



STEM Women

STEM WOMEN

ONE YEAR OF IMPACTS AND LEARNINGS

AUGUST 2019 – AUGUST 2020

STEMWOMEN.ORG.AU

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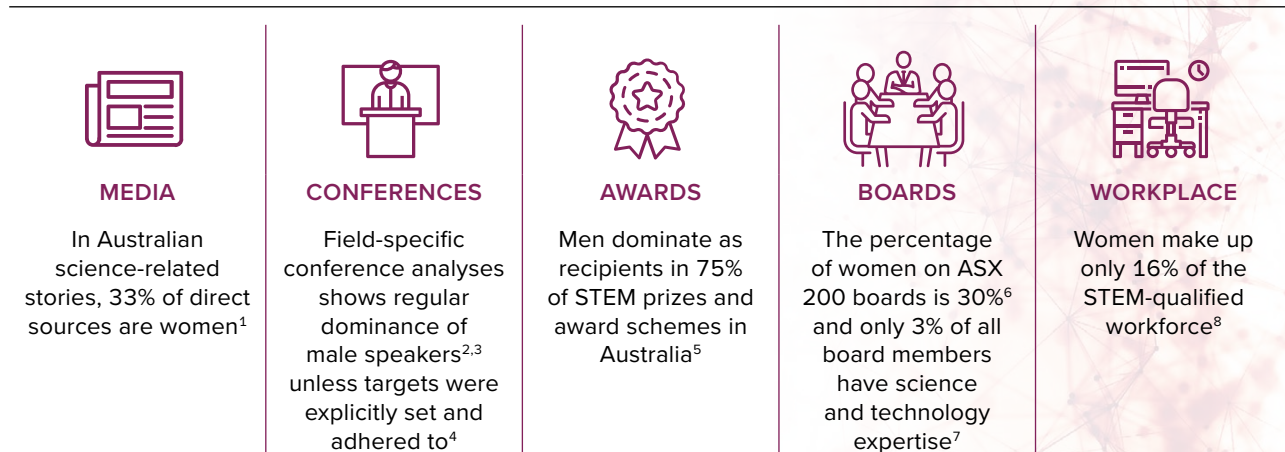
INTRODUCTION

STEM Women, created and supported by the Australian Academy of Science, is an online directory of women in Australia working and engaging in science, technology engineering and mathematics (STEM).

Developed in partnership with CSIRO, Science & Technology Australia, and the Australian Science Media Centre, with financial support from the Australian Government, STEM Women promotes gender equity by showcasing the breadth of STEM talent in Australia.

STEM Women was established as a simple tool to combat the lack of representation of women in all STEM sectors in Australia. It seeks to provide a diverse range of women with opportunities to share their expertise and progress their careers and personal capabilities. Key focus areas include speaking and outreach opportunities, media engagements, committee and board invitations and award nominations. See Figure 1 for an overview of the current state of gender balance in STEM opportunities.

Figure 1. Current representation of women in STEM across STEM Women's key focus areas



The use of databases as tools for improving gender equity is not a novel idea, with several international or expertise-specific databases in operation. STEM Women contributes to the combined efforts of these databases by creating a country-specific platform for Australia that targets all STEM professionals, not only researchers.

1 [Price J, Payne A. 2019 Women for Media Report: 'You can't be what you can't see'. 2019.](#)
2 [Kalejta R, Palmenberg A. Gender Parity Trends for Invited Speakers at Four Prominent Virology Conference Series. J Virol. 2017;19\(16\).](#)
3 [Casadevall A. Achieving Speaker Gender Equity at the American Society for Microbiology General Meeting. mBio. 2015;4\(6\).](#)
4 [Casadevall A, Handelsman J. The Presence of Female Conveners Correlates with a Higher Proportion of Female Speakers at Scientific Symposia. mBio. 2014;5\(1\).](#)
5 [EMCR Forum. Increasing diversity in prizes and awards. 2019.](#)
6 [Australian Institute of Company Directors. Gender diversity progress report. 2020.](#)
7 [Australian Institute of Company Directors. Driving Innovation: The Boardroom Gap 2019 Innovation Study. 2019.](#)
8 [Office of the Chief Scientist. Australia's STEM Workforce. 2020.](#)

STEM Women aligns with the visibility opportunity outlined in the [Women in STEM Decadal Plan](#), and the vision of the Australian Government's [Advancing Women in STEM strategy](#), by providing visibility of role models. Each successful connection contributes to increasing the participation of women in STEM and leads to overcoming the biases and stereotyping that are barriers for girls and women in STEM. The public presence of women in STEM often falls on a small number of people, so STEM Women set a target to reach over 1000 profiles in its first year to ensure opportunities were spread across a greater number of women from diverse STEM discipline areas.

Since its launch in August 2019, over 2600 women have created a STEM Women profile, and more than 41,000 people have visited the site.

There is no cost to be a member or seeker on STEM Women.

EVALUATION

Evaluation of STEM Women from August 2019 to August 2020 was undertaken. This aimed to determine the impact of the platform on increasing women's participation in STEM and how the site is being used and by whom. The evaluation sought to identify:

- **DISCOVERY**—Does STEM Women showcase a diverse range of women? Is it an accessible and usable platform?
- **CONNECTION**—Does STEM Women help women in STEM to share their expertise, knowledge and experiences with the community?
- **AWARENESS**—Is the STEM community aware of STEM Women and its functions?

As STEM Women transitions from its initial development and launch phases, all evaluation learnings will be incorporated into further shaping the development of the platform.

METHOD

The evaluation of STEM Women was informed by a number of sources, including qualitative and quantitative surveys, case studies and data analysis to identify the reach and impact of the site to two primary audiences: women in STEM who created profiles, who we call 'members', and users of the site searching for women in STEM, called 'seekers'.

SURVEYS

STEM Women profiles

A 20-question survey was circulated via email to 2601 STEM Women members on 13 July 2020. Using Likert scales and open-ended questions, the survey aimed to understand usability, access to opportunities, and impacts and perceptions of STEM Women. A total of 268 responses were received.

STEM community

An 18-question survey was circulated via email to 1897 seekers who had sent messages through STEM Women, and an existing Academy women in STEM stakeholder list, on 16 July 2020. The survey was also promoted via social media

CASE STUDY: Creating new stories

"STEM Women enabled me to connect with experts doing similar research, to develop new story ideas for our live storytelling workshops with kids about galaxies."

— Annabel Blake,
Little Literature Co.

and on the STEM Women website. The survey aimed to understand usability, ease of offering opportunities, outcomes of connections and perceptions of STEM Women. 110 responses were received.

CASE STUDIES

In January and August 2020, a selection of seekers and members were contacted via email to provide a description and comment capturing their experiences with the STEM Women site.

ANALYTICS

De-identified user data was exported from the STEM Women servers, along with Google Analytics and Campaign Monitor (email distribution platform) data for the period of 1 August 2019 – 1 August 2020.

EVALUATION FINDINGS

DISCOVERY

STEM Women is primarily designed as a platform for discovery. It aims to help seekers quickly find and reach out to new experts who they otherwise would not have come across.

As a platform available to all women in STEM, STEM Women aims to ensure the database reflects the broad array of skills, backgrounds and experiences of the sector. This section of the report provides a stocktake of STEM Women profiles, with a focus on exploring the following questions:

- Do the member profiles reflect the Australian STEM sector in their number and diversity?
- Is profile information up to date?
- How is the website accessed by women in STEM (that is, current and potential members)?

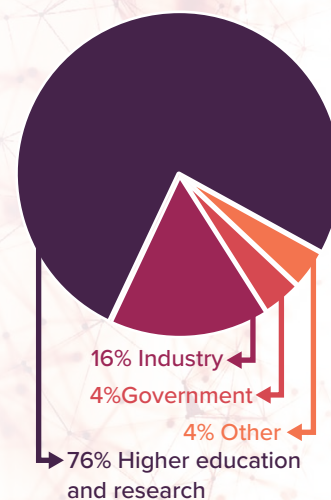
WHO IS ON STEM WOMEN?

In just 12 months, 2677 STEM Women profiles were created, representing around 1% of all women in the Australian STEM-qualified workforce. The most rapid growth occurred in the first two months post launch, with the site reaching 2000 profiles by September 2019. After this period, STEM Women averaged 71 new profile creations per month. This growth exceeded initial expectations, confirming that the STEM Women model is considered useful by the STEM sector.

Range of workforce sectors

Three-quarters of STEM Women members are working or studying in the higher education and research sector (Figure 2). This reflects the composition of the Academy's primary stakeholder network. Moving forward, it is important to grow member representation across all sectors of the STEM workforce. As the demand for a STEM-skilled workforce grows, STEM Women aims to represent visible examples of all STEM career paths.

Figure 2. Range of STEM Women members' workforce sectors



Breadth of career stages

STEM Women collects each member's employment position as an open text field. This gives no quantitative indication of years of experience or career stage. Key word searches of positions found 14% of members are studying, describing their position with 'student', 'master', 'PhD' or 'honours'. A similar methodology reveals 5% of members describe their position as a senior executive role, such as 'CEO', 'dean' or 'director'. To inspire the next generation of senior executive women in STEM, it is important that STEM Women works to increase the representation and identification of senior women in STEM.

Other databases collect and display career stage and/or education level attained, through a drop-down menu. This functionality may be worth considering as an addition to STEM Women to better understand the member demographics and their needs, as well as the needs of seekers.

Reach in states and territories

As a national database, STEM Women provides an important function in aggregating profiles from women across Australia. Currently, representation is greatest along the east coast of Australia (Queensland, New South Wales, Victoria, and the Australian Capital Territory), accounting for 79% of all profiles. Future targeted campaigns in Western Australia, South Australia, Northern Territory and Tasmania are required to ensure that women in all states and territories are equally presented with opportunities.

Target focus expertise areas

Women members collectively described their expertise with 4000 unique terms. This indicates substantial variety in the expertise among STEM Women profiles. Not all STEM sector expertise is equally represented, with a prevalence of life sciences. Moving forward, STEM Women could devise campaigns to target expertise areas with low representation. Selection of areas for promotion could also be informed by common seeker search terms and upcoming STEM days of celebration, such as International Day of Mathematics or World Environment Day. Effectiveness of such campaigns could be determined by monitoring the growth of related expertise terms.

Diversity attributes

Acknowledging the fact that individuals may identify with an intersection of social or political identities, STEM Women provides functionality for women to publicly identify with several diversity attributes including culturally and linguistically diverse, LGBTQI+, Aboriginal, Torres Strait Islander, having a disability and neurodiverse.

Over 10% of profiles chose to identify with one or more of these defined attributes. The ability for STEM Women members to voluntarily declare diversity attributes is an effort to ensure that intersectional identities are visible and can be promoted.

Vocational education and training pathways

Just 8% of the Vocational Education and Training (VET) qualified STEM workforce in Australia are women⁹. STEM Women is a feasible tool to assist in increasing awareness of STEM VET career pathways. Currently, STEM Women does not collect members' qualifications so the proportion of members with

Creating a STEM Women profile

Creation of a STEM Women profile is open to self-identifying women who work or study in Australia in the STEM sector, or who have STEM skills.

Initial profile creation collects:

- name
- email
- location: state and city
- employment: position and organisation
- profile picture
- expertise areas (up to 12)
- presence of a working with children check
- interested opportunity areas
- option to link to an Expert Connect profile.

After signing up, members can log in to their profile, update their above details and add:

- biography
- diversity attributes
- external links
- video
- social media.

Prior to being published on the website, each profile is reviewed by an Academy staff member to ensure all content is appropriate.

Figure 3. National distribution of STEM Women members

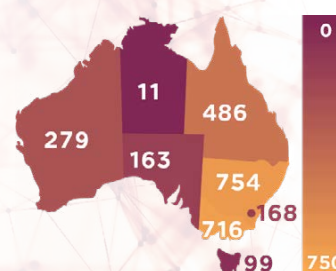


Figure 4. Word cloud of most frequently occurring expertise in STEM Women profiles



⁹ Office of the Chief Scientist. Australia's STEM Workforce. 2020.

VET qualifications is unknown. With further financial support, STEM Women could introduce functionality to capture, display and filter for qualification data, providing a platform to identify and promote VET pathway members. Monitoring and responding to this data would allow STEM Women to guarantee its profiles represents the diverse pathways to STEM careers.

Incomplete profiles

Analytics show that at least 296 people visited the profile creation page but did not complete the profile creation process. This attrition during the profile creation stage will be further investigated to improve engagement and optimise user experience.

STRATEGIES FOR SUCCESS

- Work across the STEM sector to increase identified areas of low representation:
 - in industry and government sectors
 - among senior executive level women
 - in Western Australia, South Australia, the Northern Territory and Tasmania
- Launch regular campaigns to increase representation for underrepresented areas of expertise
- Set a public target to reach 5000 profiles by August 2021
- Ensure that STEM Women highlights and champions intersectionality
- Initiate processes to understand and engage incomplete profiles
- Explore options to attract and promote the VET-qualified STEM workforce

CASE STUDY: Helping with awards

“Within days of signing up I could see how my experience was able to guide and inspire other women in STEM. Other women could see awards I had won and were contacting me for advice and guidance with their applications. That was magical. I believe the STEM Women database will lead to a sharp increase in the number of women we see applying for awards in the coming years.”

— Dr Hayley Teasdale, Lead Scientist, Halo Neuroscience

HOW IS STEM WOMEN USED BY MEMBERS?

Feedback indicated that STEM Women is considered easy to use by 60% of survey respondents, but ensuring members return and update their profile is difficult. Nearly 80% of survey participants did not update their profile since creating it. Comments on usability identified that many members did not know how STEM Women was being used by seekers and therefore were hesitant to dedicate further time to updating their profile. Comments included suggestions to communicate successful opportunity connections, provide explanations of how and why to update certain fields, and increase transparency about how the site is being used by the community.

During community consultation for the development of STEM Women, the platform was perceived to likely add to the existing pressure to maintain multiple digital selves. It is for this reason that STEM Women integrated with the existing CSIROData61 researcher database Expert Connect. Fifteen per cent of profiles activated the integration function which allows members’ research and their articles published on ‘The Conversation’ to sync with their STEM Women profile in real time. The most popular survey recommendation suggested integration with existing databases such as LinkedIn or ORCID. These findings indicate a limited

Increasing transparency with members

In the July 2020 edition of the STEM Women newsletter, a word cloud of June’s most common search terms was shared with STEM Women profile holders. Direct link clicks indicate this led to at least 35 members logging in and updating their profile.

Simple updates like this are helpful to keep STEM Women members engaged and informed.

understanding of the integration with Expert Connect. Moving forward, STEM Women should conduct targeted promotion of the Expert Connect integration and investigate direct integration with other suggested databases.

Members identified some functionality wish-list items, including an indication of monthly profile views, and for STEM Women to generate contact and collaboration suggestions based on similarity of expertise and location. These are thoughtful suggestions that would increase STEM Women's value to its members. Implementation of these features requires additional financial support and resources for major structural changes and re-design of the site.

During profile creation, members indicated that visibility, support, opportunities and community were some of the main reasons they decided to join STEM Women (see Figure 5). Additionally, 30% of survey respondents regularly used the search function on STEM Women, indicating that members are taking the initiative to learn more about, and engage with, their community. The development of a community of women in STEM was not a primary aim of STEM Women but has been a serendipitous outcome. As it's an important focus for STEM Women members, the Academy will continue to foster the community primarily through its member newsletter. Ideas under consideration include:

- calling for blog submissions to be published on STEM Women, allowing members to share their ideas, experiences and opinions
- including links to member profiles who suggest resources and opportunities (with permission)
- featuring STEM Women members
- showcasing examples of STEM Women members connecting or collaborating

STRATEGIES FOR SUCCESS

- Regularly promote opportunity connections on the STEM Women blog and newsletter, and Academy social media
- Create 'how and why' articles for different profile fields, including Expert Connect
- Communicate number of site searches, new members and profile visits in the newsletter
- Explore options for financial support to implement additional community-building functionality
- Trial and evaluate community-building ideas in the newsletter

CONNECTION

Making new connections with relevant experts can be challenging. For example, a Google search for 'chemistry expert woman Australia' returns an incomprehensible 22.7 million results. It is therefore no surprise that our seeker survey found that most people rely on their existing networks to source experts to be involved in their opportunities.

Figure 5. Top responses when STEM Women members were asked "What is your main reason for joining STEM Women?"

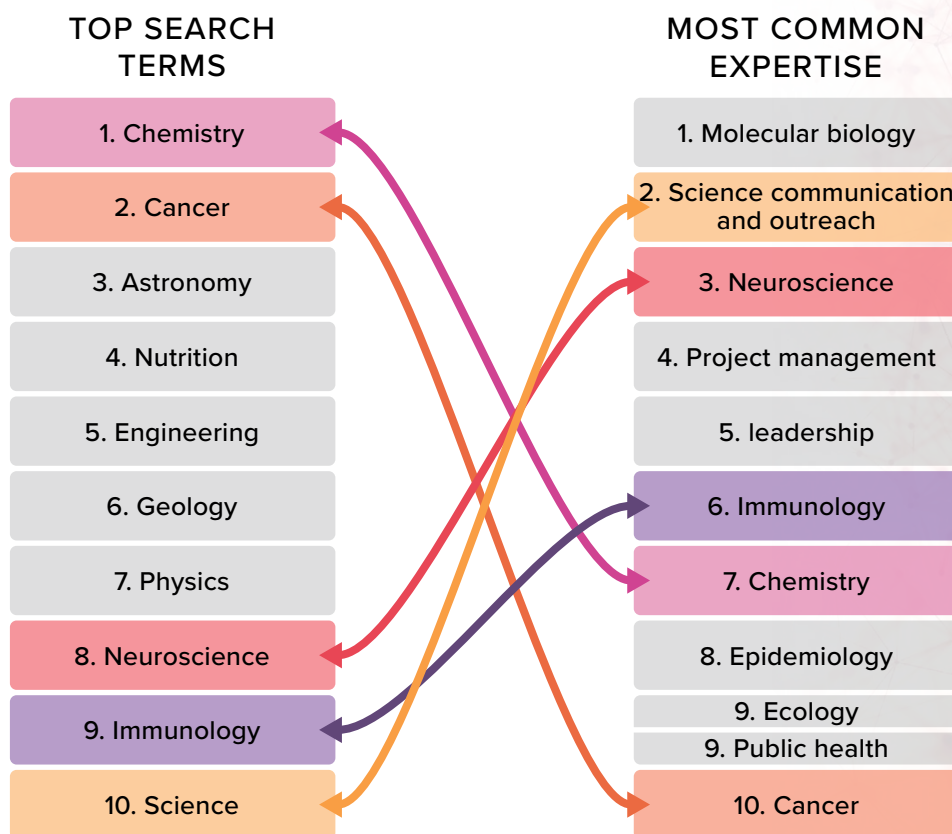


STEM Women wants to help seekers make connections outside of their network. This is achieved by seekers searching the site and finding and messaging suitable experts with opportunities. STEM Women was used for 9570 searches in its first year. The opportunity journey begins with a search, and in this section we explore how STEM Women has facilitated connections and how the site can be adapted to ensure more STEM Women members are connected with useful opportunities.

SEARCHES

STEM Women allows seekers to search for experts via six filters: expertise, state, city, opportunity type, diversity attribute, and if they have a working with children check. The open text expertise filter was used in 76% of searches. Seekers searched with 1574 different expertise terms, the most common being chemistry, cancer, astronomy and nutrition. Several top search terms aligned with the most common expertise listed by STEM Women profiles (Figure 6), but expertise areas such as astronomy, physics and geology are ideal candidates for an expertise-specific member promotion campaign.

Figure 6. Comparison of most common seeker search terms and most common expertise listed on STEM Women profiles



The preference for seekers to search via expertise cements STEM Women as a discovery database. Where else can a search for ‘chemistry’ return over 250 profiles of women with specific knowledge and enthusiasm to engage with a range of opportunities? Repeated requests for STEM Women to include functionality to search via name or organisation detracts from this ethos of discovery. If a seeker knows who they wish to contact, then it is likely that their contact details can be found through a search engine such as Google.

CASE STUDY: Finding women in computing

“STEM Women is what I have been waiting for to help me find women in computing who are keen to be involved in our events.”

— Aidan Muirhead, Communications and Outreach Officer, NCI Australia

The top 25 most common searches (Figure 7) indicate that seekers are looking for experts across all of Australia and a wide range of expertise, reiterating the need to focus on the recommended actions stated in the *Discovery* section listed above.

Mentoring was the most searched opportunity type, making up 30% of all opportunity focused searches. The Women in STEM Decadal Plan recommends the development of best practice guidelines for mentoring programs. This data indicates that many individuals are reaching out for a mentor independent of a structured program and the role STEM Women plays in facilitating these connections should be explored further.

STRATEGIES FOR SUCCESS

- Conduct expertise-specific promotion campaigns as informed by common search terms
- Continue to monitor top search terms and expertise to aim for alignment
- Explore roles STEM Women can play in facilitating useful mentoring relationships

Figure 7. Top 25 STEM Women searches

RANK	SEARCHES	EXPERTISE	STATE	OPPORTUNITY TYPE
1	131	-	QLD	-
2	128	CANCER	NSW	-
3	124	-	WA	-
4	114	-	ACT	-
5	112	-	SA	-
	112	-	VIC	-
7	102	-	NSW	-
8	57	NUTRITION	-	-
9	55	-	TAS	-
10	52	-	NSW	MENTOR
11	51	IMMUNOLOGY	-	-
12	50	-	-	MENTOR
13	46	-	NSW	SPEAKING
14	42	NEUROSCIENCE	-	-
15	39	PHYSICS	-	-
16	37	TECHNOLOGY	-	-
	37	-	NSW	-
18	36	ENVIRONMENTAL OR BIOMEDICAL SCIENCE	NSW	MENTOR
	36	SOFTWARE ENGINEERING	VIC	MENTOR
20	35	ASTRONOMY	-	-
21	34	-	VIC	MENTOR
	34	ASTRONOMY	WA	-
	34	-	ACT	-
24	33	-	VIC	-
25	31	-	-	CONFERENCE

DIRECT MESSAGING

To contact a STEM Women member via the website, a seeker must use the in-platform contact form. In the past 12 months, 9% of STEM Women members were sent a message through the platform. Seeker survey results, however, indicate that this figure only captures a small proportion of interactions facilitated by STEM Women, with 75% of survey respondents successfully connecting with a STEM Women member outside of the platform after finding out about them on STEM Women.

Contact forms were chosen to monitor messages and protect members from unsolicited or inappropriate contact. Data indicates that the current approach should undergo review, with the intention to foster more in-platform connections. One option is for members to voluntarily publish their email address on their profile. Google Analytics could determine the rate these email addresses were accessed compared to in-platform messages.

During the first year, STEM Women's interaction with seekers was minimal. Survey responses indicated that many seekers were unsure what STEM Women would be useful for and what kind of opportunities it had fostered. This highlights the need to work with members and seekers to identify and showcase successful connections more broadly. Survey responses provided details on over 30 successful connections, summarised in Figure 8 and in the report's case studies. These successes should be shared widely.

To investigate any shared patterns in profiles that had received messages, contacted and uncontacted profiles were assessed and compared based on their content (tallying one point for a profile picture, one point for a biography, etc). Messaged profiles had, on average, one more profile section than those not yet messaged. Seekers ranked biography as the second most important profile section, but only half of messaged profiles included a biography, while just 29% of all profiles had a biography. It's clear that STEM Women should strongly encourage members to complete their biography section to enhance their chances of being contacted for opportunities.

Nineteen per cent of messaged profiles had declared at least one diversity attribute. Further investigation is needed to identify whether STEM Women is contributing to an understanding and acknowledgement of intersectionality, or perhaps even assisting seekers to specifically find experts with intersectional identities.

"I was searching for a speaker for an event and, thanks to the search engine on your website, managed to find a profile that matched my criteria exactly. Videos on the profiles were very helpful too."

– Seeker survey respondent

CASE STUDY: Connecting to mentors

Lauren Black, Program Coordinator of Women in Engineering and IT at University of Technology Sydney, runs the Lucy Mentoring Program, connecting women studying engineering or technology at UTS to industry professionals for one-on-one mentoring.

One student, Amelia Guigini, had a keen interest in spinal cord research. Lauren searched for 'spinal cord research' on STEM Women and quickly discovered and messaged Lynne Bilston from Neuroscience Research Australia. Within a day Amelia and Lynne were connected.

Lauren now recommends STEM Women to others, stating, "*STEM Women connects you with a wide network of incredible women outside of your immediate sphere. It is an easy-to-use resource for women in STEM to find mentors in their discipline.*"

STRATEGIES FOR SUCCESS

- Strongly encourage STEM Women members to add a biography
- Explore options for STEM Women members to make their email publicly available on their profile
- Work with members and seekers to showcase successful connections

Figure 8. Some examples of the opportunities facilitated by STEM Women, categorised by opportunity type.

OPPORTUNITY TYPE	EXAMPLES OF OPPORTUNITIES FACILITATED BY STEM WOMEN
MENTORING	"Students interested in doing a PhD under my supervision"
	"Someone contacted me to have a discussion as she was interested in my career path"
	"Opportunity to provide mentoring to younger researchers"
	"A request to mentor other women in STEM by an ARC centre"
	"Asked to mentor someone who was interested in working in a similar role/industry to me"
	"Someone asked if I would speak to their daughter re studying science at university and what opportunities there were. She seemed to not have had any information about university choices etc from her school, she was in year 12"
	"A student reached out to me for mentoring"
	"UTS STEM Mentoring workshop"
OPPORTUNITIES TO COLLABORATE	"I was contacted by a student and responded by offering mentorship, answers to any questions they might have but they did not respond."
	"Participating in research activities relating to COVID 19"
	"Contacted by industrial company"
OUTREACH ACTIVITIES	"A colleague saw the STEM profile and asked me to collaborate with her"
	"I was contacted to give a talk at an annual event at ANSTO for young women who are studying STEM subjects at university. I spoke about my career and experience as a woman in STEM. The talk was very well received and later led to an invitation to give a TED talk next year, which I have accepted."
	"opportunity to speak at a conference (cancelled due to COVID) on women in leadership"
	"Presenting at an event"
PROVIDING AN EXPERT OPINION	"High school visit"
	"I was interviewed about women in STEMM"
	"Providing my experience for a blog article"
	"Interview for a UNSW Journalism Student"
	"A journalist contacted me to ask for my opinion about a topic that I do research in"
SITTING ON BOARDS OR COMMITTEES	"A journalist was considering writing an article and asked my opinion as she was unsure. She decided against writing the article."
	"Phone interview with a reporter for a newspaper article."
OTHER	"Invitation to sit on a degree advisory board"
	"Assessing grant applications for a grant opportunity in my area."
	"I was contacted via the platform to request my participation in a survey being conducted by undergraduate students related to the disadvantages faced by Women in STEMM"
	"Presenting at an employee group as a board member of a NFP that they have selected for donations."

AREAS OF INTEREST

The survey of STEM Women members asked them to identify what opportunities they would like to be offered. 'Offers to sit on boards and committees' was the most highly regarded opportunity by respondents. Analysis of outgoing messages identifies that this opportunity was the least likely to be offered during the past year (Figure 9). Identification of this misalignment provides a key focus area for future STEM Women promotion and partnering strategies.

Figure 9: Opportunities members would like to be offered compared to opportunities seekers are offering

MOST DESIRED OPPORTUNITIES ACCORDING TO MEMBERS

1. sitting on boards and committees
2. opportunities to collaborate
3. providing expert opinion
4. presenting at conferences
5. outreach activities
6. mentoring

MOST FREQUENTLY OFFERED OPPORTUNITIES FROM SEEKERS

1. mentoring
2. providing expert opinion
3. outreach activities
4. opportunities to collaborate
5. presenting at conferences
6. sitting on boards and committees

RESOURCES AND OPPORTUNITIES BOARD

In addition to the original seeker-initiated method of connection, in June 2020 STEM Women introduced a ‘resources and opportunities’ board and accompanying newsletter to provide an additional platform to facilitate connection to opportunities. Survey results identified that it is useful and complements the actions of the site well. However, overall awareness of this functionality was minimal, so it is important to continue to promote the board widely and work with organisations directly to gain access to exclusive opportunities.

STRATEGIES FOR SUCCESS

- Identify a strategic process to increase the number of seekers using STEM Women to find board and committee members
- Continue to promote and maintain the resources and opportunities board

AWARENESS

Increasing awareness of STEM Women is an ongoing task, to both increase membership and connect STEM Women to more opportunities. In its first year, STEM Women worked to create awareness among existing Academy networks through email and social media. The following assesses the impact of this approach to inform future awareness-raising steps.

ACQUISITION AND BEHAVIOR

In its first year, 43,191 users visited STEM Women, an average of 145 unique users per day. Most users were from Australia (78%) and were female (60%), aged 25–34 (38%) and arrived at the site through a search (50%) or by following a direct link (34%). Survey data indicates that most of these users were from the research and academic sector.

Google Analytics indicates that, in general, a user moves from home page to the search page, then to a profile, as one would expect for a database. As it currently stands, further work is required to uncover deeper insights of user behavior, including rates of profile creation, shortlisting, and visits to contact pages.

CASE STUDY: Linking students to STEM career paths

“We hosted another 80 high school students here at Hawker College and without STEM Women it could not have happened as successfully as it did. The professionals from GeoScience Australia were simply amazing, and when a presenter had to back out less than a week before the event I was able to find a replacement almost immediately on your website—who actually flew in from Dubai right before the event and had meetings after! Every single person I have contacted has replied almost within an hour or two, (so rare to have happen!) and every single one has been supportive and helpful. I passed out the small flyers you sent to each of the HS teachers attending and have been spreading the word as best I can here in the ACT. We run WINGS, (our young women in STEM initiative) at Hawker College twice a year, and STEM Women has become our go-to for professional and engaging presenters and speakers!”

— Ryan Elwell, Hawker College

ORGANIC SEARCH

Analytic data show that 69% of users who arrived via an external search engine landed directly on a profile page. This is likely to result from a seeker searching an expert's name in a search engine, and then selecting their STEM Women profile from the search results. Knowing that a significant proportion of traffic comes through search engines, a future focus on search engine optimisation (SEO) strategies would be advantageous to ensure relevant profiles or groups of profiles appear at the top of related search engine searches.

EMAIL CAMPAIGNS

Email was a key method for both seekers (56%) and members (27%) to first discover STEM Women. Email campaigns were a primary promotion method given the extensive subscriber list developed by the Academy during the consultation process for the Women in STEM Decadal Plan. To further promote the launch, STEM Women circulated a promotional kit to key stakeholders, which contained example newsletter content, however the extent to which this was utilised is unknown. For future promotional kits and email campaigns it will be important to include link tracking tags to identify if users are arriving from content shared by stakeholders.

Since June 2020, STEM Women has been circulating a monthly newsletter to all active profiles, containing updates on new resources and opportunities relevant to women in STEM. It has been well received with an average open rate of 48% and multiple resultant connection stories and follow ups. Initially implemented to provide support during COVID-19, the STEM Women newsletter has transformed into a key platform to keep members engaged, connected and informed.

SOCIAL MEDIA

STEM Women was promoted through Academy Twitter, LinkedIn, Facebook and Instagram channels. Upon launch, a video featuring Women in STEM Ambassador Professor Lisa Harvey-Smith was shared widely, accumulating over 50,000 views and over 1000 engagements across Facebook, Twitter and Instagram. Strategy in August and September 2019 focused on encouraging the audience to help STEM Women reach 2000 profiles, driving a substantial number of users to the site. Other peaks in posts and users correspond with promoting new STEM Women functionality (June 2020) and the Academy delivering the Catalysing Gender Equity 2020 conference (February 2020).

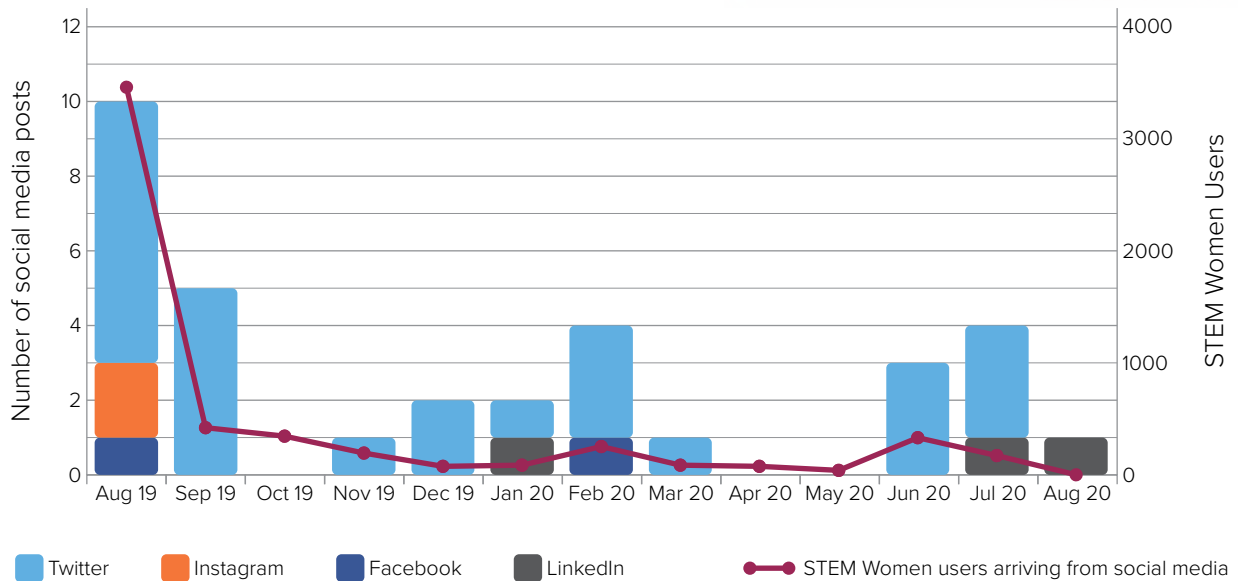
Google Analytics indicates that 12% of users arrived on STEM Women from social media which is reflective of the ad hoc approach to social media posts over the past year. Given the Academy's substantial social media presence of more than 2.4 million followers, a sustained social media strategy focusing on the positive impacts of STEM Women and its members is proposed. Monitoring changes to the numbers of users acquired through social media will help guide the platform, content and style of posts.

CASE STUDY: Raising professional profiles

"The STEM Women database has really helped raise my professional profile. In just a few months since I joined, I have been invited to give a plenary at a conference, host a panel at a symposium and attend a high-profile networking event. Not only have these events been valuable in themselves, but they have also led to further connections and opportunities."

— Isabelle Kingsley, Research Associate, Office of the Women in STEM Ambassador

Figure 10. Number of Academy social media posts compared to STEM Women users acquired through social media



IN THE MEDIA

At the launch of STEM Women, a press release was circulated to Academy media networks. Key coverage by [SBS News](#), [Womens Agenda](#) and [Now to Love](#) accounted for over 800 additional users during the launch period. Another mention of STEM Women in the media was Professor Lisa Harvey-Smith identifying STEM Women as a useful tool to get STEM role models in schools, during her National Press Club address in November 2019.

It is important that STEM Women is recognised as a useful tool for media rather than a focus of articles. A handful of journalists regularly engage with the database, and methods to maintain and extend this relationship to other journalists should be explored.

WORD OF MOUTH

Survey data indicates that STEM Women is perceived to be a useful gender equity tool that the majority of users encourage others to utilise. These results highlight that STEM Women has created an engaged community, but findings from this analysis also indicate the need to increase transparency and provide positive outcomes for all users to discuss and promote. Action should be taken quickly and consistently to prevent STEM Women losing the community's engagement and valuable awareness generated by word-of-mouth.

EVENTS

The inclusion of STEM Women at events was limited due to resource constraints. STEM Women was launched alongside an existing event, Women in Tech Pitch, which allowed it to reach a broad audience that included women working in entrepreneurship and technology fields and contributed to an initial rapid growth of new profiles. In addition, Academy Chief Executive Anna-Maria Arabia promoted STEM Women during a variety of keynote presentations.

CASE STUDY: Exposure to media

Production company Media Stockade used STEM Women to discover an astronomy expert for an ABC documentary series. They found Karlie Noon and offered her the opportunity based on her communication work around Indigenous knowledge and research into the Milky Way, all showcased on her profile.

When asked about the experience, Karlie stated, "Working with Media Stockade and ABC on the Back to Nature series has given me a once in a lifetime experience. I have a whole new appreciation of what can be achieved with film media and learnt so much from working with all the talented and professional crew."

STEM Women, thanks to generous funding from Professor Michelle Coote, supported twelve women to attend the Catalysing Gender Equity 2020 conference. At this Academy-led national conference STEM Women was also promoted through a poster in the Equity Action Gallery, promotional material and in a handful of presentations.

Several event organisers reached out to STEM Women for access to flyers and PowerPoint slides in order to promote the site during their event. Events are an untapped avenue of promotion for STEM Women that will be explored further, pending the easing of COVID-19 restrictions

STEM WOMEN CONNECTORS

STEM Women Connectors is a proposed initiative in which STEM organisations and networks can directly collaborate with STEM Women to meet their gender equity targets, inspire future generations of women in STEM and help grow the STEM Women community.

The initiative will publicly recognise organisations who encourage their employees to join STEM Women. It will also build a network of organisations in which STEM Women can seek resources, opportunities and connections. With an effective promotion strategy to ensure reach to new networks, particularly in industry, it is hoped that the Connectors process will lead to increased impact and value for the STEM Women site. This initiative is anticipated to launch in late 2020.

STRATEGIES FOR SUCCESS

- Continue to strengthen strategic and regular promotion via social media and email communication
- Include tracking tags on shared links to increase power of analytics
- Explore avenues to improve STEM Women's SEO
- Explore options to ensure media recognises STEM Women as a useful tool
- Identify and promote new avenues, such as the Connectors initiative, to increase visibility of profiles and create connections to opportunities in new areas of the STEM sector

CONCLUSIONS

In just one year, STEM Women proved to be a powerful tool in the journey towards gender equity. With a community of over 2600 members, which is growing every day, the second year of STEM Women promises to be one of growth and promotion. The Academy and other STEM leaders and organisations can all play a role in reminding the sector that STEM Women is here and has the potential to make substantial gains in gender equity. Together we can use this platform to maintain momentum in gender equity across the STEM sector.

CASE STUDY: Mentoring future engineers

"With the current gender disparity in the fields of engineering and IT, the STEM Women database has provided a brilliant and much needed central resource to bring forward the profiles of women in STEM from all across Australia, to help connect, mentor and break the 'manel' cultures in STEM fields. Through my profile I got the opportunity to have an amazing experience to mentor a team of students from Bialik College for BrainSTEM innovation challenge."

— Dr Muneera Bano, Senior Lecturer, School of Information Technology, Deakin University

STEM Women acknowledges those who have embraced the platform openly, dedicating time to create a profile, share a tweet, add to our newsletter or taken time out of their day to engage with STEM Women in another way. Without you we would not be celebrating the community and connections showcased in this report. The success of STEM Women is thanks to the strength of the new and burgeoning community it created.

Every message sent and connection made is a step in the right direction in increasing the visibility of women in STEM and assisting in reducing the biases and stereotypes that contribute to a gender imbalance in STEM. We now must work together across industry, government and media to increase awareness and the number of connections made.

This is just the first step; continued evaluation is needed to take stock of how well STEM Women is reaching its goals. By making this report public we are also accountable for our actions. The Academy will work with its stakeholder network to implement this report's extensive list of future work. Some of these actions will require additional resources and the Academy is actively investigating new partnerships to support this.

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