Student feedback from TAFE Taster Program pilot 2022

STEM Community Partnerships Program, Generation STEM

Written by the Impact and Evaluation Team, Education and Outreach

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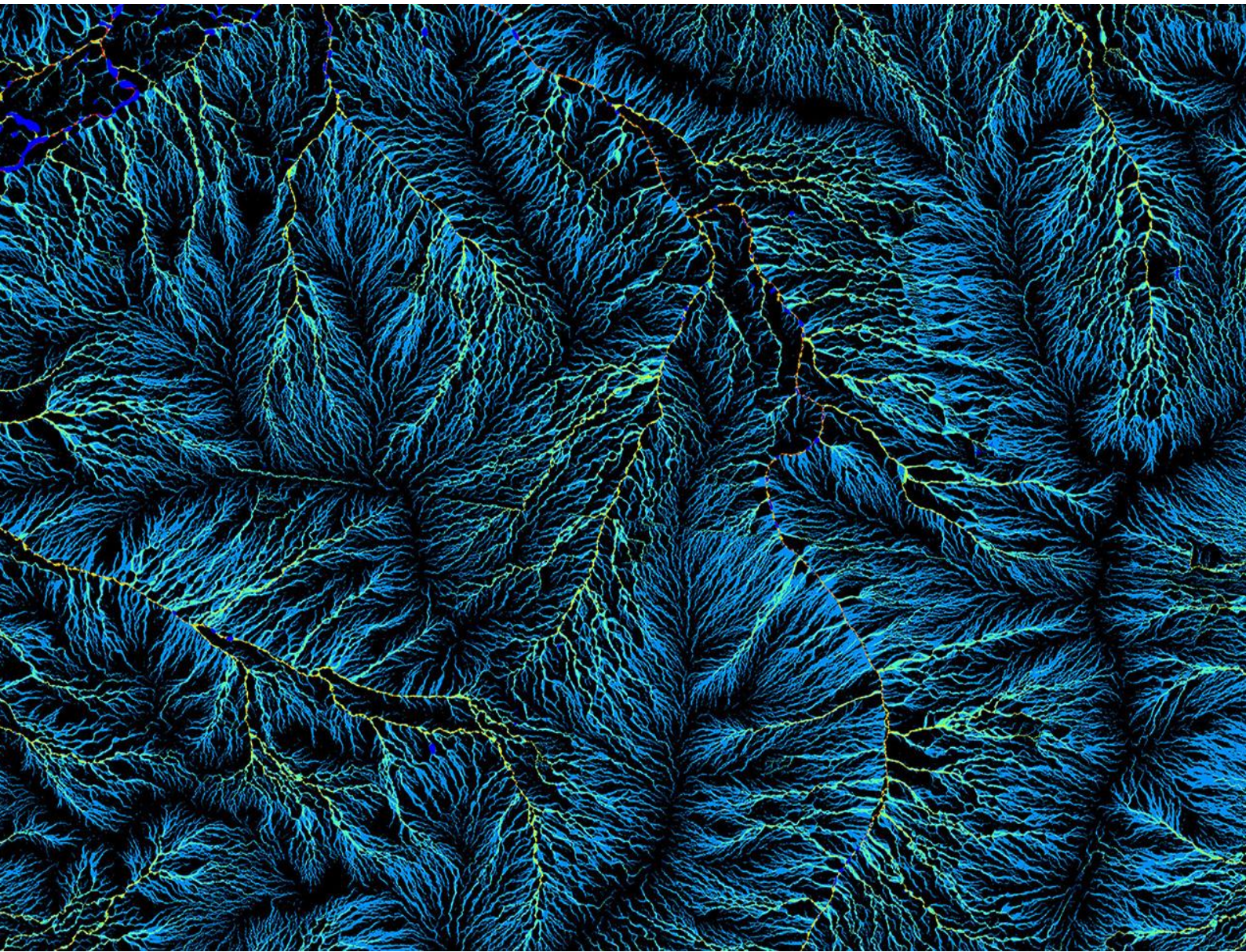


Introduction

This report provides the STEM Community Partnerships Program (STEM CPP) team and TAFE institutions participating in STEM CPP with student feedback about the STEM Taster Program piloted in Term 1, 2022. A total of 14 students completed the post-event questionnaire, which is a 74% response rate.

A total of 19 students participated in the TAFE Taster Program, with 63 per cent being female. Notably, most of those who responded to the survey were female (86%), and culturally and linguistically diverse (64%).

Despite a high response rate, due to the small number of responses and cohort of participants, results should be interpreted with some caution. These findings are indicative only and do not constitute a robust evaluation of the TAFE Taster Program; rather, the findings will help inform the implementation of future TAFE experience sessions. In addition, as with most surveys, there was the potential for bias, including social desirability effects. This was countered through simple, clearly worded questions; including a mix of closed and open-ended questions; and avoiding leading questions.

Program description

CSIRO partnered with TAFE NSW – Kingswood / Mount Druitt to deliver the STEM Taster Program in February 2022. The program focused on the following subject areas over seven days:

- Nursing
- Sterilisation
- Dental assisting
- Health care general / allied health – physiotherapy / sports and fitness science
- Technology and design thinking
- Manufacturing and engineering
- STEM and design thinking

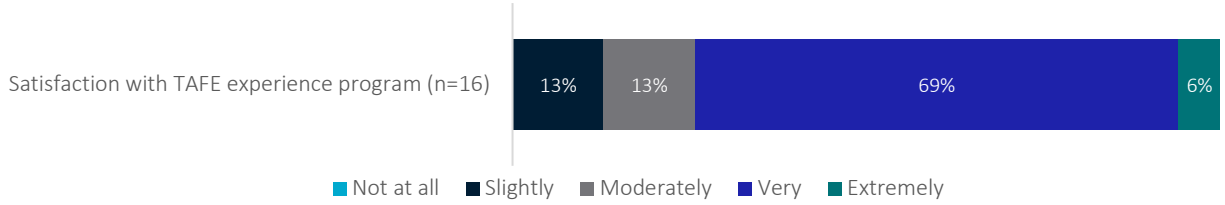
During the program, students learnt about possible career pathways associated with the above STEM profession areas through hands-on practical activities and interacting with industry professionals. This pilot TAFE Taster Program had a particularly strong focus on allied medical careers, but emphasising the STEM components associated with these professions. A greater proportion of the practical activities were associated with these subject areas than the other STEM related topics listed above.

Results and feedback

Student satisfaction and feedback

Students were asked how satisfied they were with the STEM Taster Program. Of those who responded (n=16), **most stated they were 'very' satisfied (69%).** Equal numbers of respondents indicated that they were 'moderately (13%) or 'slightly' satisfied (13%) (see Figure 1). None of the respondents indicated that they were 'not at all' satisfied with the program.

Figure 1: Student satisfication with the TAFE experience program, 2022



When asked to expand upon what they enjoyed most about the experience, a majority of students stated that they enjoyed the 'hands-on' practical activities offered to them throughout the program. A notable number of students also specified that they enjoyed the physiotherapy component, for example:

> *All the practical work (e.g. making things, exercises, seeing/using equipment, etc.).*
>
> *The subjects were interesting and the opportunities to look and do things that we normally wouldn't be able to do in school.*

Similarly, when asked what improvements could be made to the TAFE experience program, many students focused on practical activities, indicating that they would prefer even more than were offered. As the program is currently structured, practical activities are centred on the medical subject areas. The program team might need to consider how best to make the TAFE Taster Program more engaging for some of the STEM 'design thinking' topics which can't as easily be 'hands-on' for high school students.

> *Some classes didn't have much prac,* [and] *it mainly consisted of sitting for a long duration of time.*
>
> *Throughout the 7 weeks there were many different things happening such as theory and a bit of prac. I* [thought] *there were more activities.*

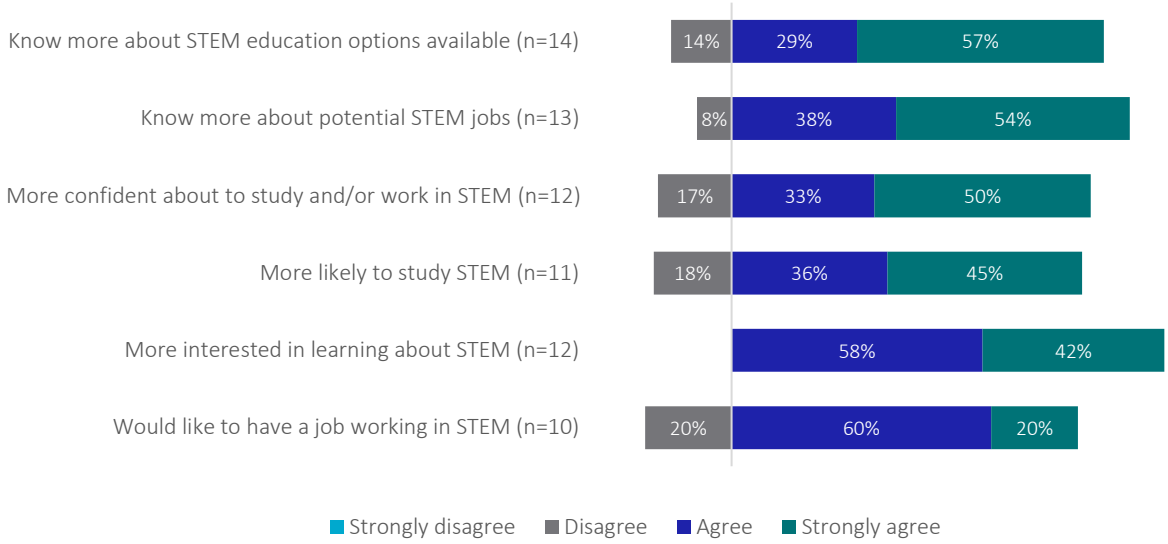
Change in students' awareness and attitudes towards STEM

One of the main goals of STEM CPP is to improve students' awareness, attitudes, and interest in STEM, which in turn, is anticipated to lead to a greater aspiration among students to further study and work in STEM. The survey asked respondents what they thought about a number of statements[1] after participating in the STEM Taster Program. The statements eliciting the most positive responses were: 'more interested in learning about

[1] This list of statements was selected from a range of international and domestic studies measuring student interest in, attitudes about, and self-efficacy in STEM. The items were selected from the main STEM CPP survey sent to students at the end of each year.

STEM' (100% agreed or strongly agreed) and 'know more about potential STEM jobs' (92%) (Figure 2). This indicates that the TAFE Taster Program has done well emphasising what STEM pathways are available to students. Relatively fewer respondents agreed with the statements 'would like to have a job working in STEM' (80% agreed or strongly agreed) and 'more likely to study STEM' (81%), indicating that students were slightly less committed to pursuing actions related to STEM, although the results were still quite strong.

Figure 2: Students' self-reported change in interest and attitudes about STEM, 2022



Note: Unsure/hard to say responses were not analysed for this question.

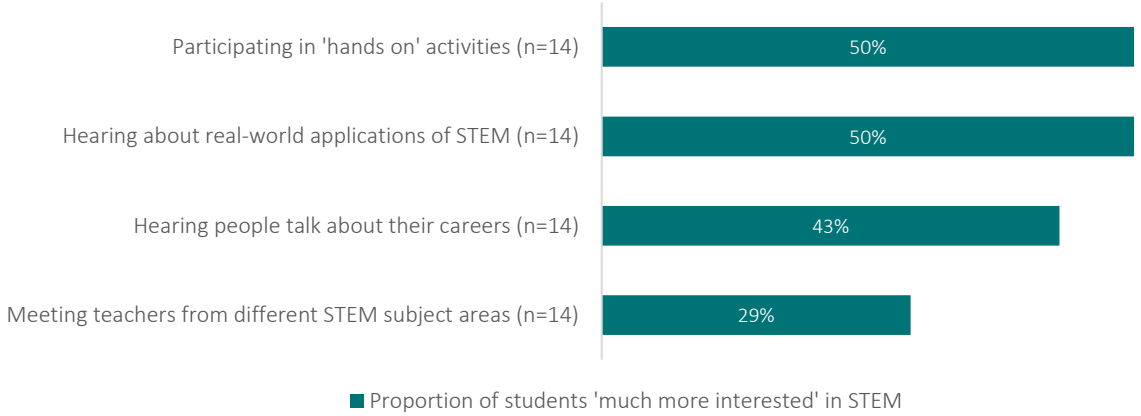
Students were also asked about whether participating in the TAFE Taster Program had influenced what they wanted to do for future study and/or career. All students responded, and of these, 10 (71%) stated the program had influenced their future education and career pathways. As indicated above in Figure 2, this was likely a result of having a greater awareness about the STEM options available to them.

> *It has given me a taste of the outside world and a bigger picture of the career path I would like to pursue.*
>
> *Yes, I have realised how many jobs are available. For example, in the navy there are hundreds of jobs you can do.*

Individual program components

Students were asked to rate the impact each component of the TAFE experience had on their interest in STEM (Figure 2). **Students were equally likely to report that 'participating in 'hands-on' activities' and 'hearing about real world applications of STEM' had made them 'much more interested in STEM'** (50% for each statement). These results align with written survey feedback from students. In contrast, students were much less likely to say meeting various TAFE teaching staff had a significant impact on their interest in STEM (29% 'much more interested'). Additionally, the Generation STEM program team noted that more STEM industry professionals are needed for future TAFE Taster Programs so as to better communicate to students genuine STEM career pathways (Figure 3, 'hearing people talk about their careers'). This pilot only had available four STEM industry professionals over the seven weeks.

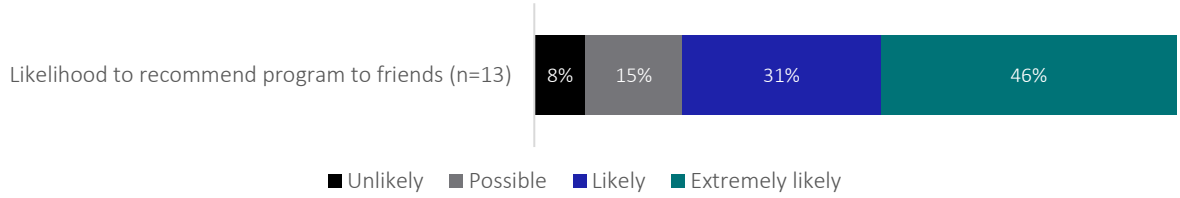
Figure 3: **Impact of specific components on students' self-reported interest in STEM, 2022**



Likelihood to recommend

Finally, students were asked about their likelihood to recommend the TAFE Taster Program to friends. Close to half (46%) indicated they were 'extremely likely' to recommend it, and another 31% indicated 'likely'. Of those students who were less likely to recommend the program, a majority reported knowing what they wanted to do after school and that program had not influenced their choices.

Figure 4: Likelihood to recommend the TAFE Taster Program, 2022



Note: Unsure/hard to say responses were not analysed for this question.

Conclusion and learnings

Overall, data from the survey indicate that there are strong foundations with the TAFE Taster Program pilot, with majority of students (77%) likely to recommend the program to their peers and 100% reporting they were 'more interested in learning about STEM' (agreed or strongly agreed) after participating in the program. Additionally, the exposure to varied subject areas over the seven weeks has helped improve students' awareness about potential STEM jobs (92% agreed or strongly agreed).

The program has provided students with an opportunity to engage with STEM in unique ways that may not have been possible through their standard schooling. In particular, students emphasised they enjoyed the 'hands-on' practical activities of the program, but would have preferred even more to be offered. Consideration might need to be given to structure of certain elements of the program so as to better engage high school students. For example, incorporating more activities and physical tours, using tasked-based learning, and having interactive presentation sessions with STEM industry professionals.