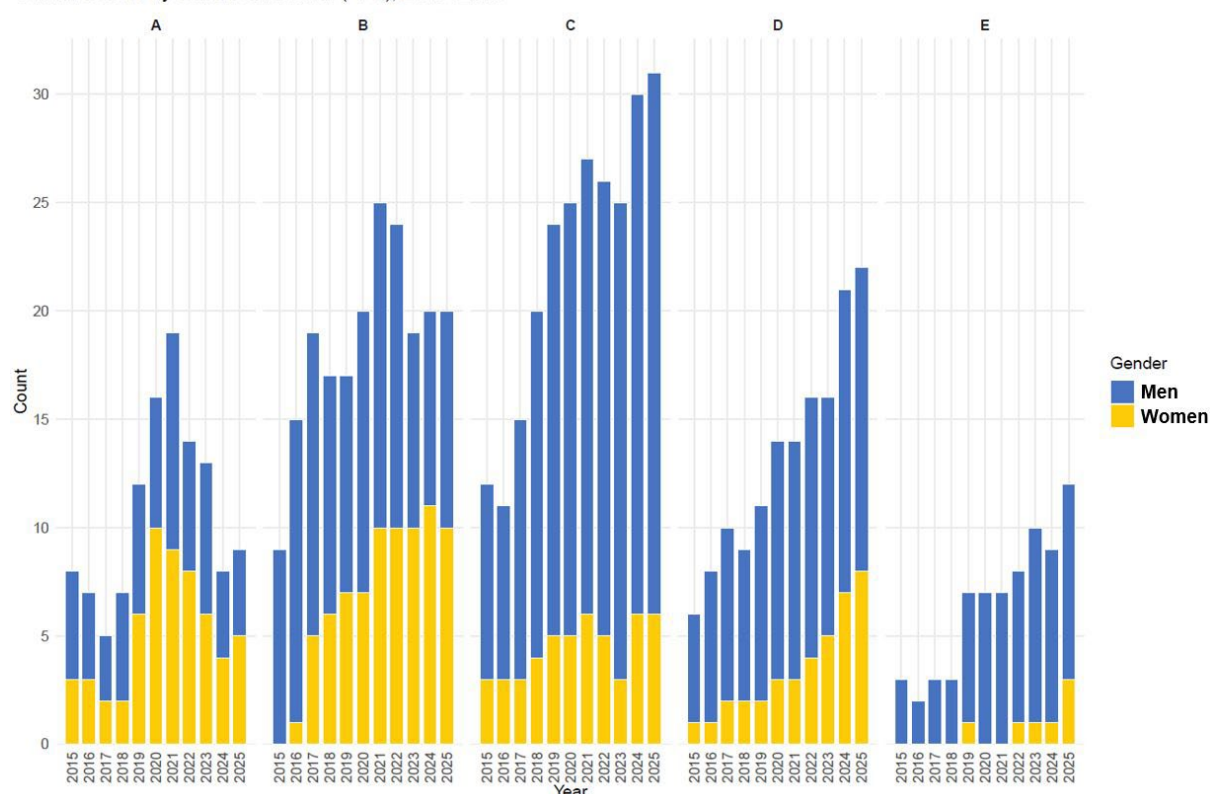


Figure 19. Academic Staff Numbers from 2015 to 2015 in each academic level (A – E).

Gender Composition (%) by Level (A–E), 2015–2025

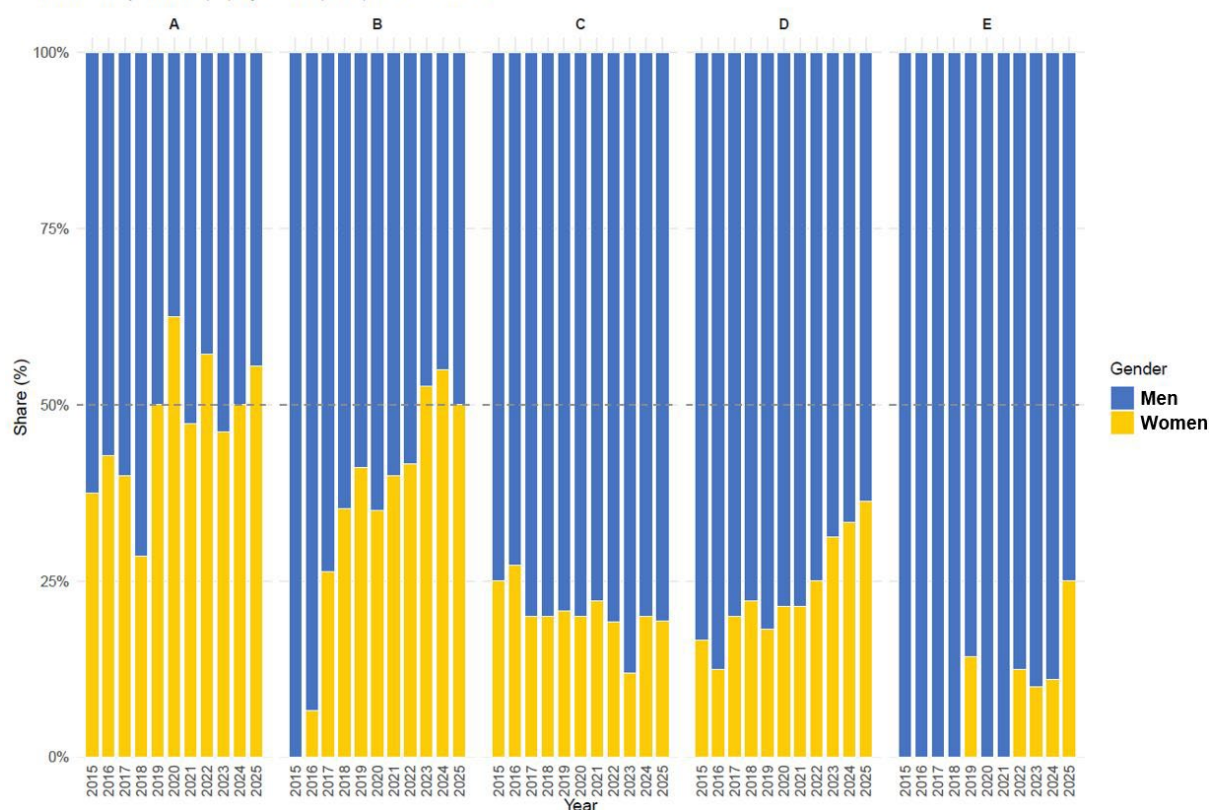


Figure 20. Percentage of women and men academic staff in SSTE from 2015 to 2025 in each academic level (A – E).

Counts by Gender across Levels (A–E) and Disciplines, 2015–2025

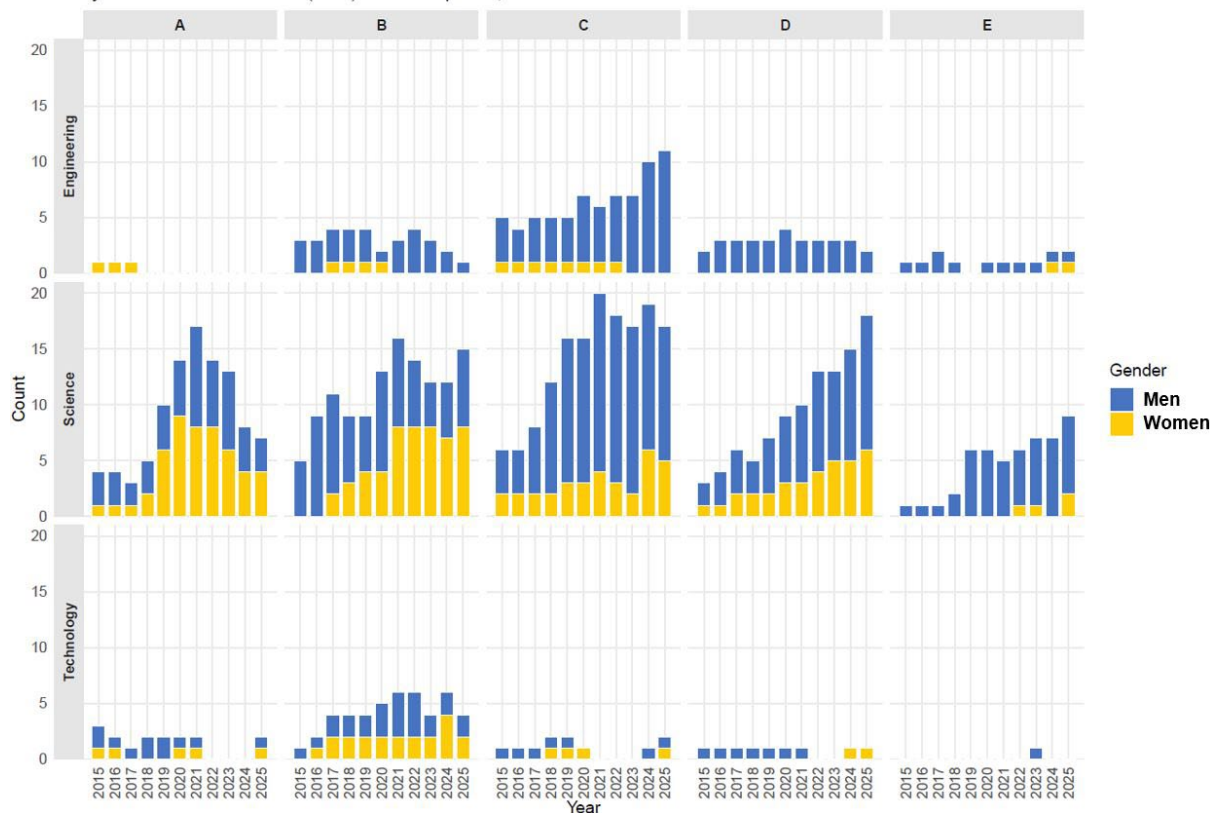


Figure 21. Academic Staff Numbers from 2015 to 2025 within each discipline and academic level (A – E).

Gender Composition (%) by Level and Discipline, 2015–2025



Figure 22. Percentage of women and men academic staff from 2015 to 2015 within each discipline and academic level (A – E).

## Promotion outcomes

Across 2018–2024, women participated actively in promotion across UniSC, though with year-to-year variability in both application and success rates. Participation was particularly strong in the School of Science, Technology and Engineering (SSTE), where women often applied at higher rates than men. In SSTE, women’s application rates ranged between 4% and 21%, often exceeding men’s (6–16%), with the most sustained participation of any School (Table 11). SSTE’s active Promotion Support Committee likely boosted women’s higher application rates, yet both genders experienced fluctuating success, suggesting discipline-specific variability.

The increase in numbers of women at Level A from 2018 to 2020, followed by a decrease from 2021 to 2025 is partly explained by increase in women promoted to Level B positions, which saw an increase and then plateau from 2021 – 2025, however this cannot be completely validated with current data availability. Of significance within SSTE is that promotion rates, since 2019 women promotion rates have exceeded men, and doubling men’s since 2023. This will continue to be monitored in future rounds closely, as promotions contribute to closing the representation gap in SSTE.

**Table 11. Academic Promotion rates**

|      |       | Applications - 2018-2024 |     |     |       | Successful 2018-2024 |     |     |       | Success rate |     | Ongoing & fixed term academic staff |     |     |       | Application rate |     | Promotion rate |     |
|------|-------|--------------------------|-----|-----|-------|----------------------|-----|-----|-------|--------------|-----|-------------------------------------|-----|-----|-------|------------------|-----|----------------|-----|
|      |       | W                        | W%  | Men | Total | W                    | W%  | Men | Total | W%           | M%  | W                                   | W%  | Men | Total | W%               | M%  | W%             | M%  |
| 2018 | UniSC | 17                       | 45% | 21  | 38    | 9                    | 41% | 13  | 22    | 53%          | 62% | 246                                 | 54% | 210 | 456   | 7%               | 10% | 4%             | 6%  |
|      | SSTE  | 2                        | 29% | 5   | 7     | 1                    | 20% | 4   | 5     | 50%          | 80% | 11                                  | 23% | 37  | 48    | 18%              | 14% | 9%             | 11% |
| 2019 | UniSC | 25                       | 61% | 15  | 41    | 18                   | 67% | 9   | 27    | 72%          | 60% | 237                                 | 52% | 217 | 454   | 11%              | 7%  | 8%             | 4%  |
|      | SSTE  | 2                        | 22% | 7   | 9     | 2                    | 29% | 5   | 7     | 100%         | 71% | 18                                  | 29% | 44  | 62    | 11%              | 16% | 11%            | 11% |
| 2020 | UniSC | 26                       | 68% | 12  | 38    | 13                   | 76% | 4   | 17    | 50%          | 33% | 268                                 | 54% | 230 | 498   | 10%              | 5%  | 5%             | 2%  |
|      | SSTE  | 3                        | 50% | 3   | 6     | 2                    | 50% | 2   | 4     | 67%          | 67% | 23                                  | 31% | 52  | 75    | 13%              | 6%  | 9%             | 4%  |
| 2021 | UniSC | 12                       | 46% | 14  | 26    | 9                    | 53% | 8   | 17    | 75%          | 57% | 259                                 | 54% | 225 | 484   | 5%               | 6%  | 3%             | 4%  |
|      | SSTE  | 5                        | 42% | 7   | 12    | 3                    | 38% | 5   | 8     | 60%          | 71% | 29                                  | 31% | 64  | 93    | 17%              | 11% | 10%            | 8%  |
| 2022 | UniSC | 17                       | 49% | 18  | 35    | 10                   | 50% | 10  | 20    | 59%          | 56% | 273                                 | 56% | 213 | 486   | 6%               | 8%  | 4%             | 5%  |
|      | SSTE  | 1                        | 20% | 4   | 5     | 1                    | 50% | 1   | 2     | 100%         | 25% | 28                                  | 31% | 61  | 89    | 4%               | 7%  | 4%             | 2%  |
| 2023 | UniSC | 25                       | 51% | 24  | 49    | 17                   | 49% | 18  | 35    | 68%          | 75% | 282                                 | 57% | 209 | 491   | 9%               | 11% | 6%             | 9%  |
|      | SSTE  | 5                        | 38% | 8   | 13    | 5                    | 45% | 6   | 11    | 100%         | 75% | 25                                  | 30% | 59  | 84    | 20%              | 14% | 20%            | 10% |
| 2024 | UniSC | 39                       | 68% | 17  | 57    | 33                   | 73% | 11  | 45    | 85%          | 65% | 311                                 | 60% | 205 | 516   | 13%              | 8%  | 11%            | 5%  |
|      | SSTE  | 6                        | 40% | 9   | 15    | 4                    | 50% | 4   | 8     | 67%          | 44% | 29                                  | 33% | 60  | 89    | 21%              | 15% | 14%            | 7%  |

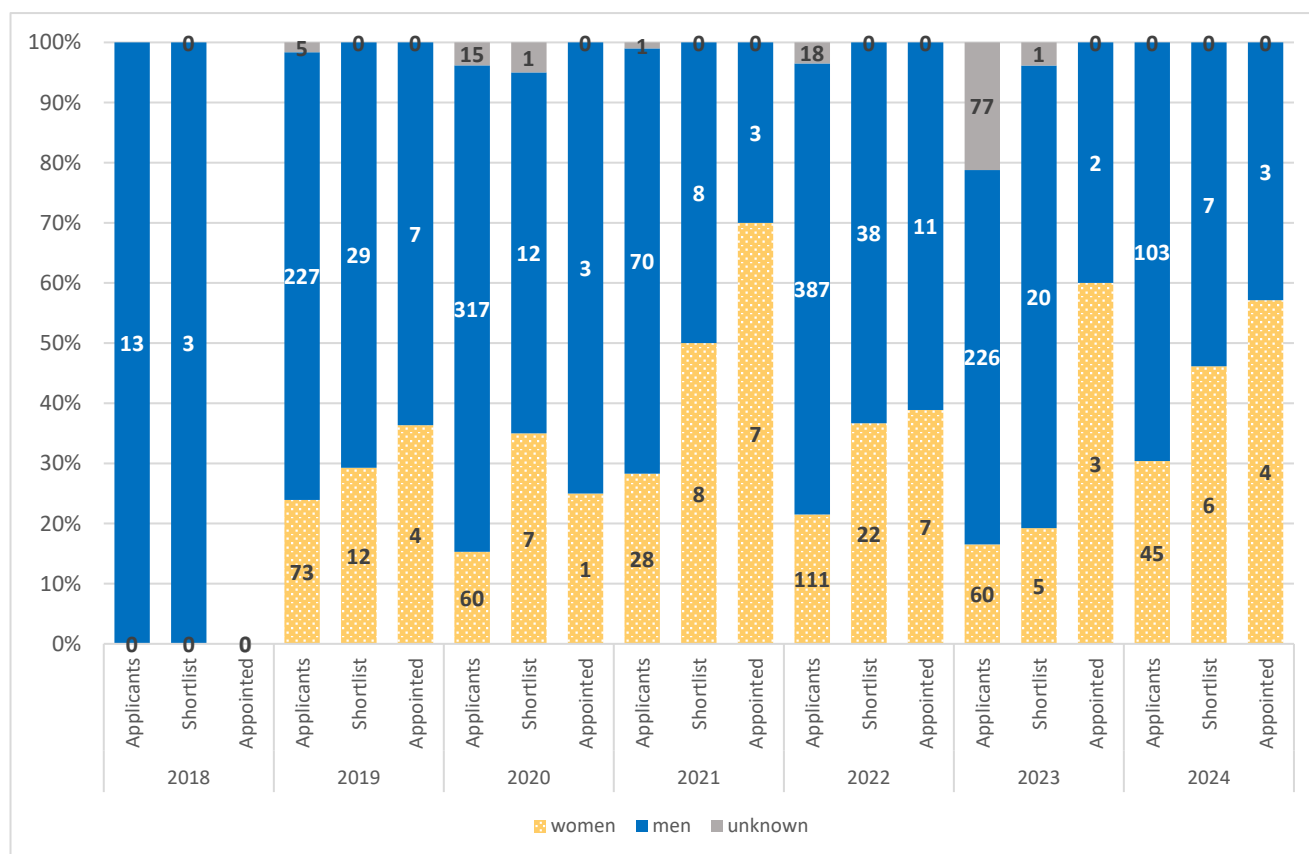
**Success rate:** number successful/number of applications, **Application rate:** number of applications/number of eligible staff, **Promotion rate:** number successful/number of eligible staff

## Recruitment outcomes

Between 2018 and 2024, men comprised the majority of applicants, however, gender differences were less pronounced at the shortlisting and appointment stages than at application (Figure 23). From 2018 to 2020, women represented a smaller share of applicants, and their representation among shortlisted candidates and appointments remained broadly proportional to their share of the applicant pool.

In 2021, following the incorporation of Information Communication and Technology (ICT) disciplines into the School, both overall applicant volumes and the proportion of women applicants increased, however, it is not possible to determine from aggregate data the extent to which this change reflects disciplinary composition rather than recruitment practices.

Inclusive recruitment approaches and a targeted School-wide recruitment round were introduced progressively from 2022. In the subsequent period (2023–2024), women’s representation among shortlisted candidates and appointments remained broadly aligned with, and in some instances slightly higher than, their share of applicants. Overall, movement from application to appointment appears largely reflective of application composition rather than indicating systematic gender disparity at later selection stages. Future analysis will disaggregate outcomes by discipline to better understand the influence of disciplinary mix on applicant composition and appointment outcomes (Future Action 3).



**Figure 23. School of Science, Technology and Engineering (SSTE) recruitment, 2018-2024**

Targeted women-only recruitment within Engineering in 2025 represents a significant early intervention in a discipline where underrepresentation has been most persistent. As these recruitment outcomes fall outside the timeframe captured in Figures 16-19 (which report data to 2024), their impact is not yet reflected in the workforce composition, academic level or discipline-level data presented in this section.

The targeted campaigns attracted strong applicant interest, with 114 completed applications received across the three advertised women-only engineering roles (Table 12). Across the recruitment lifecycle, 12 candidates progressed to first-round interview, and three offers were made and accepted, resulting in successful appointments for each role.

A woman Associate Professor of Mechanical Engineering commenced at UniSC in July 2025, with women appointed to Senior Lecturer (Civil Engineering) and Lecturer (Renewable Energy Engineering) roles scheduled to commence in 2026. These appointments will increase the number of women in Engineering to four in 2026.

**Table 12. Women only targeted recruitment outcomes**

| Recruitment campaign                                                       | Applications | Shortlisted<br>(Round 1<br>interview) | Shortlisted<br>(Round 2<br>interview) | Offer<br>accepted | Advertising period   |
|----------------------------------------------------------------------------|--------------|---------------------------------------|---------------------------------------|-------------------|----------------------|
| Associate Professor,<br>Mechanical<br>Engineering<br>(women-only targeted) | 24           | 5                                     | 2                                     | 1                 | 21 Feb - 23 Mar 2025 |
| Senior Lecturer, Civil<br>Engineering<br>(women-only targeted)             | 40           | 4                                     | n/a                                   | 1                 | 30 Jul - 7 Sep 2025  |
| Lecturer, Renewable<br>Energy Engineering<br>(women-only targeted)         | 50           | 3                                     | n/a                                   | 1                 | 30 Jul - 7 Sep 2025  |

The recruitment and promotion outcomes suggest that while attracting women applicants remains an ongoing challenge in some disciplines, processes supporting progression and appointment have strengthened, contributing to improved workforce outcomes over time.

## Barrier 2: Underrepresented student groups in the “leaky” STEM talent pipeline

Participation data for SSTE programs between 2018 and 2024 (Figure 24) indicate that women’s proportional enrolment has remained relatively stable over time, with moderate improvement observed between 2018 and 2022 (35% to 41%). Following 2022, women’s proportional representation declined, returning to levels closer to those observed earlier in the reporting period.

Despite proportional variation, the number of women enrolled increased across the period, rising from 671 enrolments in 2018 to 841 in 2024, reflecting expansion in overall enrolments. Participation by students identifying as gender diverse (X) remained low, accounting for less than 1% of enrolments, with small increases evident from 2019 onwards.

Overall, despite some fluctuation, women remain underrepresented in SSTE undergraduate programs. This limits the available pool of women progressing through the STEM pipeline and constrains the potential to achieve gender balance at later stages, including HDR, and academic careers.

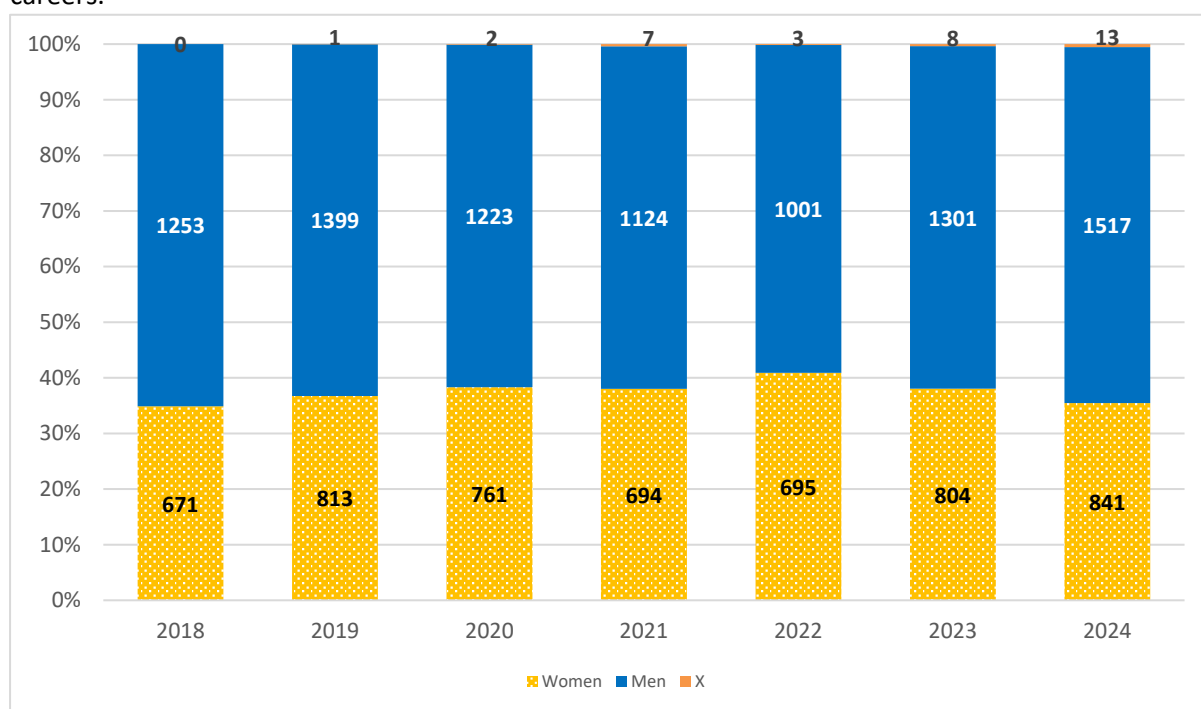


Figure 24. Number and proportion of students enrolled in SSTE programs by gender 2018 - 2024

### 2.1.1 SSTE undergraduate completions and attrition

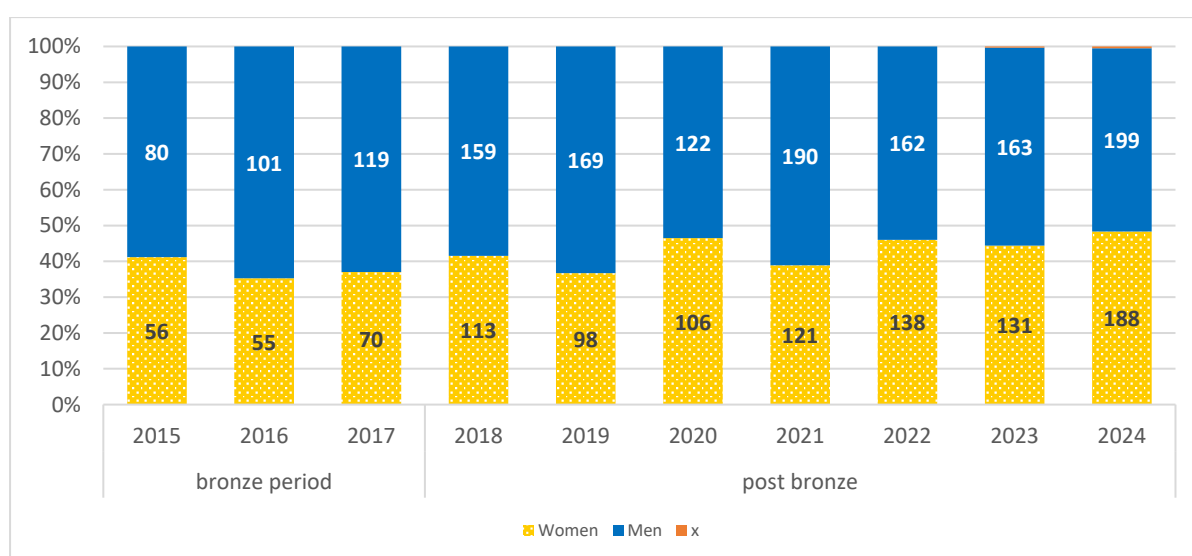
Compared to the Bronze period, undergraduate outcomes for women in SSTE have strengthened, with increases observed in both absolute completion numbers and proportional representation (Figure 25). While women comprised approximately 35–37% of completions during the Bronze period, this increased to approximately 37–49% in the post-Bronze period.

Women’s representation among completions is consistent with, or higher than, their participation rates (35–41% of enrolments, Figure 25), suggesting that women are completing at least in proportion to their enrolment.

Across the reported four-year completion periods, women's completion rates were higher than men's in each period. Women's four-year completion rates were 25.4% in 2019–2022, 22.4% in 2020–2023, and 32.8% in 2021–2024, compared with 20.4%, 18.3%, and 22.9% respectively for men (Table 13). While variation across periods is evident, the pattern consistently indicates stronger completion outcomes for women.

Attrition rates for women and men were broadly comparable and declined over time (Figure 26). Between 2020 and 2024, attrition decreased from 19.6% to 15.0% for women and from 22.0% to 18.2% for men, with no consistent gender disparity observed.

Taken together, these outcomes indicate that women who enrol in SSTE undergraduate programs complete at rates at least comparable to, and in recent cohorts higher than, men. This suggests that gender imbalance observed at later stages of the pipeline is unlikely to be primarily explained by differential completion or attrition during undergraduate study.

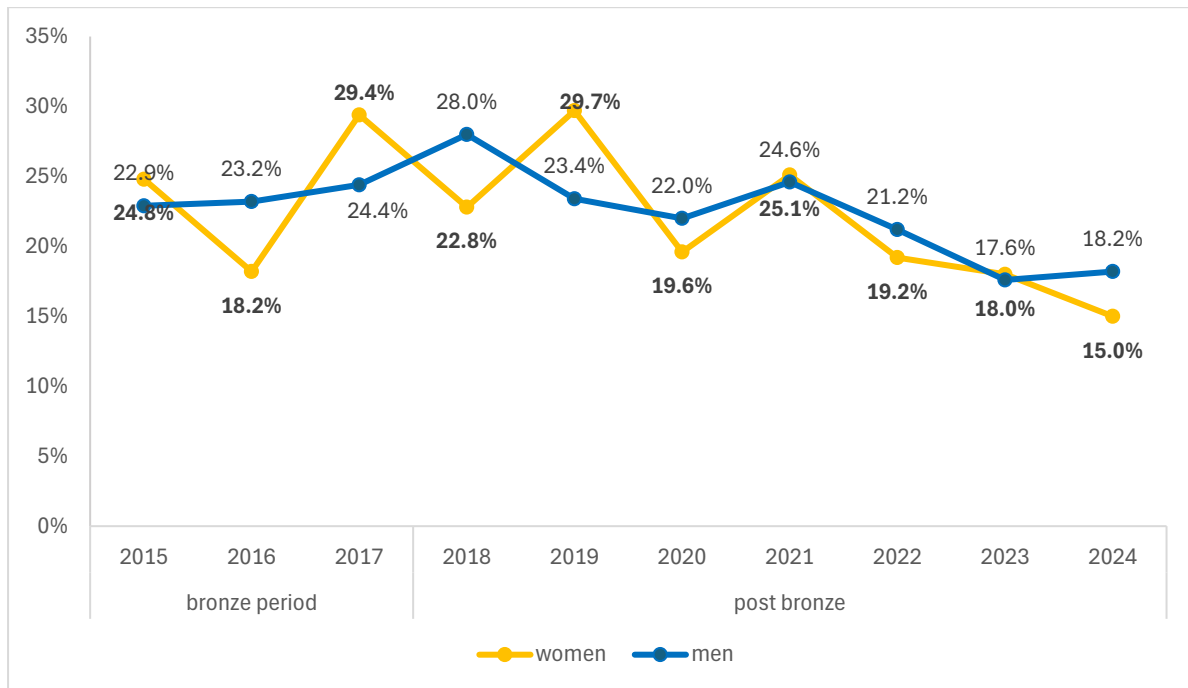


**Figure 25. SSTE, Undergraduate Completions (2015-2024)**

**Table 13. SSTE, Undergraduate Completion Rates – 4 Years<sup>2</sup>**

|       | 2019-2022 | 2020-2023 | 2021-2024 |
|-------|-----------|-----------|-----------|
| Women | 25.4%     | 22.4%     | 32.8%     |
| Men   | 20.4%     | 18.3%     | 22.9%     |

<sup>2</sup> Completion Rate = number of students who completed an undergraduate bachelor award degree course at UniSC within 4 years (during x-y year) / number of commencing undergraduate bachelor award cohort students (in year x).



**Figure 26, SSTE, Undergraduate Attrition Rates (2015-2024)**

### **2.1.2 SSTE HDR completions**

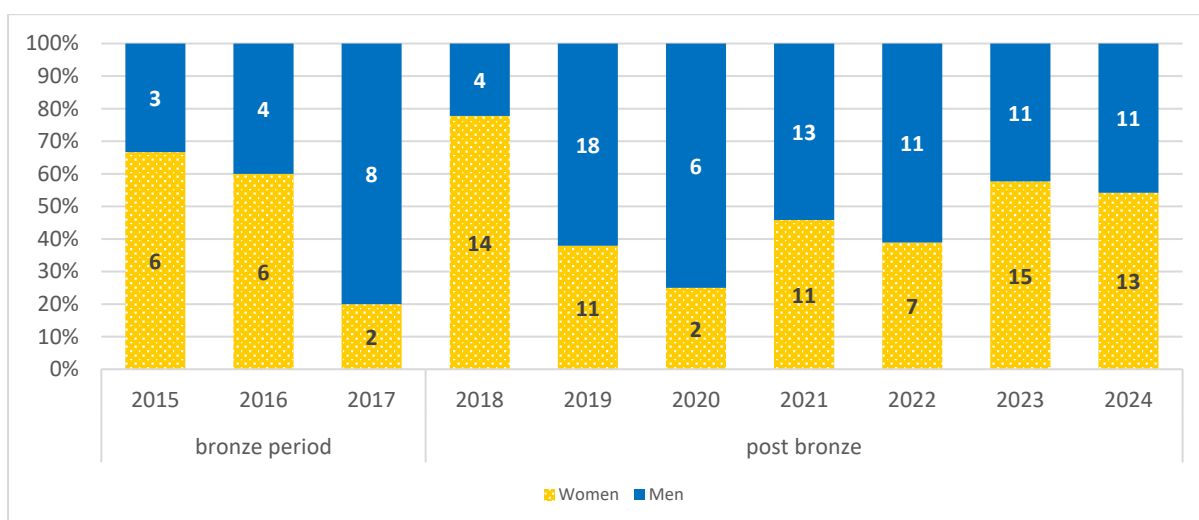
To examine potential points of leakage in the student pipeline, undergraduate outcomes were considered alongside HDR completion patterns.

HDR outcomes at UniSC are not currently reported as cohort-based completion rates due to small cohort sizes and variation in candidature duration (e.g. part-time enrolment, leave of absence, extended time to completion). Instead, annual completion counts are used, with interpretation focused on proportional representation within completions.

Women's representation among HDR completions varies across the reporting period, comprising around or above 50% in some years, but not consistently (Figure 27).

However, in the absence of cohort-based HDR progression data (e.g. transition rates from undergraduate to honours or HDR, and HDR completion rates by cohort), it is not possible to determine where leakage occurs within the pipeline. This is a current limitation in the analysis.

Addressing this gap is identified as a priority. Future work will focus on developing longitudinal cohort tracking and progression metrics (e.g. undergraduate to honours, honours to HDR, and HDR completion rates) to enable a more robust assessment of pipeline progression and identify specific points of attrition (Further Action 4).



**Figure 27. SSTE, HDR Completions, 2015-2024**

### **2.1.3 MindSET-do project**

The MindSET-do project and its supporting actions at UniSC have contributed to strengthening participation of girls and young women in early STEM pathway activities by increasing visibility, interest, and engagement. While barriers remain, especially around self-efficacy and long-term progression, the initiative has established a strong foundation for sustained, inclusive participation and has informed future strategic actions through evidence-based reflection.

Program evaluation data show positive participant experiences, with high enjoyment reported by female participants (average 89%) and 74% reporting increased confidence in their STEM capability.

Evaluation data from MindSET-do events further indicate strong engagement outcomes, with 70–80% of participants reporting increased interest and confidence in STEM, and 66–73% indicating greater likelihood of considering tertiary study. Enjoyment levels were consistently high (87–96%), and female participation remained stable across secondary-level events (40–46%), supported by targeted initiatives such as Athena Girls STEM Connect Days. While outcomes were not disaggregated by gender, qualitative feedback from female-focused programs indicates these experiences broadened girls’ awareness of STEM fields, strengthened aspirations, and increased confidence in pursuing tertiary pathways and future STEM careers.

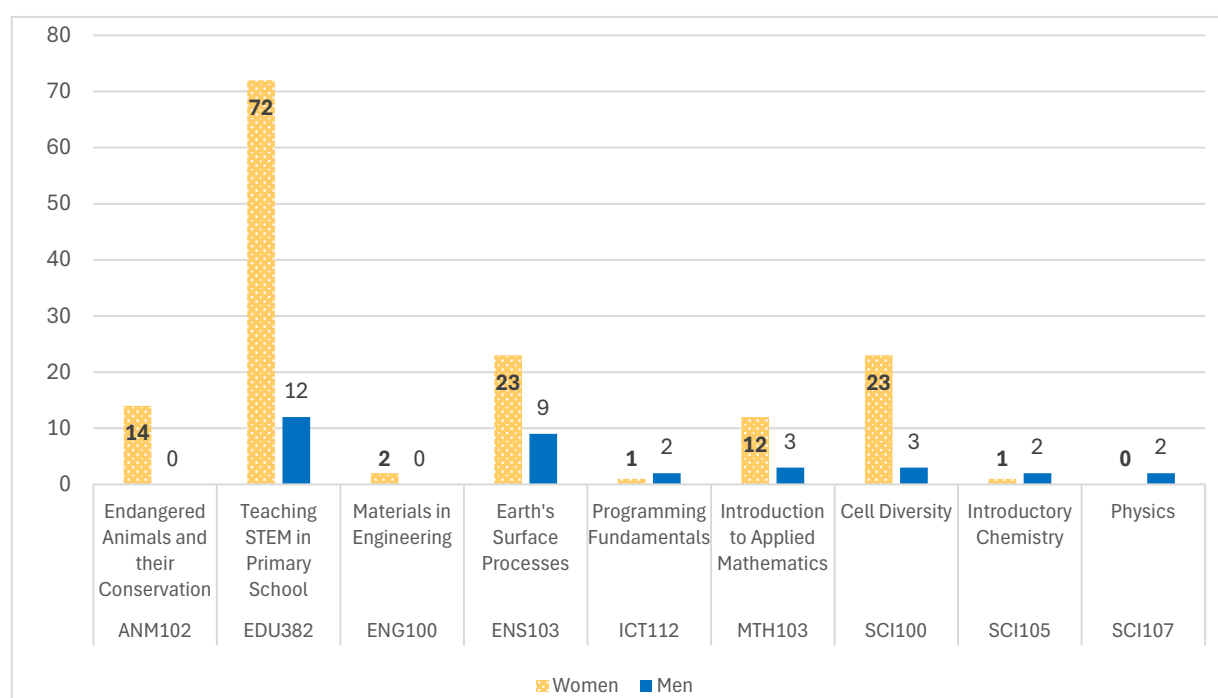
### **2.1.4 Outreach events delivered by the Future Students team**

The Future Students program supports access to higher education by delivering career aspiration activities, skill development and tailored resources to students from equity cohorts across primary and secondary schooling, as well as adult learners.

Post-engagement survey data suggested the program is effective at improving aspiration, awareness and confidence, with 68% of respondents reporting increased understanding of future study and career options, 67% reporting greater confidence in making career and study decisions, and 68.4% indicating increased belief that university or TAFE study was achievable. While these outcomes were not disaggregated by gender, the findings provide evidence of strengthened aspiration and confidence among equity cohorts more broadly and contribute to broader pipeline efforts aimed at improving access to tertiary education, including STEM pathways.

## 2.2 Empowering Future Educators: Building STEM Capability and Career Awareness in Primary Classrooms

As the STEM specialisation in the Bachelor of Primary Education was implemented in 2025, as such, outcome data is currently limited to enrolment patterns among eligible second and third-year preservice teachers. Women students make up the majority of the overall program cohort, 86% in 2025 (275 of 319 students) and 87% in 2026 (313 of 360 students), reflecting the gender profile of primary initial teacher education more broadly. Analysis of course-level enrolments show distinct patterns in how women and men engage with different STEM disciplines once they opt into the specialisation. All students who enrol in the specialisation will need to enrol in Teaching STEM in Primary School. Across both years, Women preservice teachers enrolled in a broad range of science and mathematics courses, including cell biology, earth science and applied mathematics, indicating disciplinary breadth within their STEM selections. Male students, while fewer in number, were proportionally more likely to enrol in traditionally male-dominated subjects such as physics, chemistry and programming. These course-level outcomes demonstrate that students of different genders are engaging with the STEM specialisation in differentiated ways, providing a baseline for examining disciplinary preferences, confidence and progression patterns in future cohorts.



**Figure 28. Bachelor of Primary Education enrolment data in STEM specialisation courses, 2025-2026**

This emerging engagement also contributes to the longer-term goal of increasing the number of women in academic STEM positions. By supporting women preservice teachers to develop disciplinary knowledge and confidence across STEM fields, alongside applied pedagogical and leadership skills. The specialisation may serve as a foundation for future postgraduate study or academic pathways in STEM education. As these graduates gain experience, some may transition into university-based roles as lecturers, researchers, or mentors, helping to shift the gender balance in STEM-related academic employment and serving as visible role models to future cohorts of students.

## 4. IMPACT

Impact has been assessed through a mixed-methods approach including institutional survey data, qualitative interviews, program evaluations and participation data (Table 14).

**Table 14. Disaggregated Headcount Data by Method and Sub-group**

| Method                                               | Total n= | Women | Men | Non-binary or not disclosed |
|------------------------------------------------------|----------|-------|-----|-----------------------------|
| April 2024 Employee Engagement Survey                | 1186     | 70%   | 29% | 1%                          |
| Interviews SSTE Academic women                       | 4        | 100%  | 0%  | 0%                          |
| Athena Swan staff consultation (2025)                | 51       | 100%  | 0%  | Not collected               |
| Mindset Do Participants Primary survey (2020-2024)   | 11075    | 53%   | 46% | 1%                          |
| Mindset Do Participants Secondary survey (2020-2024) | 1581     | 50%   | 47% | 4%                          |
| Headstart survey 2023-2025                           | 680      | 79%   | 20% | 1%                          |
| Headstart interviews 2018 & 2022                     | 19       | 79%   | 21% | 0%                          |
| STEMM Strolls participants survey 2024               | 20       | 100%  | 0%  | 0%                          |

### 4.1 On improving representation of women among STEM academic staff

Initiatives implemented within SSTE to improve the representation of women among STEM academic staff have contributed to shaping a more inclusive school culture that supports the attraction and retention of women academics. To understand the impact of these initiatives, semi-structured interviews were conducted in December 2025 with four women academics within SSTE. The participants were selected to reflect a ranging years of experience, and roles within the School, including individuals with leadership responsibilities in equity and diversity initiatives. It is acknowledged that two participants held formal leadership roles in this area (DEI Lead, and the Chair of the Women in STEM Committee), and therefore may bring perspectives shaped by their active engagement in gender equity work. Given the small sample size (representing approximately 13% of ongoing women), these insights are not intended to be representative of all women in SSTE, but rather to provide in-depth perspectives that complement broader quantitative and consultation data, including findings presented in Table 15 and feedback from the 2025 staff consultation process.

## Leadership and culture

Women academics describe women's leadership as positively influencing school culture through visible role modelling, responsiveness to staff needs, and active promotion of equity and inclusion. Experiences also indicate that the extent of inclusivity has varied over time, influenced by the priorities and attitudes of individual leaders.

"Female leaders promote an inclusive culture by serving as role models to more junior staff, by promoting equity in School and University initiatives that impact upon staff, and by engaging across the diverse workforce of the School. Female leaders can be responsive to the needs of staff and ensure representation of diversity and inclusion in School committees and initiatives." (Associate Professor, Associate Dean of Research, SSTE)

"I think inclusivity in the school has been quite dependent on the Dean or Head of School over the years, and their priorities and attitudes regarding EDI, especially interpretation of how it is defined. I think a lot of progress has been made" (Associate Professor, EDI Lead, SSTE)

"I like that we have had female leadership in ADLT and ADR, both mothers who visibly live work around our children so it's a norm not an exception." (Senior Lecturer, SSTE)

## Governance and decision-making

Formal governance mechanisms, including the appointment of a DEI portfolio lead are viewed as enabling more deliberate consideration of equity in decision-making and stronger alignment with university-wide initiatives. Sustained impact is understood to depend on continued resourcing, recognition, and integration into school planning.

"The appointment of a DEI lead means that decisions by the board, including initiatives but also 'business as usual' are able to be consciously and deliberately considered under a DEI lens." (Associate Professor and Lead, Diversity, Equity and Inclusion (DEI), SST)

"I like that within our school our former Dean instigated the creation of a portfolio that covers diversity" (Senior Lecturer, SSTE)

"The committee has received positive support from School leadership, including endorsement of its formation and openness to its goals. This early support is critical. Ongoing support through resourcing, recognition, and the integration of recommendations into school planning will be key to ensuring the committee can deliver meaningful, sustainable impact." (Associate Professor and Chair, Women in STEM Committee, New academic staff)

It also allows for a 'representative' that can bridge gaps between the school board/school and other University wide initiatives like Athena Swan, and between students, HDRs and staff, and the board or Dean when anonymity is preferred (e.g. if reporting concerns). The DEI position meant that priorities could also be identified at the school level." (Associate Professor and Lead, Diversity, Equity and Inclusion (DEI), SSTE)

## Women academics' experiences of working within SSTE

Women academics describe SSTE as a collegial and supportive work environment, characterised by openness to collaboration and growing recognition of equity and inclusion. At the same time, experiences highlight reliance on self-initiated mentoring and a desire for more structured support and clearer pathways to support career progression across stages and raised concerns by disproportionate administrative and service workloads. (Future Action 6)

There is a strong sense of willingness and commitment to improvement. As a female academic in a male-dominated discipline, I believe more structured mentoring, clearer pathways for progression, and targeted support mechanisms would further strengthen the experience for women at all career stages." (Associate Professor and Chair, Women in STEM Committee, New academic staff)

"Through my own initiative, I have sought out and found great supporters (both male and female) as mentors across the school." (Senior Lecturer, SSTE)

"I have felt very welcomed and supported within SSTE, particularly by the leadership team and colleagues who are generous with their time and open to collaboration." (Associate Professor and Chair, Women in STEM Committee, New academic staff, SSTE)

"Like in many disciplines, I feel like at times the women take on the larger administrative load for many reasons, but we have to take care to ensure that burden isn't overlooked, and while we celebrate the sheer number of women on the SSTE board...we shouldn't overlook the administrative burden that came with." (Senior Lecturer, SSTE)

"I appreciate the collegial environment, the openness to new initiatives, and the growing recognition of the importance of equity, diversity, and inclusion. There is genuine interest in positive change. Continued attention to workload equity, visibility of female role models, and inclusive decision-making would significantly enhance the school culture." (Associate Professor and Chair, Women in STEM Committee, New academic staff)

## Recruitment, representation and future direction

Insights from interviews highlighted strong support for targeted women-only recruitment as a strategic and evidence-based response to persistent gender imbalance in STEM. Future aspirations emphasise the role of the Women in STEM Committee in supporting recruitment, retention, progression and wellbeing through coordinated, visible, and sustained action.

"I strongly support targeted female-only positions as a strategic and evidence-based measure to address long-standing gender imbalance in STEM. These roles are not about lowering standards, but about widening the pool, correcting structural barriers, and accelerating cultural change. Increased representation at the academic level is critical for students, leadership diversity, and the long-term sustainability of the engineering disciplines." (Associate Professor and Associate Dean of Research, SSTE)

"My vision is for the Women in STEM Committee to become a visible, active platform that supports recruitment, retention, progression, and well-being of women in SSTE, both staff and students. This includes mentoring networks, leadership and career-development opportunities, targeted support for HDR students, advocacy on workload and equity issues, and initiatives that build community and visibility of women's achievements across the school." (Associate Professor and Chair, Women in STEM Committee, also a new academic staff)

Athena Swan consultation undertaken in 2025 similarly indicated support for targeted women-only recruitment in areas of persistent underrepresentation. Participants highlighted the importance of targeted approaches in challenging entrenched gender norms and strengthening visible role models, noting that *"Targeted recruitment is essential to disrupt entrenched gendered lenses in certain fields of study and practice and create role models."* Consultation feedback also identified considerations for future implementation, particularly regarding internal communication and staff understanding of the initiative's intent. Participants recommended *"Better internal communication so that other staff understand the specifics. People read the news articles that came out and drew incorrect conclusions about other parts of the university and a 'female agenda' when it was a specific issue that was being addressed."*

## Promotion Support Insights

Insights from a school-based survey, conducted as part of UniSC's first Cygnet submission on Promotion, highlighted the valuable role of school-based Promotion Support Committees and the importance of structured support and clarity in the promotion process. Feedback from a 2024 SSTE applicant emphasised this value *"It was beneficial to have female mentors and representation from both research and L&T... [the Dean] was my biggest influence for success"* (Woman, Parent, Level B, 2024 Applicant).

However, feedback also revealed inconsistencies between School-level and executive-level advice, indicating a need for greater alignment. *"Review of my application was useful; however, some of the advice I received differed from that given by Exec when I was not promoted; ensuring clarity and alignment here would be beneficial"* (Man, Parent, Level B, 2019 Applicant).

These insights have driven actions aimed at strengthening structured support, enhancing clarity around promotion expectations, and improving alignment in promotional guidance. These actions have been integrated into the Promotion Cygnet Action Plan.

## Staff engagement data

Analysis of the 2024 Employee Engagement Survey indicates that improvements in workforce representation have not yet translated into consistently equitable workplace experience for women in SSTE. Compared with both UniSC women overall and men within SSTE, women in SSTE reported lower favourable responses across several indicators (Table 16), including advocacy (39% compared with 67% of UniSC women and 63% of SSTE men), psychological safety (37% compared with 49% and 54% respectively), perceptions of equal opportunity (48% compared with 60% and 63%, involvement in decision-making (42% compared with 58% and 49%) and access to workplace resources 42% compared with 65% and 49%).

Despite lower advocacy sentiment, retention intent among SSTE women remained relatively strong (58%, compared with 66% of UniSC women and 67% of SSTE men), suggesting continued organisational attachment alongside areas requiring attention. Positive outcomes were also evident, including strong support for flexible working arrangements (77%), positive supervisor feedback (77%) and higher favourable responses relating to feeling valued (58%), highlighting the influence of local leadership practices. As comparable data at the School level is not available for earlier survey cycles, the 2024 Employee Engagement Survey results are treated as a baseline for future monitoring.

These findings informed targeted SSTE School actions, including the introduction of School-level awards to strengthen the recognition and visibility of contributions, alongside consultation activities (including School surveys and Mentimeter-based feedback) to better understand barriers related to voice, recognition and participation in decision-making. Across the 2024 and 2025 school award cycles, women comprised the majority of individual award recipients (7 of 12 non-team awards in 2024, 7 of 11 in 2025), and in each year the team award was conferred on a team led by women.

**Table 15: Disaggregated Headcount Data 2024 Employee Engagement Survey**

| Method                                | Total n=       | Women        | Men        | x        | Academic Staff           | Professional Staff     |
|---------------------------------------|----------------|--------------|------------|----------|--------------------------|------------------------|
| April 2024 Employee Engagement Survey | 1186           | 70%          | 29%        | 1%       | 466                      | 720                    |
|                                       | UniSC baseline | SSTE Overall | SSTE Women | SSTE Men | SSTE Women Response rate | SSTE Men Response Rate |
|                                       | 1186           | 90           | 31         | 57       | 38%                      | 44%                    |

**Table 16. 2024 Employee Engagement Survey, (Academic & Professional) Staff, results percent favourable**

| Item                                                                                                                 | UniSC |     | SSTE |     |
|----------------------------------------------------------------------------------------------------------------------|-------|-----|------|-----|
|                                                                                                                      | W     | M   | W    | M   |
| I would recommend UniSC as a great place to work                                                                     | 67%   | 66% | 39%  | 63% |
| UniSC values diversity                                                                                               | 70%   | 66% | 68%  | 71% |
| I can voice a contrary opinion without fear of negative consequences                                                 | 49%   | 50% | 37%  | 54% |
| People from all backgrounds have equal opportunities to succeed at UniSC                                             | 60%   | 65% | 48%  | 63% |
| I receive appropriate recognition for good work at UniSC                                                             | 51%   | 50% | 39%  | 48% |
| I see myself still working at UniSC in two years' time                                                               | 66%   | 63% | 58%  | 67% |
| I am appropriately involved in decisions that affect my work                                                         | 58%   | 53% | 42%  | 49% |
| I have access to the things I need to do my job well                                                                 | 65%   | 59% | 42%  | 49% |
| In my work area, we are genuinely supported if we choose to make use of flexible working arrangements                | 70%   | 70% | 77%  | 77% |
| My direct supervisor (or my performance and development leader) gives me useful feedback on how well I am performing | 70%   | 71% | 77%  | 67% |
| I feel valued for the unique contribution I can make at UniSC                                                        | 52%   | 54% | 58%  | 46% |

## 4.2 Improving representation of women in student groups in the “leaky” STEM talent pipeline

### 2.1 Attract and support underrepresented student groups from high school through alumni stages

Actions implemented to strengthen participation of girls and women across the STEM pipeline have contributed to increased visibility, engagement and confidence at key transition points. Impact has been assessed (Table 13) through participation data, program evaluation surveys, and qualitative feedback from student participants and UniSC preservice teachers involved in outreach and engagement.

#### Student belonging and transition, Headstart

Qualitative interview data indicate that participation in the Headstart program contributes to early experiences of belonging, confidence and transition readiness among students. Girls and young women engaging with STEM aligned pathways, described forming peer networks and developing familiarity with university systems prior to full enrolment, supporting smoother transition into tertiary study.

“I probably would have been very lonely if I didn’t do the Headstart program. I wouldn’t have any of the friends that I have now which is really important for me, because I still contact and catch up with my friends that I made in Headstart.”

They also reported increased confidence and personal growth through exposure to supportive learning environments.

"I was going through a lot of hard time with bullying through high school... Headstart gave me an escape from all that... it increased my own self-confidence that I can become a part of something bigger."

Early exposure to institutional systems was identified as reducing transition stress and strengthening readiness for university learning.

"Once I wrapped my head around everything it really wasn't that hard because I knew exactly how the timetable system worked, I knew exactly what I needed to do and where I needed to go."

While Headstart does not operate as a direct recruitment pathway into SSTE programs, these findings suggest the program contributes to upstream conditions associated with persistence in tertiary study, including confidence, belonging and institutional navigation capability.

### Early engagement and confidence-building (Primary school)

Qualitative feedback from primary school participants in MindSET-do activities consistently reflects enjoyment, collaboration and early confidence in STEM capability. Girls described positive experiences engaging with hands-on coding, robotics and problem-solving tasks, often emphasising learning alongside peer interaction and enjoyment.

"We got to learn new things and collaborate with other students"  
(Year 5 Female Student)

"Learning about the different jobs drones are helpful in and learning how to code and fly a drone was the highlight for me."  
(Year 6 Female student)

"I enjoyed working with my friends and knowing I can program lights to a song." (Year 6 Female Student)

"I had so much fun and learnt new things. We had the best coding teacher!" (Year 6 Female Student)

"It was very nice, I learnt how to program and many more things, I would like to do more lessons like this - I learnt how to code as well" (Year 4 female student)

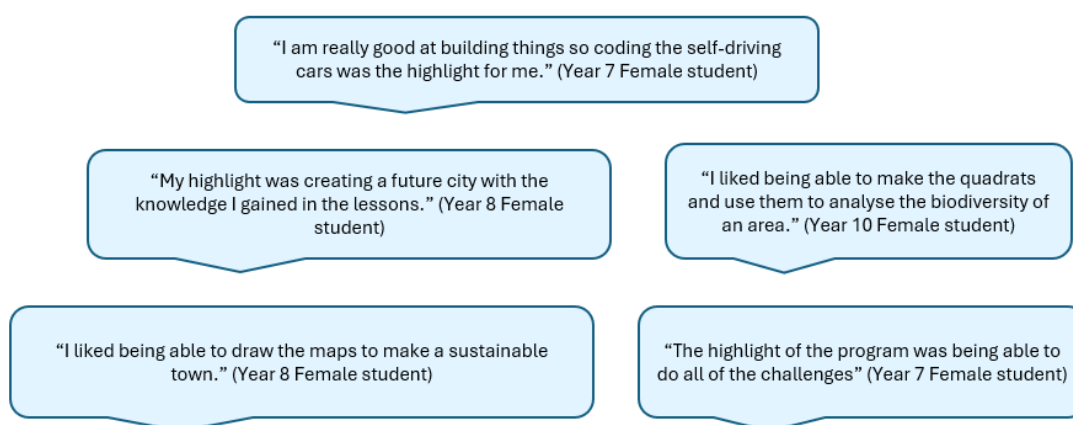
"My favourite part was testing the game " (Year 4 female student)

These reflections demonstrate more than enjoyment alone; they indicate early self-efficacy development and positive STEM identity formation. Participants articulate pride in mastering new technical skills, valuing collaboration, and recognising the real-world relevance of STEM applications. These reflections align with evaluation data indicating high enjoyment and increased confidence among girls and young women and support the program's early-intervention focus on STEM identity formation prior to secondary school transition.

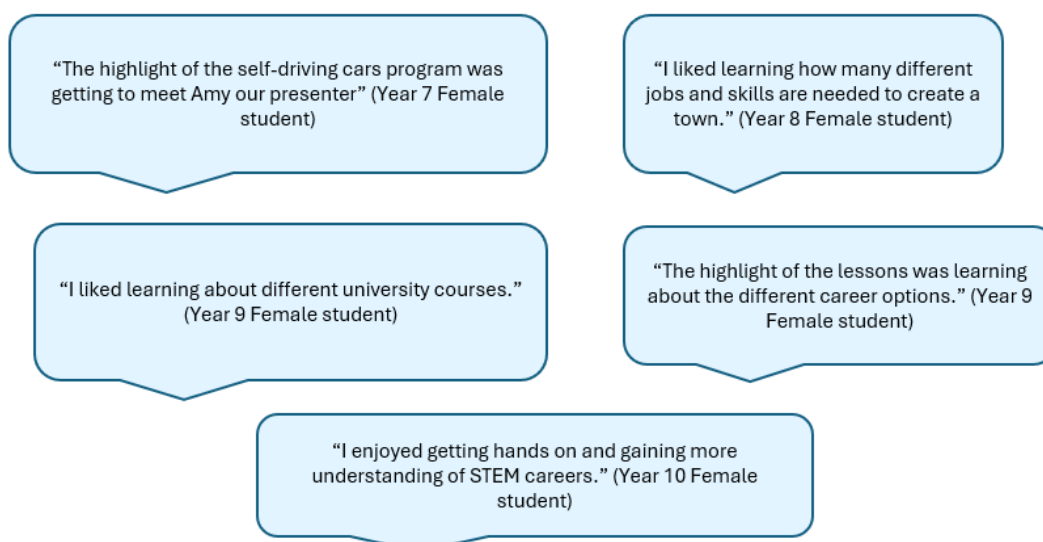
## Sustaining engagement through adolescence (Secondary school)

Participation data indicate that girls and young women continue to engage with MindSET-do activities through secondary school programs, although overall participation volumes decrease relative to primary programs. This trend is consistent with broader sector evidence highlighting increased attrition risk during adolescence, as subject selection pressures intensify, confidence gaps widen, and gendered norms around STEM capability become more pronounced.

Qualitative feedback from secondary school participants indicates that targeted, applied learning experiences play an important role in sustaining engagement during this period. Students emphasise challenge, creativity and real-world relevance, alongside growing confidence in their own technical abilities.



Secondary school student reflections also highlight the program's impact on career awareness and aspiration during a key stage of subject selection and future planning. Students describe increased understanding of STEM pathways, university options and the diversity of careers available, as reflected in the quotes below:



Taken together, these responses indicate that the secondary programs support both affective and cognitive dimensions of engagement. Participants describe increased self-efficacy, enjoyment of challenge-based learning, and a clearer understanding of the diversity of STEM careers and study

pathways. Importantly, several comments reflect a shift from passive exposure to active identification, seeing themselves as capable contributors and future participants in STEM fields.

While these qualitative insights indicate positive short-term impacts, the absence of longitudinal tracking limits the ability to directly attribute participation to later subject selection or tertiary enrolment decisions.

## Preservice teachers (UniSC presenters)

Qualitative reflections from UniSC preservice teachers involved in the MindSET-do program (Figure 28) indicate strong positive impacts on professional capability, confidence, and teaching identity. Across multiple presenters, participation was consistently described as strengthening confidence to teach STEM, deepening pedagogical skills, and increasing readiness to deliver engaging, hands-on learning experiences in diverse classroom contexts.

#### 4.2 Preservice teacher - Sian Whiting

Sian Whiting is a current UniSC Preservice teacher and one of our dynamic presenters. Sian brings a passion for teaching and a commitment to fostering a love for learning in young students.

"As a preservice teacher I have thoroughly enjoyed each experience of delivering MindSET-do lessons aligned with the research project. This year my time presenting in classrooms so far is equivalent to over a full week which is invaluable for maintaining practical experience with instruction and classroom management in between allocated Professional Experience windows. The MindSET-do experience in the classroom helps me to keep up my awareness of how students are learning, maintain student engagement and play a role in supporting students to undertake new challenges, where they experience genuine success in their learning.

My involvement in this project provides opportunities to liaise with teachers to meet their expectations and personally reflect upon my practice. Developing these skills, along with STEM experience puts me in a position of confidence and enthusiasm to deliver similar lessons to my own future students, and to support other teachers in my future school."



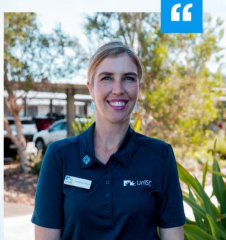
"The experience helps me to keep up my awareness of how students are learning and play a role in supporting them to undertake new challenges, where they experience genuine success in their learning."

**Sian Whiting**  
UniSC Preservice teacher

#### 4.2 Preservice teacher - Kimberly Purcell

Kimberly Purcell is a dedicated preservice teacher in the Master of Teaching (Primary) at UniSC and an enthusiastic STEM presenter for MindSET-do. Kimberly's work with the program and her studies at UniSC demonstrate her dedication to shaping the future of education and empowering the next generation of learners.

"I feel very fortunate to be involved in delivering lessons for the MindSET-do research project. The opportunity has positively impacted me as a preservice teacher in many ways. Having the ability to present highly engaging lessons to a variety of classrooms within the Sunshine Coast LGA has boosted my confidence in my ability to teach STEM. Furthermore, having access to high quality lesson plans, presentations and equipment such as microdrones and electrical circuits coupled with the support and training of the MindSET-do team has given me the knowledge, ability and inspiration to facilitate similar learning opportunities for my future students. The positive impacts for my future students will be exposure to authentic learning experiences where the links between the technology available today and possible future careers are evident, hands-on learning in a safe supportive environment is provided and students are encouraged to problem-solve collaboratively."



"Having the ability to present highly engaging lessons to a variety of classrooms within the Sunshine Coast LGA has boosted my confidence in my ability to teach STEM."

**Kimberly Purcell**  
UniSC Preservice teacher

#### 4.2 Preservice teacher - Lana Jeffs

Lana Jeffs is a current UniSC Preservice teacher and MindSET-do's Regional Coordinator. She effectively supports preservice teachers, schools and educators in implementing innovative programs and practices.

"As the Regional Coordinator for MindSET-do (primary), the Encouraging Career Aspirations in STEM research project, has profoundly impacted my learning and development as a preservice teacher. Over the past three years, the project has enabled me to further develop my teaching pedagogy, applying strategies for teaching and learning through valuable classroom experience. Because the lessons are scaffolded in a way that promotes achievement, my role easily lends itself to encouraging and empowering students, promoting a growth mindset towards STEM subjects. It's always fantastic to see the students' overcome challenges, persevering with the use of computational thinking and soft skills, ultimately increasing the belief in their capabilities to achieve the tasks set within the lessons.

The project has given me the opportunity to interact with schools in the Sunshine Coast LGA. I have been fortunate in being able to share my knowledge of STEM integrated lessons through the delivery of professional development sessions with both teachers and preservice teachers. This invaluable opportunity has allowed me to help other teachers enhance their understanding and confidence to teach integrated hands-on STEM lessons in the classroom. Overall, this experience has solidified my motivation to share my knowledge of STEM education for the benefit of student learning."



"Because the lessons are scaffolded in a way that promotes achievement, my role easily lends itself to encouraging and empowering students, promoting a growth mindset towards STEM subjects."

**Lana Jeffs**  
Regional Coordinator  
MindSET-do  
UniSC

#### 4.2 Preservice teacher - Diana Chirizzi

Diana Chirizzi is a committed preservice teacher at UniSC, currently pursuing a Bachelor of Primary Education. In addition to her studies, she serves as a STEM presenter for MindSET-do, where she passionately promotes science, technology, engineering and mathematics to young learners.

"As a STEM presenter for MindSET-do, I can say that the project has become a valuable experience for me because it has enabled me to upskill myself as a preservice teacher. Visiting classes across many schools has allowed me to put the theory I learn from my university courses into practice. This hands-on teaching experience provides me with opportunities to continuously reflect on and improve my skills in areas such as behaviour management and differentiation. This consistent practice has deepened my understanding of the lesson content, allowing me to focus on refining my delivery techniques. As a result, my confidence in the classroom has grown.

MindSET-do has also helped me foster a growth mindset, which is something I will model to my future students. Since joining the team, I have received continuous support and am glad that I decided to push through my self-doubt and break down the fixed mindset I possessed towards teaching STEM subjects. I now know that I am more than capable of teaching STEM, which extends beyond the scratch, drones, and Arduino lessons I currently teach. I now believe I can learn and teach any new STEM topic with perseverance and commitment.

Teachers at the schools I visit are open to sharing their stories of teaching, which has widened my understanding of pathways after university. I am so excited to get out there and be a teacher, but also to bring my love of STEM to my future classroom."



"This consistent practise has deepened my understanding of the lesson content, allowing me to focus on refining my delivery techniques. As a result, my confidence in the classroom has grown."

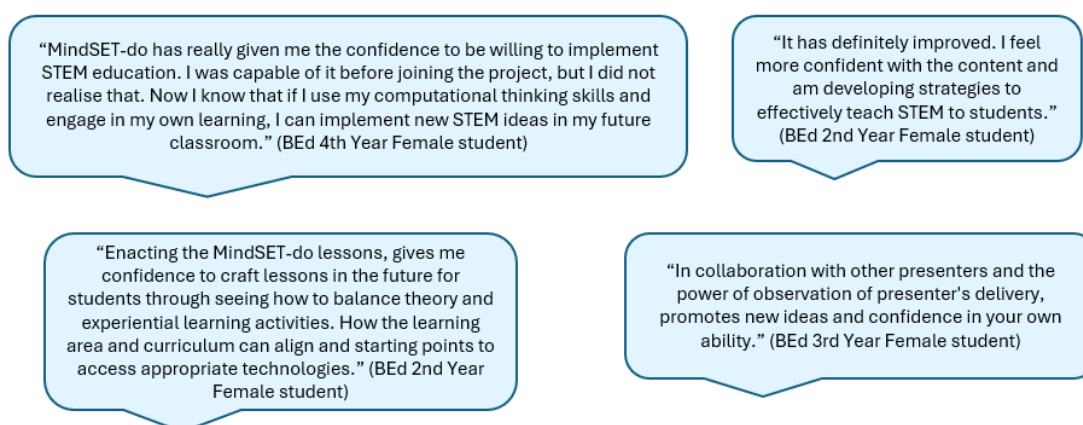
**Diana Chirizzi**  
UniSC Preservice teacher

Figure 28. Qualitative reflections from UniSC preservice teachers involved in the MindSET-do program

## 2.2 Empowering Future Educators: Building STEM Capability and Career Awareness in Primary Classrooms

The STEM specialisation was only implemented in 2025, therefore, longitudinal qualitative impact data specific to the specialisation cohort are not yet available. However, qualitative evidence from preservice teachers participating in the MindSET-do program provides an indicative example of the types of outcomes the specialisation is designed to achieve.

Preservice teacher reflections consistently point to increased confidence, strengthened pedagogical capability and a shift in self-perception regarding STEM teaching competence.



These reflections highlight three key impact domains aligned with the intended outcomes of the STEM specialisation. First, they show growth in self-efficacy, with preservice teachers recognising their capability to lead STEM learning. Second, they demonstrate strengthened pedagogical content knowledge, particularly in designing inquiry-based, experiential lessons that integrate curriculum, theory and technology. Third, they emphasise the value of collaborative practice and modelling in building professional confidence.

Given that the Bachelor of Primary Education cohort is predominantly women, strengthening confidence and competence in STEM teaching has broader pipeline implications. Preservice teachers who feel capable of delivering inclusive, engaging STEM learning are more likely to model confidence, embed positive STEM messaging, and support girls' STEM identity formation from the early years. Collectively, the MindSET-do data provide an early indicator of the scalable impact of the STEM specialisation

### STEMM Strolls

The STEMM Stroll initiatives delivered in 2024 and 2025 demonstrate impact through strengthened regional connection and visibility of women across STEMM disciplines. By bringing together students, early-career professionals and senior practitioners in a low-barrier networking environment, the events supported cross-sector engagement and fostered a sense of community beyond institutional boundaries. Participant feedback highlighted the value of informal networking formats. "The stroll had a lot of value- genuine connection and opportunity to chat with women in diverse fields of STEMM." Continued engagement beyond the events, including the establishment of informal STEMM coffee catchups scheduled to continue into 2026, indicates that these activities are contributing to the development of an emerging community of practice aligned with UniSC's equity objectives.

## 5. FURTHER ACTION

This Cygnet focused on responding to persistent underrepresentation of women across the academic workforce and student pipeline within SSTE. A suite of workforce and pipeline initiatives were implemented, including inclusive recruitment and promotion practices, targeted appointment strategies, strengthened leadership visibility and research-informed outreach programs.

Outcomes indicate proportional increases in women's representation within continuing and fixed-term academic staff roles, alongside increased participation by women in promotion processes. However, women remain proportionally underrepresented at senior academic levels and within some disciplines. Within Engineering, targeted recruitment activity implemented in 2025 has contributed to an increase in the number of women academics since the 2024 outcome data, however the impact of this change is not yet reflected in the formal outcome data analysed for this Cygnet. Across the student pipeline, absolute numbers of women enrolling in and completing SSTE programs have increased, while proportional representation has remained relatively stable and below parity overall.

Impact analysis indicates that while visibility and representation have improved, these structural gains have not yet translated into consistently improved lived experience for all women. Staff experience data highlight challenges relating to voice, recognition and access to enabling organisational resources. In addition, qualitative data from exit interviews were not available, limiting understanding of the factors influencing women's decisions to leave SSTE roles.

Key learnings are that structural interventions must be complemented by sustained cultural and systems-level change, and that accountability for gender equity, while beginning to be embedded through School-level governance as not yet been applied systematically. Limitations in workforce and pipeline data also constrained understanding of academic progression pathways and restricted the application of a robust intersectional lens, reinforcing the need for improved quantitative and qualitative data capability.

| Ref | Rationale / Evidence                                                                                                                                      | Future Action                                                                                                                                                                                                                           | Timeframe (Start–End) | Person/Group Responsible                                                         | Desired Outcome / Success Indicator                                                                                                                                                         |
|-----|-----------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|----------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1   | Understanding of academic workforce patterns is currently limited by incomplete visibility of appointment and progression pathways.                       | Undertake analysis of academic appointment and progression pathways within SSTE to establish baseline visibility of transitions between employment types, disaggregated by discipline, gender and other equity dimensions.              | 2026–ongoing          | People & Culture (P&C) with Athena Swan support                                  | Baseline understanding of appointment and progression pathways to inform subsequent discipline-level, intersectional and targeted equity actions.                                           |
| 2   | Representation of women at Level D has increased (2015–2024); however, representation across Levels C–E remains below parity, with discipline variability | Continue discipline-informed recruitment and progression strategies, including targeted recruitment where appropriate, transparent promotion pathways, and annual monitoring by discipline and academic level.                          | 2026–2028             | Dean, SSTE / Discipline Leads; Women in STEM Committee; with Athena Swan support | Clearer discipline-level monitoring; evidence of sustained recruitment and progression strategies supporting gender equity at senior levels.                                                |
| 3   | School level aggregation obscures discipline specific gender patterns, limiting targeted analysis and action.                                             | Implement routine discipline-level reporting of academic workforce composition (by academic level, employment type gender and other equity dimensions), to better understand representation patterns across multiple equity dimensions. | 2026–ongoing          | People & Culture (P&C) with SSTE Exec Support                                    | Annual dashboard/report showing gender distribution by discipline; with intersectional insights informing targeted and evidence-based actions; baseline established and reviewed each year. |

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| 4 | HDR completion outcomes demonstrate year-to-year variability, with fluctuating proportional outcomes for women. The absence of cohort-based HDR completion rates currently limits the ability to fully assess pipeline progression and identify points of attrition. Continued monitoring and enhanced reporting are required to support more robust analysis. | Monitor HDR enrolment, progression and completion annually using gender-disaggregated data, and develop improved reporting approaches, including cohort tracking and progression metrics. Analysis will inform supervisory practice discussions, mentoring and HDR support initiatives. | 2026–2028    | Dean, SSTE; Graduate Research School Insights and Analytics Unit with Athena Swan support | Annual reporting demonstrates improved understanding of HDR gender trends, with cohort-based insights enabling identification of progression patterns and informing targeted actions to support equitable completion outcomes. |
| 5 | Culture change requires sustained leadership and governance oversight.                                                                                                                                                                                                                                                                                         | Continue to support an active DEI lead within SSTE School Board                                                                                                                                                                                                                         | 2026–ongoing | Dean SSTE                                                                                 | DEI lead position maintained with clear remit; actions progressed and reported through School Board annually.                                                                                                                  |
| 6 | Women academics identified opportunities to further strengthen equitable distribution of administrative and service workloads. DEI Lead workload analysis provides an evidence base to guide structured, School-wide responses.                                                                                                                                | Progress DEI Lead’s workload analysis outcomes to embed more equitable approaches to administrative and service workload allocation.                                                                                                                                                    | 2026–2027    | SSTE Dean; School Leadership Team; DEI Lead, Athena Swan support                          | Workload practices reviewed; improved survey indicators relating to workload equity.                                                                                                                                           |

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| 7  | Without understanding appointment and progression pathways, it is difficult to identify where women are being lost between casual/sessional and continuing roles.                                     | Further analysis of appointment and progression pathways will be undertaken to determine whether transitions are occurring between sessional and more secure academic role                                                                                                                          | 2026–ongoing   | P&C with SSTE Executive and Workforce Planning                                                                                | Pathway map and transition rates produced (by gender and discipline); identified barriers and targeted actions implemented (e.g., conversion pathways, mentoring, transparent criteria).                                                                                                                                                           |
| 8  | The STEM specialisation creates a potential future pipeline of women into STEM education research and academic roles; structured pathways increase likelihood of uptake.                              | Create a structured “ITE-to-Academia” pathway for STEM-specialised BEd (Primary) students (e.g., honours/HDR information sessions, RA opportunities, mentoring by women STEM/STEM-ed academics).                                                                                                    | 2026–ongoing   | School of Education & Tertiary Access (SETA) + Graduate Research School + SSTE                                                | Increase in honours/HDR expressions of interest and enrolments from STEM-specialised graduates; increased participation of women in RA/academic development opportunities.                                                                                                                                                                         |
| 9  | Girls’ STEM participation is influenced by early experiences, teacher confidence, and career visibility; outreach led by relatable role models can shift STEM identity formation.                     | Explore expansion of the MindSET-do primary-school outreach where women STEM-specialised preservice teachers deliver integrated STEM and career awareness activities (in partnership schools), with simple pre/post measures.                                                                       | 2026–ongoing   | SETA MindSET-do project team                                                                                                  | Program delivered in partner schools; measurable increases in girls’ STEM interest/aspiration indicators and teacher-reported engagement.                                                                                                                                                                                                          |
| 10 | Women’s participation and retention in STEM programs may be influenced by course design, timetabling and visibility of supports, particularly for students balancing work or caring responsibilities. | Pilot elements of a PACE-informed “Women in STEM Student Success” model in SSTE: redesign course delivery/timetabling for accessibility (e.g., predictable timetables, hybrid options where appropriate, clustered on-campus days), embed proactive student support (early alerts, peer mentoring). | 2026 - ongoing | Centre for Learning & Teaching (CLT) (learning design + timetabling support) with SSTE Program Leads; Student Success/Support | Increased enrolments of women in targeted SSTE programs; improved continuation/retention and progression rates for women (year-to-year); improved student satisfaction and belonging indicators (survey/qual feedback); documented course redesign outputs (timetables, assessment maps, flexible delivery options) and evidence of uptake/impact. |