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STEM Community Partnerships Program – 2025 Insights Report

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Acknowledgement of Country

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Acknowledgments

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Executive summary

This report presents an insight-driven analysis of the 2025 implementation of the Generation STEM Community Partnerships Program (STEM CPP). Rather than focusing solely on program performance, it examines how and why the program is working, for whom it is most effective, and what this means for future design, delivery and scale.

STEM CPP is most impactful when students experience STEM as relevant, applied, and connected to the real world. Inquiry-based community projects, interaction with industry professionals, and participation in active STEM events work together to position STEM as something students can use to understand and address real-world problems. This combination is STEM CPP's core strength and the primary mechanism through which it influences student engagement and thinking.

Importantly, the program's impact is not primarily reflected in large shifts in general STEM interest. Instead, it is seen in more meaningful changes in how students understand STEM. Students demonstrate significant increases in their perception of STEM as useful in everyday life, alongside improved awareness of STEM careers and education pathways. These outcomes are critical precursors to longer-term participation, shaping how students make decisions about subject selection and future opportunities.

A second key insight is the program's strong equity potential. Students from low socio-economic backgrounds show the largest gains in perceived relevance of STEM, indicating that contextualised, real-world learning is particularly powerful for those who may have had less prior exposure to STEM pathways. However, participation data reveals a critical tension: the students who benefit most are not proportionally represented in the program. Schools in lower ICSEA quartiles, regional and remote areas, and those serving higher proportions of Aboriginal and Torres Strait Islander students remain underrepresented. This indicates that while equity is embedded in the program's design, it is constrained by access and participation.

Implementation conditions also play a significant role in shaping outcomes. Educators strongly value STEM CPP, reporting benefits to both teaching practice and student learning. However, implementation is often constrained by curriculum pressures, time limitations, and structural misalignment within the school system.

Industry engagement is another clear strength. The program has successfully established partnerships with a diverse range of organisations, with high levels of partner satisfaction and contribution to STEM CPP activities. However, most engagement remains episodic, concentrated in events such as showcases or site visits. While effective for exposure, this model does not fully leverage the potential of industry partners to support sustained learning, mentoring, and deeper career understanding that is essential to participating students.

Across student outcomes, the program contributes strongly to several factors associated with ongoing STEM participation. These include increased perceptions of STEM relevance in their everyday life, enhanced career awareness, and significant gains in transferable skills such as problem-solving, communication and collaboration.

At the same time, the evaluation highlights participation in STEM beyond Year 10 is shaped by external factors, some beyond the remit of STEM CPP. Student report their subject decisions are influenced by perceived relevance to careers, confidence in ability and subject availability. Persistent barriers, including low self-efficacy, perceived difficulty, and limited access to opportunities, remain outside the direct control of the program.

Taken together, these findings point to a clear strategic direction for the next phase of STEM CPP:

1. STEM CPP should protect and strengthen its core design, maintaining a focus on inquiry-based, real-world learning and ensuring authenticity remains central as delivery evolves. Depth of experience should be prioritised over breadth of activity.
2. Achieving equitable impact at scale will require a shift toward more intentional targeting and differentiated delivery. This includes increasing participation from underrepresented schools, strengthening engagement with Indigenous communities, and developing models that respond to the constraints faced by lower-capacity/underrepresented schools.
3. Addressing implementation challenges will require closer alignment with school systems. Strengthening curriculum mapping, adjusting planning timelines, and continuing to provide flexible or modular delivery options will support more consistent integration and reduce reliance on individual teacher capacity.
4. There is a clear opportunity to deepen industry engagement. Moving beyond one-off interactions to more sustained forms of involvement, such as mentoring, repeated engagement, and project co-design, will strengthen students' understanding of STEM careers and pathways.

Overall, the 2025 findings indicate STEM CPP is a high-quality, high-impact program with a clear and distinctive contribution to the STEM education ecosystem. Its greatest value lies in helping students see STEM differently: not just as a subject, but as something relevant, useful, and connected to their future.

The next stage of development will depend on the program's ability to scale this strength while navigating the realities of the education system. With greater alignment, targeted participation, and deeper partnerships, STEM CPP is well positioned to play a sustained role in strengthening equitable STEM pathways across New South Wales.

Part I Introduction

CSIRO’s STEM Community Partnerships Program (STEM CPP) is part of the broader Generation STEM initiative, which aims to attract, support and retain more young people in NSW STEM education and career pathways. As a school-industry partnership model, STEM CPP connects Year 7–10 students with local employers and real-world STEM applications to make learning relevant, contextual and community-driven. By grounding STEM learning in local challenges and opportunities, the program strengthens the pipeline of future innovators while responding to the needs of diverse communities across metropolitan and regional NSW.

The program’s delivery model is deliberately multifaceted, offering students a suite of hands-on experiences and industry interactions that extend well beyond the classroom curriculum. These include inquiry-based, community problem-solving projects, site visits to STEM workplaces, structured work experience placements, interactions with STEM professionals, teacher professional learning, and participation in local career expos and industry events. This coordinated set of interventions ensures students not only develop technical and critical-thinking skills but also build confidence in navigating STEM environments and understanding the diversity of STEM career and study pathways available to them.

Importantly, STEM CPP is reaching students across a wide geographical footprint, including Western Sydney, the Central Coast, the Central West, Dubbo, Albury and Queanbeyan-Yass. Low socioeconomic schools within these regions are also actively sought out to participate in the free program. This ensures equitable access to STEM enrichment opportunities regardless of a student’s initial background.

Rather than focusing solely on whether the STEM CPP program has delivered against its intended outputs, this insights report is designed to generate a deeper understanding of how and why the program is working, for whom it is most effective, and under what conditions its impact is strengthened or constrained.

The evaluation data shows that STEM CPP has significantly improved students’ perceptions of STEM, strengthening student’s recognition of STEM’s relevance to their everyday lives, and increased student’s interest in pursuing STEM pathways, particularly among those from underrepresented backgrounds. These outcomes highlight the program’s growing value as a strategic enabler for STEM capability building across NSW and an essential contributor to Generation STEM’s long-term goals.

Part II What is working in STEM CPP

This section synthesises evidence from across the 2025 STEM CPP surveys and programmatic data to identify the program elements that are most influential, explain why they are effective, and explore how these insights should shape future delivery.

1 Relevance and authenticity are the strongest drivers for student STEM engagement

Across the 2025 STEM CPP evidence base, a consistent and robust pattern emerges: the program is most effective when learning experiences are explicitly grounded in real-world contexts and authentic applications of STEM. This is evident across both quantitative and qualitative data sources, including student surveys, teacher responses, and reported implementation practices.

Student-reported outcomes indicate activities characterised by active participation and interaction have the strongest influence on engagement. Participation in showcase events (86%), interactions with STEM professionals (80%) and completing the inquiry-based project (80%) were most frequently identified as drivers of increased STEM interest (Figure 1).

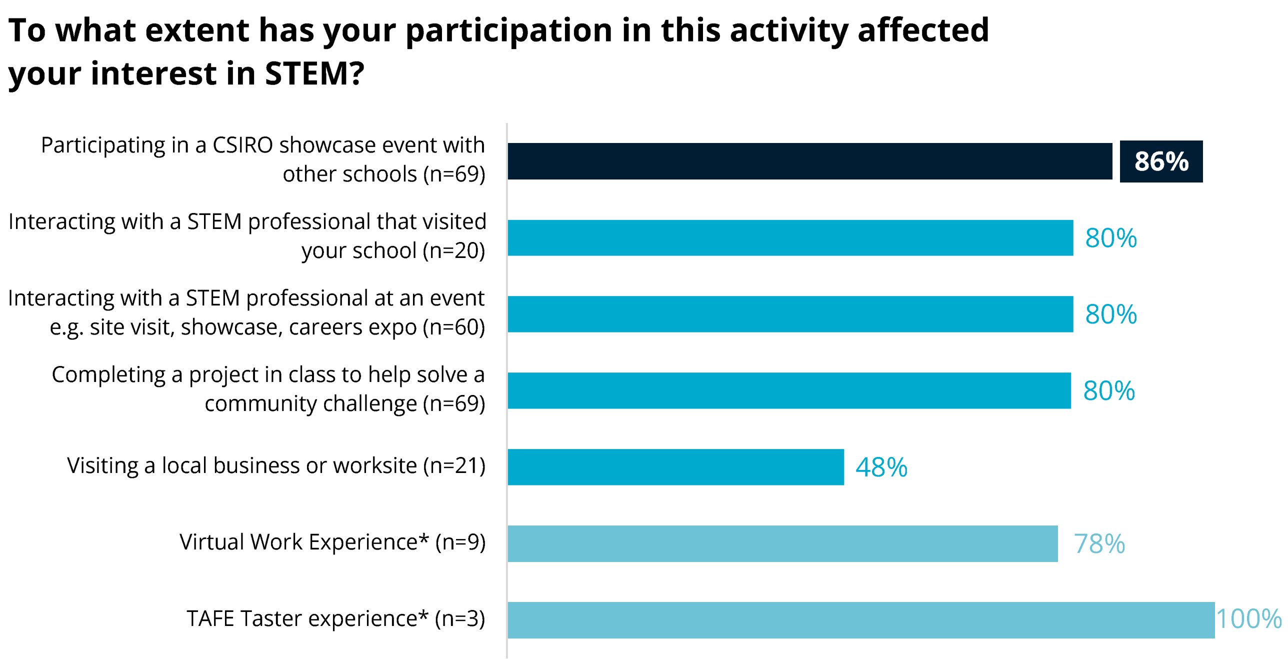

Figure 1 Student's responses to the question 'To what extent has your participation in this activity affected your interest in STEM?'. Only students answering, 'Has made me much more interested in STEM' and 'Has made me a bit more interested in STEM' are shown in the figure above

These findings are strongly aligned with teacher perceptions, with educators similarly identifying showcase events (76%), interactions with STEM professionals (58%) and inquiry-based community projects (66%) as impactful components for student engagement (Figure 2). Importantly, activities that are more observational in nature, such as visiting a workplace without structured interaction, were less influential, suggesting that exposure alone is insufficient to generate sustained STEM interest.

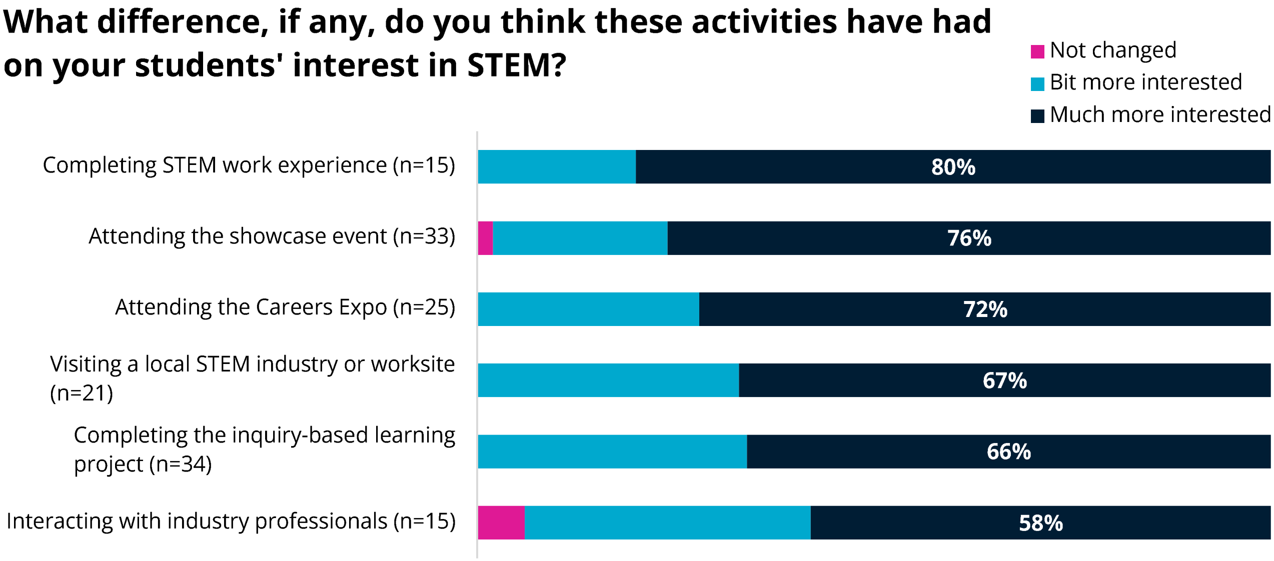

Figure 2 Perceived impact of STEM engagement activities on students' interest in STEM. Responses are sorted by descending 'Much more interested' percentage

One of STEM CPP's greatest strengths is its inquiry-based projects, which engage students in real-world community STEM problems with industry partners whilst providing authentic interactions with STEM professionals and role models. Showcase events extend this learning by enabling students to present their work to peers and industry partners, reinforcing recognition of their STEM skills and capabilities. This is reflected in statistically significant increases in students' perceptions of STEM's usefulness in everyday life (Table 1), suggesting relevance is a key mechanism through which STEM CPP shapes student thinking. Student's perceptions on STEM's usefulness was not only statistically significant amongst this year's cohort, but was also significant regardless of the student's gender, cultural or socioeconomic background. The biggest change came from low socioeconomic status students ($g = 0.9$), where opportunities to engage in real-world STEM problems can be quite limited.

Table 1 Pre and post values, along with statistical results from students' answering, *'To what extent do you agree with each of the following statements? 0=Strongly disagree and 5=Strongly Agree; I think STEM is useful in everyday life'*. Effect size was calculated using the Hedge's g statistic

QUESTION	ALL (N=77)	FEMALE INDENTIYING (N=46)	MALE IDENTIFYING (N=26)	CALD^ (N=35)	NON-CALD (N=41)	HIGH SES^^ (N=48)	LOW SES (N=21)
Before STEM CPP	3.649	3.457	3.885	3.600	3.732	3.771	3.429
After STEM CPP	4.156	4.043	4.385	4.143	4.244	4.083	4.333
Difference	0.506	0.587	0.500	0.543	0.512	0.313	0.905
p-value	0.000	0.001	0.009	0.003	0.002	0.007	0.005
effect size*	0.456	0.504	0.502	0.444	0.505	0.274	0.911

*MN Associates (2025) consider an intervention to have a large effect when the effect size exceeds 0.80, a medium effect when it exceeds 0.50, and a small effect when it is above 0.20.

^Culturally and Linguistically Diverse (CALD) ^^Socioeconomic status

‘Throughout this year I built on my understanding of STEM and realised what ever career I choose I CAN do STEM alongside it. The project I've made in class built on my passion for my community and how I can made direct change no matter my SES. Completing this project gave me a lot of understanding about a niche topic which I can expect to support me in my future.’
– Participating STEM CPP student

Educator feedback reinforces this conclusion also. Teachers consistently described inquiry-based learning as both engaging and transformative, highlighting students’ progression from initial curiosity to confidence in presenting ideas to external audiences. These observations suggest authenticity does not only enhance engagement, but also supports student agency, ownership, and identity development in STEM contexts.

2 Equity impacts are amplified when relevance meets access

The 2025 STEM CPP data provides strong evidence that the program supports positive outcomes for students from underrepresented and traditionally marginalised groups in STEM, including those from low socio-economic backgrounds.

Quantitative analysis shows students from low SES backgrounds experienced the largest gains in perceiving STEM as useful in everyday life (g=0.91, Table 1). This is a notable finding, as perceptions of STEM relevance are strongly linked to long-term engagement and participation in STEM pathways. Gains were also observed across female identifying students and culturally diverse cohorts, indicating that the program is contributing to meaningful shifts in how diverse students perceive STEM.

These outcomes suggest the design features identified in the previous section, particularly the emphasis on authentic, community-based learning, are especially effective for students who may not already have strong exposure to STEM pathways. By grounding STEM in local and relatable contexts, the program appears to reduce barriers associated with abstractness or perceived irrelevance, which are often cited as factors limiting engagement among underrepresented groups.

However, participation data indicates these benefits are not reaching all students equally. Schools in the lowest Index of Community Socio-educational Advantage (ICSEA) quartile are underrepresented in the program (10% compared to 24.8% of all NSW schools), and there is limited participation from schools with higher proportions of Aboriginal and Torres Strait Islander students (Table 2). In addition, no participating schools were in outer regional or remote areas, despite representing over 10% of NSW Schools.

Table 2 Characteristics of schools participating in STEM CPP in 2025. These characteristics include enrolment composition, remoteness, socio-educational advantage (ICSEA), school sector, and local government area, compared with the NSW school population (Australian Curriculum Assessment and Reporting Authority, 2026b, 2026a)

2025 PARTICIPATING SCHOOLS	NUMBER OF SCHOOLS	PERCENTAGE OF SCHOOLS	PERCENTAGE OF NSW SCHOOLS*
Sex			
Female enrolments < 49%	32	50.8	50.0
Female enrolments ≥ 49%	31	49.2	50.0
Indigeneity			
Aboriginal and/or Torres Strait Islander enrolments < 7%	40	63.9	49.9
Aboriginal and/or Torres Strait Islander enrolments ≥ 7%	23	36.1	50.1
Culturally and Linguistically Diverse (CALD)			
CALD enrolments < 18%	13	28.6	50.4
CALD enrolments ≥ 18%	50	71.4	49.6

2025 PARTICIPATING SCHOOLS		NUMBER OF SCHOOLS	PERCENTAGE OF SCHOOLS	PERCENTAGE OF NSW SCHOOLS*
Remoteness Area				
	Major Cities	56	88.9	64.5
	Inner Regional	7	11.1	24.1
	Outer Regional	0	0.0	9.4
	Remote or Very Remote	0	0.0	1.9
ICSEA				
	Quartile 1 (most socio-educationally disadvantaged)	8	10.0	24.8
	Quartile 2	21	40.0	25.3
	Quartile 3	19	33.3	25.0
	Quartile 4 (least socio-educationally disadvantaged)	13	16.7	25.0
School Sector				
	Government	31	49.2	56.8
	Catholic	16	25.4	11.9
	Independent	16	25.4	31.2
Local Government Area				
	Blacktown	5	7.9	13.3**
	Canterbury-Bankstown	8	12.7	10.5**
	Central Coast (NSW)	6	9.5	10.5**
	Penrith	8	12.7	7.9**
	Campbelltown (NSW)	4	6.3	7.4**
	Liverpool	7	11.1	7.4**
	Parramatta	1	1.6	7.1**
	Cumberland	4	6.3	5.1**
	Fairfield	4	6.3	4.8**
	Inner West	1	1.6	4.3**
	The Hills	3	4.8	4.3**
	Camden	2	3.2	3.8**
	Albury	3	4.8	3.1**
	Blue Mountains	1	1.6	2.8**
	Hawkesbury	1	1.6	2.3**
	Queanbeyan-Palerang	2	3.2	2.0**
	Bathurst	1	1.6	1. 8**
	Greater Hume	1	1.6	0.8**
	Lithgow	1	1.6	0.8**

*NSW schools that have enrolments across Year 7-10.

**Percentage of schools that are only located in the disclosed Local Government Areas.

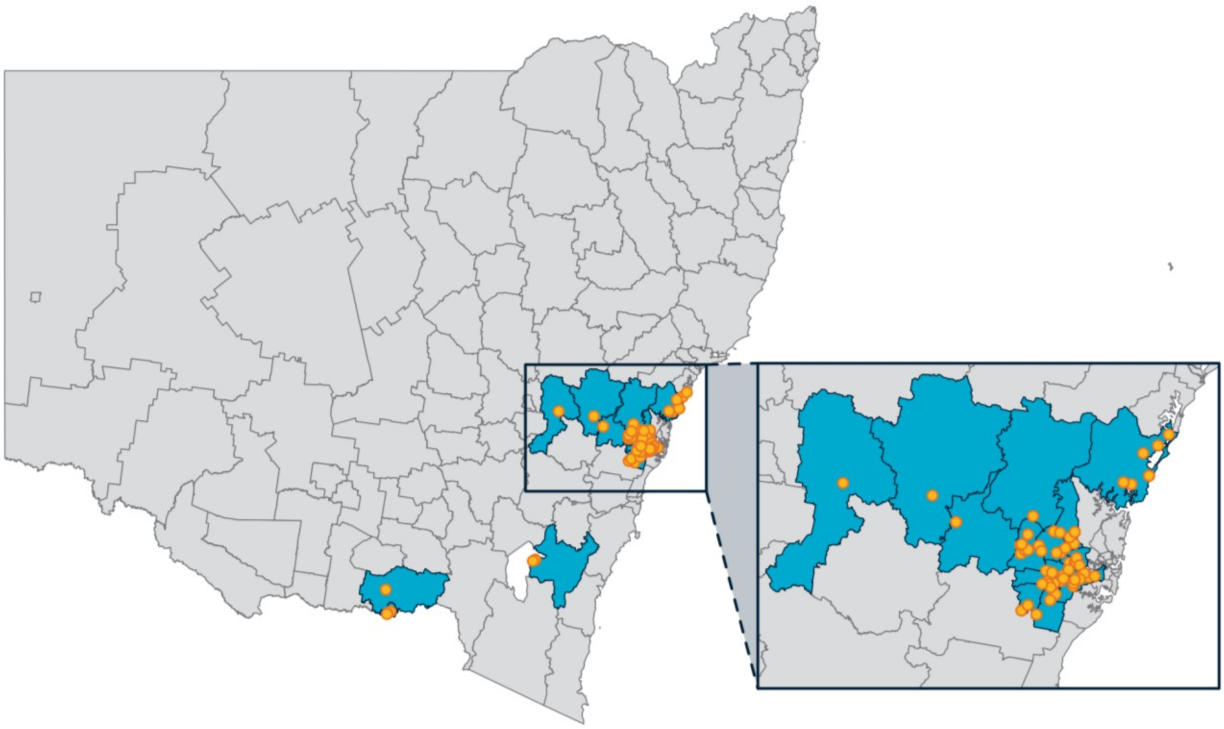

Figure 3 New South Wales Local Government Areas (LGAs; blue) and Schools (orange) participating in 2025 STEM CPP. Metropolitan and Western Sydney has been zoomed in on to showcase the breath of participating schools and LGAs across these areas

While STEM CPP demonstrates strong equity potential, its current reach is shaped by structural constraints that limit participation from lower-capacity schools. These constraints likely include logistical challenges, resource limitations, competing priorities, and reduced access to networks and partnerships that facilitate program involvement.

This pattern has important implications for how equity is conceptualised within STEM CPP. Rather than viewing equity as a separate objective or targeted intervention, the evidence suggests that equity is inherent to the program’s design, particularly through its emphasis on relevance and real-world application. However, achieving equitable outcomes at scale requires not only effective and relevant pedagogy, but also intentional strategies to address systemic barriers to participation.

From a program design perspective, this reinforces the need to move beyond a “one-size-fits-all” model of implementation (Banks et al., 2023), particularly when offering activities to schools and students from underrepresented backgrounds. Schools differ significantly in their capacity to engage with external programs, and those with the greatest need often face the most constraints. Continuing to incorporate differentiated support, including:

- targeted outreach to underrepresented schools and regions,
- tailored implementation support for lower-capacity contexts, and
- flexible delivery approaches that reduce dependence on school-based resources and logistics

is essential for the engagement of students who currently have a low identity around STEM. In addition, strengthening engagement with regional schools and STEM professionals continues to require specific partnership models that prioritise local relevance and co-design, ensuring that program delivery aligns with community needs and contexts (Murphy, 2020, 2022).

3 Educator capacity, confidence and curriculum constraints shape STEM CPP implementation

The successful implementation of STEM CPP is closely linked to the conditions under which educators can integrate STEM CPP within their classrooms. While the 2025 evaluation data demonstrate strong educator endorsement and engagement, it also highlights persistent structural challenges that constrain implementation.

Teachers consistently reported that participation in STEM CPP contributed positively to their teaching, with the largest impacts associated with delivering inquiry-based projects (69%), engaging with industry mentors (62%), and participating in teacher networking opportunities (65%) (Figure 4). These findings suggest that the program not only benefits students but also supports professional learning and pedagogical development for educators.

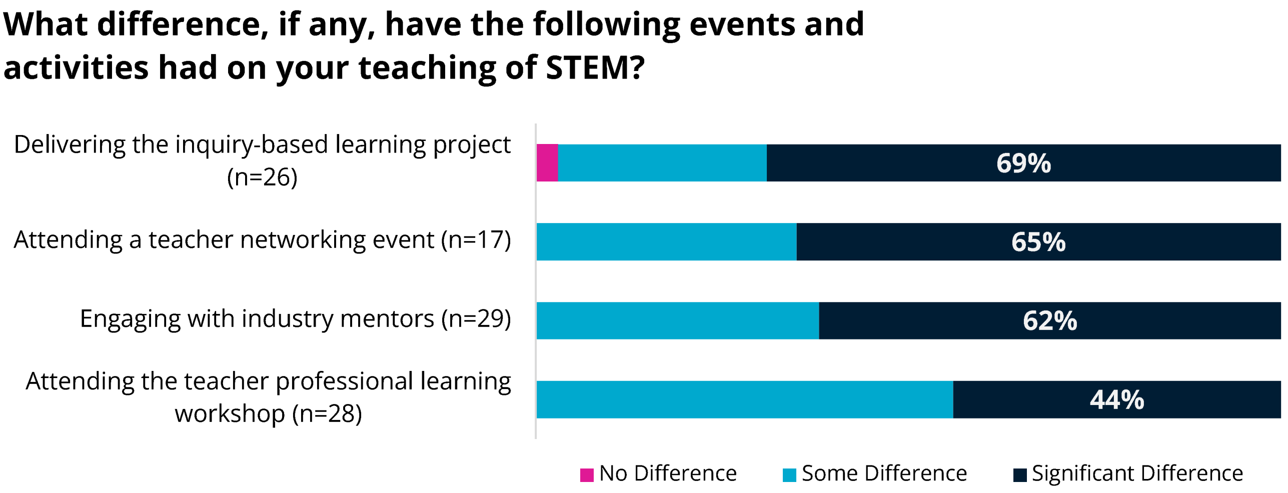

Figure 4 Teacher-reported impact of STEM CPP activities on their teaching of STEM (n = 17–29). Most teachers reported a significant difference to their teaching because of delivering the inquiry-based learning project (69%), attending teacher networking events (65%), and engaging with industry mentors (62%). Fewer teachers reported a significant difference following attendance at the teacher professional learning workshop (44%), with others reporting some or no difference across activities

However, despite these positive outcomes, nearly half of educators (42%) reported difficulty embedding STEM CPP within their formal teaching practice (Figure 5). The most frequently cited barriers were curriculum-related constraints (43%) and access issues such as time and resources (36%). These findings are reinforced by qualitative responses, which describe the challenges of aligning student-driven inquiry with fixed syllabus requirements, managing competing priorities, and accommodating the program within limited instructional time.

Curriculum - 43%	Access - 36%	School culture - 18%	Industry - 4%
• Overlapping priorities (22%) • Timetabling (14%) • CPP as Extracurricular Activity (5%)	• Time constraints (22%) • Trained Teachers (8%) • Availability to Resources (5%) • Student Skill levels (3%)	• STEM not a priority (5%) • Little project-based learning Culture (5%) • Lack of support (5%) • Student buy-in (3%)	• Couldn't connect (3%)

Figure 5 Teachers' reported factors contributing to difficulty embedding the inquiry-based learning project, grouped by curriculum, access, school culture and industry-related issues (n = 28). Curriculum-related factors, particularly overlapping priorities (22%) and timetabling constraints (14%), were most frequently identified. Access-related challenges such as time constraints (22%) and limited access to trained teachers or resources were also reported, while school culture and industry connection factors were identified less frequently

To address and attempt to breakdown these barriers, potential strategies for STEM CPP and participating schools could include:

- Strengthening curriculum alignment to support integration within existing teaching programs.
- Providing earlier planning timelines to align with school schedules and program cycles.
- Facilitating long-term support/partnership from education bodies to foster curriculum. alignment, and
- Prioritise professional learning approaches that emphasise application and collaboration.

STEM CPP actively strives to accommodate for these structural barriers, allowing STEM CPP to be implemented in a flexible manner across the school year. This allows teachers to implement the program within existing curriculum subjects or can also be offered as an extracurricular program. Teacher professional learning within STEM CPP is also designed around supporting teachers to embed the program into preexisting projects/units of work. The data suggests STEM CPP is often implemented in ways that are adapted around existing structures rather than integrated within them, as is evident in the proportion of classes (16.5%) delivering STEM CPP as an extracurricular activity or outside standard classroom hours (Table 3).

Table 3 Subjects in which STEM CPP was embedded across participating classes in 2025, showing the number and percentage of total classes by subject area.

2025 PARTICIPATING CLASSES EMBEDDING STEM CPP	NUMBER OF CLASSES	PERCENTAGE OF TOTAL CLASSES
Science	39	35.8
iSTEM (Integrated STEM)	33	30.3
Extra-curricular	18	16.5
Technological and Applied Studies	7	6.4
Design and Technology	4	3.7

Engineering	3	2.8
Geography	2	1.8
Other	2	1.8
Maths	1	0.9

It may seem from Figure 4 that professional learning workshops are only associated with a moderate impact (44%) of increasing STEM practice than other activities. However, feedback and data from teacher professional learning workshops suggests otherwise. Attending teachers were asked about their pre and post confidence in planning and implementing the STEM CPP project into their classrooms and how to link it to the curriculum, after their workshop attendance. There was a statistically significant difference in attending Educators confidence and planning, with the biggest effect being their confidence and skills with planning an inquiry-based project in their classrooms (g = 0.286; Table 4). This finding highlights the importance of STEM CPP's TPLs in building up teachers confidence and capability of integrating inquiry-based projects into their classrooms.

Table 4 Pre and post values, along with statistical results from educators' answering, *'I am confident and skilled with…? 0=Strongly disagree and 5=Strongly Agree'* after attending a teacher professional learning workshop. Effect size was calculated using the Hedge's g statistic

QUESTION	PRE	POST	DIFFERNCE	P-VALUE	EFFECT SIZE
Open questioning	2.27	3.17	0.90	<0.001	0.125
Planning an inquiry project for my class	2.17	3.21	1.03	<0.001	0.286
Linking the inquiry project to the curriculum	2.07	3.13	1.07	<0.001	0.250

From an implementation perspective, these findings indicate that the effectiveness of STEM CPP is not solely determined by its design, but also by the conditions under which it is delivered. Programs that rely heavily on teacher capacity to adapt and accommodate them are likely to experience variability in implementation and impact.

> *'It [teacher professional learning] was valuable to see my syllabus and content in a different context and imagine how we can create cross-curricular projects with students.'* – Participating Educator

In summary, educator capacity is both a strength and a constraint within STEM CPP. Teachers value the program and recognise its benefits, but structural limitations within the education system shape how effectively it can be implemented.

4 Industry engagement is strong, but under-leveraged

Industry engagement is a central component of STEM CPP and represents one of its strongest areas of performance in 2025. The program has successfully established partnerships with a diverse range of organisations across multiple sectors, including government, industry, education and community groups (Table 5). This breadth of engagement supports exposure to a wide range of STEM applications and career pathways.

Table 5 Characteristics of industries participating in STEM CPP throughout 2025

2025 PARTICIPATING INDUSTRIES		NUMBER OF ORGANISATIONS	PERCENTAGE OF ORGANISATIONS
Type			
	Industry	33	63.5
	Council	8	15.4
	Education	6	11.5
	Community	5	9.6
Sector			
	Public administration and safety	12	23.1
	Education and training	8	15.4
	Manufacturing	8	15.4
	Professional, scientific and technical services	7	13.5
	Electricity, gas, water and waste services	4	7.7
	Other services	3	5.8
	Arts and recreation services	2	3.8
	Agriculture, forestry and fishing	2	3.8
	Transport, postal and warehousing	2	3.8
	Administrative and support services	1	1.9
	Retail and wholesale trade	1	1.9
	Information media and telecommunications	1	1.9

Industry partners reported consistently high levels of satisfaction with their participation. Over 90% indicated that they felt supported, understood their role, and were able to contribute their expertise effectively (Figure 6). These findings suggest that the program has established clear processes and structures for engagement, reducing barriers to participation and enabling partners to contribute meaningfully to STEM CPP.

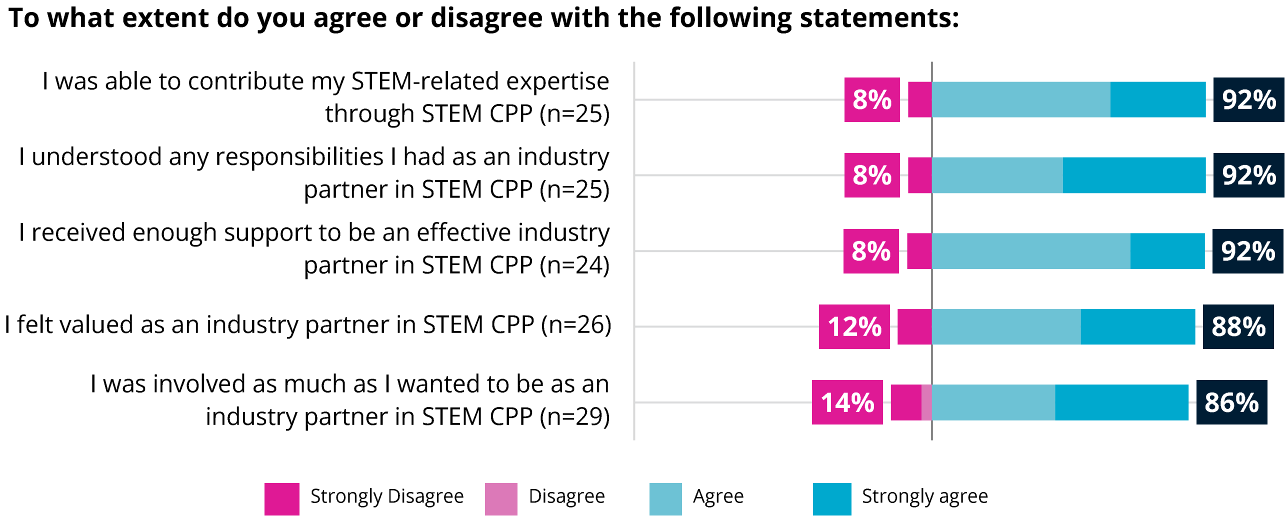

Figure 6 Industry partners' agreement with statements about their role and experience in STEM CPP (n = 24–29). Many respondents agreed or strongly agreed that they were able to contribute their STEM-related expertise (92%), understood their responsibilities as an industry partner (92%), received sufficient support to be effective (92%), felt valued (88%), and were involved to the extent they wanted to be (86%)

In addition to individual experiences, industry participation appears to generate broader benefits for organisations. Many reported increased engagements with schools (67%) and community members (60%), indicating that involvement in STEM CPP can strengthen organisational connections and community presence (Figure 7). This highlights the program's potential to act as a platform for ongoing school-industry collaboration, beyond individual activities.

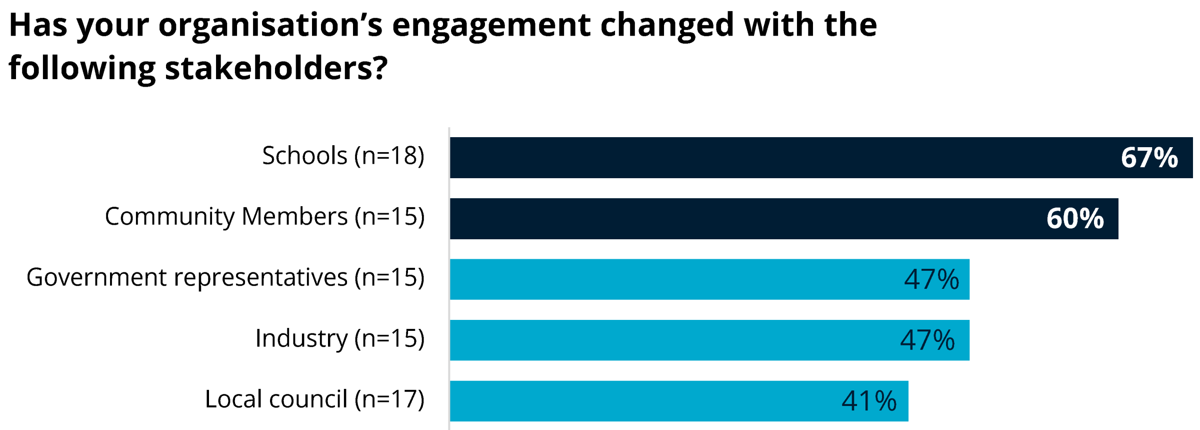

Figure 7 Reported change in organisations' engagement with key stakeholders following participation in STEM CPP (n = 15–18). Most respondents reported increased engagement with schools (67%) and community members (60%), while smaller proportions reported increased engagement with government representatives (47%), other industry organisations (47%) and local councils (41%)

However, analysis of participation patterns indicates industry engagement is often concentrated in specific types of activities, particularly showcase events, which had the highest levels of participation (Figure 8). While these events provide valuable opportunities for interaction and visibility, they happen at the program's end, with fewer opportunities for sustained or ongoing engagement. It should be noted that this survey was conducted after the showcase events which could likely bias these findings.

Did you participate in the following activity as part of your role with STEM CPP?

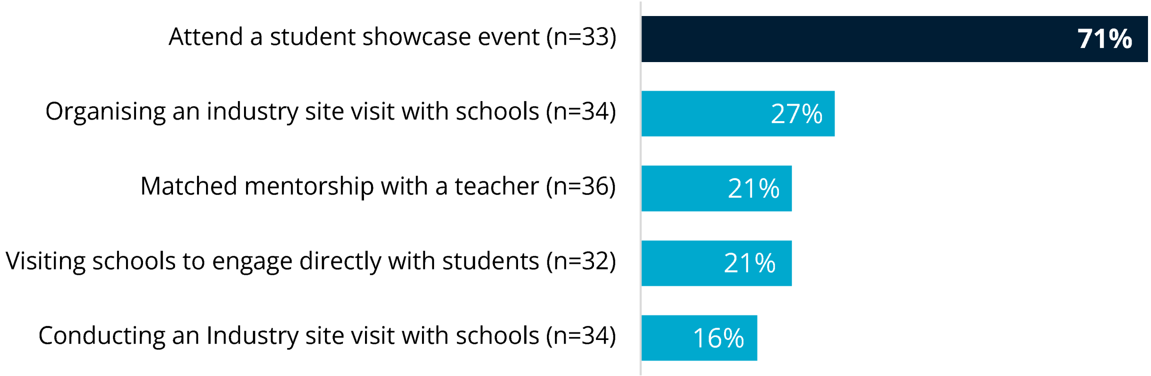

Figure 8 Industry partner participation in STEM CPP activities. Attendance at student showcase events was the most common activity (71%), followed by organising industry site visits with schools (27%). Smaller proportions of respondents reported participating in matched mentorship with a teacher (21%), visiting schools to engage directly with students (21%), or conducting industry site visits (16%)

This pattern may suggest while STEM CPP has successfully addressed the challenge of engaging industry partners, it has not yet fully leveraged their potential to contribute to deeper forms of student learning. Sustained engagement, such as mentoring, repeated interactions or involvement in project design, may provide additional benefits in terms of career awareness, professional identity development and understanding of STEM pathways.

Importantly, the data also indicates many industry partners are new to CSIRO programs, suggesting STEM CPP is effective in expanding its partner base. This provides a strong foundation for developing more structured pathways for continued engagement.

Future implementation could benefit from a more differentiated model of industry participation, recognising that partners have varying levels of capacity and interest. This may include:

- maintaining low-barrier entry points,
- creating opportunities for deeper engagement for interested partners, and
- aligning partner involvement with student interests and local industry contexts.

In summary, industry engagement is a significant strength of STEM CPP, contributing to both program delivery and broader community connection. The next stage of development lies in deepening these partnerships to maximise their impact on student learning and pathway awareness.

Part III From classroom experience to career possibility

5 STEM CPP reshapes how students perceive the relevance of STEM

A central insight emerging from the 2025 STEM CPP outcomes is that the program's most consistent and meaningful impact lies in how students reinterpret the relevance of STEM in their everyday lives, rather than in large shifts in interest alone. While engagement and interest remain important indicators, the evidence suggests STEM CPP primarily influences students' cognitive framing of STEM; how they understand its usefulness, purpose, and applicability.

Across the student cohort, there was a statistically significant increase in agreement with the statement "I think STEM is useful in everyday life" (+0.51, Table 1), representing one of the most robust outcome measures in the evaluation. In contrast, shifts in broader attitudinal measures such as interest in learning more about STEM and perceptions of the importance of STEM, while positive, were not statistically significant. This pattern indicates that STEM CPP may not dramatically change how much students like STEM in the short term, but it significantly changes how they understand it.

This distinction is critical. Research and policy frameworks in STEM education consistently highlight that long-term participation is shaped not only by interest, but by whether students perceive STEM as personally meaningful and socially relevant (Barzanji, 2013; Education Council, 2015). By strengthening these perceptions, STEM CPP contributes to a foundational layer of engagement that supports future decision-making.

The magnitude of change also varies meaningfully across student cohorts. Students from low socio-economic backgrounds exhibited the largest gain (+0.90), with a large effect size, suggesting that exposure to contextualised, real-world STEM experiences has a particularly strong effect for students who may have had fewer prior opportunities to connect STEM with their lived experiences. Gains were also consistent across gender and culturally diverse groups, indicating the broad applicability of the program's design.

These outcomes can be directly linked to the core features of STEM CPP delivery. Inquiry-based learning projects, industry engagement, and authentic problem-solving contexts expose students to STEM as something that operates beyond the classroom. Rather than presenting STEM as a collection of abstract concepts, the program allows students to see it as a tool for addressing real-world issues, particularly those relevant to their local communities.

The implications of this shift extend beyond immediate program participation. When students recognise STEM as useful and relevant, they are more likely to:

- Engage more meaningfully with STEM subjects,
- Perceive value in pursuing further STEM learning, and (as evident on educator's perceived impact STEM CPP has had on participating students intending to pursue STEM after Year 10; Figure 9) and
- Consider STEM as part of their future pathways.

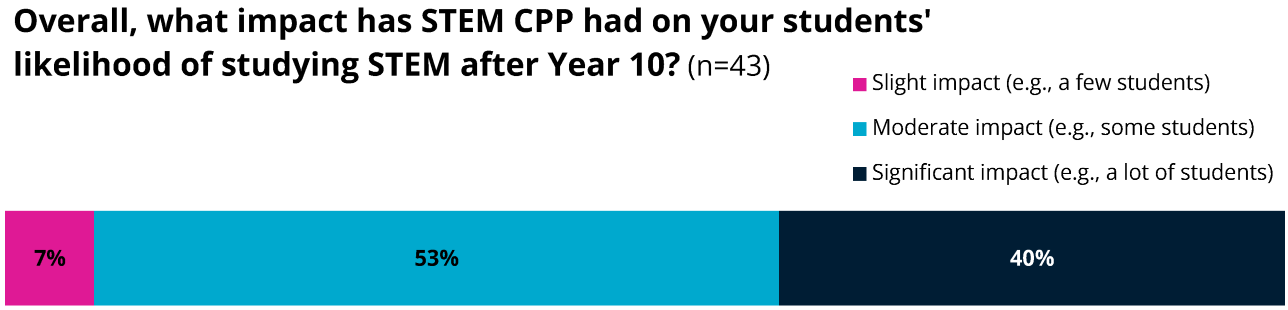

Figure 9 Educators responses to the perceived impact that the STEM CPP program has had on their students' likelihood of pursuing STEM after Year 10

Importantly, this shift may also reduce psychological barriers associated with STEM participation, such as perceptions that STEM is overly abstract, disconnected from daily life, or only relevant for specific types of students (Barzanji, 2013; Education Council, 2015).

From a program design perspective, this finding reinforces the importance of maintaining authenticity as a central organising principle. The evidence suggests that relevance is not an incidental outcome of STEM CPP; it is the key mechanism through which the program generates impact. As such, any changes to program delivery that reduce the authenticity or contextual grounding of activities may undermine this effect.

Looking forward, there is also an opportunity to strengthen this outcome further. While students are recognising the usefulness of STEM, there remains potential to deepen this understanding by:

- explicitly linking inquiry projects to broader societal challenges,
- reinforcing connections between classroom activities and real-world applications, and
- supporting students to articulate how STEM connects to their own lives and aspirations.

In summary, STEM CPP reshapes how students conceptualise STEM by making its relevance visible and meaningful. This shift, while less immediately visible than changes in interest or aspiration, is foundational to sustained engagement and represents one of the program's most significant contributions to STEM education.

6 Career awareness and pathway understanding are strengthened, though unevenly

A key outcome of STEM CPP is its contribution to improving students' awareness of STEM careers and education pathways, an area commonly identified as a critical barrier to STEM participation. The 2025 data indicates that the program is effective in strengthening students' knowledge of available pathways, though the extent of change varies across different student groups.

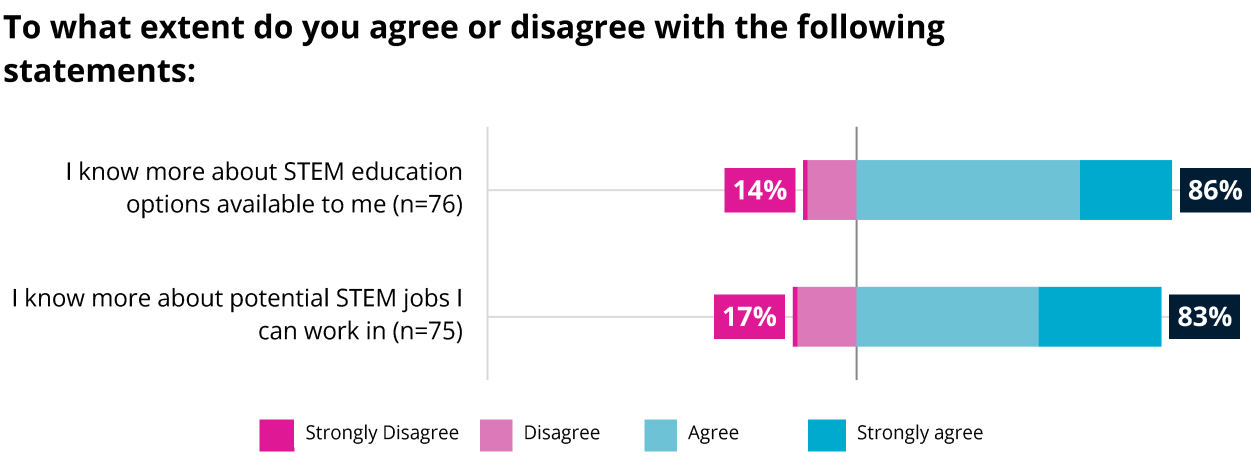

Figure 10 Students' self-reported changes in STEM awareness following participation in STEM CPP activities. Most students agreed or strongly agreed that they now know more about STEM education options (86%, n=76) and potential STEM jobs they could work in (83%, n=75). Smaller proportions disagreed or strongly disagreed with these statements

A large majority of participating students reported increased awareness of both STEM education options (86%) and potential STEM careers (83%) following participation (Figure 10). These findings are corroborated by teacher reports, with 80% indicating improvements in both career awareness and pathway understanding (Figure 11). Collectively, these results suggest that STEM CPP is effectively addressing information gaps that can limit students' ability to make informed decisions about their futures.

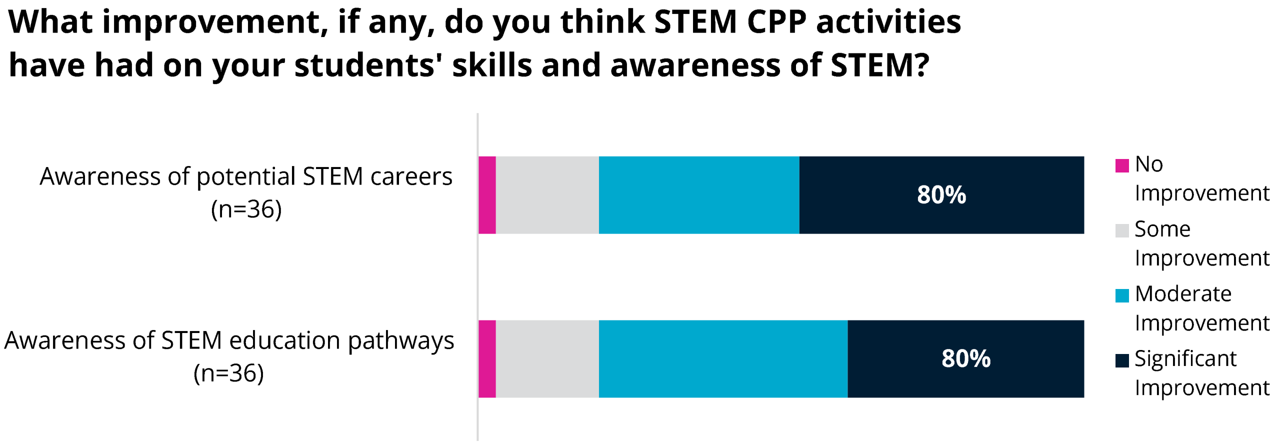

Figure 11 Teacher-reported impact of STEM CPP activities on students' STEM skills and awareness. Most respondents indicated "Significant Improvement" (80%, n=36) in both students' awareness of potential STEM careers and awareness of STEM education pathways, with smaller proportions reporting moderate, some, or no improvement

Changes in more detailed attitudinal measures further support this finding. There was a statistically significant increase in students' agreement with the statement "I am aware of the type of STEM jobs I can work in" (+0.43, Figure 12), indicating measurable growth in career awareness. In addition, increases in perceptions of STEM as exciting (+0.31, Figure 12) suggest that exposure to STEM careers and contexts may also influence affective responses, reinforcing engagement alongside awareness.

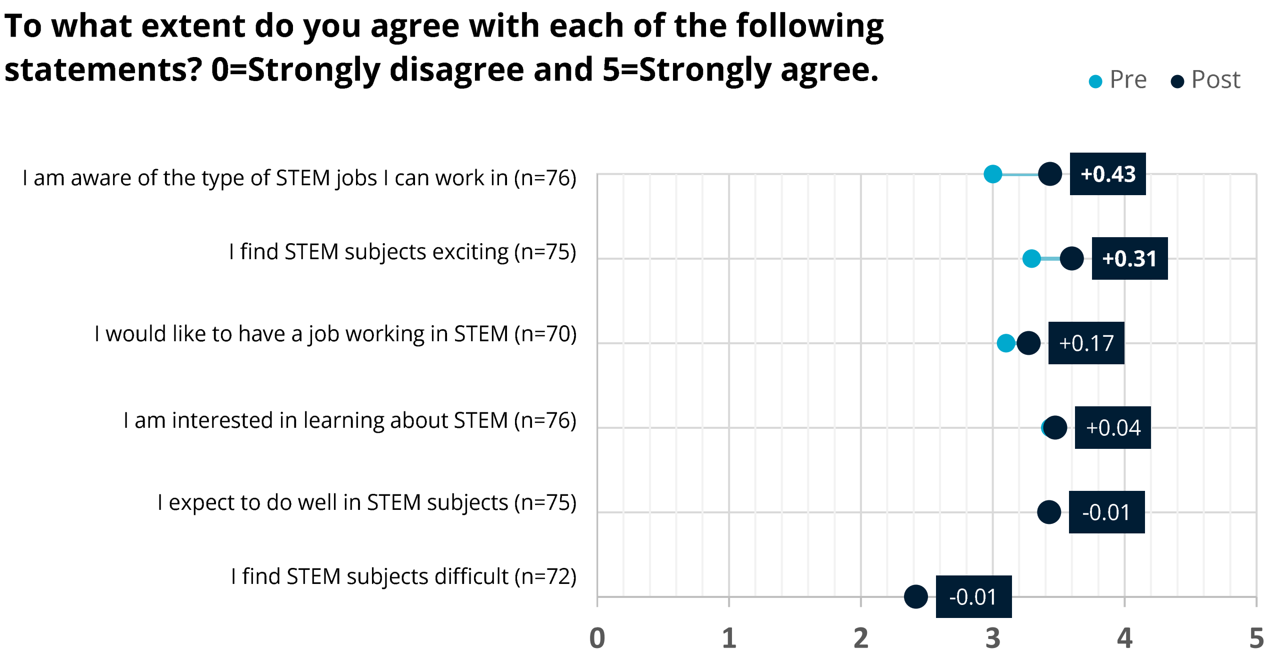

Figure 12 Change in students' agreement with STEM-related statements from pre-to-post participation in STEM CPP activities. Across all items, median agreement increased slightly, with the largest gains in students' awareness of STEM jobs (+0.43), excitement for STEM subjects (+0.31), and interest in working in STEM (+0.17). Perceived difficulty of STEM subjects and expectation to do well in STEM subjects showed no meaningful change (–0.01)

Table 6 Pre and post values, along with statistical results from students' answering, 'I am aware of the type of STEM jobs I can work in'. Effect size was calculated using the Hedge's g statistic

QUESTION	ALL (N=76)	FEMALE INDENTIYING (N=45)	MALE IDENTIFYING (N=26)	CALD (N=35)	NON-CALD (N=40)	HIGH SES (N=47)	LOW SES (N=21)
Before STEM CPP	3.000	2.978	3.077	2.914	3.125	2.894	3.286
After STEM CPP	3.434	3.111	3.962	3.400	3.500	3.234	3.714
Difference	0.434	0.133	0.885	0.486	0.375	0.340	0.429
p-value	0.001	0.298	0.001	0.028	0.013	0.007	0.251
effect size	0.322		0.655	0.325	0.296	0.249	

However, the data also highlights important variations in how these outcomes are distributed. Male-identifying students showed the largest increase in career awareness (+0.885,

Table 6), while female-identifying and Low-SES students experienced smaller, non-significant changes in this measure. Conversely, female-identifying students showed significant increases in excitement toward STEM learning (Table 7), indicating that different cohorts may respond to the program in distinct ways.

Table 7 Pre and post values, along with statistical results from students' answering, 'I find STEM subjects exciting'. Effect size was calculated using the Hedge's g statistic

QUESTION	ALL (N=75)	FEMALE INDENTIYING (N=44)	MALE IDENTIFYING (N=26)	CALD (N=34)	NON-CALD (N=40)	HIGH SES (N=47)	LOW SES (N=21)
Before STEM CPP	3.293	2.864	3.885	3.324	3.325	3.191	3.381
After STEM CPP	3.600	3.227	4.192	3.559	3.700	3.447	3.762
Difference	0.307	0.364	0.308	0.235	0.375	0.255	0.381
p-value	0.004	0.007	0.143	0.159	0.010	0.035	0.105
effect size	0.229	0.285			0.275	0.196	

These patterns suggest while STEM CPP is broadly effective in increasing awareness, the mechanisms through which students engage with career information may differ across groups. For some students, exposure to industry professionals and real-world contexts may translate directly into clearer career understanding. For others, particularly those who may have less prior exposure to STEM pathways, additional support may be required to connect experiences to concrete career options.

The program's emphasis on industry engagement appears to play a central role in driving these outcomes. Interactions with STEM professionals, whether through site visits, classroom engagement or showcase events, provides students with insights into the diversity of STEM careers, as well as the pathways required to enter them. These interactions help demystify STEM careers, making them more accessible.

However, the episodic nature of some of these engagements may limit their depth. Single interactions, while valuable, may not provide sufficient opportunity for students to fully understand complex career pathways or to see themselves within these roles. This is particularly relevant for students who may require repeated exposure and reinforcement to build confidence and understanding.

From a strategic perspective, these findings highlight both a strength and an opportunity. STEM CPP is clearly contributing to increased awareness, but there is potential to strengthen this outcome by:

- embedding career learning more explicitly within inquiry projects,
- providing structured reflection opportunities to connect activities to pathways, and
- increasing continuity in industry engagement through mentoring or repeated interactions.

In addition, ensuring career information is presented in diverse and inclusive ways will be important for supporting equitable outcomes across different student cohorts.

7 Transferable skills development is a key outcome underpinning future participation

One of the most consistent and strongly supported outcomes of STEM CPP is its contribution to the development of transferable skills associated with STEM capability, including problem-solving, communication, collaboration and critical thinking. These skills are widely recognised as essential not only for STEM learning, but also for broader educational and workforce participation (Education Council, 2015; Murphy et al., 2019).

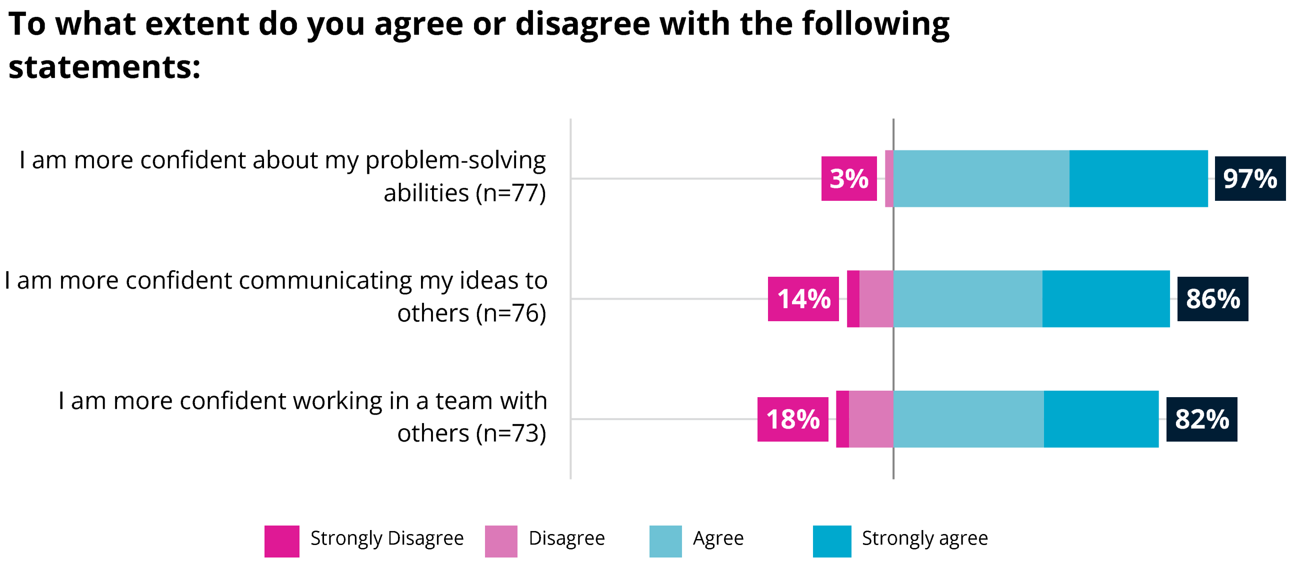

Figure 13 Students' self-reported confidence in key STEM skills after participating in STEM CPP activities. Most students agreed or strongly agreed that they felt more confident in their problem-solving abilities (97%, n=77), communicating their ideas to others (86%, n=76), and working in a team (82%, n=73). Only small proportions reported disagreement across all items

Student self-report data indicates very high levels of perceived improvement across key skill areas. 97% of students reported increased confidence in problem-solving, 86% in communicating ideas, and 82% in working collaboratively (Figure 13). Teacher observations reinforce these findings, with the majority reporting significant improvements in communication (84%), creative problem-solving (72%), teamwork (64%), and critical thinking (56%) (Figure 14).

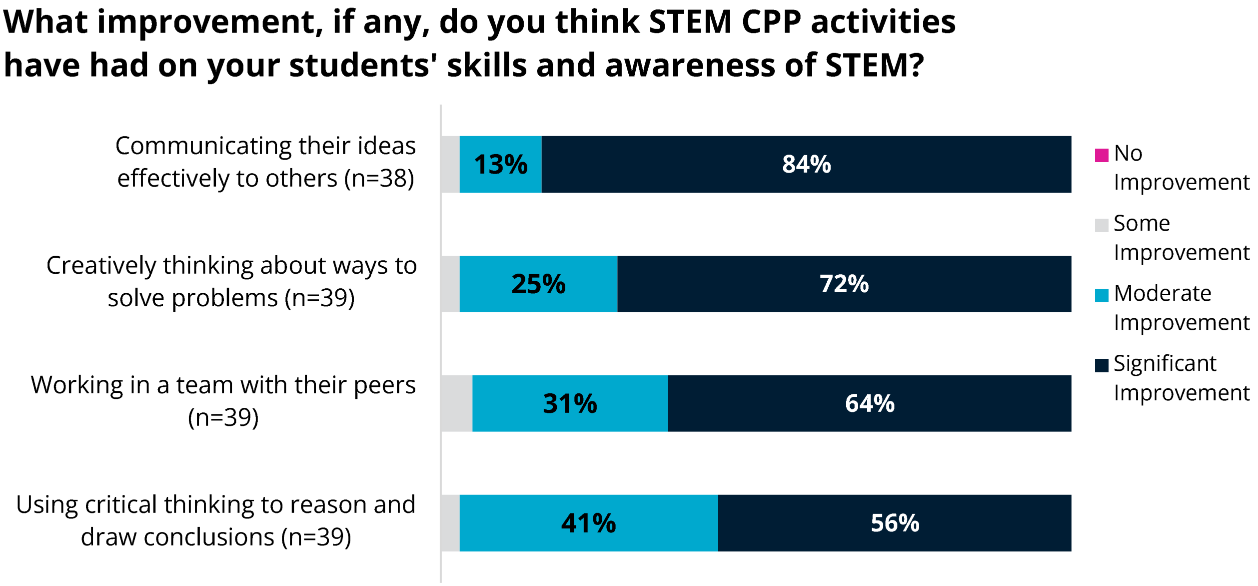

Figure 14 Teacher-reported improvement in students' STEM skills following participation in STEM CPP activities. Most teachers observed significant improvement in students' ability to communicate ideas effectively (84%, n=38), think creatively to solve problems (72%, n=39), work in teams (64%, n=39), and use critical thinking to reason and draw conclusions (56%, n=39). Smaller proportions reported moderate, some, or no improvement

The consistency across both student and teacher data strengthens the validity of these findings, suggesting that skill development is a core and observable outcome of participation in STEM CPP.

These outcomes can be directly linked to the pedagogical approach underpinning the program. Inquiry-based learning requires students to engage with complex, open-ended problems, encouraging them to analyse information critically, explore multiple solutions, and collaborate with peers to develop and refine ideas.

Similarly, interactions with industry professionals and participation in showcase events require students to articulate their thinking, respond to feedback, and present their ideas in meaningful contexts. These experiences provide authentic opportunities to practice and develop transferable skills in ways that are not typically available in traditional classroom settings.

From a program perspective, these findings reinforce the value of maintaining a strong focus on active, student-centred learning approaches. Unlike more passive forms of engagement, inquiry-based and collaborative learning environments create the conditions necessary for skill development.

There is also an opportunity to make these outcomes more explicit within the program. While students are developing transferable skills, they may not always recognise or articulate these gains. Supporting students to reflect on their skill development could enhance their sense of achievement and reinforce the relevance of these skills for future learning and careers.

8 STEM CPP influences pathways but operates within broader system constraints

While STEM CPP contributes positively to multiple factors associated with STEM participation, the evidence indicates that students' decisions about future study and careers are shaped by a complex combination of individual, social and systemic influences. As such, the program's impact on pathways should be understood within this broader context.

Student survey data shows that subject selection decisions are primarily driven by factors such as interest, perceived relevance to future careers, confidence in ability, and alignment with tertiary prerequisites (Figure 15). These findings indicate that students adopt a largely pragmatic approach to decision-making, prioritising perceived usefulness and likelihood of success.

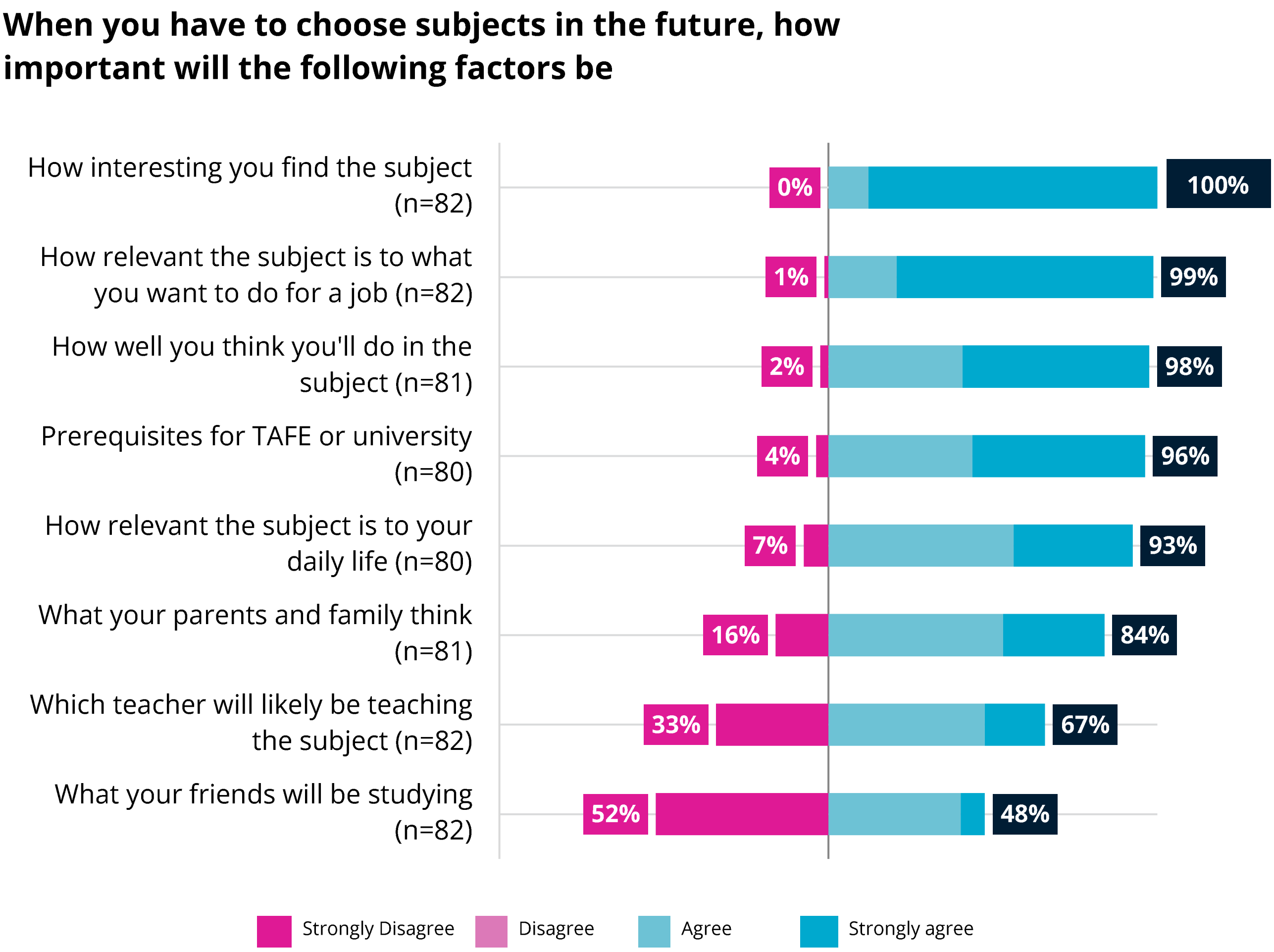

Figure 15 Students' perceptions of factors influencing their future subject choices. Interest in the subject (100%), relevance to future career goals (99%), and confidence in performing well (98%) were rated as the most important factors. Prerequisites for further study (96%) and relevance to daily life (93%) were also rated highly. Social influences, what parents/family think (84%), which teacher will teach the subject (67%), and what friends will be studying (48%), were less influential overall

In contrast, interpersonal influences such as peers, teachers and family play a more variable role, although their impact differs across demographic groups. For example, family influence is stronger for high SES and culturally diverse students, suggesting that decision-making contexts vary significantly across cohorts.

Educators also highlight several barriers students commonly raise when considering continued engagement with STEM. These include:

- educational and systemic factors such as resource availability and subject access
- individual and psychological factors such as perceived difficulty and low self-efficacy, and
- career-related factors such as limited knowledge of pathways. (Figure 16).

Educational and Systemic - 33%

- Resource Gaps (12%)
- Real world application (6%)
- Subject availability (5%)
- Teacher shortages/quality (2%)
- Curriculum issues (2%)
- Assessment impact (2%)

Individual and Psychological - 31%

- Perceived difficulty (9%)
- STEM identity (8%)
- Low confidence/self-efficacy (8%)
- Lack of interest (6%)
- Academic pressure (6%)

Career - 22%

- Lack of knowledge (15%)
- Unclear career paths (8%)

Social and Cultural - 13%

- Socioeconomic status (3%)
- Family influence (3%)
- Cultural attitudes (3%)
- Racial bias (2%)
- Lack of role models (2%)
- Gender stereotypes (2%)

Figure 16 Teacher-identified barriers influencing students' continuation in STEM. The most commonly reported challenges included educational and systemic factors such as resource gaps (12%) and limited real-world application (6%), individual and psychological factors including perceived difficulty (9%) and low STEM identity or confidence (8%), career-related barriers such as lack of knowledge about STEM careers (15%), and social and cultural influences including socioeconomic status, family influence and cultural attitudes (all 3%)

These barriers illustrate that even when students have positive experiences with STEM CPP, structural and contextual factors may limit their ability to translate these experiences into long-term participation.

> *'Students believe that Science is "too hard" and they worry they won't keep up with the work load. Some students lack confidence in maths, believing they need to be naturally good at it.'* – Participating Educator

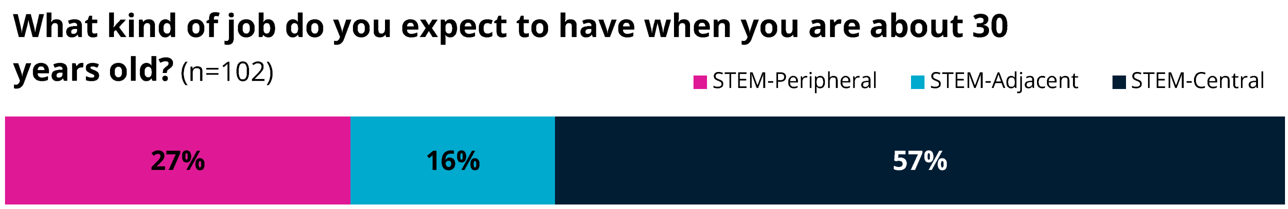

Figure 17 Students expected future career types at age 30 (n=102), categorised using the STEM-Central, STEM-Adjacent and STEM-Peripheral framework (Navy et. al., 2021). Over half of students (57%) anticipated working in a STEM-Central career, while 27% expected to work in STEM-Peripheral role. A smaller proportion (16%) anticipated entering STEM-Adjacent careers.

Student aspiration data further reinforces this complexity. While 57% of students expect to work in STEM-Central[1] careers requiring specialised STEM knowledge and skills, a significant proportion anticipate careers in STEM-adjacent (16%) careers that apply STEM concepts without requiring formal STEM qualifications or STEM-Peripheral (27%) careers that involve indirect or occasional use of STEM (Figure 17). In addition, career interests span a wide range of disciplines, including health, engineering and society and culture (Figure 18). Thus, having a mix of STEM professionals that expand student's STEM knowledge of job roles, as well as those who align with their current STEM aspirations, is important for STEM CPP's implementation.

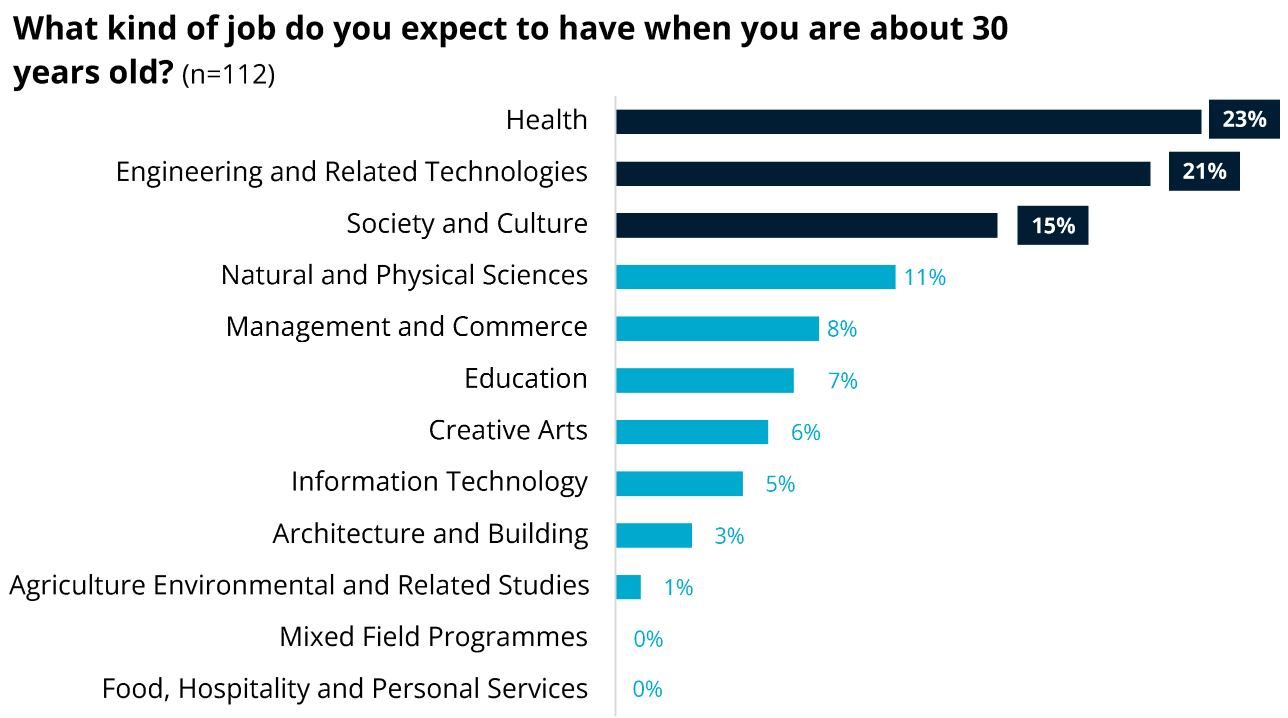

Figure 18 Students' expectations for future careers (n=112) categorised by the ABS Australian Standard Classification of Education (Australian Bureau of Statistics, 2013). Health (23%) and Engineering and related Technologies (21%) were the most selected career areas students anticipated working in by age 30. Very few students anticipated working in agriculture, environmental studies (1%), or service-related sectors (0%)

[1] More information on the STEM Central, Adjacent and Peripheral Career model can be found in the Appendix

Part IV What the evidence means for action

This section translates insights from the 2025 implementation and outcomes of STEM CPP into strategic implications for future program design and delivery. It builds directly on the evidence presented in previous sections, focusing on how the program can strengthen its impact, improve equity, and enhance scalability.

Rather than presenting a list of recommendations, this section highlights implications across four interrelated domains including; program design, targeting and equity, educator support and implementation, and industry engagement.

9 Strengthening program design around authenticity and relevance

The findings indicate the most powerful feature of STEM CPP is its ability to position STEM as authentic, applied and connected to real-world contexts. This suggests that future program design should not prioritise expansion in terms of activity but rather focus on maintaining and strengthening the conditions that enable meaningful engagement.

At the core of this design is the inquiry-based, community-linked project model. These projects allow students to engage with STEM as a problem-solving process, rather than as a body of abstract knowledge. The integration of industry interaction, along with career expos and public showcase events, creates a coherent experience in which students can investigate, apply, and communicate their learning.

From a strategic perspective, this indicates that the integrity of the program model must be preserved as it evolves. There is a risk that, in seeking to scale or streamline delivery, components may be simplified, disconnected, or reduced to isolated experiences. The evidence suggests that such changes would weaken the program’s impact by disrupting the mechanisms through which relevance is established.

There is also an opportunity to further strengthen the design by enhancing the intentionality of learning connections. While students are engaging in authentic activities, additional emphasis could be placed on making these connections explicit.

Another important consideration is the need to maintain novelty and diversity in inquiry contexts. Feedback indicates that repeated exposure to similar project themes may reduce engagement over time, particularly where cohorts overlap (e.g. siblings or sequential year groups). Introducing refreshed or rotating project themes, while maintaining alignment with local contexts, could help sustain interest and relevance.

Finally, there is scope to strengthen mechanisms for recognising student achievement. Showcase events already play a key role in this process, but additional forms of recognition, such as highlighting innovative or high-impact projects, could further enhance motivation and reinforce the value of student work.

10 Improving equitable access and participation

The 2025 findings demonstrate that STEM CPP can produce strong outcomes for students from underrepresented backgrounds. However, participation patterns indicate that these students are not proportionally represented within the program. This suggests that achieving equitable impact at scale requires a shift from passive accessibility to active targeting.

Improving equity will require a more deliberate approach to identifying and engaging schools that face structural barriers to participation. These barriers may include limited staff capacity, competing priorities, logistical constraints, and reduced access to external networks. As such, outreach efforts alone may be insufficient. Instead, participation strategies should consider how the program can adapt to the needs and contexts of these schools.

One approach is to continue developing differentiated delivery models, recognising that schools vary in their capacity to engage. For example, schools with higher levels of resourcing may be able to implement full inquiry programs with multiple industry interactions, while lower-capacity schools may benefit from:

- more structured or guided project frameworks,
- reduced logistical requirements, and
- additional support for planning and delivery.

There is also a need to strengthen engagement with Indigenous communities and regional or remote schools, which are currently underrepresented. This may require alternative partnership models that prioritise local context, cultural relevance, and co-design with community stakeholders. Ensuring that program content and delivery are responsive to local needs will be critical in building trust and sustained engagement.

In addition, equity considerations should extend beyond access to include equitable outcomes within the program. While overall gains are positive, variations in outcomes across demographic groups suggest that some students may benefit from more targeted support.

However, addressing these variations will require a more nuanced understanding of how different students experience the program and how these experiences can be tailored to support meaningful engagement.

Finally, improving equity will require ongoing monitoring and evaluation. Establishing clear participation and outcome targets for underrepresented groups, and tracking progress over time, will support more informed decision-making and more importantly, how STEM CPP's activities are changing their trajectories around STEM.

11 Reducing implementation burden for educators

The effectiveness of STEM CPP is closely tied to the ability of educators to implement the program within existing school contexts. The 2025 findings indicate while teachers strongly value the program, its implementation is often constrained by curriculum demands, time pressures, and competing priorities. Addressing these constraints is essential for sustaining and scaling the program.

A key priority is improving the alignment between STEM CPP activities and curriculum requirements. Teachers consistently reported challenges in integrating inquiry-based projects with prescribed syllabus outcomes. Strengthening curriculum alignment, through explicit mapping of project activities to learning outcomes, could reduce these challenges and make it easier for educators to incorporate the program within standard teaching programs.

Timing is also a critical factor. Many implementation challenges arise from misalignment between program timelines and school planning cycles. Providing earlier notice of program activities, as well as clearer annual schedules, would enable schools to integrate STEM CPP into their planning processes more effectively.

There is also an opportunity to explore alternative delivery models that reduce the burden on schools. For example, intensive or centralised activities (such as holiday programs or makerspace sessions) could complement school-based delivery, providing additional pathways for participation.

Ultimately, reducing implementation burden is not about simplifying the program to the point where it loses impact, but about aligning delivery with the realities of school environments. By making it easier for educators to participate, STEM CPP can achieve more consistent implementation and broader reach.

12 Deepening industry engagement to enhance impact

Industry engagement is one of the strengths of STEM CPP, but the 2025 findings indicate there is significant potential to deepen its impact through more sustained and structured involvement. While the program has been successful in attracting a diverse range of partners, most engagement currently occurs at a single-event or episodic level.

Moving beyond this model will require creating clearer pathways for industry partners to extend their involvement over time. This could include opportunities for:

- ongoing mentorship of student groups
- repeated engagement across multiple program stages, and
- participation in the co-design of inquiry projects.

Such approaches would allow students to develop more nuanced understandings of STEM careers and build stronger connections with industry professionals.

At the same time, it is important to recognise that industry partners have varying levels of capacity and availability. A differentiated model of engagement, where partners can choose from a range of involvement options, would enable broader participation while still supporting deeper engagement for those who are able to commit.

Aligning industry engagement with student interests and career aspirations is another important consideration. Data indicates strong student interest in fields such as health, engineering, and society and culture. Recruiting and retaining partners from these areas could increase the relevance of engagement and strengthen the connection between program activities and student aspirations.

There is also an opportunity to explore alternative formats for industry interaction. For example:

- virtual engagement can increase accessibility
- intensive workshops can provide deeper learning experiences, and
- collaborative events can bring together multiple partners and schools.

Finally, strengthening the value proposition for industry partners will be important for sustaining engagement. This may include highlighting the benefits of participation, such as community engagement, workforce development, and contribution to education outcomes.

Part V Conclusion

The STEM Community Partnerships Program - 2025 Insights Report demonstrates the program's impact lies not simply in increasing student interest, but in reshaping how students understand and experience STEM. By connecting classroom learning to real-world contexts, industry applications, and community challenges, STEM CPP makes STEM visible, relevant, useful, and attainable. This shift in perception is foundational. It influences how students engage in learning, how they interpret future opportunities, and how they make decisions about pathways beyond school.

Importantly, the program's strongest outcomes are seen where relevance, authenticity, and interaction are most effectively combined. Inquiry-based projects, meaningful industry engagement, and opportunities for students to communicate and showcase their work operate together as a coherent model. When these elements are aligned, students not only engage more deeply, but also develop the confidence, awareness, and transferable skills that underpin future participation.

At the same time, the report highlights impact is not evenly distributed. While STEM CPP demonstrates clear benefits for students from underrepresented backgrounds, these students are not yet proportionally reached. This creates a critical opportunity, and responsibility, for the program to move beyond accessibility toward more intentional and targeted participation.

The findings also reinforce that STEM CPP operates within a broader system that both enables and constrains its impact. Teacher capacity, curriculum structures, school resourcing, and access to partnerships all shape how the program is implemented and experienced. Similarly, students' decisions about continued participation in STEM are influenced by factors extending beyond the program, including confidence, perceived difficulty, and subject availability. These dynamics highlight that sustained impact at scale will depend not only on program design, but on how effectively it aligns with the realities of the education system.

Looking ahead, STEM CPP should maintain its core strength of authentic, inquiry-driven learning, while strengthening the conditions that allow this model to succeed more consistently across contexts. This includes reducing implementation burden for educators, deepening industry engagement, and developing flexible delivery approaches that meet schools where they are. At the same time, a stronger focus on equity will be essential to ensure that those students who stand to benefit most are able to participate and succeed.

Ultimately, STEM CPP should be understood as a catalytic intervention within a wider ecosystem. It cannot determine long-term pathways on its own, but it plays a critical role in shaping the early experiences, perceptions, and capabilities that make those pathways possible.

With deliberate refinement and strategic focus, STEM CPP is well positioned to build on its strengths and contribute to a more equitable, relevant, and sustained STEM pipeline across New South Wales.

Appendix

A.1 Student's future occupations

Students were asked an open-response question about the occupation they expect to have by age 30. These responses were mapped to Navy et al., 2021's STEM-Peripheral, Adjacent, Central (STEM-PAC) model. Navy et. al. (2021) concepted a career classification model based on the application the job's inherent use of STEM skills and knowledge. Their model suggests three STEM career classifications:

- STEM-Central: Job role that directly uses STEM knowledge and skills routinely in its work and requires a degree or specific training in a conventional or skilled technical STEM field. STEM-Central is broken down into to further categories, these being:
  - Conventional (e.g. engineer, scientist) and
  - Skilled/technical (e.g. electrician, plumber).
- STEM-Adjacent: Routinely use STEM knowledge and skills but may not require a degree or specific training in a conventional or skilled technical STEM field (e.g. bankers, fashion designers)
- STEM-Peripheral: Utilise some aspects of STEM knowledge and skills to a lesser extent in their jobs and do not require a degree or training in a conventional or skilled technical STEM field (e.g. lawyers, human resource officers).

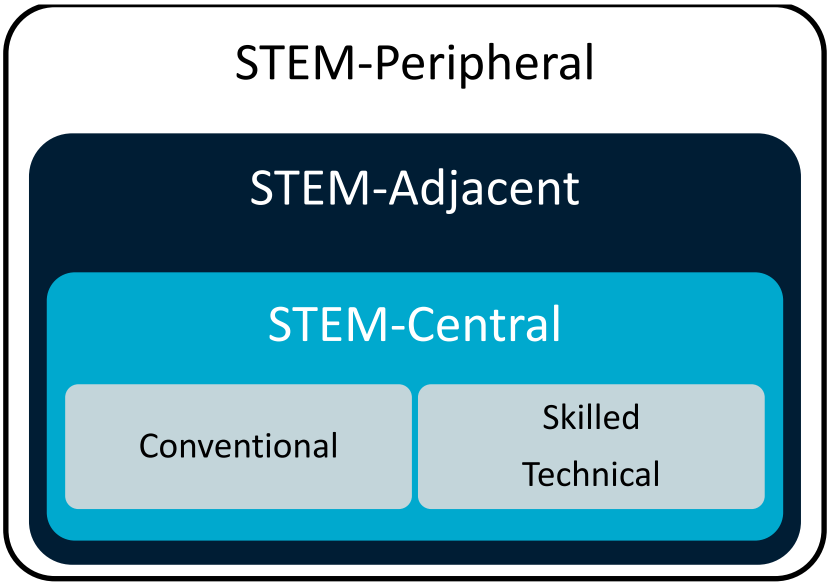

Figure A.1 Conceptual model of STEM-related career categories, adapted from Navy et. al. (2021). The model organises occupations into three concentric categories: STEM-Central careers, which require specialised STEM knowledge and skills (including conventional and skilled technical roles); STEM-Adjacent careers, which regularly apply STEM concepts but do not require formal STEM qualifications; and STEM-Peripheral careers, which involve occasional or indirect use of STEM knowledge

A.2 Additional Figures and Tables

Table A.1 Year level distribution of students participating in STEM CPP in 2025 (n=3,007)

2025 PARTICIPATING STUDENTS' YEAR LEVEL	NUMBER OF STUDENTS	PERCENTAGE OF TOTAL STUDENTS
Year 7	483	16.1
Year 8	644	21.4
Year 9	1004	33.4
Year 10	876	29.1

Table A.2 Summary of STEM CPP events delivered in 2025, including the number of events run and attended by schools, students, educators, industry staff, and industry partners, by event type

EVENT TYPE	NUMBER OF EVENTS RAN	NUMBER OF SCHOOLS ATTENDED	NUMBER OF STUDENTS ATTENDED	NUMBER OF EDUCATORS ATTDENED	NUMBER OF INDUSTRY STAFF ATTENDED	NUMBER OF INDUSTRY PARTNERS ENGAGED
STEM Site Visits	45	25	1676	22		21
STEM Showcase	8	41	893	79	39	28
Career Expos	1	18	736	43	52	18
Industry webinar	4				40	26
Teacher professional learning	1	24		34		
Virtual work experience	2	2	21			
Educator webinar	1	3		5		

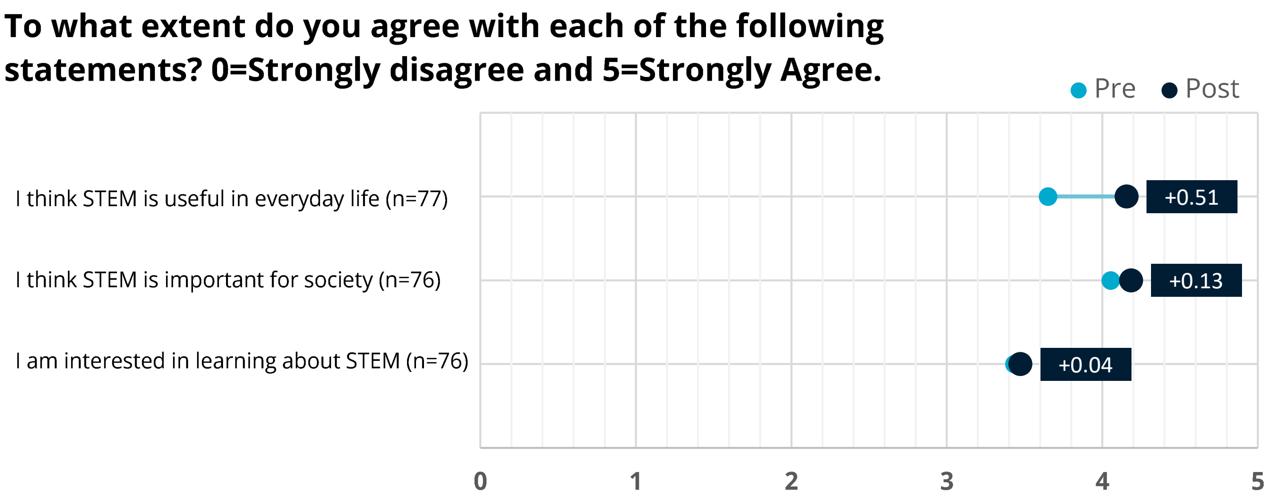

Figure A.2 Median pre-post responses from participating STEM CPP students on inherent values of STEM in their lives and society, along with their interest in learning more about STEM

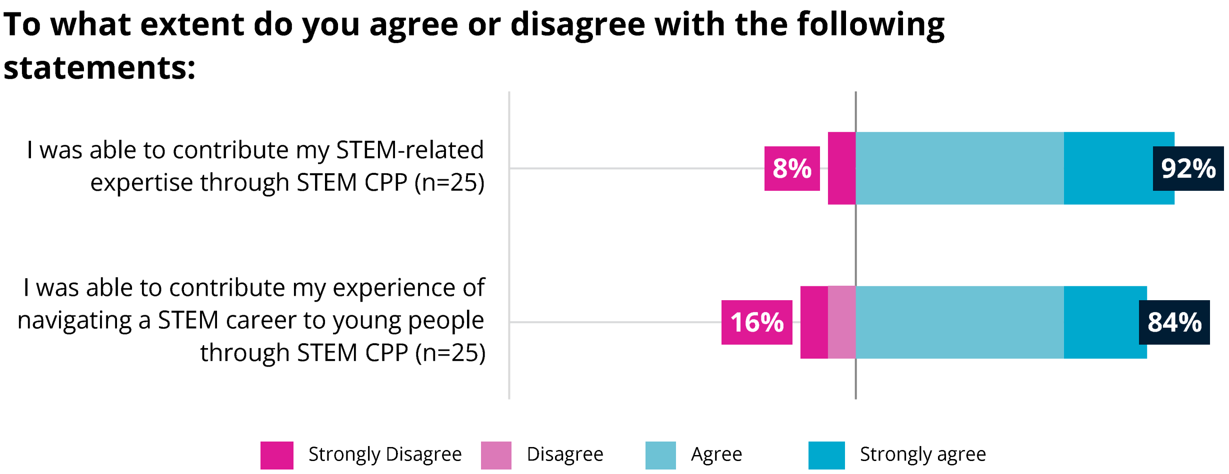

Figure A.3 Industry participants' level of agreement with statements about their ability to contribute STEM-related expertise and career experience through the STEM CPP program (n=25)

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