Centre for Education Statistics and Evaluation

Supporting Aboriginal students to attain the HSC

Aboriginal students who aspire to go to university or finish high school or who report high levels of engagement or advocacy are more likely to attain the Higher School Certificate (HSC) compared with Aboriginal students who do not report high levels of aspirations, high levels of engagement or high levels of advocacy.

This paper focuses on HSC outcomes for Aboriginal students. It also includes strategies that schools use to support students' aspirations, engagement in school and advocacy that can improve student outcomes and HSC attainment.

This paper uses NSW Tell Them From Me (TTFM) data to identify drivers of HSC attainment and contributes to the evidence base to support a key Premier's Priority for the NSW Government.[1]

1   One of the NSW Premier's priorities is to increase the proportion of Aboriginal students attaining their HSC by 50% by 2023, while maintaining their cultural identity. https://www.nsw.gov.au/premiers-priorities/increasing-number-of-aboriginal-young-people-reaching-their-learning-potential

Key findings

Key findings: what are the drivers of HSC attainment for Aboriginal students?

1. **Aspirations to finish school and aspirations to go to university improve the likelihood that students attain the HSC.** When Aboriginal students report high levels of aspirations in Year 10 they are more likely to attain the HSC in Year 12 than Aboriginal students who do not report high aspirations.

2. **Positive student engagement in school increases the likelihood that students attain the HSC.** Aboriginal students who report high levels of attendance, positive behaviour and positive attitudes towards homework in Year 10 are more likely to attain the HSC in Year 12 than their Aboriginal peers who do not report high engagement.

3. **Advocacy at school and at home improves the likelihood that Aboriginal students attain the HSC.** Aboriginal students in Year 10 who report that their teachers are interested in their school assignments and that their family encourages them to do well have greater odds of attaining the HSC compared with Aboriginal students who do not report the same support.

Key findings: what are the drivers of aspirations for Aboriginal students?

4. **Engagement and teachers' interest influence primary school students' aspirations to go to university.** The aspirations of Aboriginal and non-Aboriginal primary school students to go to university are influenced by student engagement measures: positive relationships, interest and motivation, positive homework behaviour and effort, and teachers' interest in students' school assignments.

5. **Engagement and expectations for success influence secondary school students' aspirations to go to university.** Aboriginal and non-Aboriginal lower secondary school students' aspirations to go to university are also influenced by student engagement measures (interest and motivation, positive behaviour, and effort) as well as by teachers' expectations for students' success and family discussion with the student of the importance of school.

6. **Engagement, expectations for success and Aboriginal students' feelings of culture at school influence secondary school students' aspirations to finish high school.** Aboriginal and non-Aboriginal lower secondary school students' aspirations to finish school are influenced by student engagement measures (positive behaviour and effort) and teachers' expectations for students' success. Specifically for Aboriginal students, feeling good about their culture when at school influences lower secondary school students' aspirations to finish school.

The challenge

Supporting Aboriginal students to complete their HSC and get the most out of their schooling

HSC attainment or school completion is important because it is linked to lifelong benefits. Individuals who complete school have a higher probability of employment and higher full-time average weekly earnings compared with students who choose an alternative pathway prior to the end of Year 12 (Wilkins and Lass 2018). Students who complete school also have lower chances of experiencing crime, welfare dependency and poor health compared with students who choose an alternative pathway prior to the end of Year 12 (Lamb and Huo 2017).

Since 2013, the proportion of Aboriginal students in NSW who attained the HSC each year has been much lower than non-Aboriginal students, highlighting the need to improve this outcome for Aboriginal students (Figure 1). In 2019, the proportion of Aboriginal students who attained the HSC was 45% compared with 71% of non-Aboriginal students.

Figure 1

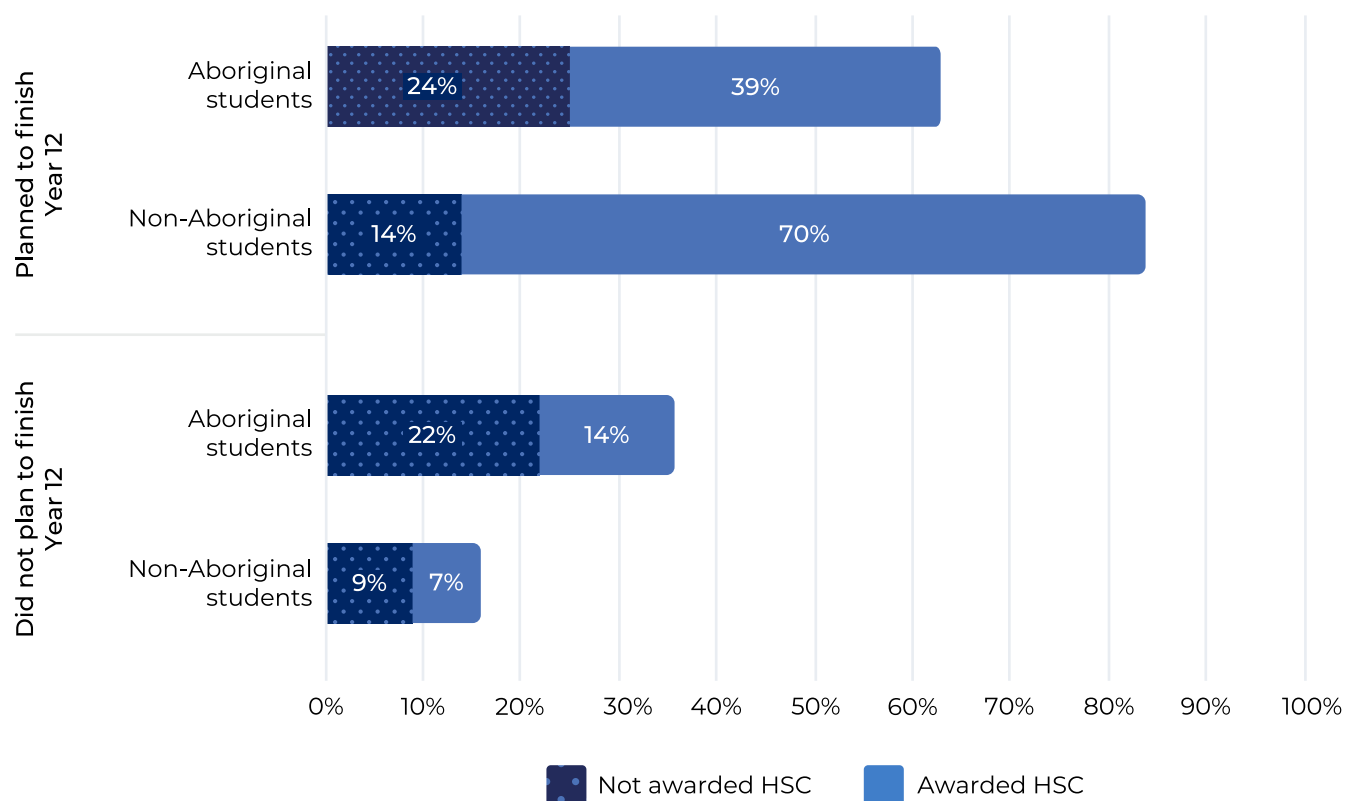**Proportion of Aboriginal and non-Aboriginal students attaining the HSC in NSW**
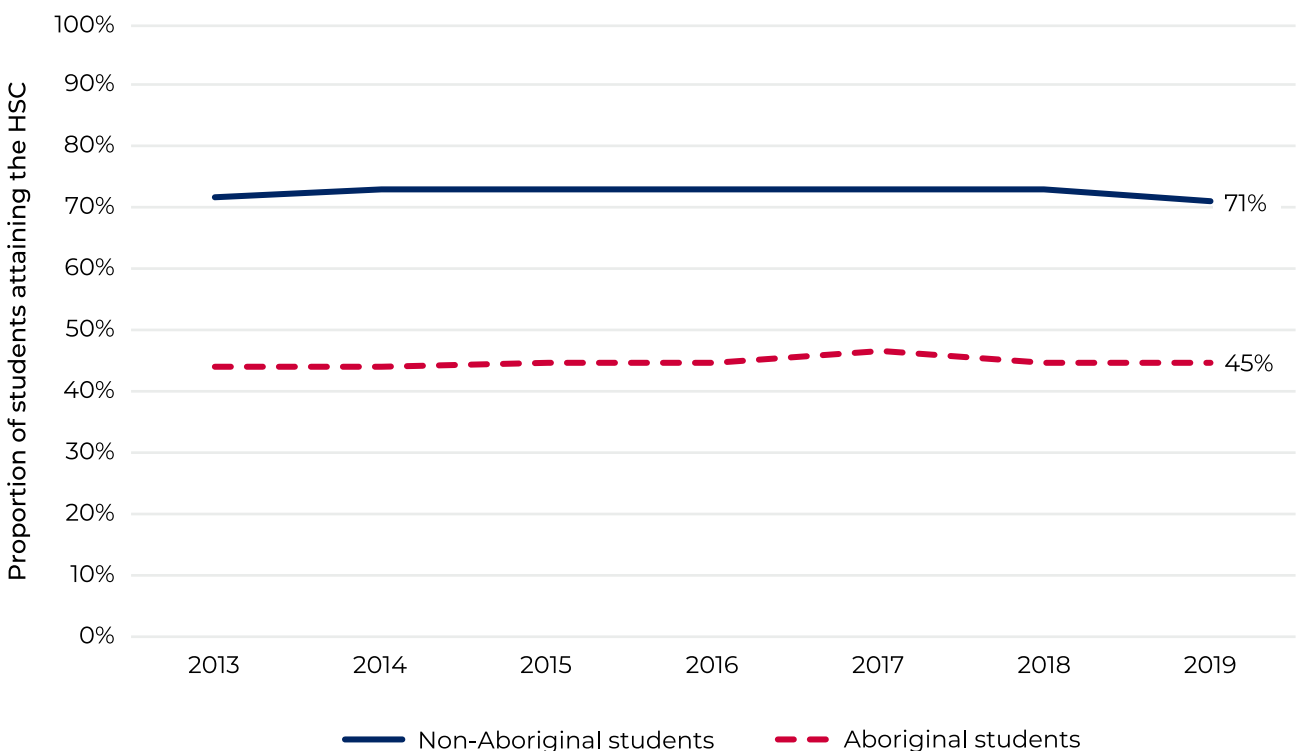
Source: NSW Education Standards Authority and Department of Education administrative data.
Note: this data is for all students in NSW.

Students who plan to finish Year 12 have a greater chance of going on to attain the HSC. Almost 40% of Aboriginal students in this analysis reported in Year 10 that they plan to finish Year 12 and they attained the HSC two years later (Figure 2). However, almost a quarter (24%) of Aboriginal students in this analysis reported in Year 10 that they intended to finish Year 12 but did not attain the HSC two years later. Interestingly, there is a group of Aboriginal students (14%) who, in Year 10, reported that they did not intend to finish Year 12 and went on to attain the HSC two years later.

| Figure 2

HSC attainment by aspirations to finish Year 12 for Aboriginal and non-Aboriginal students
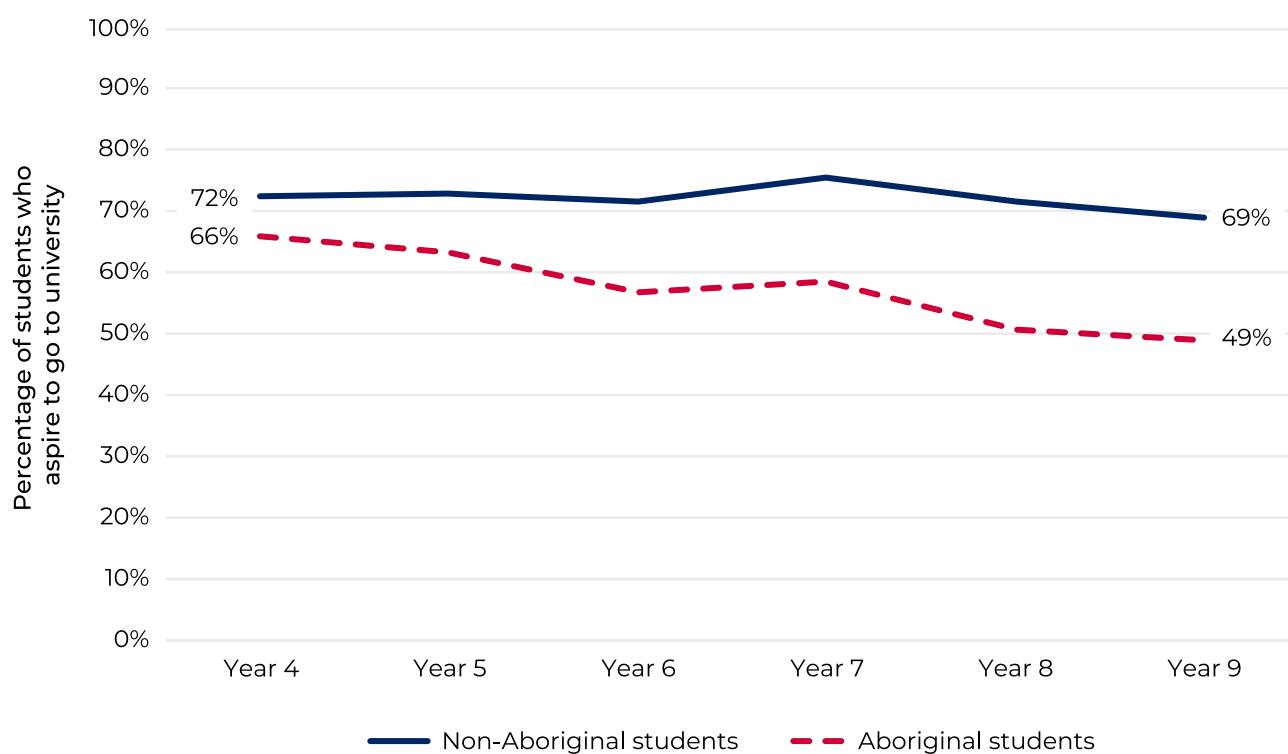

Source: Tell Them From Me student survey and NSW Education Standards Authority.

Students who have aspirations for post-school education are more likely to attain the HSC. The proportion of Aboriginal primary school students in this analysis who aspire to go to university is 66% compared with 72% of non-Aboriginal students (Figure 3). This gap in Year 4 is relatively small (6 percentage points) compared with the gap in aspirations in the later years of schooling. The difference in aspirations between Aboriginal and non-Aboriginal students becomes greater across the year groups over primary and lower secondary school, reaching 20 percentage points by the time students are in Year 9.

Figure 3

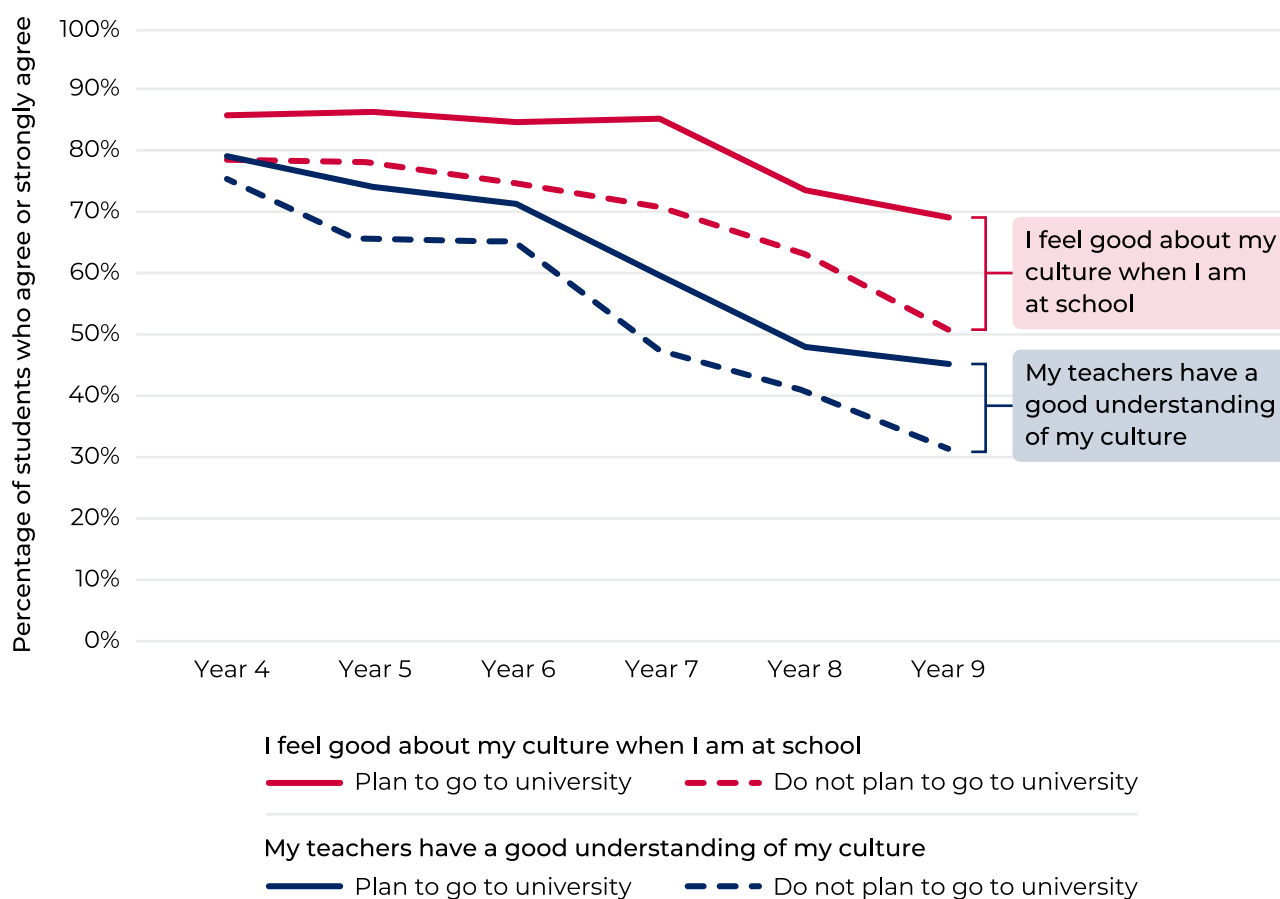**Aspiration to go to university for Aboriginal and non-Aboriginal students**

Source: Tell Them From Me student survey.

It is important that Aboriginal students feel good about their culture while at school and that their teachers understand their culture. Aboriginal students who plan to go to university report more positively on these aspects than Aboriginal students who do not plan to go to university (Figure 4). This trend is seen throughout primary school and lower secondary school.

▌ Figure 4

Aboriginal students' aspirations to go to university and feelings of culture at school

Source: Tell Them From Me student survey.

Findings from longitudinal modelling of Tell Them From Me data

Drivers of HSC attainment

The significant drivers of HSC attainment for Aboriginal and non-Aboriginal students are presented in Table 1. The associated odds ratios indicate the change in the odds of students attaining the HSC when the TTFM measure increases by one point. These drivers can be categorised into three groups: aspirations (to finish school and to go to university), student engagement (positive attendance, positive attitude towards homework and positive behaviour), and advocacy (interest from teachers in the student's school assignments and family encouragement to do well).

Table 1[2]

Measures positively associated with HSC attainment (odds ratios)

Measure	Odds of non-Aboriginal students completing the HSC	Odds of Aboriginal students completing the HSC
Aspirations (in Year 10)		
• To finish school	1.17***	1.09***
• To go to university	1.05***	1.04***
Student engagement (in Year 10)		
• Positive attendance	1.11***	1.08***
• Positive attitude towards homework	1.06***	1.05***
• Positive behaviour	1.07***	1.05**
Advocacy (in Year 10)		
• Interest from teachers in the student's school assignments	1	1.05***
• Family encourage student to do well	1	1.04***

Significance levels: * p<0.10, ** p<0.05, *** p<0.001

To understand the extent to which these groups of drivers improve the chances for Aboriginal students to attain the HSC, the results in Table 1 can be converted to predicted probabilities of hypothetical types of students.

These hypothetical students have identical socio-demographic characteristics and report either having high levels of each measure (aspirations, engagement or advocacy) or do not report high levels. These measures are scored from 0 to 10. A student who does not report 'high' aspirations, engagement or advocacy has a score of 2.5 while a student who reports 'high' aspirations, engagement or advocacy has a score of 7.5.

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2   The model takes into account student demographics, school demographics, TTFM student engagement measures and contextual factors, prior NAPLAN achievement, students' plans for school completion and further education as well as Aboriginal students' responses to Aboriginal culture questions. See methodology section for more information.

Finding 1: aspirations to finish school and aspirations to go to university improve the likelihood of students to attain the HSC

The extent to which aspirations (to finish school and to go university) can help improve the likelihood of Aboriginal students to attain the HSC can be illustrated through an example. In this case, there are two hypothetical students: Student A and Student B. These two students have identical socio-demographic characteristics. The only differences between them is that Student A is an Aboriginal student with high aspirations to finish school and high aspirations to go to university in Year 10. Student B is an Aboriginal student who does not report high aspirations.

Student A (with high aspirations) has a 71% chance of attaining the HSC in Year 12 (Figure 5), which is 22 percentage points higher than Student B (who does not report high aspirations) who has a 49% chance of attaining the HSC in Year 12.

▌ **Figure 5**

Predicted probability of HSC attainment of Aboriginal and non-Aboriginal students by aspirations

Probability of attaining the HSC
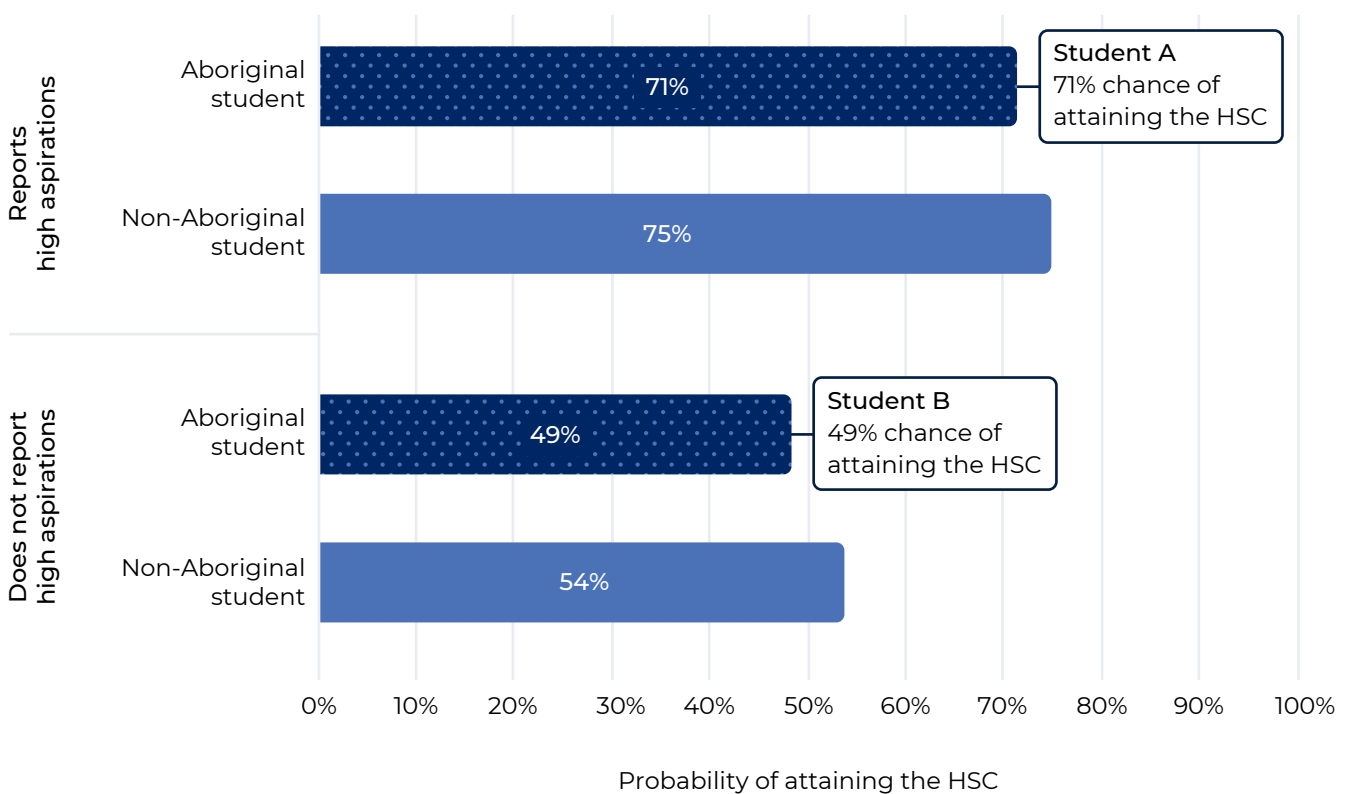
Finding 2: positive engagement improves the likelihood of students to attain the HSC

Figure 6 shows the extent to which student engagement (positive attendance, positive attitude towards homework and positive behaviour) improves the likelihood of Aboriginal students attaining the HSC. In this case, Student A is an Aboriginal student with high engagement (positive attendance, positive attitude towards homework, and positive behaviour) in Year 10. Student A has identical socio-demographic characteristics to Student B. Student B is an Aboriginal student who does not report high engagement (attendance, homework behaviour and general behaviour) in Year 10.

Student A, with high engagement, has a 72% chance of attaining the HSC. This is 25 percentage points higher than Student B, who does not report high engagement, who has a 47% chance of attaining the HSC in Year 12.

▋ **Figure 6**

Predicted probability of HSC attainment of Aboriginal and non-Aboriginal students by level of engagement
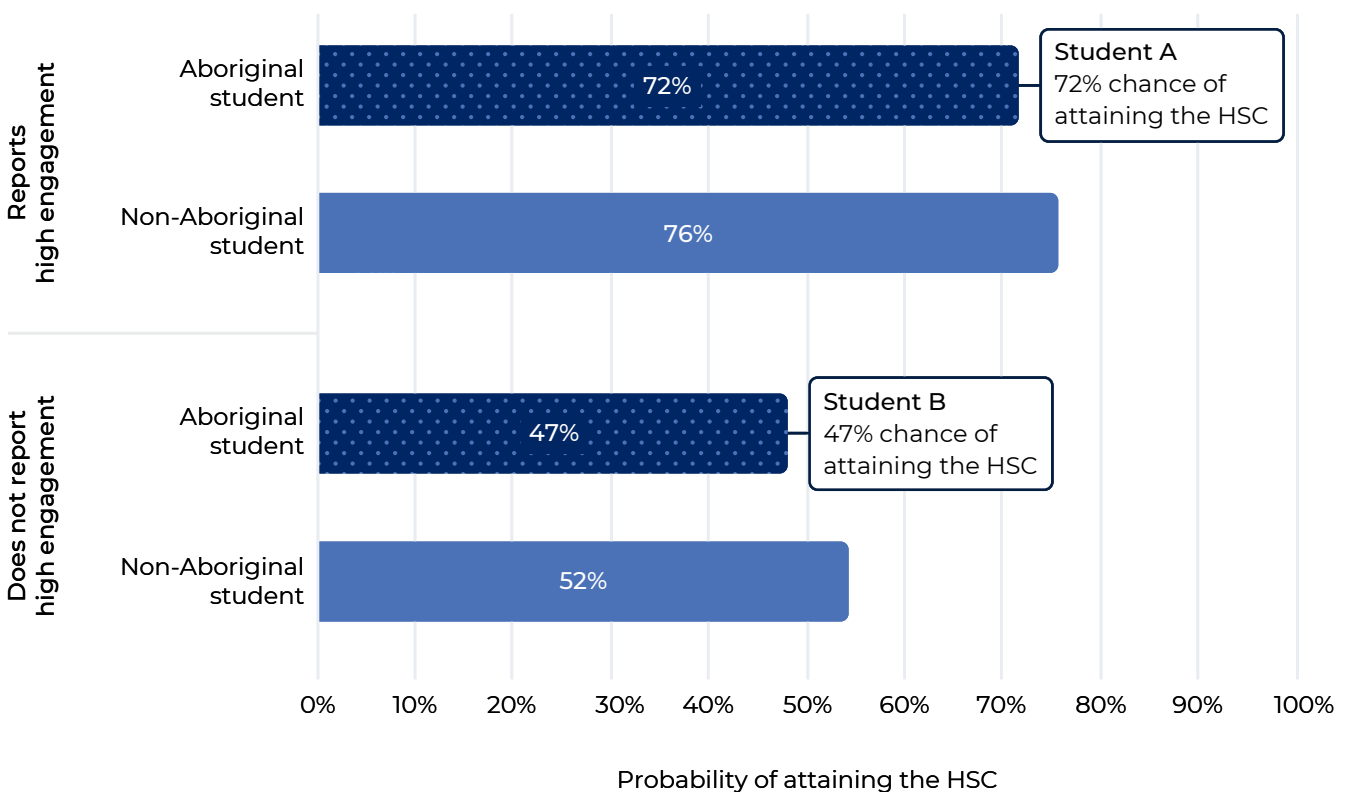
Finding 3: advocacy at school and at home influences students' likelihood of attaining the HSC

Aboriginal students in Year 10 whose teachers show interest in their school assignments and whose parents encourage them to do well at school have greater odds of attaining the HSC in Year 12. Figure 7 shows the extent to which these types of advocacy improve the likelihood of HSC attainment for Aboriginal students.

A hypothetical Aboriginal student (Student A) with high advocacy in Year 10 has a 73% chance of attaining the HSC in Year 12. This is one percentage point higher than an Aboriginal student who does not report high advocacy in Year 10 (Student B) who has a 72% chance of attaining the HSC in Year 12.

▌ **Figure 7**

Predicted probability of HSC attainment of Aboriginal and non-Aboriginal students by level of advocacy
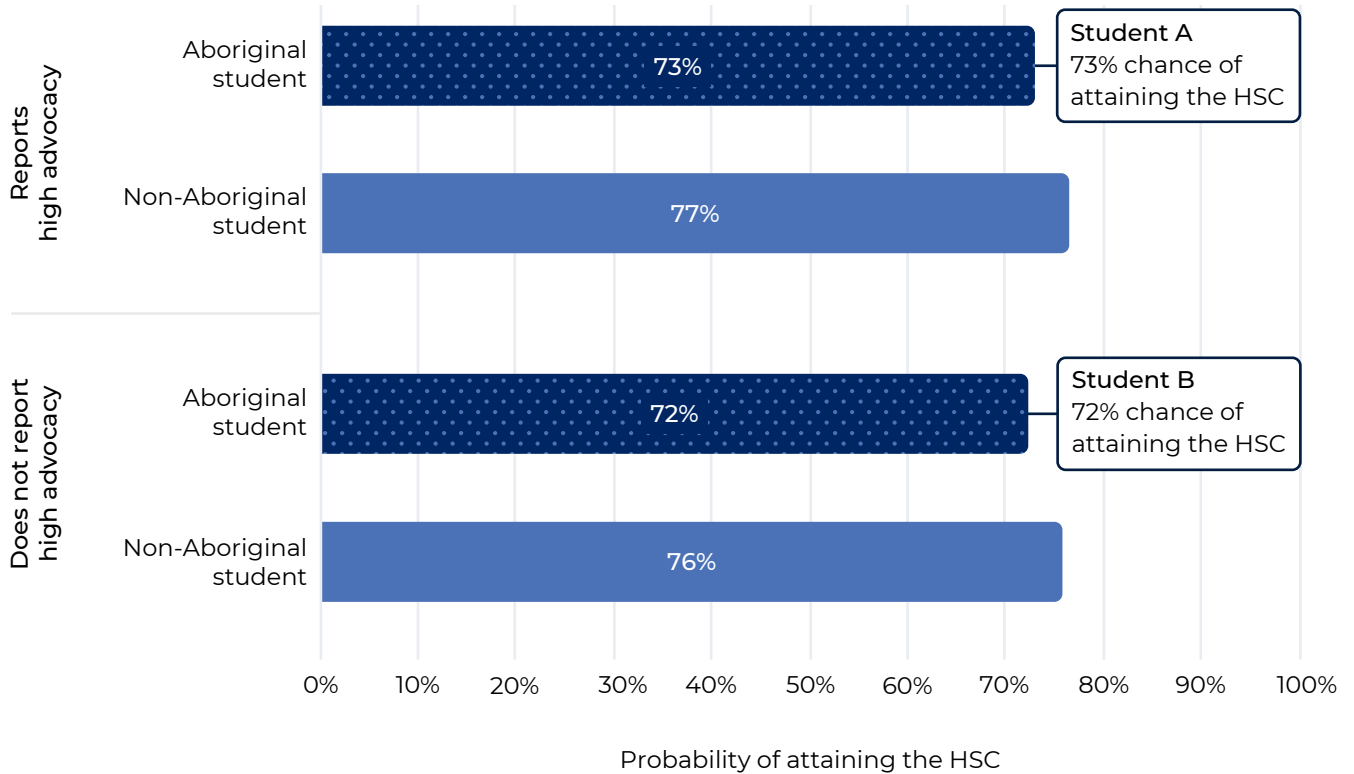
Drivers of aspirations to finish school and aspirations to go to university

Students' aspirations to both finish school and go to university are strong drivers of their likelihood of going on to attain the HSC. Table 2 shows the significant drivers of aspirations for primary (Years 4-6) and lower secondary school students (Years 7-9) based on this analysis.[3]

Table 2

Measures positively associated with student aspirations in primary and lower secondary school

Aspirations to go to university for primary students (Years 4-6)	Aspirations to go to university for lower secondary students (Years 7-9)	Aspirations to finish school for lower secondary students (Years 7-9)
Student engagement • Positive relationships • Homework behaviour • Interest and motivation • Effort	**Student engagement** • Interest and motivation • Positive behaviour • Effort	**Student engagement** • Positive behaviour • Effort
Teachers' interest in students' assignments	Teachers' expectations for students' success	Teachers' expectations for students' success
	Family discuss importance of school with student	Feeling good about their culture when at school (examined for Aboriginal students only)

Finding 4: engagement measures and teachers' interest influence primary school students' aspirations to go to university

The aspirations of primary school Aboriginal and non-Aboriginal students to go to university are influenced by student engagement measures, specifically, positive relationships, interest and motivation, positive homework behaviour and effort, and teachers' interest in students' school assignments.

Finding 5: engagement and expectations for success influence secondary school students' aspirations to go to university

The aspirations of lower secondary school Aboriginal and non-Aboriginal students to go to university are also influenced by a slightly different set of student engagement measures (interest and motivation, positive behaviour and effort) as well as teachers' expectations for students' success and family discussion with the student of the importance of school.

3   The longitudinal model used for this analysis takes into account student demographics, school demographics, TTFM student engagement measures and contextual factors, prior NAPLAN achievement and Aboriginal students' responses to Aboriginal culture questions. Refer to data and methodology section for more information.

Finding 6: engagement, expectations for success and Aboriginal students' feelings of culture at school influence secondary school students' aspirations to finish high school

Aspirations of lower secondary school Aboriginal and non-Aboriginal students to finish school are influenced by student engagement measures (positive behaviour and effort), teachers' expectations for students' success, and, for Aboriginal students, feeling good about their culture when at school.

Data and methodology

This paper uses NSW public school data from the Tell Them From Me (TTFM)[4] survey in two sets of longitudinal models.

Model 1: drivers of HSC attainment (Findings 1-3)

This model used secondary school student survey data to explore the links between students' engagement, educational plans to complete Year 12 or go to university, and experience of teaching practice in Year 10 and their likelihood of attaining the HSC two years later in Year 12.

This analysis tracks 37,049 students including 3,686 Aboriginal students, who participated in the TTFM student survey in 2016 and 2017 and links their survey responses to their Year 12 outcomes in 2018 and 2019. The methodology used in this analysis follows an earlier CESE paper on the drivers of school completion (CESE 2019b). In this analysis, HSC attainment is defined as a student being awarded the Higher School Certificate.

Model 2: drivers of aspirations (Findings 4-6)

Following from the findings of model 1, we then explored the drivers of aspirations among primary and secondary students, specifically, the drivers of primary school students' aspirations to go to university and lower secondary school students' aspirations to finish school and aspirations to go to university. We tracked 8,087 students who participated in the TTFM primary school survey (Years 4-6) and 6,968 students in Years 7-9 who participated in the TTFM secondary school survey from 2017 to 2019.

To determine the drivers of aspirations, a random effects multi-level regression was used. The model takes into account student demographics, school demographics, TTFM student engagement measures, TTFM contextual factors, prior NAPLAN achievement and Aboriginal students' responses to Aboriginal culture questions. This method of analysis helps to identify drivers (independent variables) that are statistically significant for one group but not for another group, for example, Aboriginal and non-Aboriginal students. This approach is used to find predictors that are only relevant to the group in which the coefficients are statistically significant, which can then be used for targeted interventions for that group. The comparison of the magnitude of the coefficients is only meaningful when the coefficient estimates are statistically significant.

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4   For more information on the TTFM survey and the indicators of engagement, wellbeing and effective teaching practice it measures, visit https://www.cese.nsw.gov.au/publications-filter/supporting-school-improvement-using-the-tell-them-from-me-student-parent-and-teacher-surveys

Summary of strategies for improving the likelihood of students to attain the HSC

Based on the modelling and findings in this paper, the following section summarises strategies that have come from earlier CESE evidence-based research and case studies that can help to improve HSC attainment for all students.

Strategies to drive students' aspiration to finish high school and aspiration to go to university

Have high expectations for students' success and enhance students' interest and motivation in their work

- Encourage students and expect them to try hard, to participate in class and to ask for help.

- Create a classroom environment that is safe, where all students feel comfortable asking questions, taking risks, and making mistakes. This can be done by facilitating and modelling classroom expectations about how to be a respectful, responsible and collaborative class member.

- Challenge students to learn new things by helping them set needs-based learning goals.

- Encourage students to believe they can perform a task by setting high expectations for what they can achieve, being explicit about how they can achieve it, and drawing on previous examples of effort when students achieved a challenging task.

- Pitch lessons at the right level for students, provide increasingly more complex tasks as they gain understanding, and provide a variety of learning opportunities for a range of student understanding.

- Build students' sense of autonomy by listening, asking them questions and responding to their questions, acknowledging students' perspectives and giving them opportunities to work through problems on their own when they have a sufficient knowledge base.

- Acknowledge students' effort, highlight and explain improvement, and provide students with actionable steps to improve their learning process and achieve their learning intention.

- Enhance students' ability to self-assess and monitor their work by explicitly showing them how they can reflect on the quality of their work using success criteria and rubrics or marking guidelines.

Promote and expect positive behaviour

- Explain classroom rules, routines and expectations for behaviour that fit within the school's classroom management policies.

- Develop high-quality student – teacher relationships by taking the time to know students, looking for opportunities to engage with them, and encouraging students to voice their opinions and feedback. Reflect on your interactions with students.

- Actively supervise students to keep them on task by moving around the classroom and scanning for signs of on-task or off-task behaviour. Acknowledge appropriate behaviour and address passive disengagement.

- Respond to disengagement and disruptive behaviours and support students to re-engage in learning. Identify the reason for disengagement or disruption and give corrective feedback consistently, fairly and respectfully that is proportionate to the level of disengagement or disruption. Ensure that students understand the reason for correction and have clear escalation paths.

- At a whole-school's level, set an expectation of consistent values, norms and responsibilities, and the consequences for behaviours when in the school context.

Establish a quality learning environment that supports Aboriginal students to thrive at school

- Ensure that all students and staff value and respect Aboriginal culture, history and customs. This can be done by inviting Aboriginal community members and Elders in to the school to speak about their culture and experiences, engaging with the Aboriginal community and undertaking Professional Learning on supporting Aboriginal students.

- Develop a school environment that allows Aboriginal students to feel welcome and safe. This can be done by building positive relationships with Aboriginal families, teaching and celebrating Aboriginal culture and recognising the cultural needs of Aboriginal students and their families.

- Recognise and celebrate Aboriginal culture through the observation of significant events such as NAIDOC Week and Sorry Day.

- Incorporate local Aboriginal languages into lessons by developing material in collaboration with Aboriginal Education Officers.

- Invite Aboriginal families into the school and engage and share information with Aboriginal families.

- Work with Aboriginal Education Officers to understand cultural matters and the appropriate ways of dealing with cultural matters such as Sorry Business.

- Provide time for all staff to take part in cultural competency training.

Strategies to drive students' engagement through school attendance and homework behaviour

Improve school attendance

- Set whole-school expectations for attendance and monitor attendance patterns. This can be done by using data to monitor any changes to attendance, which will allow for follow-up with the student and parents/carers to understand and address barriers to school participation.
- Listen to and understand the student perspective, as poor attendance can reflect underlying issues such as poor relationships with teachers and other students, a dislike for school, or feeling unsafe at school.
- Promote social and emotional engagement by improving students' connection to school and sense of belonging at school.
- Collaborate with families by involving parents in school decision-making, increasing parental participation in school and classroom activities, and establishing a contact person at school for families.

Encourage a positive attitude towards homework

- Make homework a part of the learning process and show that it is an opportunity for growth by rewarding effort and demonstrations of learning through homework to show students that homework is an opportunity for growth.
- Provide structured tasks for homework that encourage practice and repetitive learning to help develop students' skills.

Strategies to advocate for students at school and at home

Show interest in the students' work

- Talk to students about their learning by having open in-class discussions about their work and use formative assessment to give individual students feedback on their work.
- Encourage student voice by inviting students to express their opinions and feedback on their work.
- Recognise students who are at risk of experiencing lower levels of advocacy and provide them with targeted support.

Engage with the parent/carer community to help build advocacy at home

- Work with parents and carers to support their child's learning at home. Provide them with advice, tools and information about how students learn, such as the importance of study and establishing routines.
- Share information with parents and carers on their child's progress, learning and wellbeing, and provide parents and carers with positive feedback such as 'good news' calls.
- Invite parents and carers into the school to view their child's work and discuss their goals, either in person or online.

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