



2021-20 STEM Influencer Report – Parents

Prepared by YouthInsight for the
Department of Industry, Science,
Energy and Resources

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Executive summary

Building on from the Youth in STEM research, the Department of Industry, Science, Energy and Resources (DISER) has expanded the research to incorporate parents, teachers and career advisors. These audience segments have been identified as key influencers of young people's choices when it comes to education and career selection. Understanding their perceptions and attitudes towards STEM can assist families, educators and policy makers in supporting girls throughout their STEM education and consider future STEM-related careers.

Separate online surveys were conducted among parents and educators (teachers and careers advisors) from September to October 2020 with a representative sample of 1,492 parents and 844 educators across the country. Respondents were sourced from a range of online panels and through direct partnerships with the Australian Academy of Technology and Engineering (ATSE) and Education Services Australia (ESA). This report outlines the detailed findings from the Parents' 2020/21 research and highlights some of the key comparative findings from the Teacher & Career Advisor 2020/21 research and the *Youth 2019/20* research.

The survey found that parents' influence begins with the example set by their own employment and education circumstances. Beginning with employment, the survey revealed a disproportionately higher number of fathers to be in full-time work compared to mothers, who were more likely to be at-home parents compared to fathers. Similarly, a significantly higher proportion of fathers reported having higher education qualifications and when it came to STEM, the gap stretched even wider, with fathers reportedly being 81% more likely to have a STEM qualification compared to mothers.

As the number one influencer group for young people regarding education and career decisions, this foundational example of gender disparity in STEM sets the theme around many of the findings in this study. The insights revealed in this report align closely to the findings uncovered in the *Youth 2019/20* research and add an indispensable perspective of the young people's main influencer group. The insights help us understand some important contributing factors behind perceptions and attitudes of young people towards STEM. While the study is vastly detailed, this report focuses on a set of key metrics used to evaluate parents' understanding, attitudes and perceptions of STEM. A summary of the findings for each of these key metrics is outlined below.

STEM awareness and understanding

A question used to gauge the understanding of STEM across all audience groups was whether respondents could identify the four subjects of the STEM acronym. The survey found that half of all parents (52%) were able to correctly identify all subjects, which was slightly lower compared to young people (58%), and significantly lower compared to educators (87%). There were no differences in correct responses between mothers and fathers, although mothers were more likely to acknowledge that they didn't know what it stood for, while fathers were more likely to have a guess, even if it was incorrect. Among Aboriginal and / or Torres Strait Islander parents, only a quarter were able to correctly identify all four STEM subjects.

The survey also tested parents' understanding of the types of jobs associated with STEM qualifications and found that engineer was the profession with the highest association, followed by science teacher / lecturer / professor and professions relating to information technology.

Interestingly, although engineering was the subject which was least likely to be identified in the STEM acronym among both parents and young people, it was the profession with the highest association with STEM across both audience groups. A similar proportion of educators also cited

engineer as a profession associated with STEM compared to parents, although scientist and teaching professions ranked higher than engineer among educators.

Life skills associated with STEM education

Another approach used to assess parents' understanding of STEM was to gauge their knowledge of the life skills developed through the study of STEM. The results revealed that both parents and educators selected the same top three life skills: problem solving, critical thinking and design thinking. These alignments help develop a consistent narrative for young people around life skills which can be developed through STEM education.

Parents' interest in STEM

When asked directly about their level of interest in STEM, four out five parents said they were interested in STEM in general, with technology and science proving to be most popular subjects. Interest levels were higher among fathers compared to mothers, which corresponds to the gender disparity seen between fathers and mothers in terms of STEM qualifications they have obtained.

Perceived importance of STEM for future employment

Overall, parents showed positive attitudes towards STEM, with most in agreement that a STEM-skilled workforce is important for the Australian economy and that basic understanding of mathematics and science is critical for future employment.

When asked specifically about the importance of STEM for their children's future employment prospects, the majority were in agreement regarding its importance and ranked technology and mathematics skills as most important. Gender differences were again evident, with fathers recording higher levels of perceived importance for all STEM subjects apart from mathematics.

Parents' perceptions of the importance of STEM for future employment were closely aligned with the views of educators. However, in contrast with the views from the *Youth 2019/20* research, it was found that both parents and educators place a higher level of importance on the skills attained from STEM education compared to young people.

Parents' expectations

Parent's expectations of employment for their children further highlights the importance of studying STEM. The survey revealed that one in two parents aspire for their children to pursue a career in a STEM-related field, with computing / information technology topping the list followed by engineering. Preference for a STEM-related career was more common among fathers compared to mothers and among parents of boys compared to parents of girls. It was also found that a higher proportion of Aboriginal and / or Torres Strait Islander parents expect their children to pursue a STEM career compared to other parents surveyed.

Parents' confidence in supporting children with STEM schoolwork

The ability to support children with schoolwork can be a challenge for some parents. To understand this further, the survey set out to measure parents' confidence levels in supporting their children with STEM related school work. It was found that three quarters of parents have some level of confidence in their ability, mostly in technology and mathematics. In line with other metrics, a significant gender difference was again noted, with a higher proportion of fathers claiming to be confident in supporting their children with STEM school work compared to mothers.

The results also revealed that the age of the child plays a key role in the level of confidence parents have in supporting their children with STEM. Parents of younger children (years one to six) reported the highest levels of confidence compared to parents of older students.

Gender bias

The survey revealed some clear gender biases among parents. One such example was that half of all parents agreed that it's easier to engage boys in STEM compared to girls. This was mostly driven by parents of boys compared to parents of girls.

Interestingly, when comparing how much mothers and fathers agree with the two opposing statements that 'boys / girls have a better chance to succeed in STEM compared to the opposite gender', the survey found that fathers were just as likely to agree that boys have a better chance, as they were to say that girls have a better chance. In contrast, a higher proportion of mothers agree that boys have a better chance of success in STEM compared to girls.

Parents were also asked about their perceptions of the confidence boys and girls have across STEM and other school subjects. While most parents believe boys and girls are equally confident in most subjects, a larger proportion believe boys are more confident in STEM subjects compared to girls. Engineering recorded the largest gender skew, with half of all parents saying that boys are more confident in this subject compared to only 3% for girls (46% were neutral). It was also found that Aboriginal and / or Torres Strait Islander parents were more likely than other parents surveyed to say that girls are more confident with all four STEM subjects.

These findings corresponded with the perceptions of young people with similar results recorded in the *Youth 2019/20* study. These similarities also extend to the *Teachers & Career Advisors 2020/21* research which also recorded a perceived skew of confidence towards boys for all STEM subjects. However, educators were more likely to say that boys are more confident in mathematics and engineering compared to parents.

Parent and child interactions

When it comes to engagement, almost half of all parents reported having weekly discussions with their children about STEM topics, while two in five do this less regularly and only 15% do not discuss STEM at all. Weekly conversations were more common among fathers compared to mothers and among parents of boys compared to parents of girls. Aboriginal and / or Torres Strait Islander parents also reported having more regular STEM discussions compared to other parents surveyed. Half of all parents reported having participated in a STEM-related activity with their child in the past 12 months, with science museums and watching documentaries proving to be the most popular activities.

School perceptions

Parents were given an opportunity to provide feedback about how their child's school supports students with STEM. The survey found that half of all parents believe their child's school places quite a bit or a lot of emphasis on the teaching of STEM, while a third believe there is some emphasis, but not much. Despite the positive perceptions around the emphasis schools place on STEM, more than half of all parents would like their child's school to be doing more to engage their children with STEM. This was driven more by fathers compared to mothers. Interestingly, the appetite for greater STEM engagement through the school was highest among parents who say their school currently places a lot of emphasis on STEM education.

In conclusion

The insights presented in this report have established critical benchmarks for the future tracking of this key influencer group. The research provides information for policy makers to take a data driven approach in addressing the gender imbalance existent in STEM education and related careers. This research along with the *Teachers & Careers advisors 2020/21* research complements the insights uncovered through the *Youth 2019/20* research, providing much-needed context around young people's perceptions of STEM.

Moving forward, DISER will continue tracking key measures around STEM from both young people and their key influencers. The next round of research will be conducted in 2021 and will be the third wave of the Youth in STEM research.

Notes on interpreting the report

Significant differences – Differences between demographic groups cited in the report refer to statistically significant differences based on a 95% confidence interval. Charts in this report show statistically significant differences between subgroups using black or white arrows alongside the percentage results. If a difference is described as indicative, the difference is not statistically significant.

Weighted data and rounding – To ensure the survey results are representative of the population, weighting was applied to correct for under or over representation of the sample. Where the weighted population or proportions do not add up to 100%, this is due to rounding of decimal places up or down to the nearest whole number.

Multiple choice questions (MC) – Multiple choice questions will not add to 100% as respondents could select more than one answer. All multiple-choice questions have been labelled within the question text as MC.

Parents – References to parents refer to the combination of all parents, legal guardians and carers of the child in question. References to fathers refer to parents, legal guardians and carers who have identified as men, while mothers are the parents, legal guardians and carers who have identified as women.

Child – Survey respondents were asked to answer the questions based on their oldest child who is currently either in primary or secondary school. A small subset of parents with children in higher education were also included. This approach was taken with the objective of setting a consistent randomised method of selecting a child. Also, by referring to the oldest child, we know the upper limit of the parents' experiences with the education system which is likely to highly influence their responses to the survey.

Non-binary respondents – Data was collected from respondents who did not identify with binary genders and also from parents who had children who did not identify with binary genders. While these respondents contribute to the overall sample size, due to low numbers, this report excludes any analysis based on these respondents.

CALD – People have been classified as CALD (Culturally and Linguistically Diverse) if they speak a language other than English at home.

Location / area – When referring to location or metropolitan vs. regional areas, this refers to the location of the oldest child's school, not the home location of the parent.

Socioeconomic status – Lower or higher socioeconomic status (SES) has been determined by using the Australian Bureau of Statistics Socio-Economic Indexes for Areas (SEIFA) which ranks areas in Australia according to relative socioeconomic advantage and disadvantage into deciles. The indexes are based on information from the five-yearly census. This survey employs the Index of Education and Occupation (IEO). Postcodes supplied by respondents have been mapped to the corresponding IEO decile. This report has grouped deciles one to five and classified this group as lower SES and deciles six to ten as higher SES.

STEM classifications: Below is a list outlining how STEM has been classified in this research report.

- **STEM definition in the context of this report:** STEM stands for science, technology, engineering and mathematics. In this survey, science refers to topics such as biology,

chemistry, physics, and earth and environmental sciences. It does not include medicine, nursing, psychology or health sciences, however while reporting on perceptions, medicine and nursing are often linked by respondents to STEM.

- Technology refers to topics related to information technology and programming, mechanics, electronics, and all other types of technology. Some technology courses could also be called engineering. There are many types of engineering, like aerospace and environmental engineering, and many types of mathematics, such as geometry, logic and statistics.
- **STEM subjects at primary school:** mathematics, science, technologies.
- **STEM subjects at secondary school:**
 - **General STEM subjects:** mathematics, biology, chemistry, earth and environmental science, physics, geography, design and technologies and digital technologies.
 - **Year 9-10 elective STEM subjects:** geography elective, agricultural technology, design and technology, food technology, graphics technology, industrial technology, information and software technology.
 - **Year 11-12 elective STEM subjects:** agriculture, biology, chemical world science, chemistry, computing applications, design and technology, earth and environmental science, earth and space science, electrotechnology (VET), engineering studies, geography, human society and its environment, industrial technology, information and digital technology (VET), information processes and technology, investigating science, living world science, marine studies, mathematics, mathematics advanced, mathematics extension, metal and engineering (VET), physical world science life skills, physics, science extension, software design and development.
- **STEM subjects at higher education:** agriculture, computing and information technology, engineering and technology, environmental studies, mathematics, biology, chemistry, physics, earth and environmental sciences.
- **STEM qualifications:** computing or information technology (IT), data analyst, engineering, mathematics, science.
- **STEM jobs / careers:**
 - **Qualifying jobs / careers:** computing or information technology (IT), data analysis, engineer, mathematician, scientist.
 - **Potential qualifying jobs / careers, depending on specific role:** entrepreneur, machinery operator or driver, professor, lecturer or teacher, public servant (includes Army, Airforce, Navy), technician or trade worker (mechanic, electrician, carpenter).

Project background

Background

Building on from the [Youth in STEM Research](#), the Department of Industry, Science, Energy and Resources (DISER) has continued the collection and reporting of attitudes and perceptions of young Australians towards STEM. The objective of the research is to understand more about the perceptions of young Australians (12 to 25-year-olds) towards STEM skills and careers, particularly those of girls (women).

With the previous *Youth 2019/20* research showing that girls' perceptions of, and engagement with, STEM are strongly influenced by parents, teachers and career advisors, DISER decided to expand the research to provide insights into the attitudes and perceptions of these key influencer groups. From 2020 onwards, the Youth in STEM research will track both the 12 to 25 year-old group of young people and the influencer groups of parents and educators. Each survey is conducted biennially as below, with results released early the following year:

- 2019: People aged 12-25 ([completed report](#))
- 2020: Parents ([current report](#))
- 2020: Teachers & Career Advisors ([companion report](#))
- 2021: People aged 12-25
- 2022: Parents
- 2022: Teachers & Career Advisors

The research focuses on any differences and similarities in data outcomes based on gender, as well as investigating the intersection of other demographics which may further influence STEM engagement and participation.

Given the substantial differences between the experiences and perspectives of parents and educators, the research was split into two surveys to enable more customisation of the questionnaire and to establish the key metrics by which to track these influencer cohorts.

This research report is the establishment report for the parent survey. Key differences between the insights from this report and the *Teachers & Career Advisors 2020/21* report and the *Youth 2019/20* research have been noted.

Objectives

The principal objective of this study is to establish STEM related awareness and perceptions of parents of young Australians and to understand how they influence the decision-making process of students' future education and career paths. The underlying theme of the research is to uncover key gender differences and biases.

More specifically, the study aims to:

- Understand levels of awareness and understanding of STEM and associated skills among parents
- Evaluate key metrics such as interest, confidence to support children in STEM and perceived importance of STEM
- Understand parents' general attitudes towards STEM education and careers
- Assess difference in perceptions among a range of parent groups
- Understand behaviours which impact student disposition towards STEM
- Uncover gender biases in parents' perceptions.

Methodology

YouthInsight conducted a 20-minute online survey among a representative sample of parents of young people currently studying in Australia. Parents completed the survey via computer, tablet or mobile phone.

Sampling

The total unweighted sample for the parent survey was 1,492. YouthInsight collaborated with two professional online panel partners to obtain a nationally representative sample of Australian parents of young students. The sample was balanced to ensure it had representation of parents of children in primary and secondary schools and a smaller proportion of parents of students currently in higher education.

Sample quotas were placed on state, gender and school type (Government, Catholic, Independent and other). Sample sizes were boosted beyond general population levels for Aboriginal and / or Torres Strait Islander parents.

To ensure survey results were representative of the population, weighting was applied based on state and gender to correct for under or over representation of the sample for these variables.

To determine socioeconomic status, the survey used Socio-Economic Indexes for Areas (SEIFA) developed by the Australian Bureau of Statistics (ABS). SEIFA ranks areas in Australia into ten equally sized groups according to relative socioeconomic advantage and disadvantage. These are known as socioeconomic deciles. The indexes are based on information from the five-yearly Census of Population and Housing. The data captured in the survey has been mapped to the Index of Education and Occupation (IEO).

Below are the summary tables of the unweighted sample and weighted population with applied weighting factors.

Table 1: Total unweighted sample and weighted population.

GENDER, AGE AND SCHOOL	UNWEIGHTED SAMPLE	UNWEIGHTED SAMPLE %	WEIGHTED POPULATION	WEIGHTED POPULATION %
Total	1,492	100%	1,492	100%
Parents' Gender				
Man	614	41%	746	50%
Woman	869	58%	746	50%
Other / non-binary	9	1%	0	-
Gender of oldest child				
Boy	828	56%	839	56%
Girl	659	44%	649	44%
Non-binary	5	-	4	-
School type of oldest child (excludes higher education)				
Primary	609	43%	609	43%
Secondary	594	41%	593	41%
Combined (P-12) and other	229	16%	231	16%
School year level of oldest child				
Year 1 to 4	378	25%	371	25%
Year 5 to 6	233	16%	237	16%
Year 7 to 8	249	17%	248	17%
Year 9 to 10	298	20%	294	20%
Year 11 to 12	274	18%	284	19%
Higher education	60	4%	59	4%
School jurisdiction of oldest child (excludes higher education)				
Government	973	68%	964	67%
Catholic	249	17%	253	18%
Independent	190	13%	196	14%
Other	20	1%	20	1%

*Where weighted sample or proportions do not add up to 100%, this is due to rounding of decimal places up or down to the nearest whole number.

LOCATION AND SOCIOECONOMIC STATUS	UNWEIGHTED SAMPLE	UNWEIGHTED SAMPLE %	WEIGHTED POPULATION	WEIGHTED POPULATION%
State				
NSW	444	30%	477	32%
VIC	435	29%	388	26%
QLD	297	20%	298	20%
WA	119	8%	149	10%
SA	123	8%	104	7%
ACT	43	3%	30	2%
TAS	25	2%	30	2%
NT	6	0%	15	1%
Location of school				
Capital city / major metropolitan area	1,070	72%	1,078	72%
Regional or remote/rural	422	28%	414	28%
Socioeconomic status (SES)*				
Lower SES (Decile 1 - 5)	509	34%	505	34%
Higher SES (Decile 6 - 10)	970	65%	974	65%
Unknown	13	1%	13	1%

*Socioeconomic status (SES) - not all postcodes are available in the SEIFA index list.

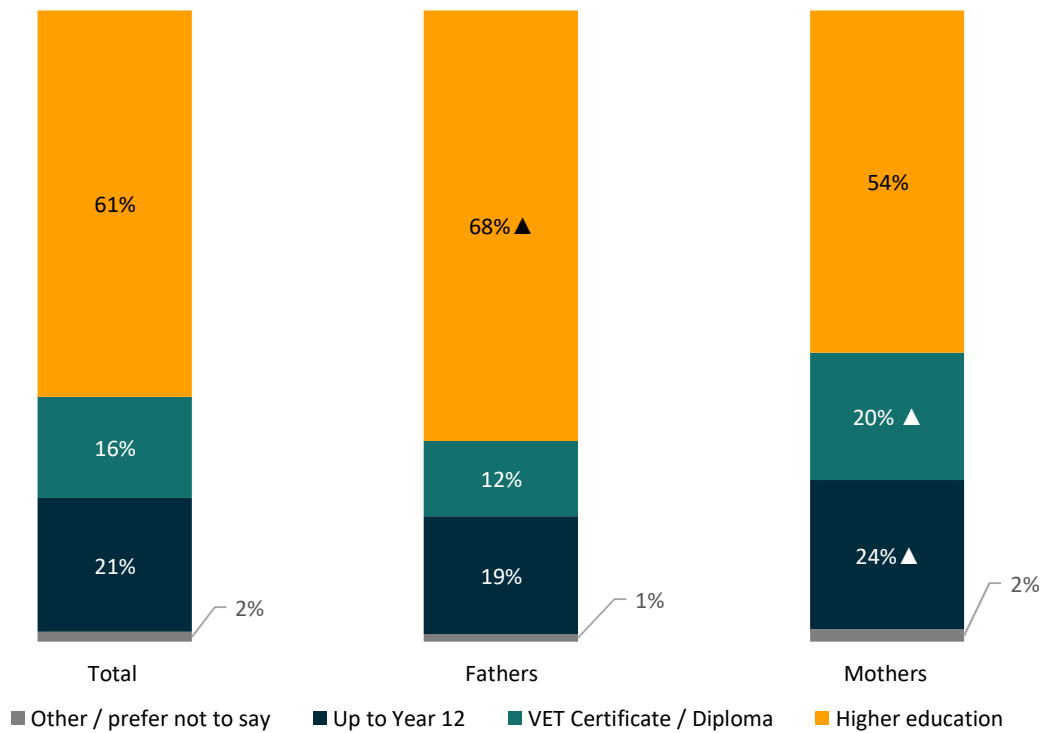
PARENT / GUARDIAN BACKGROUND	UNWEIGHTED SAMPLE	UNWEIGHTED SAMPLE %	WEIGHTED POPULATION	WEIGHTED POPULATION %
Country of birth				
Australia	1,140	76%	1,137	76%
Other	352	24%	355	24%
Aboriginal and / or Torres Strait Islander				
Non-Aboriginal and / or Torres Strait Islander	1,408	94%	1,403	94%
Aboriginal and / or Torres Strait Islander	84	6%	89	6%
CALD (Culturally and Linguistically Diverse - based on language spoken other than English at home)				
Non-CALD	1,184	79%	1,182	79%
CALD	308	21%	310	21%

Parent profile

The influence parents have on their children’s career decisions begins with the example set by their own employment and education situation. The survey revealed that 68% of fathers have higher education qualifications compared to 54% of mothers.

Figure 1: Highest level of education.

Q. What’s the highest level of education you have attained?

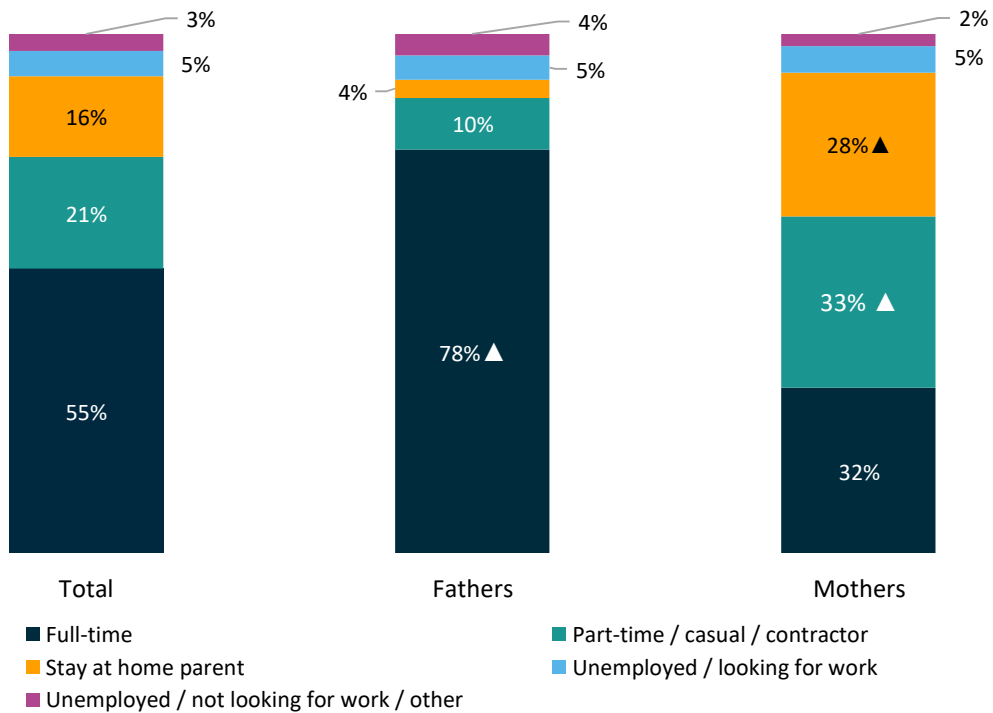


Base: Total – 1,492, fathers – 614, mothers – 869 (non-binary – 9. Not included due to small base size). Weighted percentages may not add up to 100% due to rounding of decimal places to the nearest whole number.

Furthermore, 78% of fathers reported being employed in full time work compared to only 32% of mothers, who were significantly more likely to be full-time at-home parents compared to fathers (28% vs 4%). Overall, 88% of fathers were found to be employed in the workforce compared to 65% of mothers.

Figure 2: Employment status.

Q. What is your employment status?

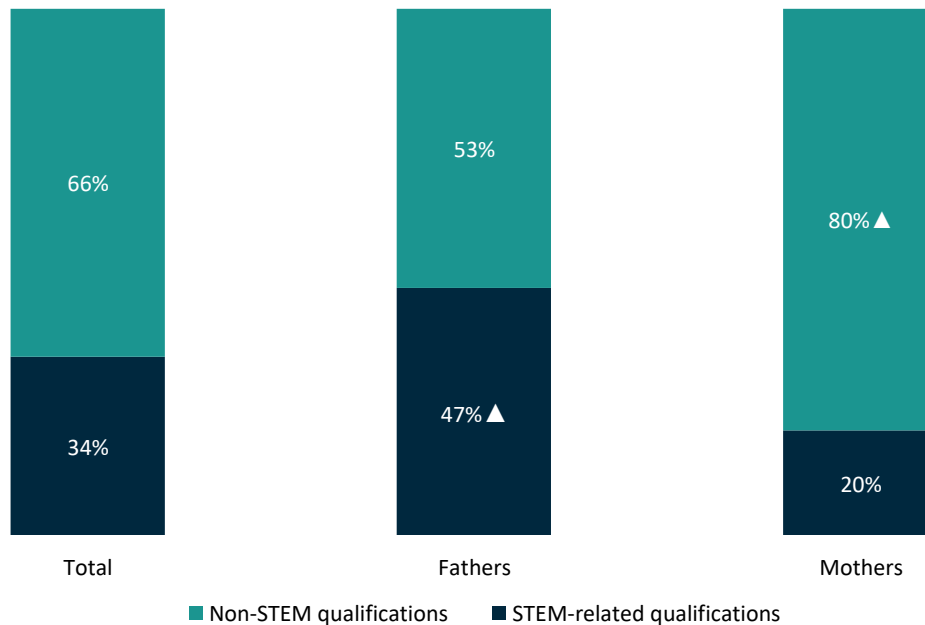


Base: Total – 1,492, fathers - 614, mothers – 869 (non-binary – 9. Not included due to small base size). Weighted percentages may not add up to 100% due to rounding of decimal places to the nearest whole number.

Among tertiary-qualified parents, it was found that fathers are 81% more likely¹ to have STEM qualifications compared to mothers. This has the potential to influence children at a young age when it comes to gender affinities regarding STEM education.

Figure 3: Qualifications obtained (degree or certificate) among parents with tertiary qualifications.

Q. Have you or the child’s other parent / primary carer (if applicable) completed a degree or certificate in any of the following areas? (MC)



Base: total with tertiary qualifications – 1,138, fathers – 490, mothers – 648 (non-binary parents not shown due to low base size – 8). Weighted percentages may not add up to 100% due to rounding of decimal places to the nearest whole number. Please note that results shown are based on people who exclusively do not have STEM qualifications vs people who do, out of those who have tertiary qualifications.

It was found that parents from metropolitan areas (68%) are more likely to have higher education qualifications compared to their regional or remote counterparts (43%). A similar trend is seen among parents from higher SES groups (68%) compared to those in lower SES groups (47%). Parents from CALD backgrounds (81%) are also more likely to have higher education qualifications compared to those from non-CALD backgrounds (56%).

Parents were also asked what they believe their child’s favourite school subjects are, with the option of selecting up to three subjects. Among parents with primary school children, three quarters (76%) selected at least one STEM subject. This was made up of 83% of parents of boys selecting a STEM subject, compared to 67% of parents of girls. Mathematics ranked highest among parents of boys (55% vs 36% of parents of girls) while creative arts topped the list among parents of girls (54% vs 24% of parents of boys).

¹ Score calculated using index: The index is ratio of the row or column percentage to the total for the column or row multiplied by 100. The results referred to above are the differences of the index i.e., index of having a STEM qualification: men – 155, women – 61, the difference then is 88.

Similarly, among parents of secondary school students, 79% of parents of boys selected at least one STEM subject as one of their child’s top three subjects compared to 67% of parents of girls. According to parents of girls, the top subject was English (31% vs 20% of parents of boys). While mathematics topped the list among parents of boys, there was no significant difference in preference for mathematics among parents of boys or girls (36% of parents of boys vs 30% of parents of girls).

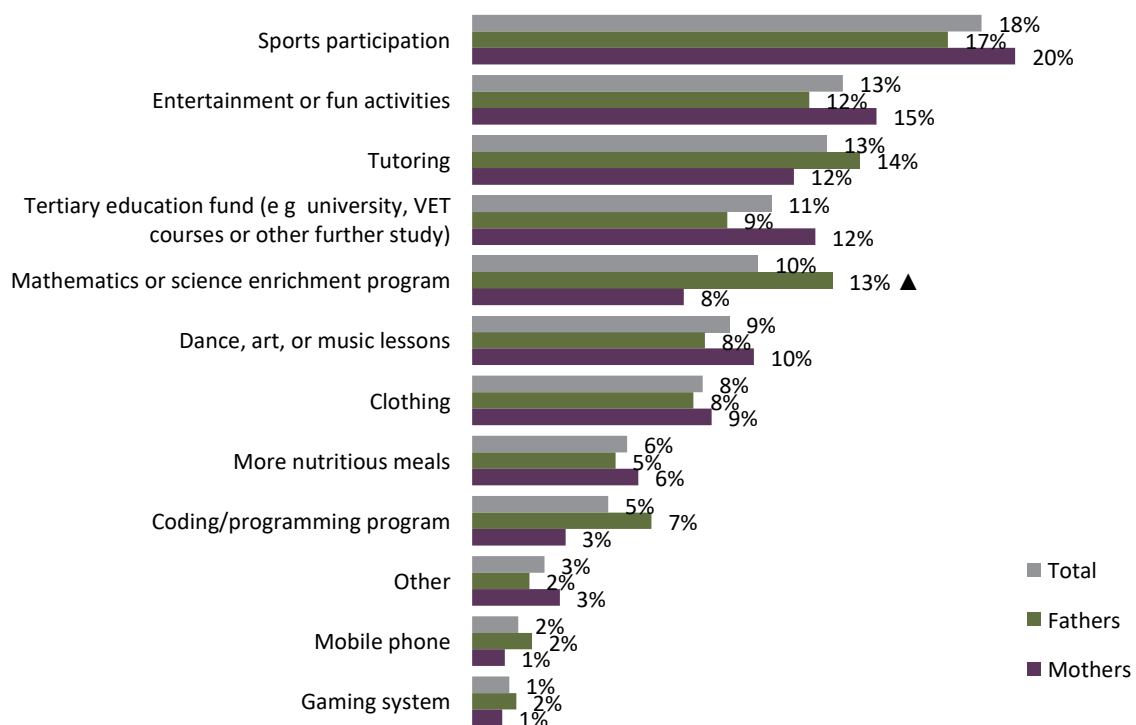
Furthermore, primary school students from families where at least one of the parents works in a STEM-related career are 22% more likely to favour STEM subjects compared to families where neither of the parents work in STEM. Similar results are seen among secondary school students, where the likelihood that a student’s favourite subject is related to STEM is 16% higher if the parents work in this field.

To help understand what sorts of extracurricular activities they prioritise, parents were asked how they would spend an extra \$100 a month on their child. Given Australia’s strong involvement with sports, it was not surprising that most parents chose to spend the money on sports participation (18%). The next preference was to spend the money on either entertainment or fun activities, or tutoring (both 13%).

When it comes to activities related to STEM, with the additional \$100 per month, fathers are 59% more likely to enrol their child in a mathematics / science enrichment program or a coding class compared to mothers. Furthermore, parents in general are 35% more likely to enrol their son in a mathematics / science enrichment program or a coding class compared to their daughter.

Figure 4: Preference for spending additional \$100 on their child.

Q. If you had an extra \$100 to spend each month on the child, how would you be most likely to spend it?



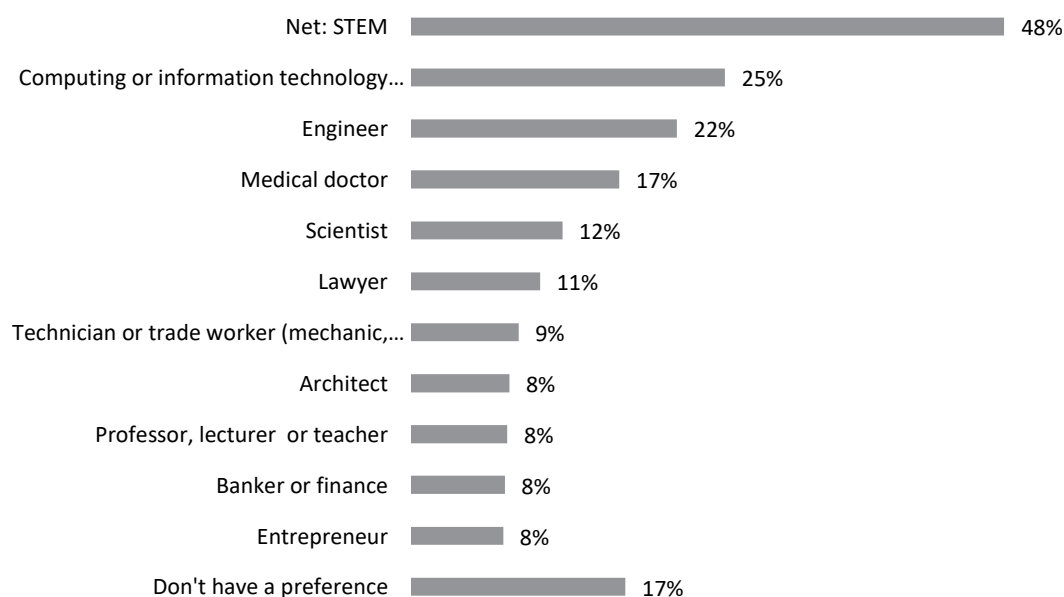
Base: total – 1,492, fathers – 639, mothers – 873 (non-binary parents not shown due to low base size – 9). Weighted percentages may not add up to 100% due to rounding of decimal places to the nearest whole number.

Parents' expectations

Overall, one in two (48%) parents would like their child to pursue a career in a STEM-related field. The career most sought out by parents for their children is within the field of computing / information technology (25%), followed by engineering (22%) and medical doctor (17%). However, 17% of parents state they have no preference for the type of career their child pursues.

Figure 5: Career preferences for oldest child. Showing top 10 careers only.

Q. From the professions listed, which are the top 3 professions you would most like the child to pursue? (MC)

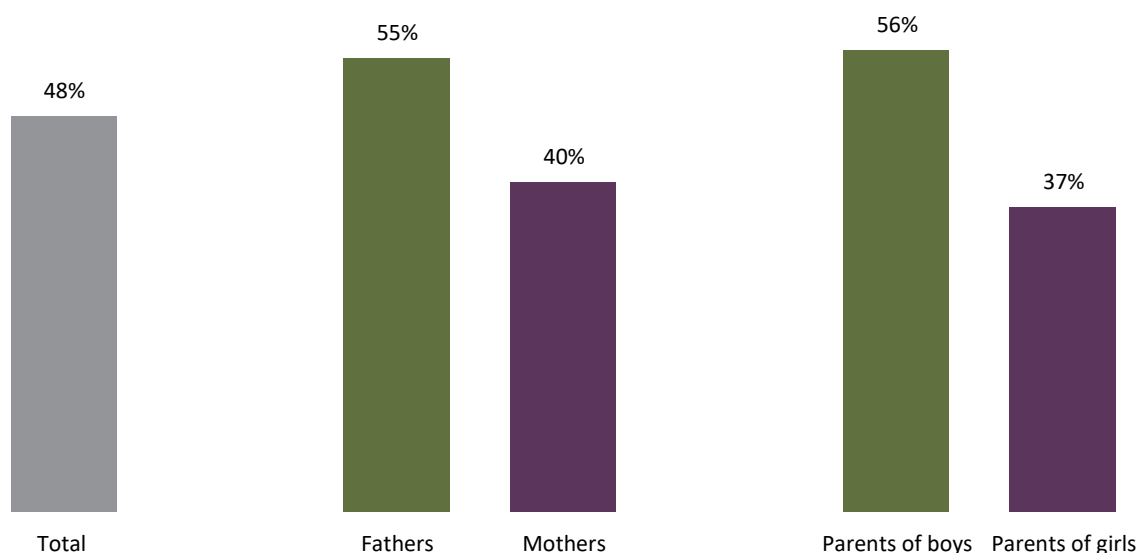


Base: total – 1,492. Weighted percentages may not add up to 100% due to rounding of decimal places to the nearest whole number.

Preference for a STEM-related career is more common among fathers (55%) compared to mothers (40%). The survey also found that parents of boys (56%) are more likely to want their child to pursue a STEM career compared to parents of girls (37%).

Figure 6: STEM career preference for oldest child, split by gender of parent and gender of child.

Q. From the professions listed, which are the top 3 professions you would most like the child to pursue? (MC)



Base: total – 1,492, fathers – 639, mothers – 873, Parents of boys – 851, Parents of girls – 665 (not shown due to low base size: non-binary parents – 9, parents of non-binary children – 5). Weighted percentages may not add up to 100% due to rounding of decimal places to the nearest whole number.

Below are other significant differences among key demographic groups.

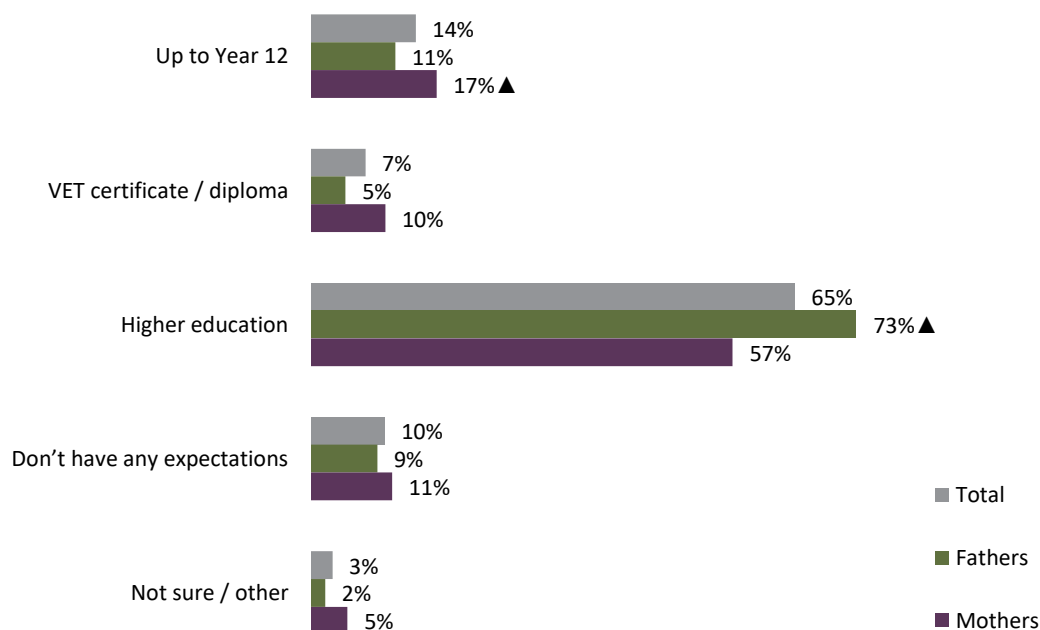
Table 2: STEM career preference for eldest child: significant differences by audience.

Audience	WEIGHTED %
Socioeconomic status	
Lower SES (Decile 1 - 5)	44%
Higher SES (Decile 6 - 10)	50%
Location	
Metropolitan	51%
Regional / remote	40%
CALD	
Non-CALD	46%
CALD	56%

Overall, two thirds of parents in Australia (65%) expect their children to attain a bachelor’s degree or higher, although there are differences between expectations of mothers (57%) and fathers (73%). However, there are no significant differences in the expected education levels of parents with either boys or girls (64% of parents of boys, vs 65% of parents of girls).

Figure 7: Expectations of the highest level of education their child will attain.

Q. What is the highest level of education you expect the child to attain when they grow up?



Base: total – 1,492, fathers – 639, mothers – 873 (non-binary parents not shown due to low base size – 9). Weighted percentages may not add up to 100% due to rounding of decimal places to the nearest whole number.

Other key differences in expectations are seen among parents from metropolitan areas compared to regional or remote areas. Seven in ten parents from metropolitan areas (71%) expect their children to have a higher education compared to 48% in regional or remote areas. Similarly, parents from higher SES areas are 23% more likely to expect their children to have a higher education compared to parents from lower SES areas. Likewise, parents with CALD backgrounds are 37% more likely than parents of non-CALD backgrounds to expect higher education.

Parents' understanding and perceptions of STEM

Awareness and understanding

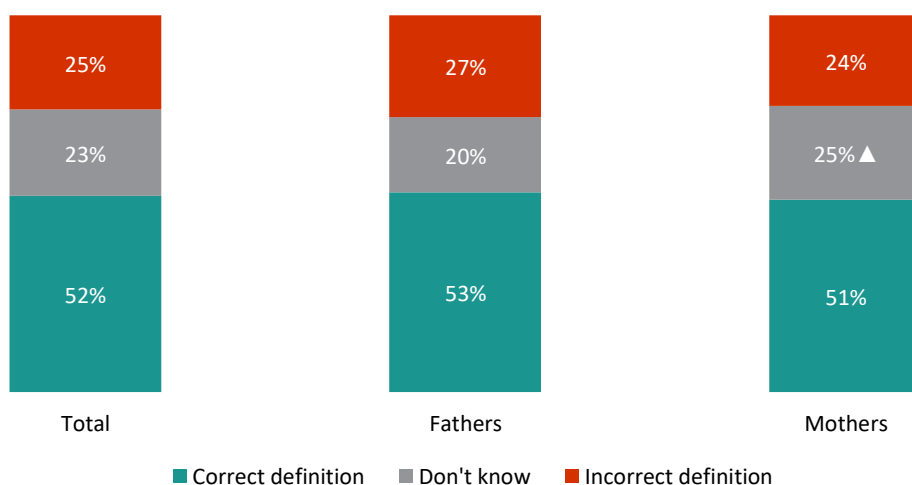
To get an indication of their understanding of STEM, parents were asked what they believe the acronym 'STEM' stands for. One in two parents (52%) were able to identify all four subjects, which is slightly lower compared to the results from the *Youth 2019/20* survey of 12-25-year-olds (58%). The difference between the proportion of mothers and fathers who correctly spelt out the acronym was not significant (53% of fathers vs 51% of mothers). However, there were more mothers who acknowledged they didn't know what it stood for (25% vs 20% of fathers), while fathers were (indicatively) more likely to provide an answer, even if it was an incorrect one (27% vs 24% of mothers).

Among the parents who provided an incorrect response, a quarter (26%) were able to identify all subjects except for engineering. Below are some of common responses mistakenly offered in the place of 'engineering':

- Science Technology **Entertainment** Mathematics
- Science Technology **Extension** Mathematics
- Science Technology **Exercise** Mathematics
- Science Technology **Environment** Mathematics
- Science Technology **Education** Mathematics
- Science Technology **English** Mathematics
- Science Technology **Electronics** Mathematics
- Science Engineering **Economics** Mathematics
- Science Technology **Emerging Material**

Figure 8: Understanding of the term 'STEM' (coded).

Q. Please tell us what you believe the term 'STEM' stands for.



Base: total – 1,492, fathers – 639, mothers – 873 (non-binary parents not shown due to low base size – 9). Weighted percentages may not add up to 100% due to rounding of decimal places to the nearest whole number.

Parents were significantly less likely to be aware of what the term ‘STEM’ stands for compared to educators, with nine in ten (87%) providing the correct definition in the Teachers & Careers Advisors 2020/21 research.

Below are other significant differences among key demographic groups.

Table 3: Proportion correctly identifying all four STEM subjects: significant differences by audience.

Audience	WEIGHTED %
Location	
Metropolitan	56%
Regional / remote	42%
Socioeconomic status	
Lower SES (Decile 1 - 5)	44%
Higher SES (Decile 6 - 10)	56%
CALD	
Non-CALD	49%
CALD	63%

Life skills associated with STEM education

Parents were asked, unprompted, what broader life skills they believe STEM education provides to children. They were allowed to give up to five open-ended responses. While a few skills were mentioned much more frequently than others (i.e. mathematics, IT, science and problem solving), overall, the range of responses to this question was very broad and with a long tail. This long tail included many skills which individually were mentioned by less than 1% of respondents, but in aggregate accounted for 20% of responses.

The skills mentioned by at least 1% of respondents are presented below. The results in the list are ordered based on the frequency of responses.

Broader life skills provided by STEM education (coded answers), in order of most to least mentioned.

Q. In your opinion, what broader life skills does STEM education provide children?

- Mathematics / numeracy / statistics
- IT / technology / computer skills
- Problem solving
- Science (including biology, chemistry, physics)
- Creativity
- Critical / logical / independent thinking
- Analysing / reasoning / analytical thinking
- More / better / good job opportunities (including salary)
- Teamwork / collaboration
- Hands on / practical skills
- Engineering
- Curiosity
- English / literacy / writing
- Broad knowledge / skills / understanding
- Knowledge
- Money / accounting / finance / economics
- General skills / life skills
- Resilience / adaptability / perseverance
- Understanding of real life / real world
- Research
- Design
- Logical thinking
- Coding / programming
- Environment / climate change
- Confidence
- Communication
- Teaching / academia
- Innovation

Overall, a quarter of parents (25%) were unable to name any broader life skills associated with STEM education. These parents were more likely to be mothers (28% vs 21% of fathers), parents from regional and/or remote areas (36% vs 20% metropolitan), lower SES areas (31% vs 21% for higher SES areas) and non-CALD backgrounds (26% vs 20% for CALD backgrounds).

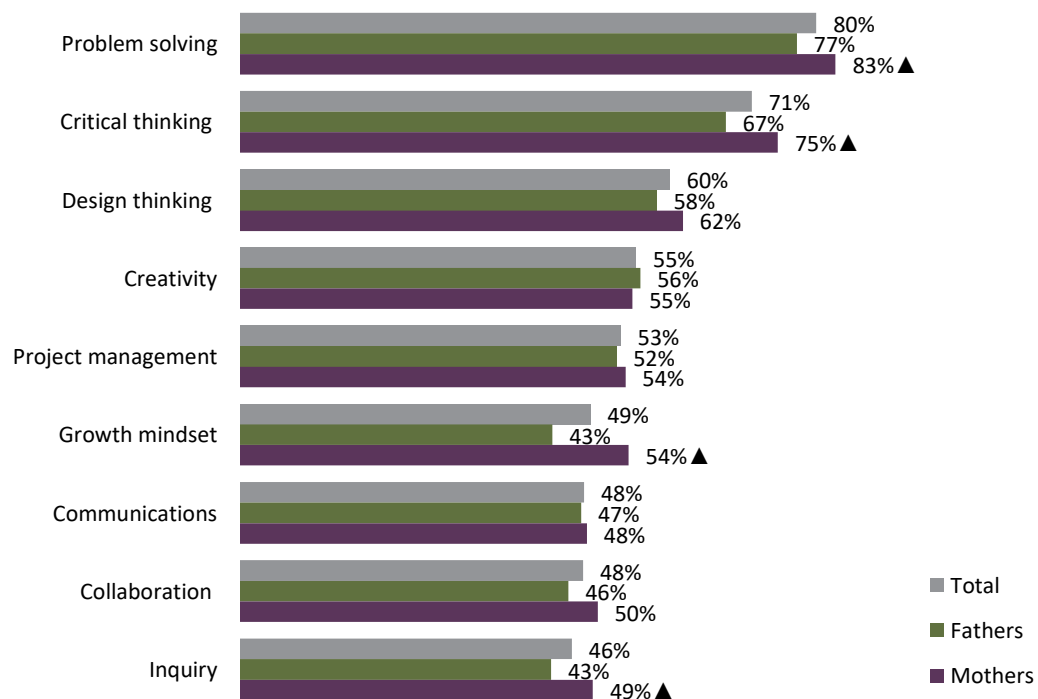
Parents were then asked a similar closed-ended question about the other skills which can be developed through the study of STEM, and the results revealed a clearer understanding of these life skills. Problem solving had the highest acknowledgment, with four in five parents (80%) connecting it to STEM education. Critical thinking (71%) and design thinking skills (60%) ranked second and third, respectively.

Other skills linked to STEM education, such as creativity, project management, communication and inquiry, had lower associations, with only around half of parents seeing them as skills which can be learnt through STEM.

Mothers were more likely to associate some life skills such as problem solving (83% vs 77% for fathers), critical thinking (75% vs 67% for fathers), growth mindset (54% vs 43% for fathers) and inquiry skills (49% vs 43% for fathers) with STEM compared to fathers.

Figure 9: Life skills that parents associate with STEM.

Q. Besides skills directly related to science, technology, engineering and mathematics, which of the below skills do you believe are developed through the study of STEM? (MC)



Base: total – 1,492, fathers – 639, mothers – 873 (non-binary parents not shown due to low base size – 9).

Educators were asked a similar question in the *Teachers & Career Advisors 2020/21* research, around what they believe are STEM skills. The results revealed that with the exception of skills directly related to science, technology, engineering and mathematics, both parents and educators selected the same top three life skills - problem solving, critical thinking and design thinking. These alignments among key influencer groups (parents and educators) are beneficial for students to ensure the narrative around STEM skills is consistent at school and at home.

Parents' attitudes towards STEM

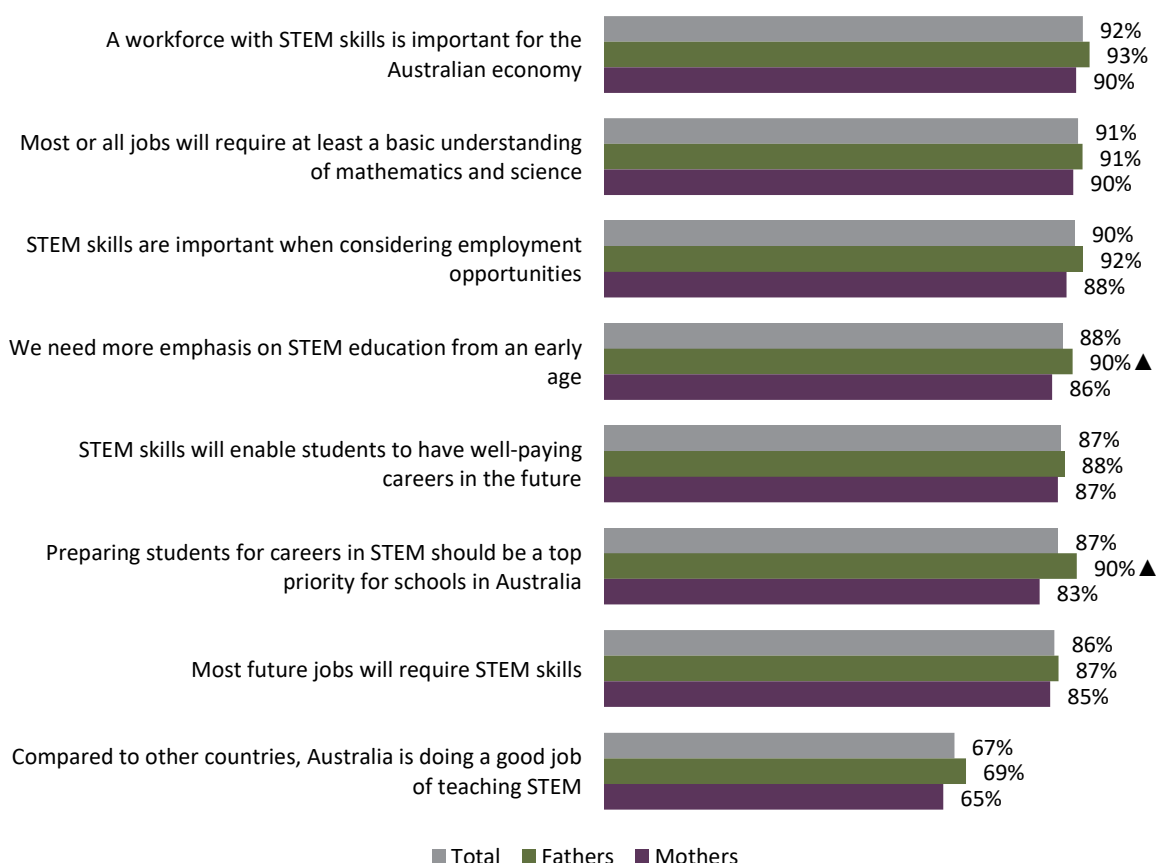
Parents generally have positive attitudes towards the impact of STEM education on future employment and the economy. Nine out of ten parents (92%) agree that a workforce with STEM skills is important for the Australian economy and that most jobs will require a basic understanding of mathematics and science in the future (91%).

A higher proportion of fathers than mothers agree that preparing students for careers in STEM should be a top priority for schools in Australia (90% of fathers, vs 83% of mothers). More fathers than mothers also agree that STEM skills are important for employment opportunities (92% of fathers, vs 88% of mothers) and that more emphasis on STEM education from an early age is needed (90% of fathers, vs 86% of mothers).

One third of parents (33%) disagree or are unsure that Australia is doing a good job of teaching STEM compared to other countries.

Figure 10: Perceptions about STEM education and its impact on future work (net: slightly / strongly agree).

Q. How much do you agree or disagree with the following statements about STEM education and its impact on future work and the economy?



Base: total – 1,492, fathers – 639, mothers – 873 (non-binary parents not shown due to low base size – 9).

Most parents in Australia understand that STEM skills are applicable in everyday life (92%) and recognise the increasing demand for these skills in the workforce (90%). Eight in ten (83%) believe there are many job opportunities for graduates with STEM qualifications.

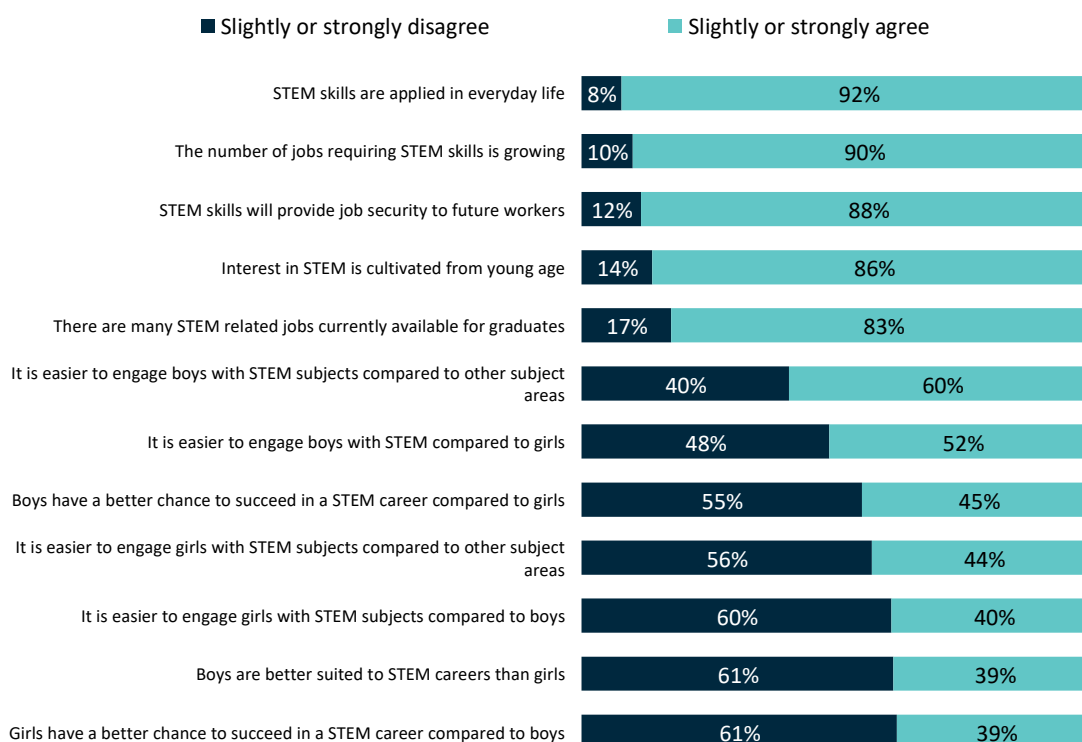
Differences in perceptions about ease of engagement between genders is apparent as half of parents agree that it is easier to engage boys with STEM compared to girls (52%) while only 40% agree that it is easier to engage girls with STEM than boys.

In terms of engagement with STEM compared to other school subjects, the majority of parents (60%) agree that it is easier to engage boys with STEM subjects compared to other subject areas, while only 44% feel the same for girls.

However, while clear gender biases are present in terms of parents' perceptions of engagement with STEM, the research also revealed that more than half of all parents do not believe gender plays any role in determining success in a STEM career (55% disagree that boys have a better chance at succeeding in STEM compared to girls and 61% disagree with the same statement regarding girls). In addition, 61% of parents disagree that boys are better suited to STEM careers than girls.

Figure 11: Perceptions about STEM skills and how they can impact future careers.

Q. How much do you agree or disagree with each of these statements about STEM skills and how they can impact future careers?



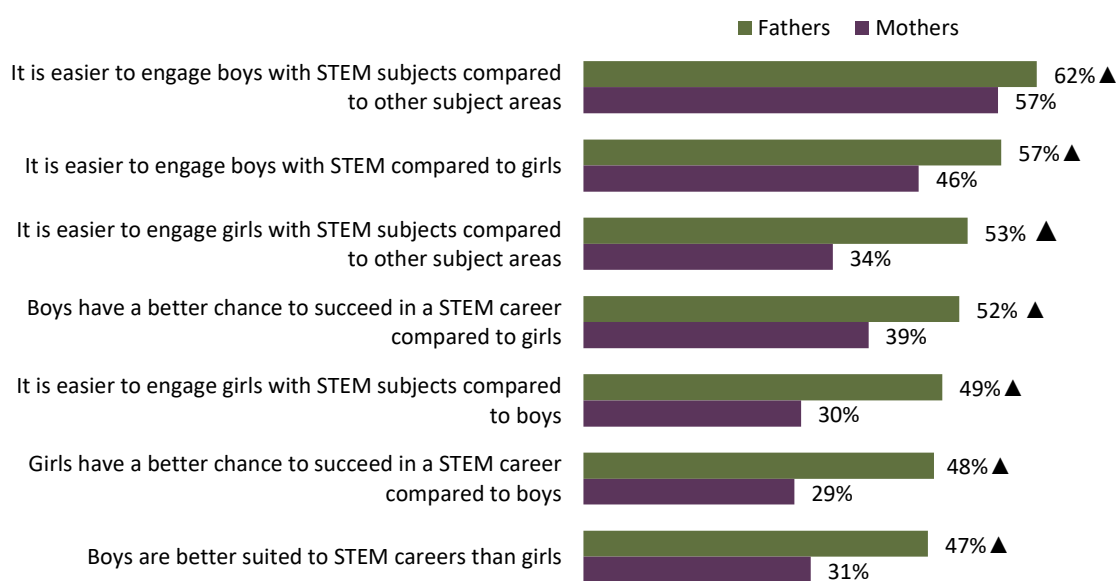
Base: total – 1,492. Weighted percentages may not add up to 100% due to rounding of decimal places to the nearest whole number.

Interestingly, with regard to engagement with and chances of success in STEM, the survey results indicated that fathers do not have a bias towards either gender, while mothers tend to be biased in favour of boys over girls.

While 52% of fathers believe that boys have a better chance to succeed in STEM compared to girls, a similar proportion (48%) believe the same for girls. In contrast, 39% of mothers agree that boys have a better chance of success compared to only 29% believing the same about girls.

Figure 12: Perceptions about gender differences in STEM (net: slightly / strongly agree).

Q. Below is a list of statements about STEM skills and how they can impact future careers. How much do you agree or disagree with each of these statements?



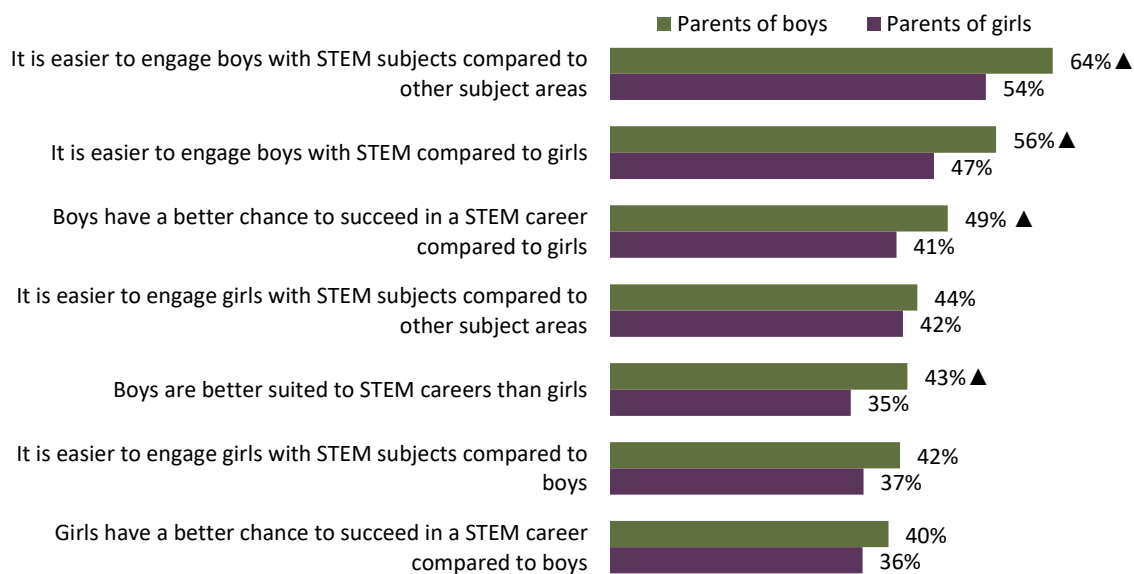
Base: fathers – 639, mothers – 873 (non-binary parents not shown due to low base size – 9).

Gender biases favouring boys in relation to engagement with and chances of success in STEM are also more pronounced among parents of boys compared to those of girls.

Over half (56%) of parents of boys agree that it is easier to engage boys in STEM compared to girls, while only 37% of parents of girls agree that it is easier to engage girls in STEM compared to boys.

In addition, parents of boys are more likely to agree that boys have a better chance to succeed in a STEM career (49%) than parents of girls (41%). They are also more likely to agree that boys are better suited to STEM careers than girls (43%) than parents of girls (35%).

Figure 13: Perceptions about gender differences in STEM (net: slightly / strongly agree).



Q. Below is a list of statements about STEM skills and how they can impact future careers. How much do you agree or disagree with each of these statements?

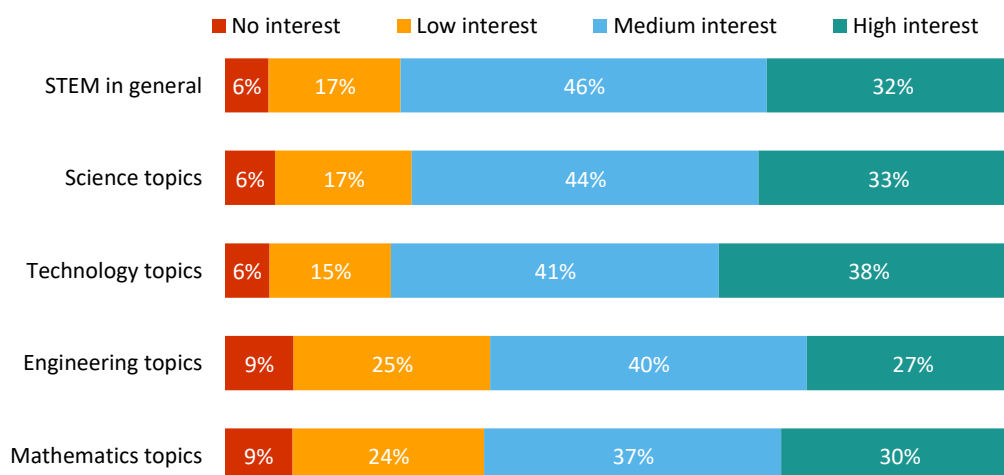
Base: parents of boys – 851, parents of girls – 665 (parents of non-binary children not shown due to low base size – 5).

Parents' interest in STEM

There is a high interest in STEM among parents with four out of five (78%) saying they have a medium to high interest in STEM in general. Technology (79%) and science (76%) ranked as the most popular subjects. However, a third of all parents have low or no interest in mathematics (33%) and engineering (34%).

Figure 14: Interest in STEM and individual STEM subjects.

Q. How interested are you in topics related to STEM and each of the individual STEM subjects?



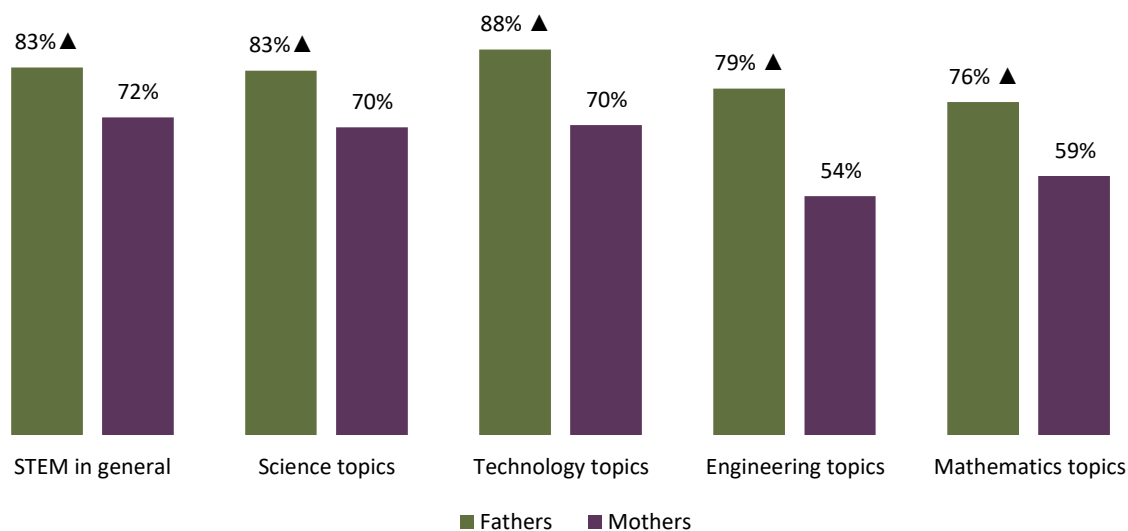
STEM subjects	STEM in general	Science topics	Technology topics	Engineering topics	Mathematics topics
Net: medium / high interest	78%	76%	79%	66%	67%
Net: low / no interest	22%	24%	21%	34%	33%

Base: total – 1,492. Weighted percentages may not add up to 100% due to rounding of decimal places to the nearest whole number.

Fathers are more likely to be interested in STEM, with 83% saying they have a general interest in this area compared to 72% of mothers.

Figure 15: Interest in STEM and individual STEM subjects (net: medium / high interest).

Q. How interested are you in topics related to STEM and each of the individual STEM subjects?

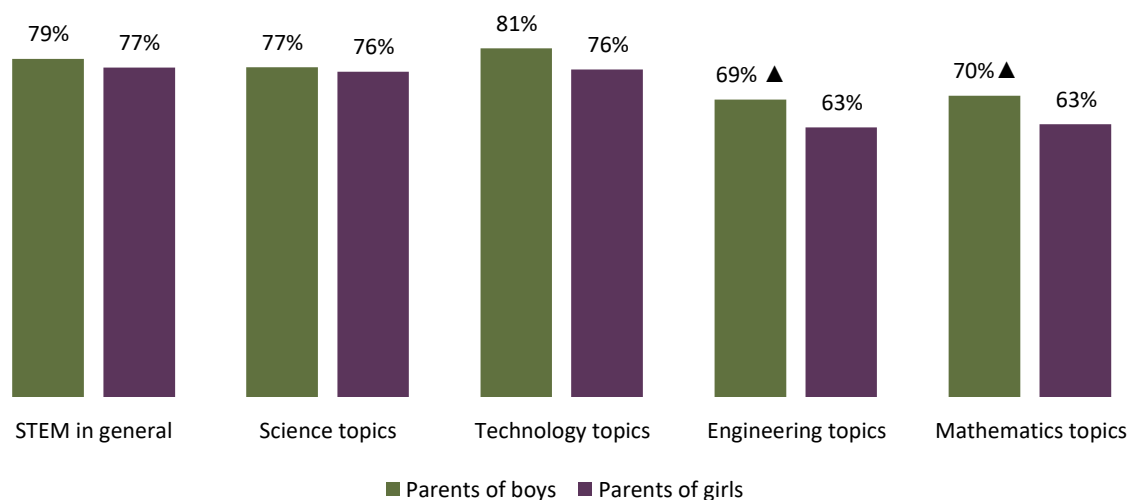


Base: fathers – 639, mothers – 873 (non-binary parents not shown due to low base size – 9).

Differences in interest levels were also noted among parents of boys compared to parents of girls, with parents of boys showing higher levels of interest in engineering (69% vs 63% of parents of girls) and mathematics (70% vs 63% of parents of girls).

Figure 16: Interest in STEM and individual STEM subjects (net: medium / high interest).

Q. How interested are you in topics related to STEM and each of the individual STEM subjects?



Base: parents of boys – 851, parents of girls – 665 (parents of non-binary children not shown due to low base size – 5).

Below are other significant differences in interest in STEM in general among key demographic groups.

Table 4: Interest in STEM in general: significant differences by audience (net: medium / high interest).

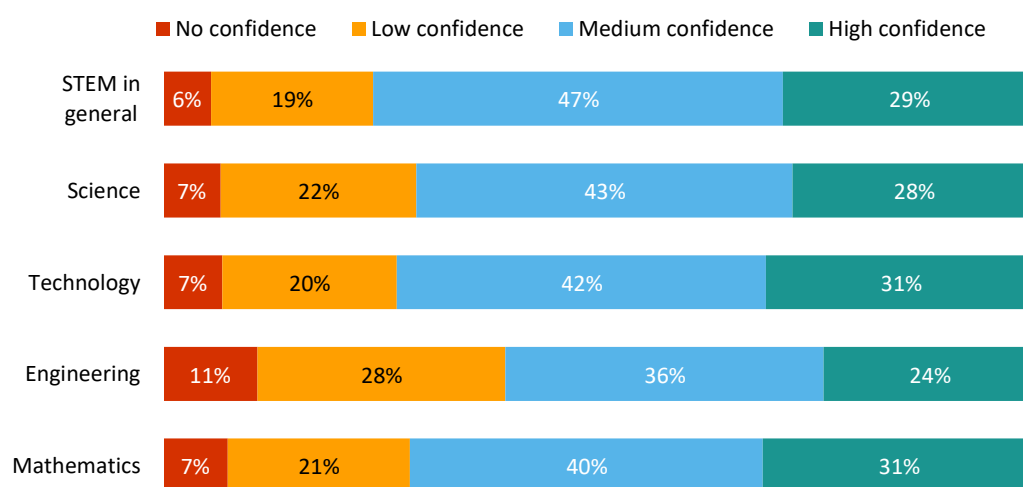
Audience	WEIGHTED %
Location	
Metropolitan	80%
Regional / remote	73%
Socioeconomic status	
Lower SES (Decile 1 - 5)	74%
Higher SES (Decile 6 - 10)	80%
CALD	
Non-CALD	75%
CALD	88%

Parents' confidence in supporting children with STEM schoolwork

Three quarters of parents (76% - STEM in general) have some level of confidence to support their children with STEM-related schoolwork, however, less than a third (29%) say that they are highly confident. Parents feel a similar level of confidence with technology (73%), mathematics (72%) and science (71%). The subject which parents feel least confident with is engineering, with two out of five (39%) acknowledging they have low or no confidence in this area.

Figure 17: Confidence in supporting children with STEM homework / projects.

Q. How confident would you feel if you had to support the child with homework / projects related to STEM?



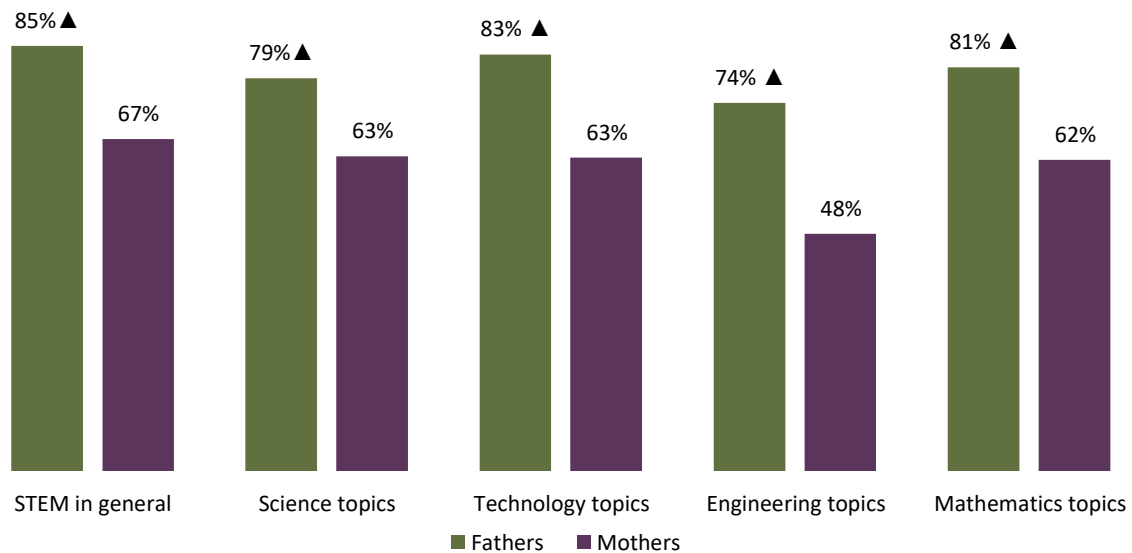
STEM subjects	STEM in general	Science topics	Technology topics	Engineering topics	Mathematics topics
Net: medium / high confidence	76%	71%	73%	61%	72%
Net: low / no confidence	24%	29%	27%	39%	28%

Base: total – 1,492. Weighted percentages may not add up to 100% due to rounding of decimal places to the nearest whole number.

Across parent genders, 85% of fathers say they are confident to support their children with STEM in general compared to only 67% of mothers. Fathers were also more confident than mothers when it came to supporting with all four specific STEM subjects.

Figure 18: Confidence in supporting children with STEM homework / projects (net: medium / high confidence).

Q. How confident would you feel if you had to support the child with homework / projects related to STEM?

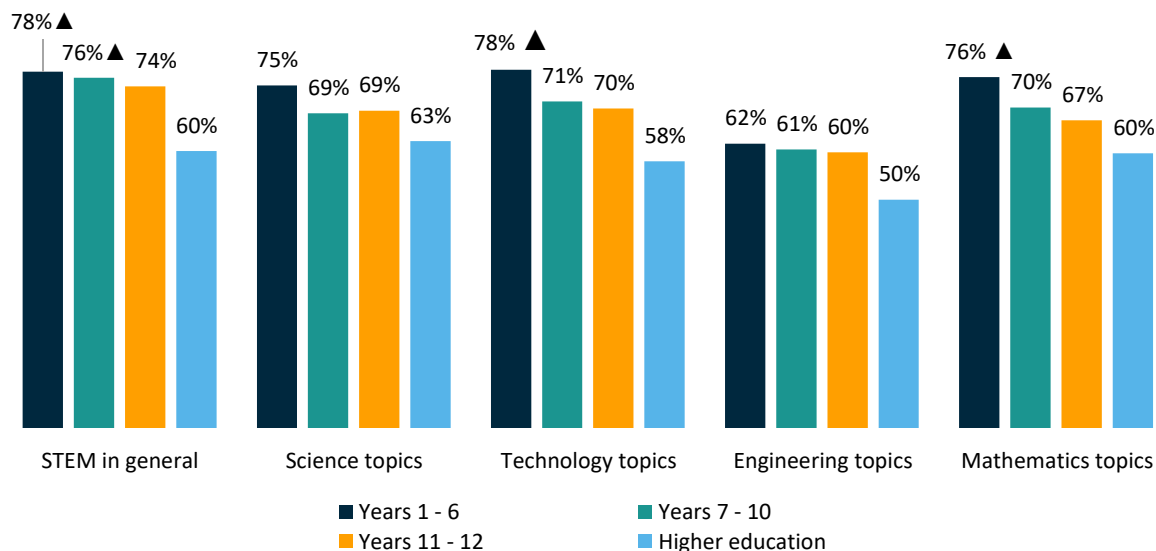


Base: fathers – 639, mothers – 873 (non-binary parents not shown due to low base size – 9).

The age of the child plays a key role in the level of confidence parents have in supporting their children with STEM. Parents of children in years one to six reported the highest levels of confidence across all subjects compared to parents of secondary school and higher education. Technology (78%) and mathematics (76%) recorded the highest levels of confidence among parents of children in years one to six, significantly higher than all other year levels. Parents of students in years one to ten had significantly higher confidence in STEM in general compared to parents of students in higher education (an average of 77% for parents of students in years one to ten, vs 60% for parents of students in higher education).

Figure 19: Confidence in supporting children with STEM homework / projects (net: medium / high confidence).

Q. How confident would you feel if you had to support the child with homework / projects related to STEM?



Base: parents of children in Years 1 - 6 – 611, parents of children in Years 7 - 10 – 547, parents of children in Years 11 - 12 – 274, parents of children in higher education – 60.

Below are other significant differences in confidence in ‘STEM in general’ among key demographic groups.

Table 5: Confidence in supporting children with homework / projects of ‘STEM in general’: significant differences by audience (net: medium / high confidence).

Audience	WEIGHTED %
Location	
Metropolitan	79%
Regional / remote	68%
Socioeconomic status	
Lower SES (Decile 1 - 5)	72%
Higher SES (Decile 6 - 10)	78%
CALD	
Non-CALD	74%
CALD	83%

Reasons for low confidence in supporting children with STEM schoolwork

Among parents who are not confident in supporting their children with STEM-related schoolwork, the primary concern is that they do not understand enough about the subject themselves. This perception was highest regarding engineering (66%). On average, two in five parents (40%) also have concerns that what they learnt at school is different to what children learn now. A third are worried about not knowing how to teach the subjects in the correct way (average of 32%) or telling their children the wrong answers (average of 30%).

Mothers are more likely to say they do not understand the subject of technology (60%) compared to fathers (43%).

Table 6: Reasons for not feeling confident in supporting child with STEM work.

Q. Why don't you feel confident supporting your child with [STEM subject]? (MC)

Reasons for low confidence supporting child with STEM subjects	Science	Technology	Engineering	Mathematics	Average
I don't understand enough about the subject myself	57%	54%	66%	46%	56%
What I learnt at school is different to what children learn now	43%	42%	31%	43%	40%
I wouldn't know how to teach it the way it's meant to be taught (i.e. in line with the Australian curriculum)	35%	35%	26%	34%	32%
I'm worried I will tell them the wrong answers	32%	28%	27%	31%	30%
I find it hard to comprehend the requirements of the homework / projects	25%	21%	20%	25%	23%
I don't have the time to go through the requirements of the homework / projects	11%	9%	9%	11%	10%
Other	1%	2%	1%	2%	2%

Base: parents who do not feel confident with science – 456, technology – 432, engineering – 625, mathematics – 452.

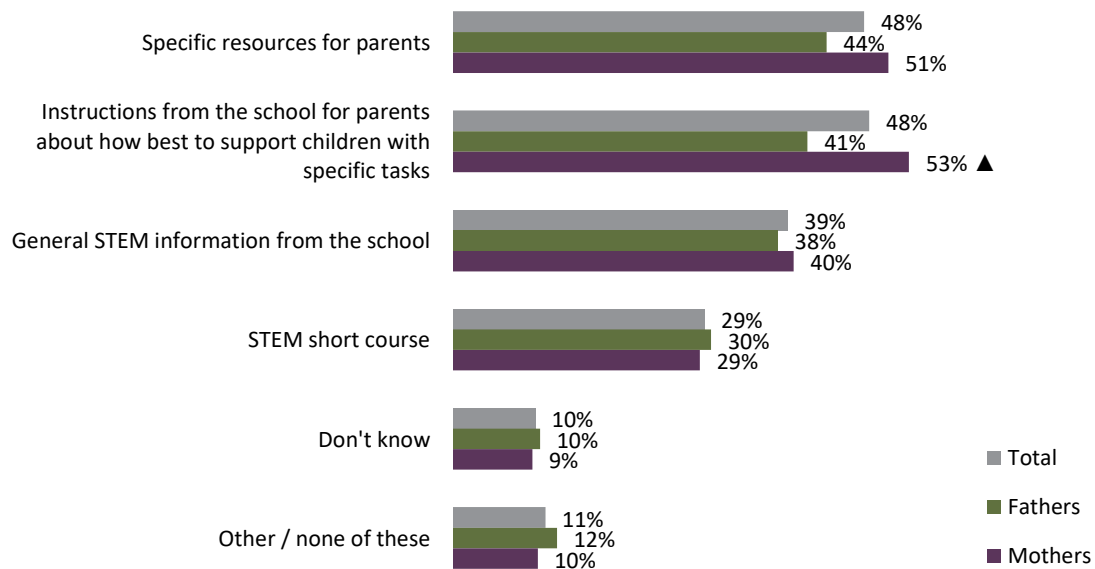
Among parents who claimed to have low confidence in supporting their children with homework / projects related to STEM, useful support could be in the form of specific resources for parents (48%) and instructions from the school about how they can best support their child with specific tasks (48%). The instructions from schools ranked as the top need for mothers (53%) while fathers most wanted resources specific for parents (44%).

General STEM information from the school and STEM short courses ranked lower, with 39% and 29% of parents selecting these options respectively.

The need for specific resources for parents was greatest among primary school parents (56% vs 41% for secondary school).

Figure 20: Preferred tools to increase confidence in supporting child with STEM work.

Q. Which of the below would help increase your confidence to support with homework / projects related to STEM? (MC)



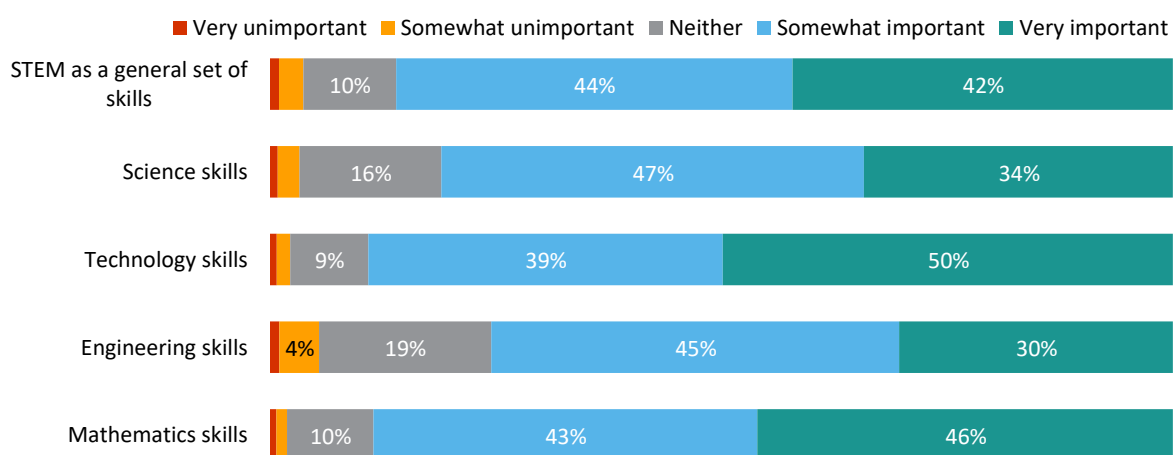
Base: Those not confident in supporting child with STEM work: total – 766, fathers – 244, mothers – 515.

Perceived importance of STEM for future employment

The majority of Australian parents believe that STEM skills are important for their children to acquire a good job in the future (86%), with technology and mathematics skills seen as the most important (89%). A quarter of parents (25%) either do not believe that engineering skills are important or consider it neither important nor unimportant to acquire a good job.

Figure 21: Perceived importance of STEM skills for future career.

Q. In your opinion, how important is it for the child to have STEM skills in order to acquire a good job in the future?



STEM subjects	STEM in general	Science topics	Technology topics	Engineering topics	Mathematics topics
Net: somewhat / very important	86%	81%	89%	75%	89%
Net: somewhat / very unimportant	4%	3%	2%	5%	2%

Base: total – 1,492. Weighted percentages may not add up to 100% due to rounding of decimal places to the nearest whole number.

When comparing with the *Teachers & Career Advisors 2020/21* research, parents' perceptions around the importance of STEM skills for future employment were closely aligned with those of educators across all subjects.

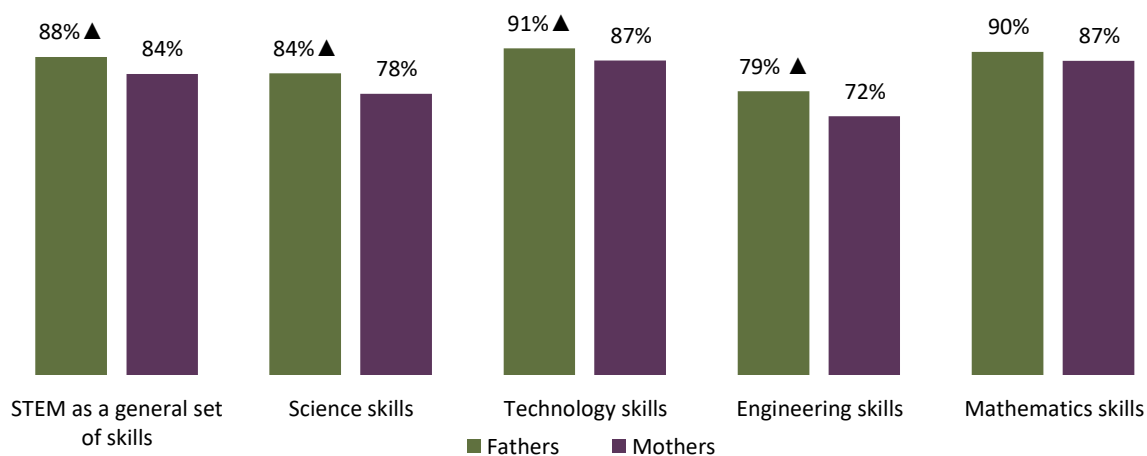
Table 7: Perceived importance of STEM skills for future career (net: somewhat / very important). Differences between parents and educators.

Net: somewhat / very important	STEM in general	Science topics	Technology topics	Engineering topics	Mathematics topics
Parents	86%	81%	89%	75%	89%
Educators	89%	89%	95%	75%	93%

Overall, the perceived importance of STEM skills for children to secure good jobs in the future was higher among fathers (88%) compared to mothers (84%). Mathematics was the only skill set where there was not a significant difference seen between mothers and fathers. (90% for fathers, vs 87% for mothers).

Figure 22: Perceived importance of STEM skills for future career (net: somewhat / very important).

Q. In your opinion, how important is it for the child to have STEM skills in order to acquire a good job in the future?



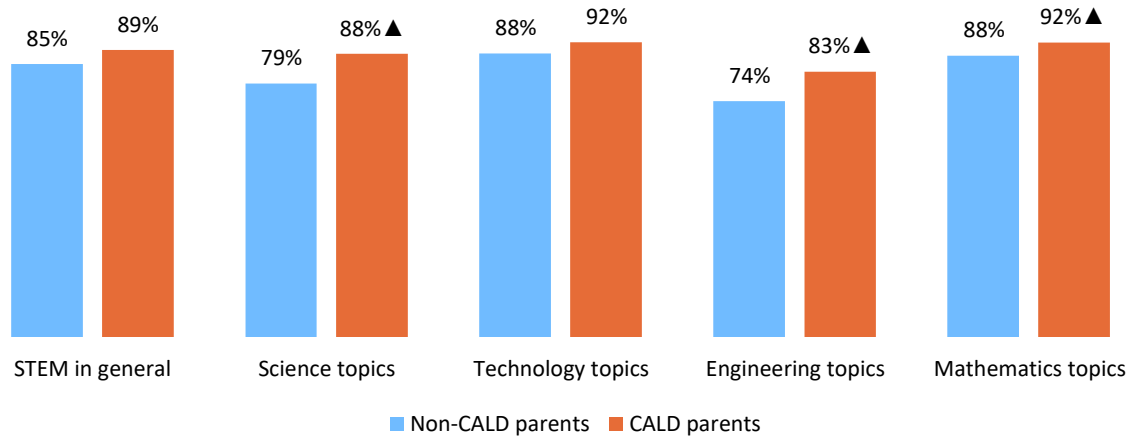
Base: fathers – 639, mothers – 873 (non-binary parents not shown due to low base size – 9).

Parents of boys were found to be 12% more likely than parents of girls to believe that engineering skills are important. Parents in metropolitan areas were more likely to see the importance of science and technology compared to parents in regional or remote areas (science – 83% vs 76%, technology – 90% vs 86%).

Parents with a CALD background also had higher perceptions of the importance of science, engineering and mathematics compared to non-CALD parents.

Figure 23: Perceived importance of STEM skills for future career (net: somewhat / very important).

Q. In your opinion, how important is it for the child to have STEM skills in order to acquire a good job in the future?

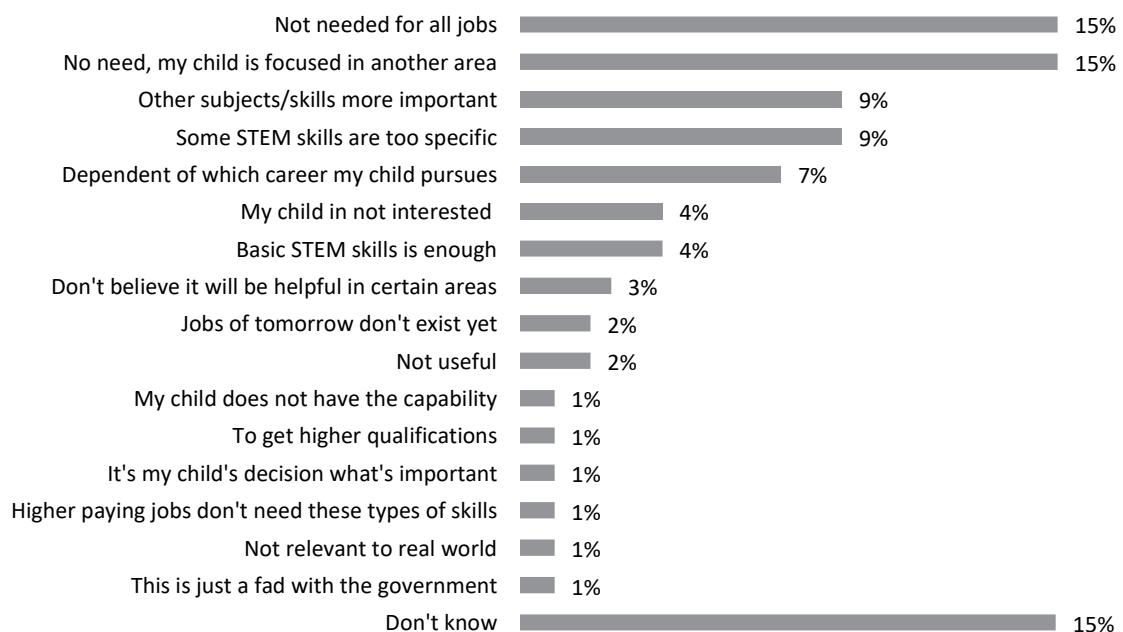


Base: CALD parents – 313, non-CALD parents – 1,208.

Among those who believe STEM skills are not important, the majority say this is because these skills are not needed for all jobs or that their child is focusing on a career which requires other skills (both 15%). Around one in ten parents believe that there are many other subjects or skills more important than STEM skills (9%) or that some STEM skills are too specific (9%), with most referring to engineering as a main example.

Figure 24: Reason(s) for believing STEM skills are not important (coded answers).

Q. Why do you believe it's not important for the child to acquire STEM skills? (MC)



Base: parents that selected any STEM skill as 'unimportant' – 105 (non-valid responses or responses <1% excluded).

Below are some examples of open-ended responses provided by parents:

STEM is not needed for all jobs

- *“Not used in everyday jobs.”* – Father of Year 2 girl
- *“Not every job requires these STEM skills.”* – Father of Year 6 boy

My child is focused on other areas

- *“Because she has aspirations for other things which don't involve each subject.”* – Father of Year 8 girl
- *“Based solely on my child's preference to pursue a career within law or politics, I do not consider it overly relevant.”* – Mother of Year 12 girl

Other skills are more important

- *“Seriously, the focus is all wrong. Kids need a grounding in real life skills and a job-focus is not the right way to go about it.”* – Mother of Year 9 girl
- *“Not all children are maths and science orientated yet still get good grades. There is enough emphasis on this already and schools should concentrate on life skills.”* – Mother of Year 11 girl

Not all STEM skills are important (some are too specific)

- *“Not every workplace requires engineering and science knowledge whereas general maths and technology are pretty much used everywhere.”* – Mother of Year 2 girl
- *“Engineering is a specific area, I don't feel the skills are broad and relevant to many other jobs.”* – Mother of Year 1 girl

Parent and child interactions

Parent and child discussions about STEM

Parents that discuss STEM with their children were asked about the topics that they usually discuss and provided an open-ended response.

The major topics that parents tend to discuss with their children include:

- The future: ambitions, careers and jobs, opportunities, university pathways
- What they like / enjoy / are interested in [*frequently linked to future career*]
- How they are doing in their STEM subjects: are there any areas they need assistance in (broadly) or with specific homework tasks?
- Current events and topics in the media:
 - Environment
 - Climate change
 - Natural resources
 - Animals
 - Space and planets
 - Electric vehicles
 - Vaccination
- Technology: innovation and new products [*often linked with current events / news topics above*]
- The world around them: how things work; how things are made.

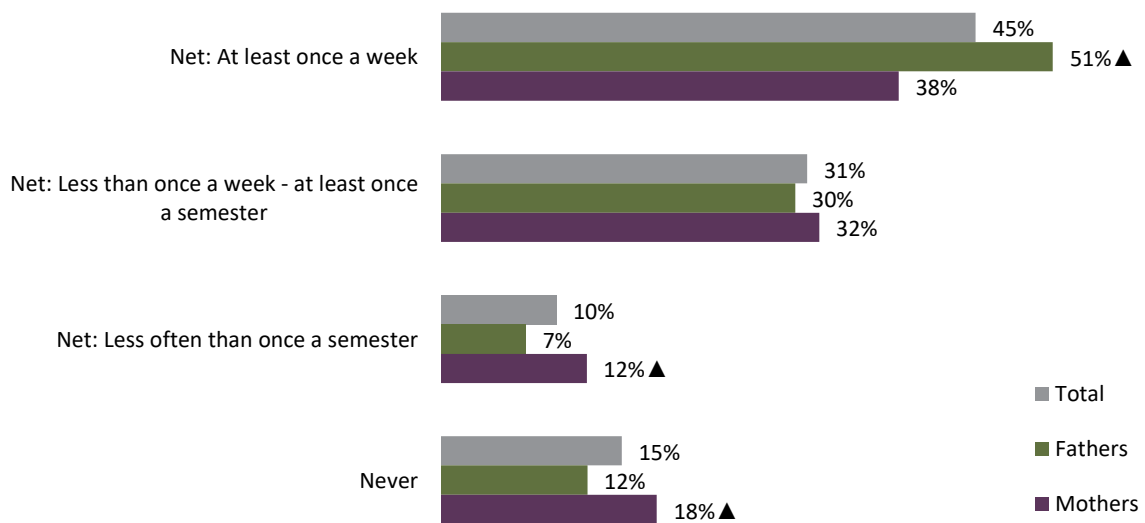
Frequency of STEM discussions

Almost half of all parents (45%) reported having discussions around STEM topics with their children at least once per week. A further 31% discuss STEM at least once per semester and 10% discuss it less frequently. Only 15% of parents say that they do not discuss STEM with their child at all.

Weekly conversations were found to be more common among fathers (51%) compared to mothers (38%). STEM conversations were also found to be more frequent with families where at least one parent is in a STEM career (59%) compared to those in non-STEM careers (43%).

Figure 25: Frequency of conversations with their child about STEM topics.

Q. On average, how often do you have conversations with the child about topics related to STEM?



Base: fathers – 639, mothers – 873 (non-binary parents not shown due to low base size – 9). Weighted percentages may not add up to 100% due to rounding of decimal places to the nearest whole number.

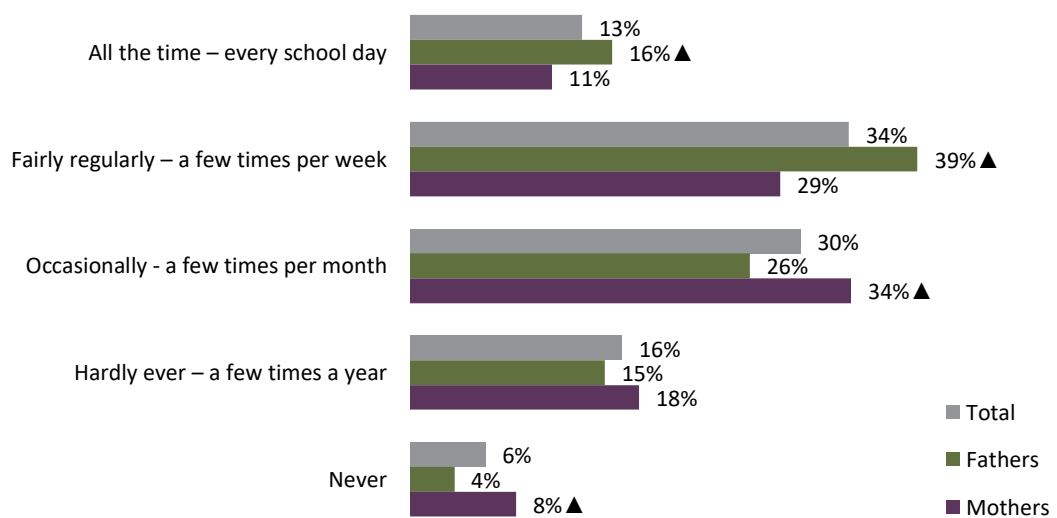
Assisting with assignments and homework

Half of parents assist with assignments or homework at least once a week or more often (47%). The occurrence of weekly assistance is significantly higher among parents of primary school children (63%) compared to parents of secondary school children (38%).

An additional 30% of parents help their child a few times a month, leaving 22% who rarely or never assist with homework or assignments, highest among parents of students in secondary (21%) and tertiary education (34%) compared to only 8% of parents of children in primary school.

Figure 26: Frequency of helping oldest child with assignments and homework.

Q. How often do you help the child with assignments and homework?

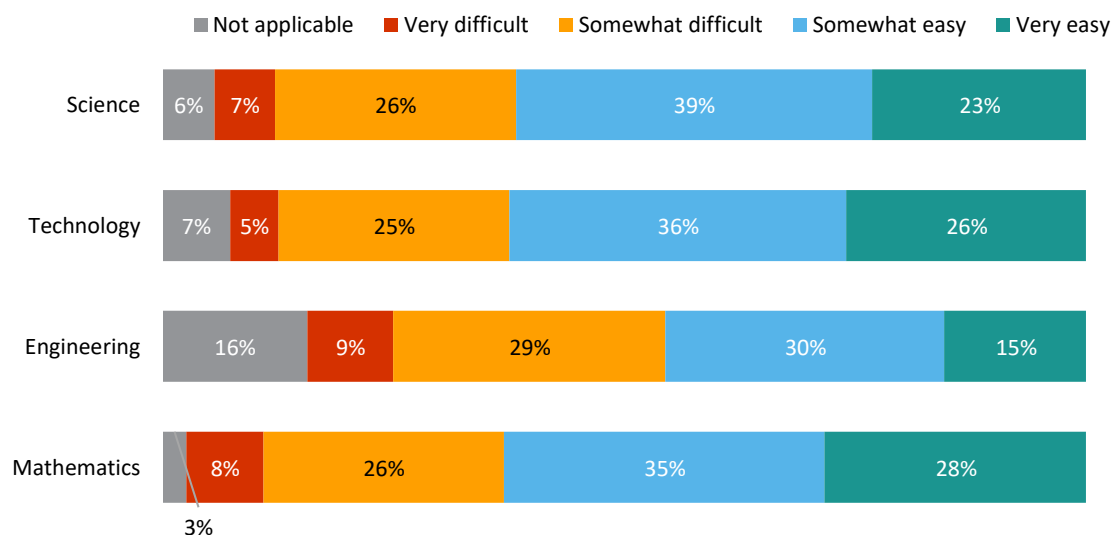


Base: total – 1,492. Weighted percentages may not add up to 100% due to rounding of decimal places to the nearest whole number.

Of those who assist their children, two out of three find it an easy task to assist with science (62%), technology (62%) and mathematics (63%). This drops to one in two (46%) parents for engineering, reflecting earlier results regarding the lower confidence in supporting with engineering versus other STEM subjects.

Figure 27: Ease of helping children with STEM homework or assignments.

Q. How easy or difficult do you find helping the child on assignments and homework related to STEM subjects?



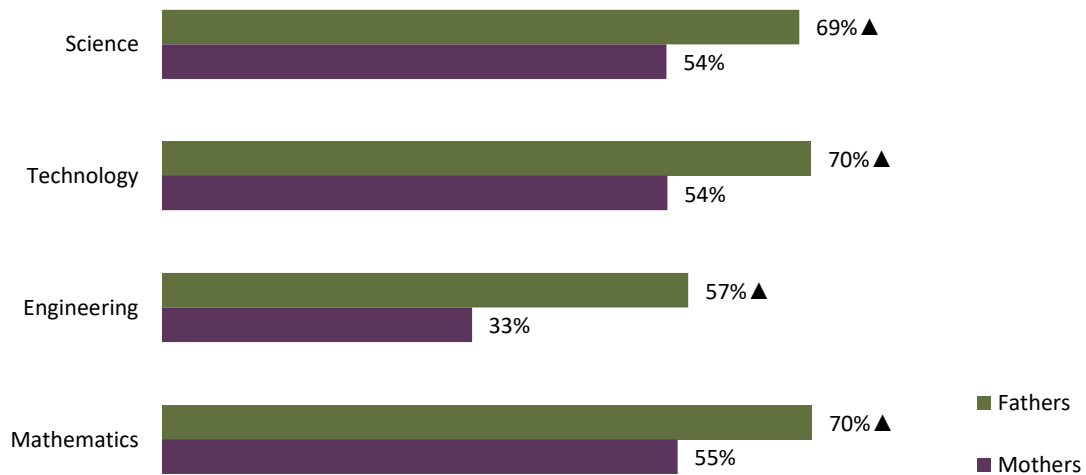
Ease of helping with STEM homework	Science topics	Technology topics	Engineering topics	Mathematics topics
Net: somewhat / very easy	62%	62%	46%	63%
Net: somewhat / very difficult	33%	30%	39%	34%

Base: parents who assist their children with homework / assignments monthly or more – 1,176. Weighted percentages may not add up to 100% due to rounding of decimal places to the nearest whole number.

Fathers were more likely than mothers to say it is somewhat or very easy to help their child with assignments and homework on all individual STEM subjects.

Figure 28: Ease of helping children with STEM homework or assignments, split by by STEM subject (net: somewhat / very easy).

Q. How easy or difficult do you find helping the child on assignments and homework related to STEM subjects?



Base: parents who assist their children with homework / assignments monthly or more, fathers – 523, mothers – 646 (non-binary parents not shown due to low base size – 7).

There were no significant differences in ease of assisting with STEM homework between CALD and non-CALD parents. Significant differences between other audiences include:

Table 8: Ease of helping children with STEM homework or assignments by audience (net: somewhat / very easy): significant differences by audience.

Audience	Science	Technology	Engineering	Mathematics
Child's year level				
Years 1 - 6	67%	67%	-	70%
Year 7 - 12	57%	59%	-	57%
Socioeconomic status				
Lower SES (Decile 1 - 5)	-	58%	41%	59%
Higher SES (Decile 6 - 10)	-	63%	48%	65%
Location				
Metropolitan	64%	-	-	65%
Regional / remote	56%	-	-	57%
Parent's job (among all employed)				
Parent works in STEM	76%	77%	67%	77%
Parent does not work in STEM	59%	60%	42%	60%

Parents who work in STEM or who have higher education qualifications report having higher levels of ease to support their children with STEM homework and assignments.

Emphasis on STEM at the child's school

Half of parents (50%) agreed their child's school places a lot or quite a bit of emphasis on the teaching of STEM. An additional 30% agreed that there is some emphasis on STEM but not much. Very few (6%) said there is no emphasis on STEM at the school and 15% were unsure.

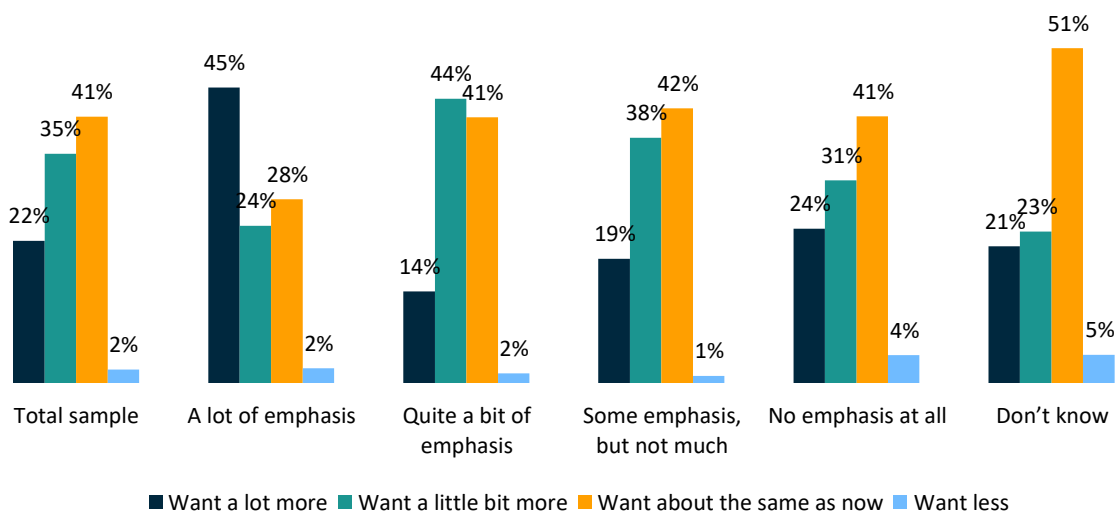
Parents of boys were significantly more likely than parents of girls to feel that their child's school places an emphasis on STEM (53% vs 46%). An emphasis on STEM within the school was also higher in metropolitan schools (53%) than regional or remote schools (42%).

When asked whether they would like to see their school doing more or less to engage their child in STEM, 57% of parents said they want their school to be doing more. Two in five (41%) are happy with the current level of engagement and only 2% wanted their school to do less. A higher proportion of fathers (61%) said they would like the school to be doing more to engage their child in STEM compared to mothers (53%).

Interestingly, the appetite for greater STEM engagement through the school is highest from parents who say their school currently places a lot of emphasis on STEM education. These parents may have a greater interest in STEM education for their children and / or value what STEM education can provide their child.

Figure 29: Preference for school's future emphasis on STEM by school's current STEM emphasis.

Q. Would you like the child's school to be doing more or less to engage your child in STEM? / Q. How much emphasis does the child's school put into the teaching of STEM?



Base: total – 1,492. Weighted percentages may not add up to 100% due to rounding of decimal places to the nearest whole number.

Parents were then asked in an open-ended style question to explain the reasons why they feel the school should do more to engage their child with STEM. The major themes that emerged included:

Too much focus on other areas such as arts or sport which are less important than STEM

- *“Our school focuses more on arts than science.”* – Father of Year 12 boy
- *“Not that I think humanities should be ignored, but I think less time on sports and more on STEM would be beneficial.”* – Father of Year 4 girl
- *“The school always promotes students who are doing well in sports but never the ones who are doing well in STEM.”* – Mother of Year 8 boy

STEM offers more opportunities and is important for the future of my child

- *“Science and technology is the way of the future, if we do not keep up with technology we will be lost & left behind.”* – Father of Year 5 boy
- *“It’s not explained enough to the kids what it is and how it will affect future jobs.”* – Mother of Year 10 boy

Engagement with STEM needs to be improved

- *“There is still a lack of engaging children in everyday examples of sciences or maths.”* – Father of Year 2 girl
- *“My daughter has no interest in STEM subjects unfortunately so I believe the school could be doing more for these kids that struggle or are disinterested in these subjects.”* – Mother of Year 10 girl

Currently the teachers and school are not able to devote enough time

- *“The workload on the teachers at Year 12 is such that they have insufficient time to spend with students to help in critical areas. To alleviate any shortfall in tutorial input from the school resources, we pay for a private resource to do this.”* – Father of Year 12 girl
- *“I think although my child’s school is doing a good job in teaching STEM subjects, classes can be a little too large and reducing class sizes would enable teachers more time to devote to each individual student.”* – Mother of Year 10 boy

STEM should be encouraged from an early age

- *“Start young. One of the biggest hurdles great STEM educators face is trying to engage older students about STEM for the first time.”* – Mother of girl in higher education

Other themes which emerged were related to:

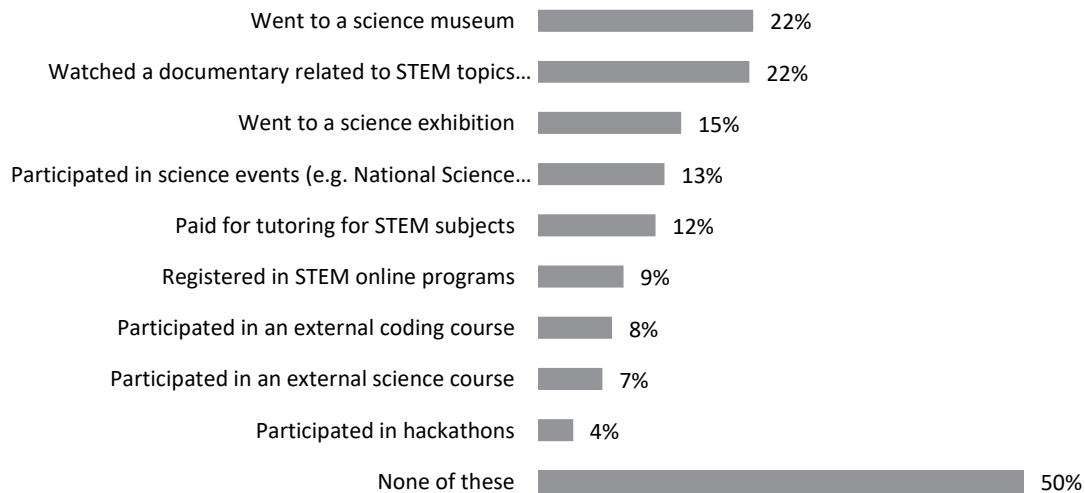
- the child showing an interest / passion in STEM
- parents not knowing enough about STEM and its importance for their child
- a want for more extracurricular activities
- not enough being done to educate students in STEM.

Involvement in STEM activities

Half of all parents (50%) surveyed reported participating in a STEM-related activity with their child in the past 12 months. Going to a science museum (22%) and watching a documentary (22%) were found to be the most common activities.

Figure 30: Participation in STEM-related activities in past 12 months.

Q. Which of the below activities have you been involved in with the child over the past 12 months? (MC)



Base: total – 1,492.

Fathers were more likely to have participated in a STEM-related activity with their child (57%) than mothers (42%). Similarly, parents of boys were more likely to have participated (53%) compared to parents of girls (45%).

Other significant differences in participation in any STEM-related activity between audiences include:

Table 9: Participation in any STEM-related activities in past 12 months: significant differences by audience.

Audience	WEIGHTED %
Socioeconomic status	
Lower SES (Decile 1 - 5)	43%
Higher SES (Decile 6 - 10)	53%
Location	
Metropolitan	53%
Regional / remote	41%
CALD	
Non-CALD	47%
CALD	61%

These statistical differences in demographics point towards income and location being a barrier to engaging with extra-curricular STEM activities and the potential need for targeted STEM events in less affluent areas.

How to increase engagement with STEM

There was a high level of uncertainty among parents when asked to list up to five things that would help them improve their child's engagement in STEM. A large proportion of parents said they don't know or chose not to answer the question at all.

The question produced a wide range of responses with few individual items getting a large enough volume of mentions to stand on their own as a universal strategy for increasing engagement. However, there were some key themes throughout the responses:

Involving children in “hands-on” activities

Comments about this type of engagement speak to the ability for kids to be engaged in STEM learning through activities. By doing, rather than reading or watching, parents think their children are more likely to be engaged with STEM. Mentions include:

- Interactivity
- Experiments
- Excursions and events
- Workshops
- Science fairs

Making STEM “Fun”

This feedback was all about making sure children enjoy STEM education, with comments about making sure any activities or learnings are:

- Fun
- Interesting
- Engaging
- Exciting
- Creative

Putting responsibility onto schools

Comments of this nature touched on a wide range of areas, but all positioned school and the education system at the centre of the solution, not parents:

- The role of teachers, the number of teachers, availability of specialist teachers
- Increasing learning / focus on STEM subjects
- Encouraging students to read more about STEM subjects
- Setting more homework / assignments / projects related to STEM subjects
- Addressing issues with STEM curriculum / providing more STEM specialisations within curriculum
- Increasing the number of STEM classes / courses

Other less common themes that arose included:

- Providing information / resources for parents (as they do not have the skills to discuss STEM)
- Providing video content, particularly via YouTube
- Addressing the mindset of their child (concentration / focus / confidence / interest)
- Providing more pathways, examples, mentors and role models in STEM to encourage them to look at STEM careers and opportunities
- Creating more / better connections between STEM and the real world or real life
- Using games or apps
- Providing gender specific supports / information targeting girls / women
- Generally increasing exposure, awareness, access and discussions about STEM.

STEM careers

Jobs associated with STEM qualifications

The survey tested parents' understanding of the types of jobs available for people with STEM qualifications. While one in five (19%) reported that they didn't know, 32% were able to identify professions or industries related to STEM. While the variation of responses was broad, engineer (10%) was the profession most highly associated with STEM, followed by scientist (7%), teacher / lecturer / professor (6%) and information technology (5%).

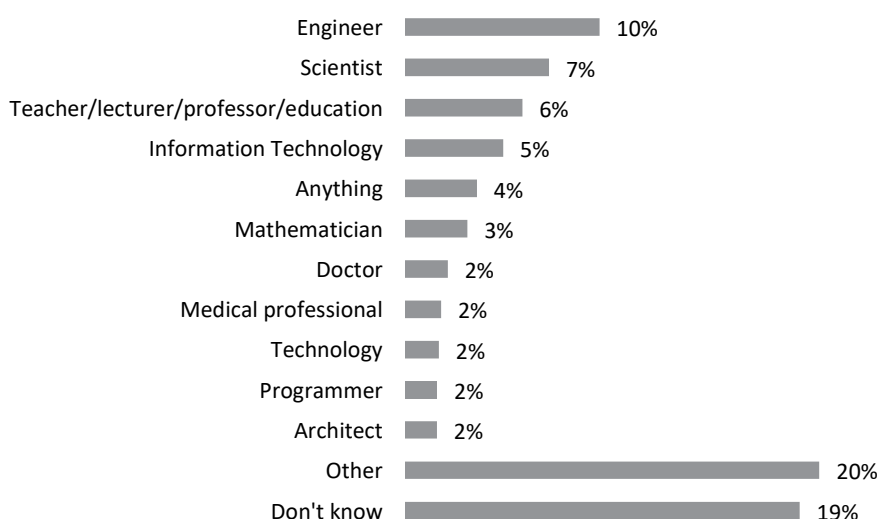
Interestingly, among those who provided incorrect responses when asked to identify the subjects that make up the STEM acronym, engineering was the subject that caused most confusion, with 26% correctly identifying all subjects except for engineering.

This was also reflected in the *Youth 2019/20* research with 24% of respondents who provided incorrect responses having difficulty identifying engineering. Despite this, the *Youth 2019/20* research also found that the career most closely associated with STEM was engineering (53%).

These results indicate that while both parents and young people understand the connection between STEM skills and the engineering career, the actual understanding of what the STEM acronym stands for is less clear.

Figure 31: Unprompted jobs associated with STEM.

Q. What type of jobs do you think people would be able to get if they have a STEM related degree or certificate? (OE)



Base: total – 1,492.

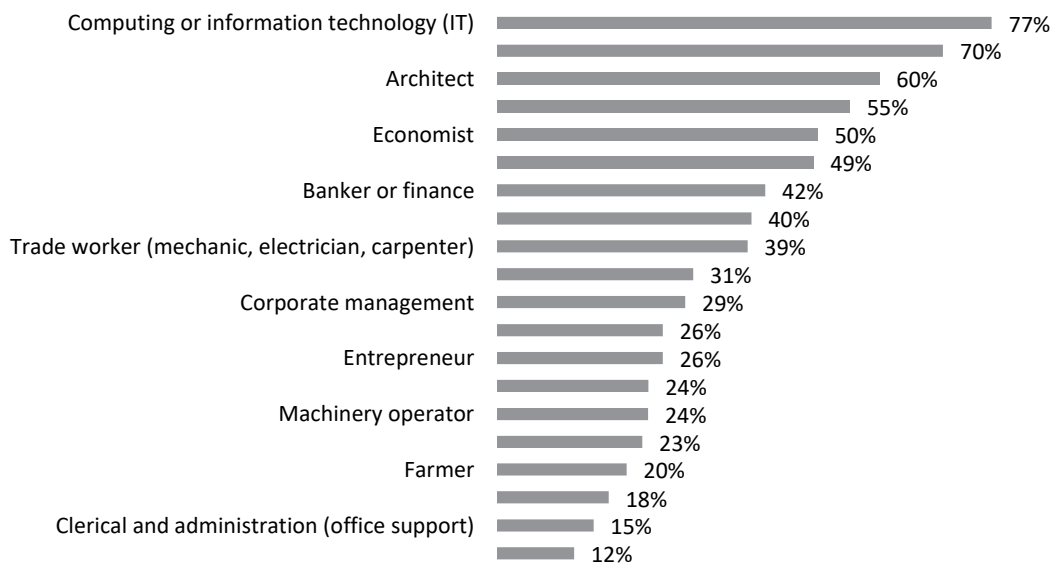
In comparison with the results from the *Teachers & Career Advisors 2020/21* research, a similar proportion of parents and educators cited engineering (10% parents vs 9% educators), information technology (5% parents vs 7% educators), and mathematician (3% parents vs 3% educators) as being associated with STEM skills. However, educators overall were able to associate more roles related to STEM compared to parents and only had 2% saying they 'didn't know', which was significantly lower compared to the 19% of parents. These results suggest that more needs to be done to raise

awareness of parents in regard to the types of jobs their children would be qualified for with STEM related qualifications.

While most parents agree that future jobs will require STEM skills, when asked about a range of existing careers, STEM skills were not seen as a must-have for most jobs. The career which most parents agreed would require STEM skills was computing / information technology (77%) followed by data analyst (70%) and architect (60%). For all other careers, only half of parents or less believe STEM skills would be an essential requirement.

Figure 32: Careers believed to require STEM skills (% must-have).

Q. How essential do you think STEM skills are to the following careers? (MC)



Base: total – 1,492.

The impact of the media

The media plays a big role in how STEM is portrayed to young people and according to 82% of parents, it is generally presented in a positive manner.

Two out of three parents agree that there is a lack of women role models in STEM (67%). This view was driven more by parents of girls (70%) compared to parents of boys (64%).

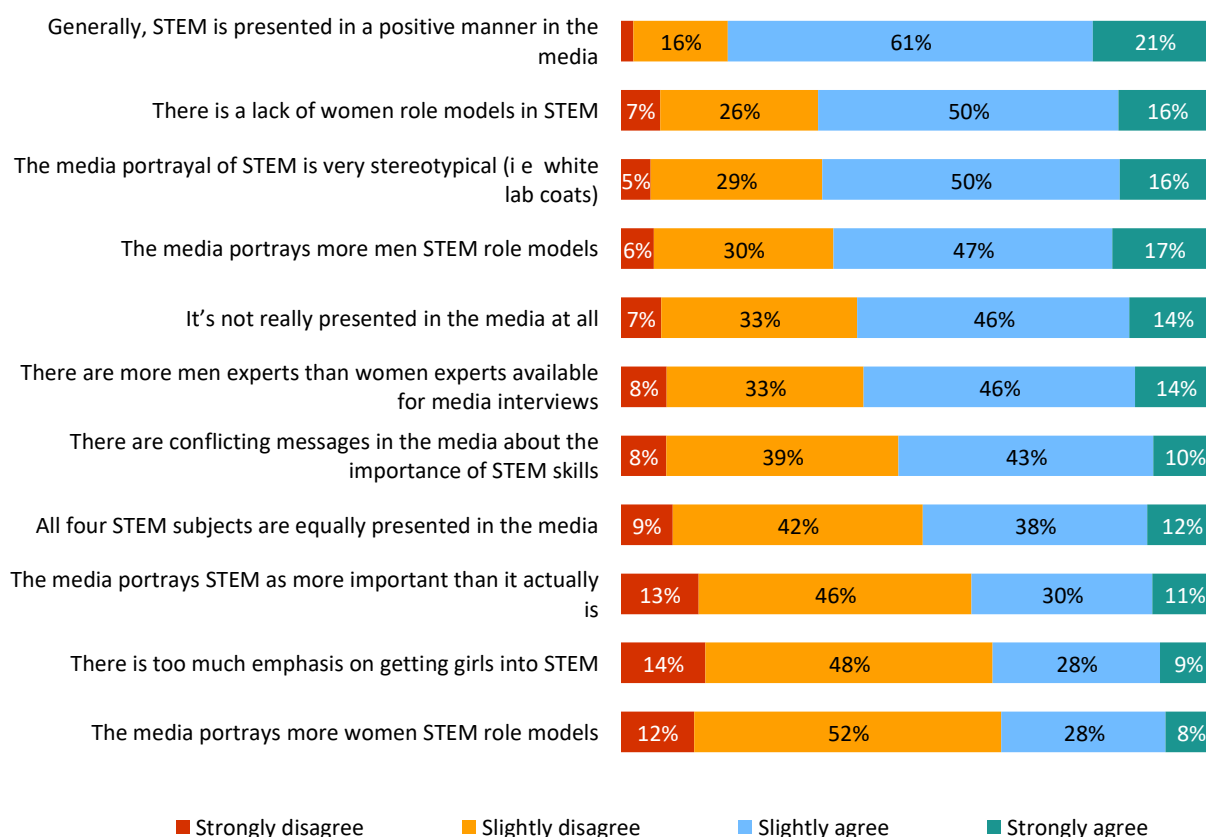
Almost two thirds (63%) disagree that there is too much emphasis on getting girls into STEM – a view more common among mothers (70%) than fathers (55%).

The majority of parents acknowledge the unbalanced gender divide in STEM, with 59% agreeing that there are more men experts than women experts available for media interviews. This view is more common among fathers compared to mothers (62% vs 56%).

Parents have split views (49% agree and 51% disagree) on whether all four STEM subjects are equally represented in the media. They also have split views on whether the media shows conflicting messages about the importance of STEM (47% agree and 53% disagree).

Figure 33: Agreement level with statements related to gender bias of STEM in the media.

Q. Please indicate how much you agree or disagree with the following statements about how STEM is currently presented to young people in the media (e.g. in television, social media, books etc.)



Statements about media portrayal of STEM	Net: somewhat / strongly disagree	Net: somewhat / strongly agree
Generally, STEM is presented in a positive manner in the media	18%	82%
There is a lack of women role models in STEM	33%	67%
The media portrayal of STEM is very stereotypical (i.e. white lab coats)	34%	66%
The media portrays more men STEM role models	36%	64%
It's not really presented in the media at all	40%	60%
There are more men experts than women experts available for media interviews	41%	59%
There are conflicting messages in the media about the importance of STEM skills	47%	53%
All four STEM subjects are equally presented in the media	51%	49%
The media portrays STEM as more important than it actually is	59%	41%
There is too much emphasis on getting girls into STEM	63%	37%
The media portrays more women STEM role models	64%	36%

Base: total – 1,492. Weighted percentages may not add up to 100% due to rounding of decimal places to the nearest whole number.

Gender bias

Confidence levels in STEM subjects among young people have been tracked in the Youth in STEM research for two years. The latest *Youth 2019/20* results verified that a higher proportion of boys / men feel more confident in doing well in STEM subjects compared to girls / women.

Table 10: Youth confidence in STEM subjects 2019/20 (net: somewhat / very confident).

	Science	Technology	Engineering	Mathematics
Boys / men	59%	69%	50%	60%
Girls / women	56%	53%	26%	54%

Overall, the majority of parents (average of 60% across all STEM subjects), believe boys and girls are equally confident in STEM. However, when analysing individual subjects and the proportion of parents who believe there are differences in confidence levels between boys and girls, gender biases are clear.

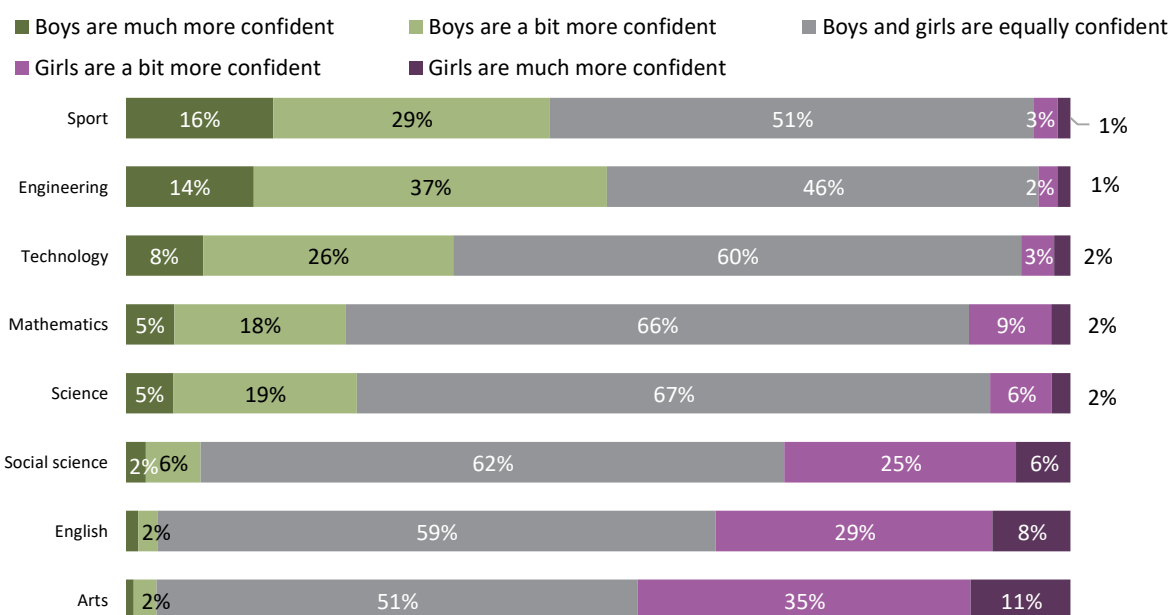
The results from this study confirm that parents' perceptions are aligned with those of young people, with a larger proportion believing that boys are more confident across all STEM subjects. Engineering recorded the largest gender skew, with half (51%) of all parents saying that boys are more confident in engineering compared to only 3% saying that girls are more confident (46% gave a neutral response).

Science was the most gender-neutral subject, with 67% of parents saying that boys and girls are equally confident in the subject. However, there was still some gender bias, with 24% saying that boys are more confident compared to only 9% saying that girls are more confident.

As per perceptions of engagement with STEM and chance of future success in STEM, this gender skew in perceived confidence in STEM towards boys was more evident among mothers compared to fathers. Only 13% of mothers believe girls are more confident in at least one STEM subject compared to 22% of fathers. For boys, a similar proportion of mothers and fathers believe boys are more confident in at least one STEM subject (60% vs 58% respectively).

Figure 34: Perceptions of boys’ and girls’ confidence in certain subjects.

Q. In your opinion, who do you believe is more confident in the following subjects?



Subjects	Net: boys are more confident	Net: girls are more confident
Arts	3%	46%
English	3%	38%
Social science	8%	30%
Mathematics	23%	11%
Science	24%	9%
Technology	35%	5%
Sport	45%	4%
Engineering	51%	3%

Base: total – 1,492. Weighted percentages may not add up to 100% due to rounding of decimal places to the nearest whole number.

The results from this study confirm that parents’ perceptions are aligned with those of young people, with most believing that boys are more confident across the individual STEM subjects.

When comparing the results from the *Teachers & Career Advisors 2020/21* research, there was a general similarity in perceptions around which genders are more confident across each subject. Educators also believe boys are more confident in all the listed subjects, except arts, English and social science. However, a higher proportion of educators believe girls are more confident in English, compared to parents (61% vs 38%) and similarly, a higher proportion of educators also believe boys are more confident in mathematics (33% vs 23% of parents) and engineering (61% vs 51% of parents).

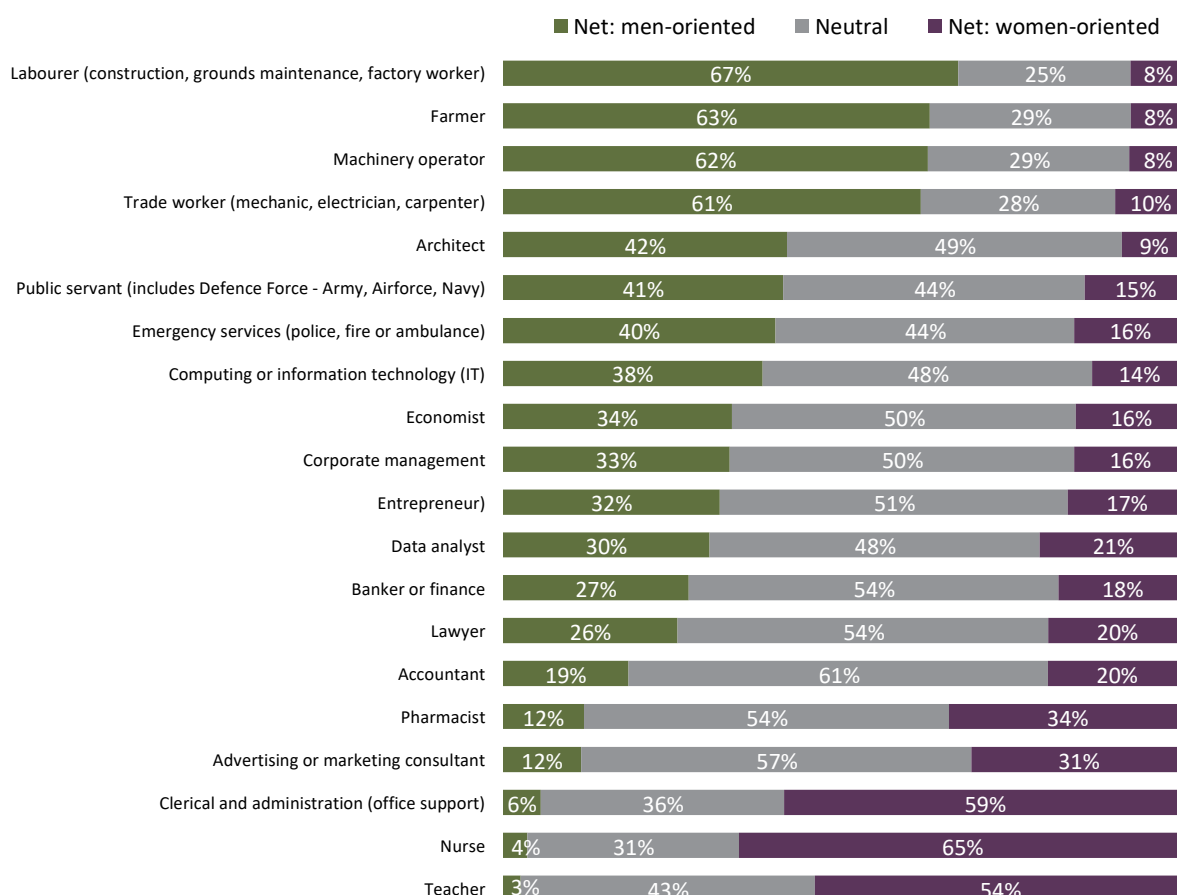
Gender bias was also seen in parents' perceptions of whether jobs are more for men or for women. A large proportion of corporate and labouring jobs were seen to be orientated more towards men. This view was equally shared by mothers and fathers.

However, overall, the results show that fathers were less likely to be neutral in their views of gender orientation of jobs compared to mothers. When comparing the average scores across all jobs shown, 40% of fathers said that these jobs were gender neutral, compared to 48% of mothers.

Accountant was the profession with the least gender bias, followed by lawyer, banker and data analyst. The roles most skewed towards women were nurse, office support and teacher. Labourer, farmer, machinery operator and trade workers were the roles most skewed towards men.

Figure 35: Perceived gender orientation of certain jobs.

Q. Of these jobs, which ones do you think are more for men, more for women or for both?

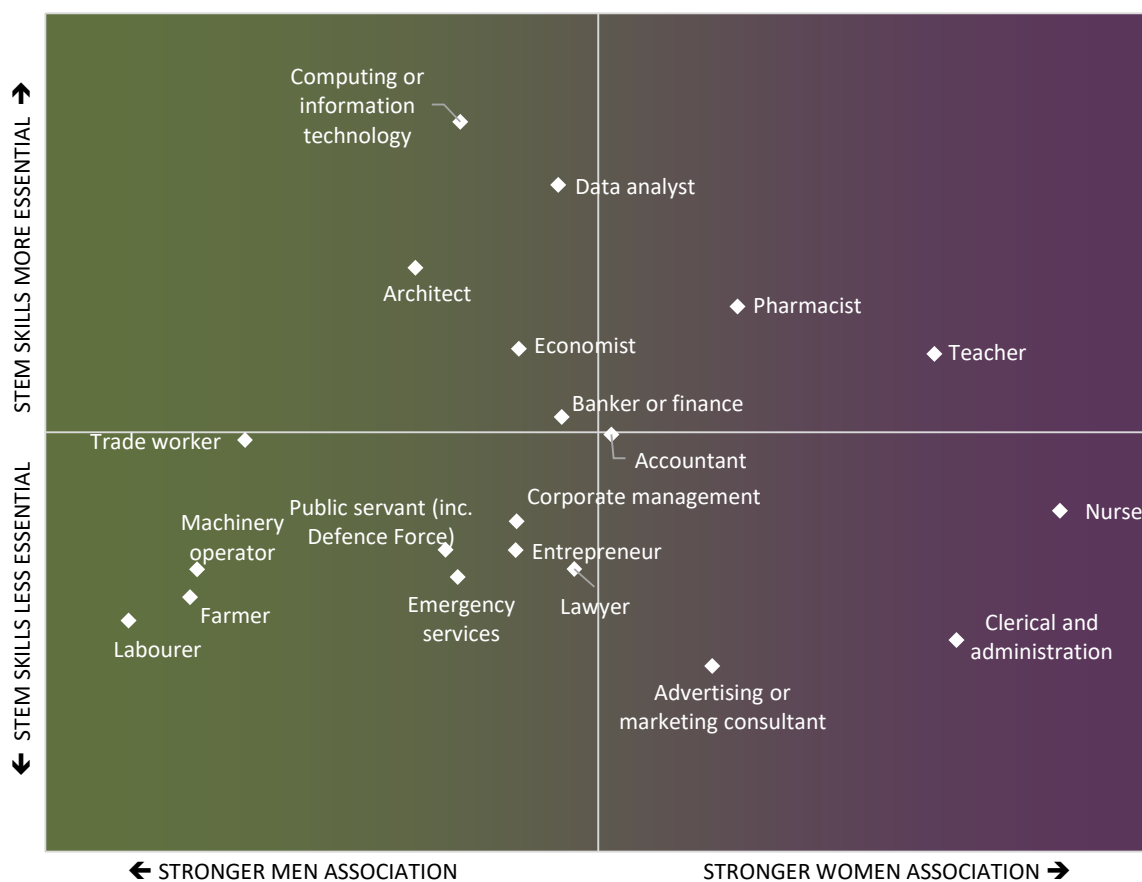


Base: total – 1,492. Weighted percentages may not add up to 100% due to rounding of decimal places to the nearest whole number.

By cross tabulating parents' perceptions of how essential STEM skills are for careers and gender occupation associations, most jobs where STEM skills are deemed a necessity are also more skewed to men (e.g. computing or information technology, and data analyst). Conversely, the most gendered roles, particularly those for women, are roles where STEM skills are deemed not important. Pharmacist and teacher were the only two occupations where STEM skills are seen as more essential and skewed towards women. These findings are strikingly similar to the associations among educators in the *Teachers & Career Advisors 2020/21* research.

Figure 36: Matrix of occupations plotted by gender association and perceived requirement of STEM skills.

Q. Thinking about what you know, do you think these jobs are more for boys, more for girls or for both? / Q. How essential do you think STEM skills are to the following careers?



Base: total – 1,492.

To further explore gender bias, parents were presented with a statement about gender inequality in STEM and asked to assess the validity of several reasons provided which aim to explain the gender differences:

The statement presented was: *“Women currently hold a smaller portion of the science and engineering faculty positions at top research universities than men.”*

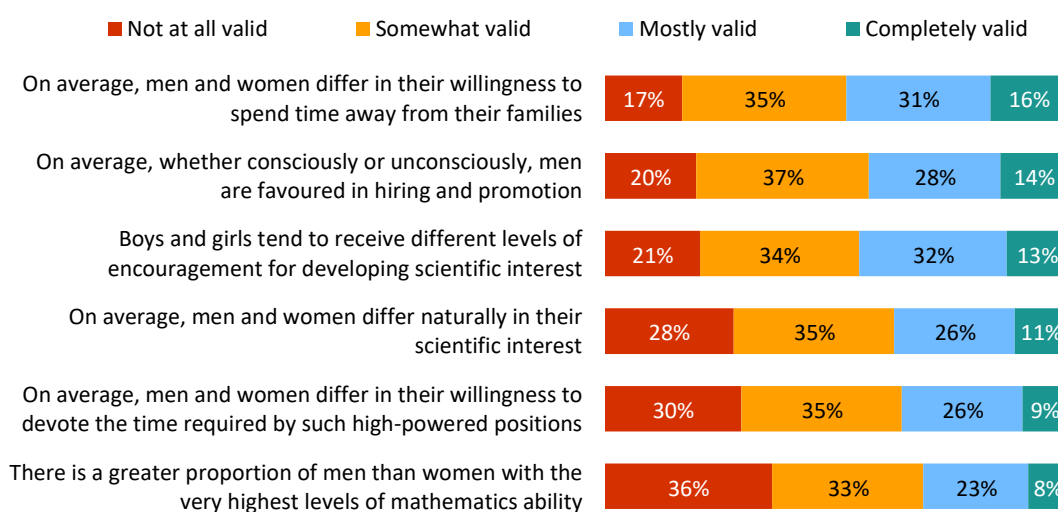
Survey respondents were asked how valid they thought a number of reasons were for explaining this difference.

The reasons most validated by parents were that ‘men and women differ in their willingness to spend time away from their families’ (48%), ‘boys and girls tend to receive different levels of encouragement for developing scientific interest’ (45%) and that ‘men are favoured in hiring and promotion’ (43%).

Another important insight which further reinforces some of the negative predispositions about women in STEM was that only one quarter (28%) rejected the notion that ‘men and women differ naturally in their scientific interest’. A further 31% of parents believe that the statement, ‘there is a greater proportion of men with high level mathematics ability compared to women’ was a mostly or completely valid reason for the gender imbalance.

Figure 37: Perceptions of validity of reasons for gender imbalance in STEM research roles.

Q. How valid do you think the following reasons are for explaining this difference?



Base: total – 1,492. Weighted percentages may not add up to 100% due to rounding of decimal places to the nearest whole number.

When comparing these results to the *Teachers & Career Advisors 2020/21* research, a general similarity in perceptions is evident. However, a higher proportion of parents compared to educators felt that the statements around differing scientific interest, willingness to devote time to high-powered positions and differing levels of mathematics abilities were valid.

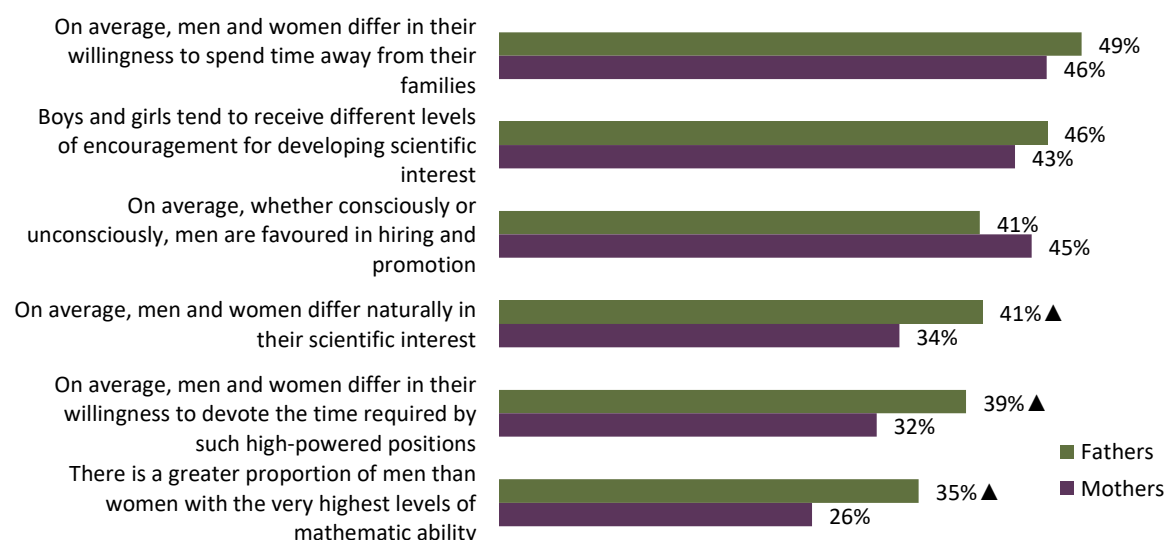
Table 11: Perceptions of validity of reasons for gender imbalance in STEM research roles - Total valid scores (net: somewhat, mostly, completely valid) among educators and parents.

Total valid scores (net: somewhat, mostly, completely valid)	Educator	Parent
On average, men and women differ in their willingness to spend time away from their families	83%	83%
On average, whether consciously or unconsciously, men are favoured in hiring and promotion	89%	80%
Boys and girls tend to receive different levels of encouragement for developing scientific interest	80%	79%
On average, men and women differ naturally in their scientific interest	58%	72%
On average, men and women differ in their willingness to devote the time required by such high-powered positions	54%	70%
There is a greater proportion of men than women with the very highest levels of math ability	52%	64%

A higher proportion of fathers (39% vs 32% of mothers) validated the notion that ‘men and women differ in their willingness to devote the time required by such high-powered positions’.

Figure 38: Perceptions of validity of reasons for gender imbalance in STEM research roles (net: mostly / completely valid).

Q. How valid do you think the following reasons are for explaining this difference?



Base: fathers – 639, mothers – 873 (non-binary parents not shown due to low base size – 9).

Aboriginal and / or Torres Strait Islander parent profile

Parent profile

Below is a breakdown of the Aboriginal and / or Torres Strait Islander parent profile. It is important to note that with no gender quotas placed on this cohort, there was a larger proportion of Aboriginal and / or Torres Strait Islander men (65%) compared to women (35%). This gender skew needs to be taken into consideration when analysing the results, as gender is a key driver of differences in perceptions towards STEM among parents.

It is also important to note that the total unweighted sample size for Aboriginal and / or Torres Strait Islander parents was 84. This sample size is sufficiently robust for analysis purposes at a total level, but not robust enough for some sub-segment analysis.

In relation to parental education, no significant differences were recorded between parents who identified as Aboriginal and / or Torres Strait Islander and those who did not. Half (50%) reported to have qualifications related to STEM, which was higher compared to other parents surveyed (30%).

Table 4: Aboriginal and / or Torres Strait Islander parent profile.

	UNWEIGHTED SAMPLE	UNWEIGHTED SAMPLE %	WEIGHTED POPULATION	WEIGHTED POPULATION %
Total	84	100%	89	100%
Gender				
Man	48	57%	58	65%
Woman	35	42%	31	35%
Non-binary	1	1%	0	-
States and territories				
NSW	28	33%	32	36%
VIC	19	23%	18	21%
QLD	16	19%	16	18%
WA	3	4%	4	5%
SA	7	8%	7	7%
ACT	5	6%	4	4%
TAS	5	6%	6	7%
NT	1	1%	2	2%
Region of child's school				

	UNWEIGHTED SAMPLE	UNWEIGHTED SAMPLE %	WEIGHTED POPULATION	WEIGHTED POPULATION %
Capital city / major metropolitan area	54	64%	57	64%
Regional and remote / rural	30	36%	32	36%
Socioeconomic status (SES)*				
Lower SES (Decile 1 - 5)	36	43%	37	42%
Higher SES (Decile 6 - 10)	44	52%	48	54%
Unknown	4	5%	4	4%
Highest level of education*				
Primary / secondary school	22	26%	24	27%
Vocational education and training	12	14%	11	13%
Higher education	50	60%	53	60%
STEM qualifications (among those with tertiary education)*				
STEM-related	31	50%	32	50%
Not STEM-related	31	50%	32	50%

*Highest level of education and STEM qualifications shown is based on the respondents' answer and not both parents. Socioeconomic status (SES) - not all postcodes are available in the SEIFA index list.

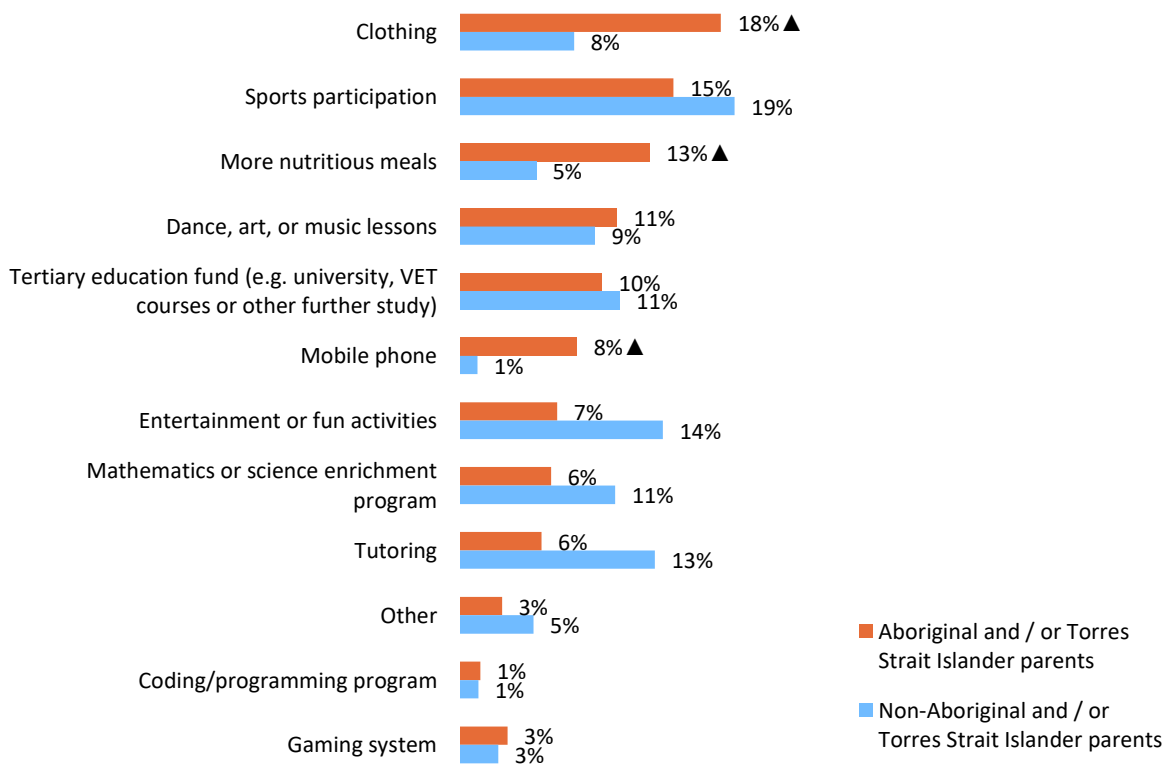
When asked which professions parents would most like to see their children pursue, a higher proportion of Aboriginal and / or Torres Strait Islander parents (57%) selected at least one STEM related career compared to other parents surveyed (46%). Computing or information technology ranked highest with 47% wanting their child to pursue a career in this area. Aboriginal and / or Torres Strait Islander fathers were the main drivers for wanting to see their children pursue STEM careers (67% vs 40% for mothers).

No differences were noted among Aboriginal and / or Torres Strait Islander parents and other parents around the highest level of education they expect their children to achieve.

All parents were given a hypothetical scenario of having an extra \$100 a month to spend on their child. Aboriginal and / or Torres Strait Islander parents were most likely to spend it on clothing (18%) followed by sports participation (14%) and more nutritious meals (13%). Compared to other parents surveyed, they were also more likely to spend it on a mobile phone (7% vs 1%).

Figure 39: Preferences for spending additional \$100 on their child.

Q. If you had an extra \$100 to spend each month on the child, how would you be most likely to spend it?



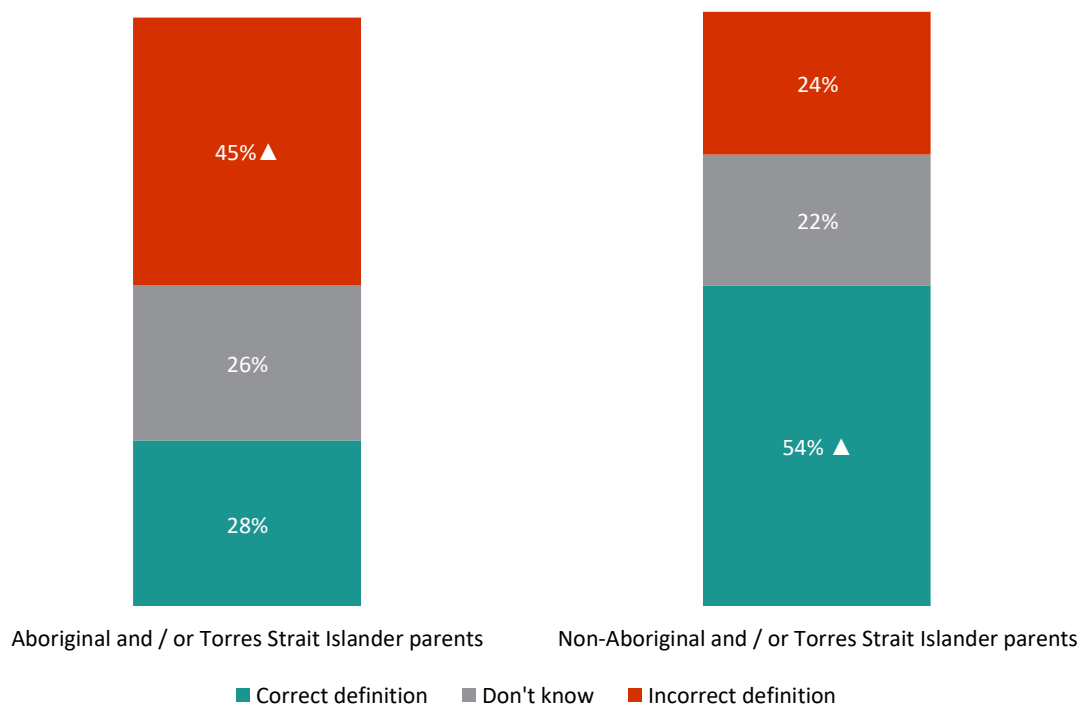
Base: Aboriginal and / or Torres Strait Islander parents – 84, non-Aboriginal and / or Torres Strait Islander parents - 1,408. Weighted percentages may not add up to 100% due to rounding of decimal places to the nearest whole number.

Awareness and understanding of STEM

A significantly lower proportion of Aboriginal and / or Torres Strait Islander parents (28%) correctly identified all four STEM subjects, compared to other parents surveyed (52%). There was no difference in the proportion of correct responses between Aboriginal and / or Torres Strait Islander fathers and mothers, although mothers were more likely (46%) to say they do not know compared to fathers (16%).

Figure 40: Understanding of the term ‘STEM’ (coded).

Q. Please write below what you believe the term ‘STEM’ stands for.

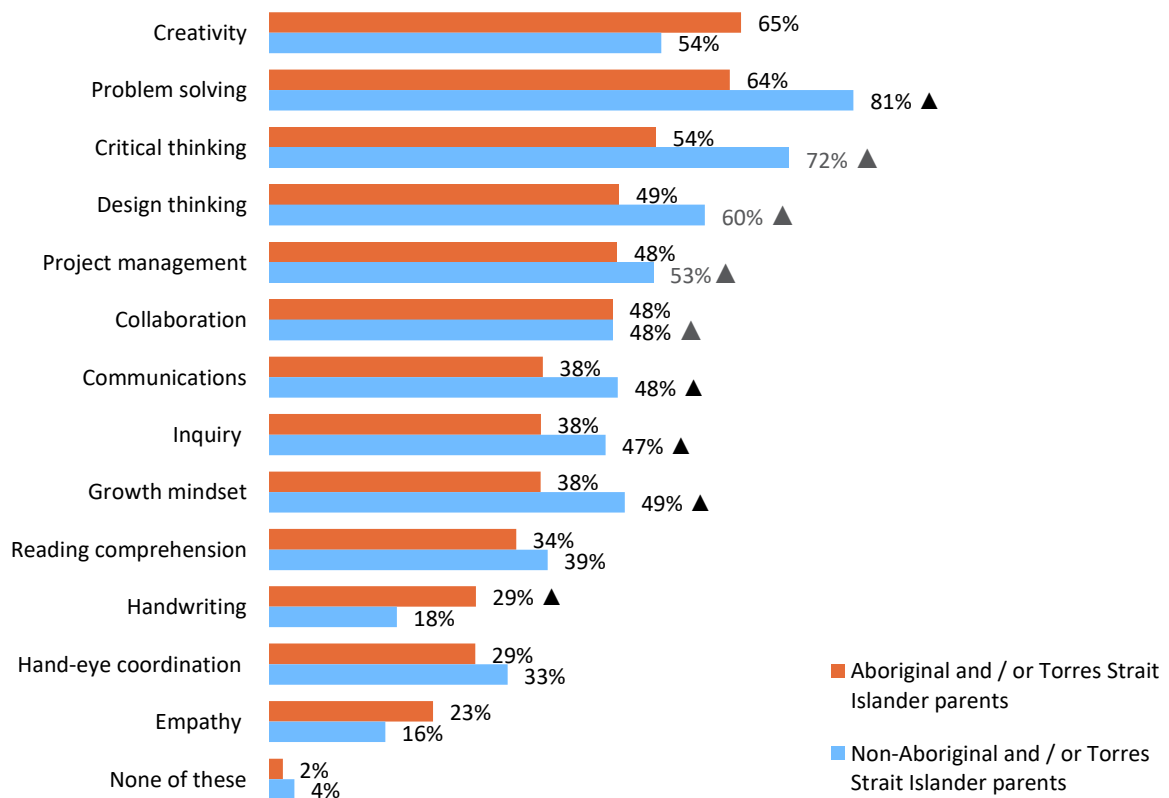


Base: Aboriginal and / or Torres Strait Islander parents – 84, non-Aboriginal and / or Torres Strait Islander parents - 1,408. Weighted percentages may not add up to 100% due to rounding of decimal places to the nearest whole number.

Aboriginal and / or Torres Strait Islander parents were less likely than other parents surveyed to say that problem solving, critical thinking, design thinking, project management, growth mindset, communications and inquiry skills were developed through studying STEM. Instead they were more likely to associate other skills with the study of STEM, such as handwriting and empathy skills.

Figure 41: Life skills that parents associate with STEM.

Q. Besides skills directly related to science, technology, engineering and mathematics, which of the below skills do you believe are developed through the study of STEM? (MC)



Base: Aboriginal and / or Torres Strait Islander parents – 84, non-Aboriginal and / or Torres Strait Islander parents - 1,408.

The survey also assessed parents' perceptions of how essential STEM skills are for a range of careers. Aboriginal and / or Torres Strait Islander parents were more likely to believe STEM skills are a must-have for careers not directly associated to STEM such as entrepreneur, lawyer, clerical and administration, and advertising or marketing consultant. They were also less likely to select data analyst as a career where STEM skills are a must-have compared to other parents surveyed.

Table 13: Proportion of parents who think profession requires STEM skills (% must-have). Showing significant differences only.

Q. How essential do you think STEM skills are to the following careers?

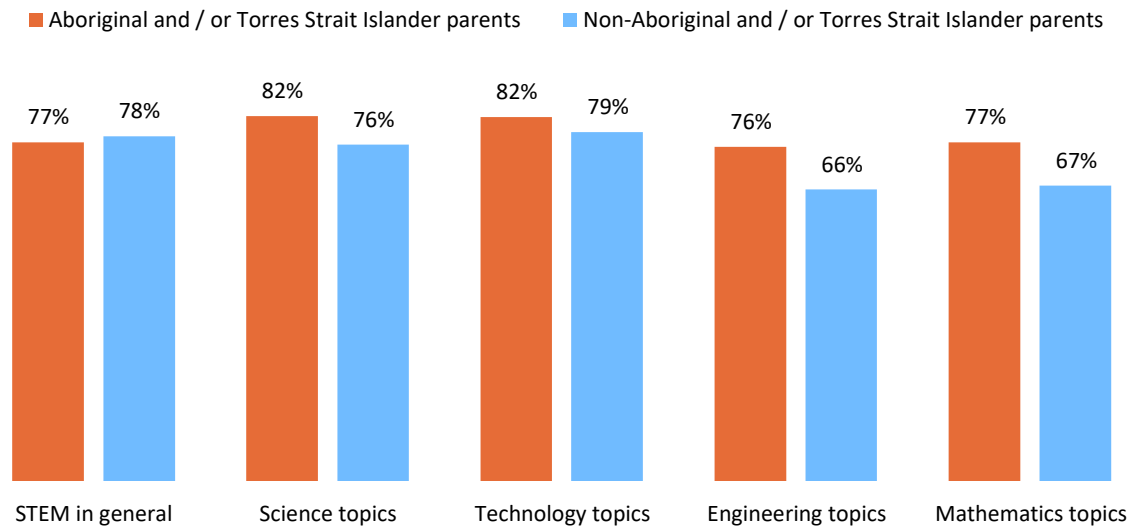
	Aboriginal and / or Torres Strait Islander	Non-Aboriginal and / or Torres Strait Islander
Data analyst	55%	71%
Entrepreneur	46%	24%
Lawyer	37%	23%
Clerical and administration (office support)	28%	15%
Advertising or marketing consultant	32%	11%

Interest in STEM

Aboriginal and / or Torres Strait Islander parents had the highest interest in technology (82%) and science (82%) topics. However, compared to other parents surveyed, there were no significant differences in interest levels for individual STEM subjects or STEM in general.

Figure 42: Interest in STEM and individual STEM subjects (net: medium / high interest).

Q. How interested are you in topics related to STEM and each of the individual STEM subjects?



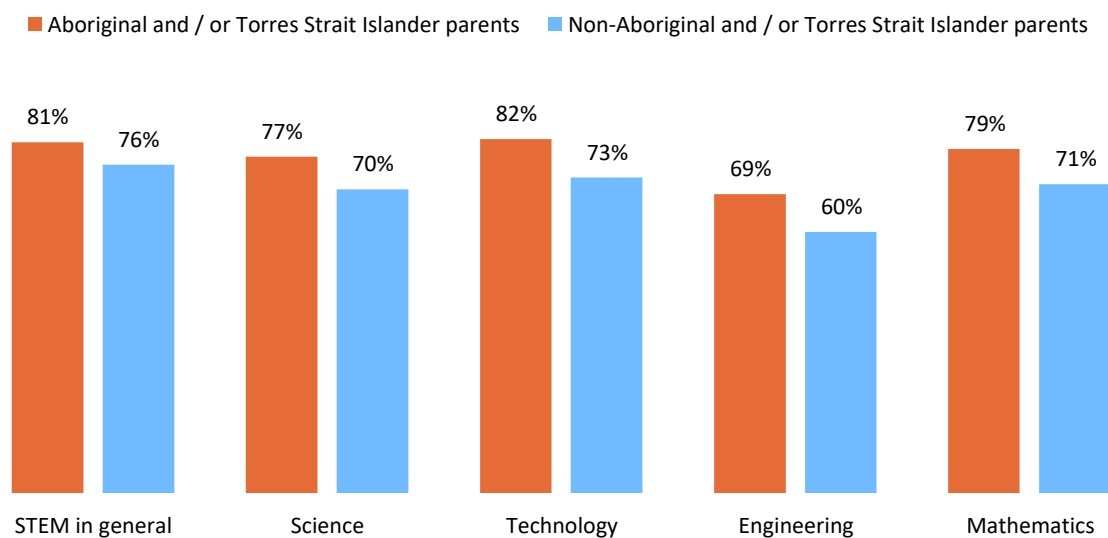
Base: Aboriginal and / or Torres Strait Islander parents – 84, non-Aboriginal and / or Torres Strait Islander parents - 1,408.

Confidence in supporting children with STEM schoolwork

Aboriginal and / or Torres Strait Islander parents reported similar levels of confidence in supporting their child with homework / projects related to STEM compared to other parents surveyed. They reported the highest level of confidence with technology (82%) and STEM in general (81%). Aboriginal and / or Torres Strait Islander fathers reported higher confidence levels compared to mothers, with 91% of fathers saying they are confident with STEM in general compared to 61% of mothers.

Figure 43: Confidence in supporting children with STEM homework / projects (net: medium / high confidence).

Q. How confident would you feel if you had to support the child with homework / projects related to STEM?



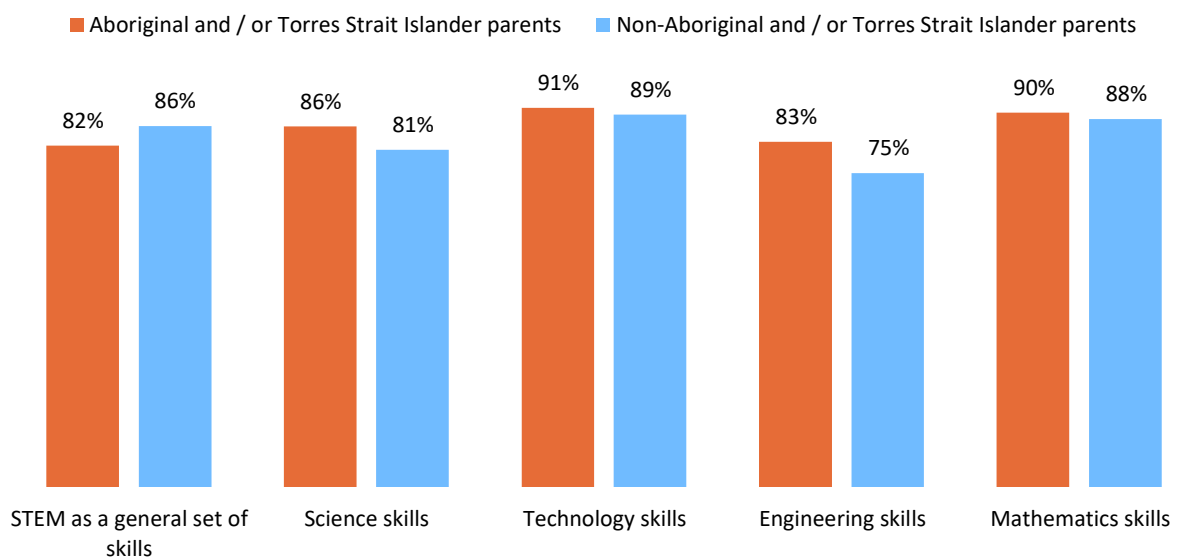
Base: Aboriginal and / or Torres Strait Islander parents – 84, non-Aboriginal and / or Torres Strait Islander parents - 1,408.

Perceived importance of STEM for future employment

Like other parents surveyed, Aboriginal and / or Torres Strait Islander parents believe that STEM skills are important for their children to acquire a good job in the future. Technology skills were seen as the most important (91%) followed by mathematics (90%).

Figure 44: Perceived importance of STEM skills for future career (net: somewhat / very important).

Q. In your opinion, how important is it for the child to have STEM skills in order to acquire a good job in the future?



Base: Aboriginal and / or Torres Strait Islander parents – 84, non- Aboriginal and / or Torres Strait Islander parents - 1,408.

Engagement with children’s education

Half of all Aboriginal and / or Torres Strait Islander parents (55%) reported discussing STEM topics with their children at least one a week, compared to 44% of other parents surveyed. Fathers reported a significantly higher frequency of STEM discussions with their children compared to mothers (66% vs 35%).

Aboriginal and / or Torres Strait Islander parents also reported helping their children with schoolwork more often than other parents surveyed (every school day support – 29% vs 12%). The survey also found that more Aboriginal and / or Torres Strait Islander parents (69%) were involved with STEM related extracurricular activities compared to other parents surveyed (48%). This was driven mostly by fathers (80% vs 49% for mothers).

Gender bias

Aboriginal and / or Torres Strait Islander parents reported similar perceptions to other parents surveyed with regards to differences in confidence of boys and girls across a range of school subjects. However, they were more likely than other parents surveyed to say that girls are more confident with all four STEM subjects.

Table 14: Proportion who think girls are more confident with STEM subjects (net: a bit more / much more).

	Aboriginal and / or Torres Strait Islander	Non-Aboriginal and / or Torres Strait Islander
Science	17%	8%
Technology	18%	4%
Engineering	8%	3%
Mathematics	19%	10%