NSW GOVERNMENT

DEPARTMENT OF EDUCATION

Supporting students' learning
Insights from students, parents and teachers

Centre for Education Statistics and Evaluation

This Learning Curve presents findings from the 2016 *Tell Them From Me* school surveys completed by primary and secondary students, parents/carers and teachers in NSW government schools. One of the aims of the surveys is to capture how support for learning is experienced at school and in the home. Students provide feedback on how much support they receive from their teachers and their parents/carers, while responses from teachers and parent/carers indicate how much support they provide in school and at home, respectively. This Learning Curve draws on all three perspectives to explore the provision of advocacy and support and how this varies for different groups of students and at different stages of school.

Key findings

- The research evidence highlights that teachers and parents/carers are key sources of support for learning. Greater levels of support are associated with better student academic and wellbeing outcomes.

- Students' perceptions of *teacher support* start to decline in the final years of primary school. Secondary school students perceive *teacher support* to dip in the middle years of school, before improving in Years 11 and 12.

- Students' perceptions of *parent support* decrease over secondary school. This decline is observed for both boys and girls, and across all socioeconomic groups.

- Teachers report that they increase the amount of classroom support they provide to students in key schooling years (Years 5-6 and Years 10-12).

- Parents report a continual decline in the frequency of their interactions based around supporting their child's schooling, starting from early primary school.

- At primary school, girls report more support at school from teachers than boys. The opposite occurs in the early and middle years of secondary school, with boys reporting more support at school than girls.

- Students from low socioeconomic backgrounds report receiving significantly less support from both parents and teachers compared to high socioeconomic-status students.

The NSW Department of Education, through the Centre for Education Statistics and Evaluation (CESE), collects student, parent and teacher feedback through a suite of surveys known as *Tell Them From Me*.

The student survey is designed to measure a range of student outcomes and classroom practices, including the support sources available to students at school and in the home. Within the survey instrument these support-related measures are referred to as **Advocacy at school** and **Advocacy outside of school**:

Advocacy at school refers to the support students receive from teachers and other school staff who consistently provide encouragement and who can be turned to for advice.

Advocacy outside of school refers to the support for learning students receive from their parents and other family members.

The importance of support for learning

Alongside effective teaching strategies, students need a supportive learning environment to succeed (Centre for Education Statistics and Evaluation 2015a). In an education context, advocacy and support for learning refer to the active consideration and support of students' academic and wellbeing needs. This encompasses general support and specific supportive behaviours that help students navigate the everyday course of school life (Malecki & Demaray 2002).

Research demonstrates that:

- Students' perceptions of supportive teachers and parents have a positive association with their outcomes, such as academic performance, sense of belonging and overall wellbeing (Murray-Harvey & Slee 2007, OECD 2017).

- Perceived support from both teachers and parents can also protect against the declines in student engagement that occur during secondary school years (Wang & Eccles 2012).

- While teacher support has a central role in influencing positive school outcomes, such as school satisfaction and academic self-efficacy (belief in one's ability to accomplish a task; Bandura 1997), it must be paired with parent support to have the greatest impact on school outcomes (Rosenfeld et al. 2000).

- Students learn better when the home and school environments form complementary and supportive roles for learning (Epstein & Sheldon 2006).

Support for learning in NSW

The NSW Department of Education Strategic Plan 2018-2022 includes the commitment to ensure that every student is known, valued and cared for in our schools. School advocacy and support for learning are necessary components for happy and successful students.

The *Tell Them From Me* surveys collect data on NSW students' perspectives of their schooling and educational experiences. Researchers have often used student voice to explore the importance of support from teachers and parents (e.g. Cattley 2004, Klem & Connell 2004, Rosenfeld et al. 2000, Wang & Eccles 2012). The *Tell Them From Me* teacher and parent surveys allow us to widen this perspective to illustrate how support for learning is both perceived by, and provided to, students as they move through school.

This Learning Curve looks at support for learning from the following perspectives:

1. How NSW primary students experience support in school

2. How NSW secondary students experience support in school and at home[1]

3. How NSW teachers and parents provide support in school and at home

4. The difference between boys' and girls' experiences of support in school and at home

5. The impact of socioeconomic status (SES) on students' experiences of support in school and at home.

This Learning Curve is accompanied by *Supporting students' learning – resources for schools, teachers and parents,* which provides some strategies for creating support frameworks that may be useful to schools, teachers and parents/carers. It includes two case studies from schools in NSW (one primary and one secondary) that demonstrate high levels of school advocacy and support for learning as reported by their students. The case studies illustrate some of the strategies and initiatives to which these schools attribute their positive results.

1   Primary students were not asked questions related to support at home.

NSW initiatives to improve student learning and support

The **NSW Wellbeing Framework for Schools** highlights the department's commitment to supporting students to connect, succeed and thrive at each stage of their development and learning. All NSW public schools are required to have a planned approach to wellbeing that incorporates the elements of the Wellbeing Framework.

The **Supported Students, Successful Students** initiative provides schools with enhanced resources to support the relevant needs of all students. It aims to proactively develop student character and wellbeing; help create safer school environments; counter inappropriate behaviours, such as cyber-bullying; and help schools to engage more effectively with vulnerable students.

The **NSW Anti-bullying Strategy** brings together evidence-based resources and information to support NSW schools, parents and carers, and students to prevent and respond to bullying.
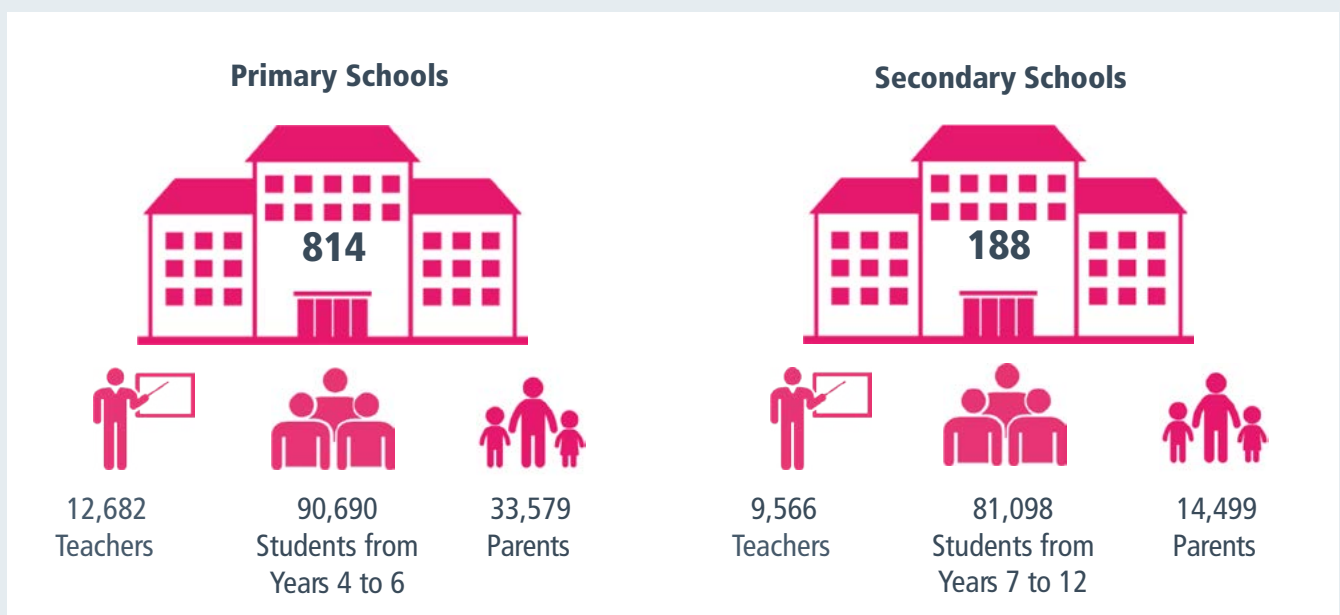
Tell Them From Me (TTFM) is an online survey system that captures the views of students, teachers and parents. The three surveys provide valid and reliable data on academic experiences to help improve student outcomes. The analyses reported in this Learning Curve use data from the TTFM surveys collected during Term 3, 2016 (Figure A).

The student survey collects data on how much primary (Years 4 to 6) and secondary (Years 7 to 12) school students feel supported by teachers in their school. Additionally, secondary students are also asked how often parents or other family members provide school-related support at home.

The parent and teacher surveys are administered annually in Term 3 at the same time as the student surveys. In the parent surveys, parents or family members are asked how frequently they provide support to their child at home. In the teacher survey, NSW teachers are asked to what extent they support their students in the classroom. In these surveys, the main respondent (parent/family member; teacher) is asked to indicate what school stage their student is currently enrolled in, ranging from Kindergarten to Year 12, in order to disaggregate data by school stage.

Figure A: Number of students, parents and teachers who provided responses from NSW government primary and secondary schools.

Primary Schools

814

| 12,682 Teachers | 90,690 Students from Years 4 to 6 | 33,579 Parents |

Secondary Schools

188

| 9,566 Teachers | 81,098 Students from Years 7 to 12 | 14,499 Parents |

Supporting students' learning: How is this measured?

The **TTFM student surveys** ask primary and secondary NSW students how much they experience general or specific supportive behaviours at school and in the home. These range from an involvement in school life (e.g. 'My parents/carers… are interested in my school assignments') to being available as a source of support (e.g. 'My teachers… talk to me about any problems I might have at school'). These items form the TTFM measures 'Advocacy at School' and 'Advocacy Outside of School', and represent the amount of support – in terms of having someone who consistently provides encouragement and can be turned to for advice – that students self-report in these contexts.

In the **TTFM teacher and parent surveys**, support is measured by the extent to which teachers and parents support children's engagement with learning through actions such as encouraging learning objectives (e.g. 'I help students set challenging learning goals') and fostering positive school attitudes (e.g. 'I encourage my child to do well at school'). In the TTFM surveys, these items form the measures 'Learning Culture' and 'Parents Support Learning at Home' within the teacher and parent surveys, respectively.

The statistical technique **factor analysis** is used to derive a single index score from the survey items that ask about support. For example, the TTFM measure Advocacy at School in the primary student survey contains five questions that ask students to what extent their teachers are providing a range of supportive behaviours at school. Factor analysis is applied to these individual items to calculate a single score that represents the standardised and weighted average of these five TTFM items.

Using this method, we can produce a standardised support-for-learning index score for every student, parent and teacher who completed the relevant survey questions. These index scores are scaled so that the middle point is zero (has a mean of 0 and a standard deviation of 1) and represents an average (NSW) level of support. Positive scores indicate a higher level of support than the average and negative scores indicate a level of support that is below average.

1. Trends in support across primary school: Support from teachers declines across primary school years

The *Tell Them From Me* primary student survey results show that students' perceptions of teacher support decline significantly each year from Year 4 to Year 6 (Figure 1). Research from Europe also finds a similar decline in students' perception of teacher support starting in primary schools and continuing into secondary school (Bru et al. 2010).

Having teacher support in primary schools is important for longer-term outcomes. Students with low levels of teacher support in primary school are twice as likely to be disengaged from school (Klem & Connell 2004). Disengagement early in schooling flows on to affect academic motivation in secondary school (Gottfried et al. 2001). More positively, research finds that students who do feel supported by their teachers, particularly as they transition from primary to secondary school, are more positive towards schoolwork and experience better wellbeing (Bru et al. 2010).

Figure 1: Support received from teachers at primary school, responses from the primary student survey ('Advocacy at School' measure)
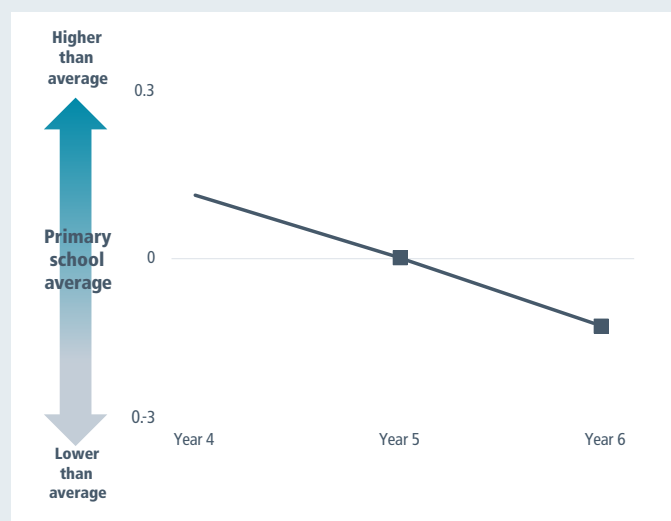
Note: symbol (■) denotes a significant difference in the level of support from the previous school year. The 'average' is for all students in Years 4-6 in NSW government schools.

2. Trends in support across secondary school years: Support from teachers dips in early secondary school years while support from parents steadily declines

Results from the *Tell Them From Me* secondary student survey show changing levels of teacher and parent support across schooling years (Figure 2). Perceived teacher support dips notably from Year 7 to Year 9, before improving from Year 10. In Years 11 and 12, teacher support picks up considerably, almost to the level seen when students first enter secondary school.

NSW students report significant declines in the level of support experienced at home across the early and middle years of secondary school (Figure 2). Students in Years 10 to 12 report relatively lower parental support when compared to students in the earlier years of secondary school. Describing a similar trend, Muller and Saulwick (2006) found that Australian parental engagement in schooling and education starts to decline as early as primary school.

Figure 2: Support received from teachers and parents across school years, responses from the secondary student survey ('Advocacy at School' and 'Advocacy Outside of School' measures)

Note: symbols (■ and ●) denote a significant difference in the level of support from the previous school year. The 'average' is for all students in Years 7-12 in NSW government schools.

What does 'Advocacy at School' look like at Whalan Public School?

Whalan Public School (WPS), located in Mt Druitt, western Sydney, highlights how listening to their students is central to how WPS fosters strong advocacy at school. Staff focus on nurturing their students' interests and wellbeing which, in turn, feeds engagement and perseverance in the classroom. WPS embeds whole-school approaches focused on consistency and familiarity to create supportive learning environments. Having their teachers deliver a consistent classroom strategy helps to alleviate student anxiety as it provides familiar learning frameworks year on year.

For further details about the WPS approach to advocacy and support for learning, refer to the companion publication.

What does 'Advocacy at School' look like at Sir Joseph Banks High School?

Sir Joseph Banks High School (SJBHS), located in Revesby, south-west Sydney, has focused on building strong relationships and coordinated student support systems within the school. The school's *Learning and Support Team* ensures that every student has a tailored path to support as soon as they join the school. SJBHS has strong links with local universities and businesses to ensure that its students are supported with opportunities that promote high expectations and aspirations.

For further details about the SJBHS approach to advocacy and support for learning, refer to the companion publication.

3. Teachers and students report varying levels of support at certain times in primary and secondary school

The *Tell Them From Me* teacher survey data show that, on average, primary school teachers report that they provide higher levels of support for their students than do secondary school teachers. In both primary and secondary school, teachers report an increase in the level of support they provide towards the final years (Figure 3), suggesting that teachers are more involved with older students who are transitioning to the next educational stage.

To capture how support is experienced in schools, the TTFM surveys ask teachers to what extent they provide a supportive learning culture in the classroom (e.g. 'I help students set challenging learning goals'), while students are asked to feed back on how much their teachers provide more general learning and emotional support (e.g. 'My teacher listens to what I have to say'). The data show that teachers offer more supportive classroom practices, such as providing feedback and goal setting, towards the later years of primary and secondary education compared to the earlier years. From the students' perspective, however, more pastoral forms of teacher support, such as having someone to talk to and feeling cared for, generally declines at primary school. In secondary school, this picks up in the final years.


The parent survey data shows that parental support starts to decline early in primary school and continues declining through secondary school. The decline reported by parents mirrors the student perspective (Figures 2 and 4). One possible explanation for this decline is the complexity of the high school curriculum, which can be daunting for parents and may deter them from getting involved with their child's schooling (Chen 2008). For instance, a quarter of Australian parents report that they are not comfortable helping their child with maths at high school levels (Westpac Banking Corporation 2017).

Figure 3: Provision of support in school by teachers across stages of learning, responses from the teacher survey ('Learning Culture' measure)

Note: symbol (■) denotes a significant difference in the level of support from the previous school year. The 'average' is for all teachers in Years K-12 in NSW government schools.

Figure 4: Provision of support at home by parent or family member across stages of learning, responses from the parent survey ('Parents Support Learning at Home' measure)
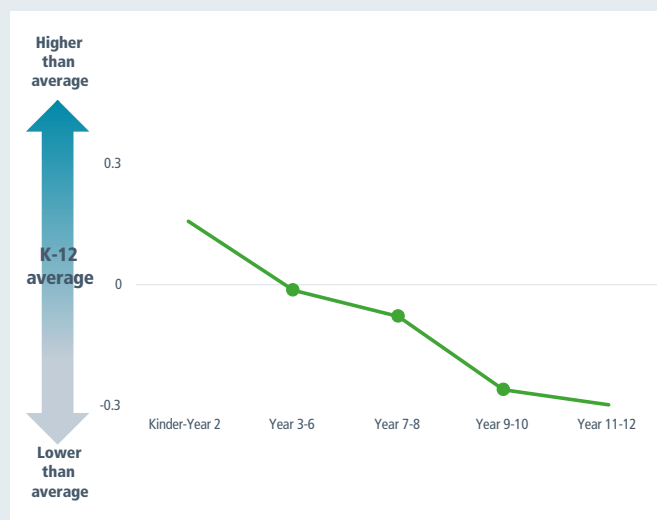
Note: symbol (●) denotes a significant difference in the level of support from the previous school year. The 'average' is for all parents with children in Years K-12 in NSW government schools.

What the evidence says about …

Teachers

Teachers have an important role to play in ensuring that students are known, valued and cared for at school. One element of this is being accessible to students for both academic and personal attention (Alder 2002). Klem and Connell (2004) found teacher support to be most influential in the early years of secondary school, where students who report high levels of teacher support are almost twice as likely to report better engagement, such as paying attention in class, and coping with challenging school-related events, such as receiving a poor grade.

Teacher support also plays a significant role in facilitating the successful transition from primary to secondary school (Centre for Education Statistics and Evaluation 2017a). The current findings, however, indicate that NSW students in later primary education feel less supported at school compared to earlier years, despite their teachers reporting increasing levels of classroom support for older students. It may be that they are not receiving a particular type of support needed for early adolescents preparing for changes in their school life (Eccles et al. 1993). Some evidence suggests that emotionally supportive behaviours from teachers have a greater effect on student success than support focused on helping with academic progress (Malecki & Demaray 2003). At these key developmental and transitional stages, school teachers may need to strike a balance between providing emotional support (e.g. 'My teacher cares about me') and instrumental support (e.g. 'My teacher is interested in my school assignments').

What the evidence says about …

Parents

The most consistent relationship reported in the literature is between 'parents talking with their child about school' and positive school achievement (Shute et al. 2011). Recent PISA findings show that Australian 15-year-olds who report that their parents are interested in their school activities performed significantly better in science, even after accounting for student SES (OECD 2017). The PISA report also shows students whose parents spend time talking with them score, on average, 10 points higher than those whose parents don't. Researchers suggest that having a source of support at home fosters a child's motivation for achievement and reinforces the value of schooling (Gonzalez-DeHass et al. 2005).

As children get older and become more independent, parents may become less involved with their child's learning (Jeynes 2007). But research shows that general parental engagement, such as having discussions about school or interacting with the school directly, is associated with better student achievement than direct supervision of learning (Sui-Chu & Willms 1996). In other words, parental or family involvement that is supportive (e.g. discussing the problems of school) rather than supervisory (e.g. checking homework) has a more positive effect on learning (Jeynes 2007, Emerson et al. 2012). Rather than frequent and direct parent-student involvement, having an approachable and communicative parent or family member may be more crucial – particularly for the later years as students move towards greater independence and autonomy.

4. Girls' and boys' experiences of teacher support differ

In primary school, girls perceive greater levels of support from their teachers than boys (Figure 5). This pattern changes in the early and middle years of secondary school, when girls in Years 7 to 10 report lower teacher support compared to their male counterparts. However, the difference between genders closes in the later years of schooling with boys and girls experiencing rising levels of support in Years 11 and 12.

The TTFM secondary student survey asks students how frequently they receive support from a parent or family member at home[2]. Results indicate that girls start secondary school with higher parent support in Year 7 than boys (Figure 6). In subsequent years, the significant gender difference disappears, with parental support among girls and boys decreasing in a similar fashion.

2   These questions were not asked in the primary student survey.

Figure 5: Support received at school reported by boys and girls, responses from the primary and secondary student survey ('Advocacy at School' measure)

Note: symbol (◆) denotes significant gender differences at each school year level. Averages are reported separately for students in Years 4-6 and students in Years 7-12, respectively.

Figure 6: Support received at home reported by boys and girls, responses from the secondary student survey ('Advocacy Outside of School' measure)
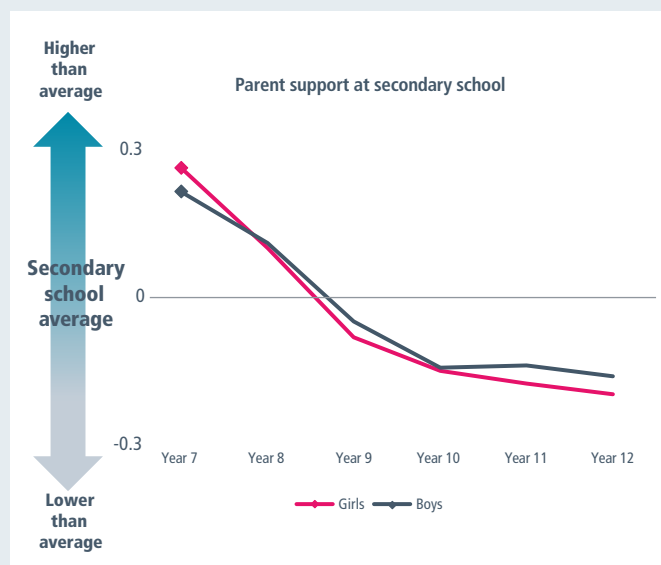
Note: symbol (◆) denotes significant gender differences at each school year level. The 'average' is for all students (girls and boys combined) in Years 7-12 in NSW government schools.

What the evidence says about ...

Gender

International research finds that girls generally report greater levels of teacher and parental support than boys (Lam et al. 2012). However, there is some discussion about gender differences in the preferred sources of support, how this support is used, and what type of support is required (Cheng & Chan 2004, Rueger et al. 2010).

Some studies find that girls are more likely to utilise peer networks as sources of support in the early secondary school years, turning towards their friends and classmates rather than their teachers (Danielsen et al. 2009, Rueger et al. 2010). Other research suggests that boys may dominate teacher attention at school, particularly in secondary school (Merrett & Wheldall 1992). It is important to note that, while support in school is often cited as a positive interaction, a teacher may be required to provide more support when a student is struggling or disengaged in the classroom (Beaman et al. 2006, Younger et al. 1999). Previous TTFM research finds that boys are more likely to demonstrate active disengagement and disruptive behaviours in the classroom compared to girls (Centre for Education Statistics and Evaluation 2017b). The gender differences reported in the current Learning Curve could indicate that school teachers in NSW are intervening to address boys' engagement trends in early secondary school with increased academic and pastoral support.

Interactions focused on supporting boys may impact on the support available to girls who are thought to be more compliant and quieter in the classroom. This may mean that some girls require greater levels of support in the form of prompting and encouragement to facilitate participation and engagement (Jones & Myhill 2004).

5. Disadvantaged students feel less supported by teachers and parents

In NSW, there is a large disadvantage gap between low- and high-SES students and their perceptions of support in school and at home (Figures 7 and 8). This gap is observed across genders, school years, and when taking into account school-level SES (calculated from the Family Occupation and Education Index; Centre for Education Statistics and Evaluation 2013).
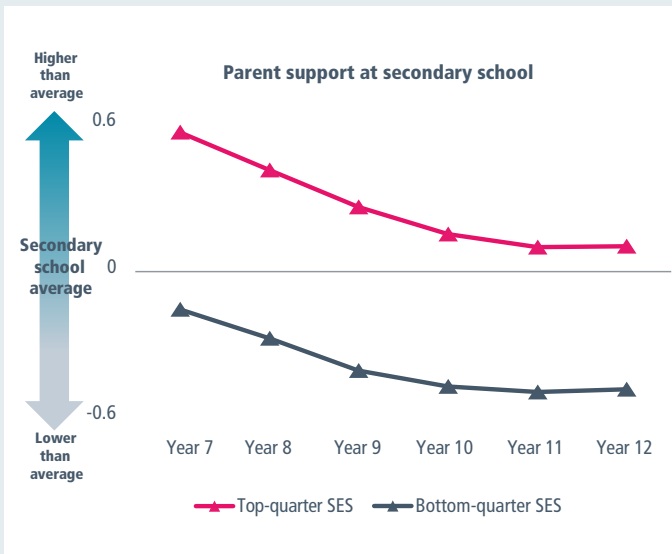
These findings echo Australian and international research that indicates disadvantaged students are likely to report less frequent exposure to quality teaching practices and interactions with their parents (OECD 2012, 2017). SES seems to impact students' experience of teacher and parent support similarly.

Figure 7: Support received at school by student SES, responses from the primary and secondary student survey ('Advocacy at School' measure)
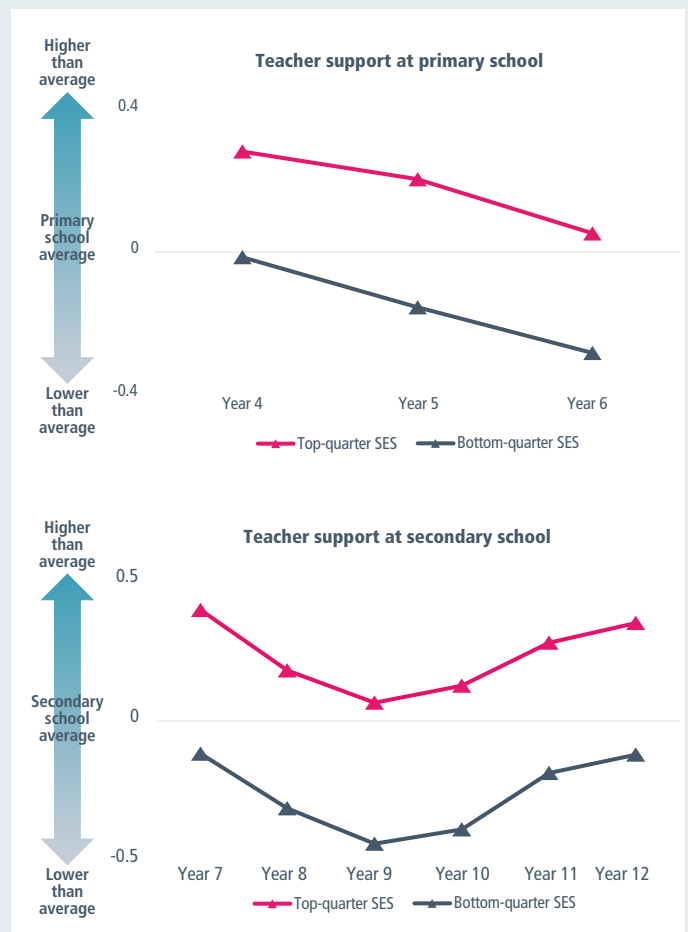
Note: symbols (▲) denote significant SES differences at each school year among low- and high-SES students. Averages are reported separately for students (all SES groups combined) in Years 4-6 and students in Years 7-12, respectively.

Figure 8: Support received at home by student SES, responses from the secondary student survey ('Advocacy Outside of School' measure)

Parent support at secondary school

Higher than average 0.6

Secondary school average 0

Lower than average -0.6

Year 7   Year 8   Year 9   Year 10   Year 11   Year 12

▲ Top-quarter SES   ▲ Bottom-quarter SES

Note: symbols (▲) denote significant SES differences at each school year among low- and high-SES students. The 'average' is for all students (all SES groups combined) in Years 7-12.


What the evidence says about …

Overcoming socioeconomic disadvantage

The research points out care and support within school as vital catalysts for engagement, especially for students from disadvantaged backgrounds (Felner et al. 2007, Rumberger 2011). TTFM data shows that supportive school and home contexts are correlated with a positive sense of belonging among all students. However, the most recent PISA report demonstrates that low-SES students report significantly lower levels of belonging at school than high-SES students in Australia and internationally (OECD 2017). Taken together, the findings may suggest that low-SES students experience a lack of connectedness to school in part because they feel less supported by their teachers (Devlin et al. 2012). Crucially, however, international results identify that disadvantaged students from schools and countries who learn in a climate characterised by high expectations and good teacher-student relationships tend to achieve better results (OECD 2012).

Parental and family support is associated with better student outcomes. However, the PISA report also highlights that fewer socioeconomically disadvantaged students have parents who are involved and supportive of their school and educational activities compared to their socioeconomically advantaged counterparts (OECD 2017). Importantly, some studies have found that improving parent involvement can significantly offset the engagement and achievement gap between students of differing SES. A longitudinal study from the United States found that the positive effect of school-related discussions – on topics such as school programs and class content – between parents and children was large enough to reduce the gap between low- and high-SES students' engagement by halving truancy and increasing positive homework behaviour among low-SES students (McNeal 2014).
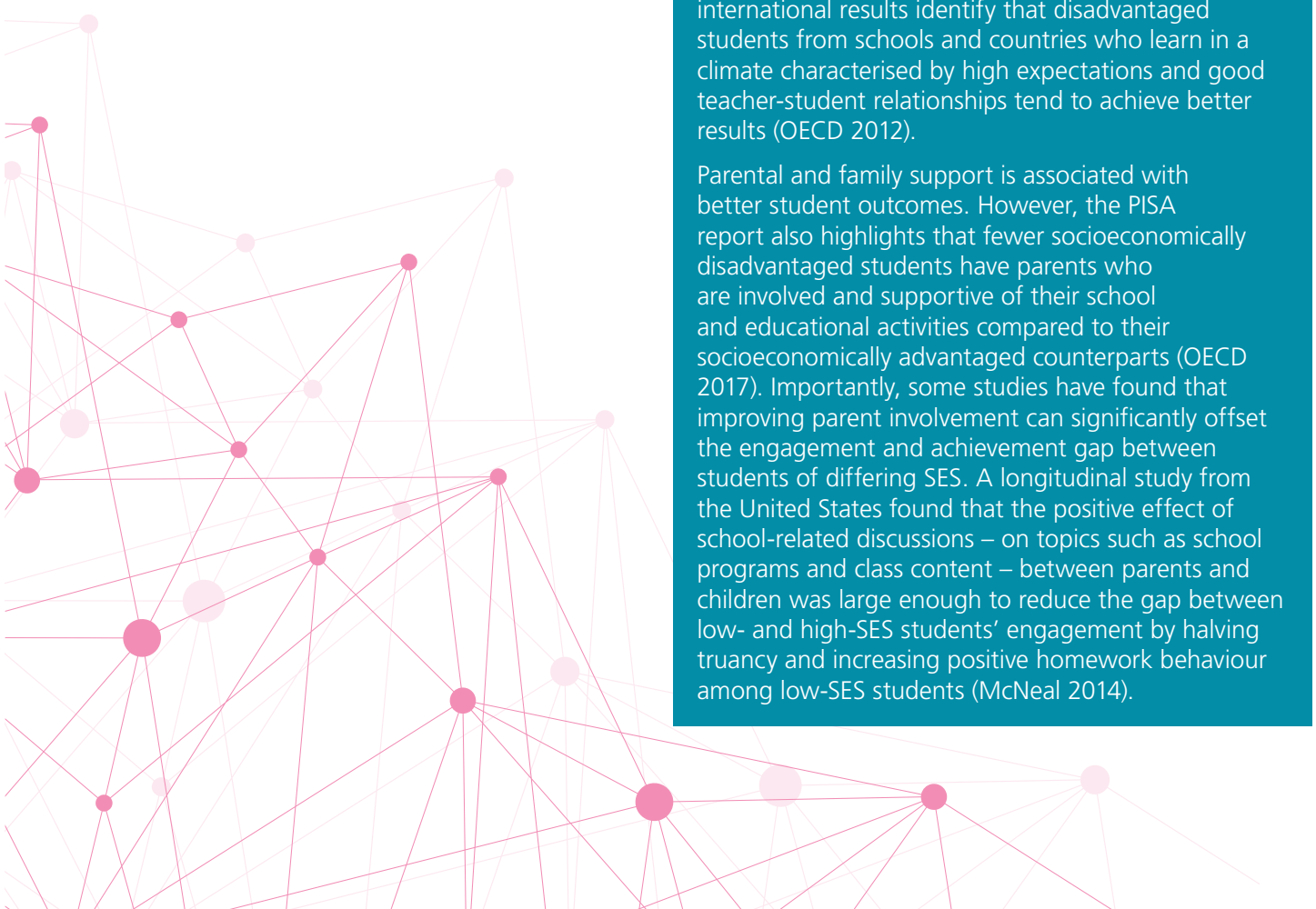
Conclusion

The suite of TTFM surveys allows us to compare multiple perspectives on advocacy and support for learning. The student surveys show perceived pastoral and academic support from teachers starts to fall in the final years of primary school. In secondary school, a large 'Year 9 dip' is prevalent, before perceived support picks up in the final years. Support from parents at home steadily declines, starting from early primary school and through secondary school. While the difference between boys' and girls' experiences of support in school and at home are relatively modest, there is a large disadvantage gap between low- and high-SES students.

Our findings indicate that NSW teachers and students alike feel that support in schools only increases significantly towards the end of secondary school, suggesting that advocacy and support for learning at school could be strengthened during the early and middle years of secondary school.

This trend has also previously been found across student engagement measures such as positive behaviour and academic interest (Centre for Education Statistics and Evaluation 2015b). One way for schools to combat student disengagement might be to encourage teachers to promote more supportive teacher-student relationships in the crucial transition period between primary and secondary school.

There is also need for a partnership between home and school to foster supportive learning environments. This Learning Curve shows parents' involvement in school declines notably over school years. Schools could help boost parental confidence and understanding of their child's schooling, for instance, by providing resources to better inform parents about curriculum and the activities that happen at school. The accompanying case studies of Whalan Public School and Sir Joseph Banks High School describe the strategies these schools have used to achieve high levels of advocacy and support for learning at school and strong home-school partnerships for their students.

References

Alder, N 2002, 'Interpretations of the meaning of care: Creating caring relationships in urban middle school classrooms', *Urban Education,* vol. 37, no.2, pp. 241–266.

Bandura, A 1997, *Self-efficacy: The Exercise of Control,* Freeman, New York.

Beaman, R, Wheldall, K, & Kemp, C 2006, 'Differential teacher attention to boys and girls in the classroom', *Educational Review,* vol. 58, no.3, pp. 339–366.

Bru, E et al. 2010, 'Students' perceptions of teacher support across the transition from primary to secondary school', *Scandinavian Journal of Educational Research,* vol. 54, no.6, pp. 519–533.

Cattley, G 2004, 'The impact of teacher-parent-peer support on students' well-being and adjustment to the middle years of schooling', *International Journal of Adolescence and Youth,* vol. 11, no.4, pp. 269–282.

Centre for Education Statistics and Evaluation 2013, *Getting the funding right: Using the Family Occupation and Education Index (FOEI) to identify disadvantage in NSW government schools,* NSW Department of Education, New South Wales.

Centre for Education Statistics and Evaluation 2015a, *What works best: Evidence-based practices to help improve NSW student performance,* NSW Department of Education, New South Wales.

Centre for Education Statistics and Evaluation 2015b, *Student engagement and wellbeing in NSW: Initial results from a pilot of the Tell Them From Me student feedback survey,* NSW Department of Education, New South Wales.

Centre for Education Statistics and Evaluation 2017a, *The role of student engagement in the transition from primary to secondary school,* NSW Department of Education, New South Wales.

Centre for Education Statistics and Evaluation 2017b, *Tell Them From Me*: *Gender and Engagement,* NSW Department of Education, New South Wales.

Chen, JJ-L 2008, 'Grade-level differences relations of parental, teacher and peer support to academic engagement and achievement among Hong Kong students', *School Psychology International,* vol. 29, no.2, pp. 183–198.

Cheng, S-T & Chan, AC 2004, 'The multidimensional scale of perceived social support: dimensionality and age and gender differences in adolescents', *Personality and Individual Differences,* vol. 37, no.7, pp. 1359–1369.

Danielsen, AG et al. 2009, 'School-related social support and students' perceived life satisfaction', *The Journal of Educational Research,* vol. 102, no.4, pp. 303–320.

Devlin, M et al. 2012, *Effective teaching and support of students from low socioeconomic status backgrounds: Resources for Australian higher education.* The Australian Learning and Teaching Council.

Eccles, JS et al. 1993, 'Development during adolescence: The impact of stage-environment fit on young adolescents' experiences in schools and in families', *American Psychologist,* vol. 48, no.2, pp. 90–101.

Emerson, L et al. 2012, *Parental engagement in learning and schooling: Lessons from research,* Australian Research Alliance for Children and Youth (ARACY) for the Family-School and Community Partnerships Bureau, Canberra.

Epstein, J & Sheldon, S 2006,'Moving forward: Ideas for research on school, family, and community partnerships', in C Conrad & R Serlin (eds.), *SAGE Handbook for Research in Education: Engaging Ideas and Enriching Inquiry,* Sage, pp. 117–138.

Felner, RD et al. 2007, 'Creating small learning communities: Lessons from the project on high-performing learning communities about "what works" in creating productive, developmentally enhancing, learning contexts', *Educational Psychologist,* vol. 42, no.4, pp. 209–221.

Gonzalez-DeHass, AR, Willems, PP, & Holbein, MFD 2005, 'Examining the relationship between parental involvement and student motivation', *Educational Psychology Review,* vol. 17, no.2, pp. 99–123.

Gottfried, AE, Fleming, JS, & Gottfried, AW 2001, 'Continuity of academic intrinsic motivation from childhood through late adolescence: A longitudinal study.', *Journal of Educational Psychology,* vol. 93, no.1, pp. 3–13.

Jeynes, WH 2007, 'The relationship between parental involvement and urban secondary school student academic achievement: A meta-analysis', *Urban Education,* vol. 42, no.1, pp. 82–110.

Jones, S & Myhill, D 2004, '"Troublesome boys" and "compliant girls": Gender identity and perceptions of achievement and underachievement', *British Journal of Sociology of Education,* vol. 25, no.5, pp. 547–561.

Klem, AM & Connell, JP 2004, 'Relationships matter: Linking teacher support to student engagement and achievement', *Journal of School Health,* vol. 74, no.7, pp. 262–273.

Lam, S et al. 2012, 'Do girls and boys perceive themselves as equally engaged in school? The results of an international study from 12 countries', *Journal of School Psychology,* vol. 50, no.1, pp. 77–94.

Malecki, CK & Demaray, MK 2002, 'Measuring perceived social support: Development of the child and adolescent social support scale (CASSS)', *Psychology in the Schools,* vol. 39, no.1, pp. 1–18.

Malecki, CK & Demaray, MK 2003, 'What Type of Support Do They Need? Investigating Student Adjustment as Related to Emotional, Informational, Appraisal, and Instrumental Support', *School Psychology Quarterly*, vol. 18, no.3, pp. 231–252.

McNeal, RB 2014, 'Parent involvement, academic achievement and the role of student attitudes and behaviors as mediators', *Universal Journal of Educational Research,* vol. 2, no.8, pp. 564–576.

Merrett, F & Wheldall, K 1992, 'Teachers' use of praise and reprimands to boys and girls', *Educational Review,* vol. 44, no.1, pp. 73–79.

Muller, D & Saulwick, I 2006, *Family-School Partnerships Project: A Qualitative and Quantitative Study,* Department of Education, Science and Training, Canberra.

Murray-Harvey, R & Slee, PT 2007, 'Supportive and Stressful Relationships With Teachers, Peers and Family and Their Influence on Students' Social/Emotional and Academic Experience of School', *Australian Journal of Guidance and Counselling,* vol. 17, no.2, pp. 126–147.

OECD 2012, *Equity and Quality in Education: Supporting Disadvantaged Students and Schools,* OECD Publishing, Paris.

OECD 2017, *PISA 2015 Results (Volume III): Students' Well-Being,* OECD Publishing, Paris.

Rosenfeld, LB, Richman, JM, & Bowen, GL 2000, 'Social support networks and school outcomes: The centrality of the teacher', *Child and Adolescent Social Work Journal,* vol. 17, no.3, pp. 205–226.

Rueger, SY, Malecki, CK, & Demaray, MK 2010, 'Relationship between multiple sources of perceived social support and psychological and academic adjustment in early adolescence: Comparisons across gender', *Journal of Youth and Adolescence,* vol. 39, no.1, p. 47.

Rumberger, R 2011, *Dropping out: Why Students Drop out of High School and What Can Be Done about It,* Harvard University Press, Cambridge.

Shute, VJ et al. 2011, 'A review of the relationship between parental involvement and secondary school students' academic achievement', *Education Research International,* vol. 2011, Article ID 915326, pp. 1–10.

Sui-Chu, EH & Willms, JD 1996, 'Effects of parental involvement on eighth-grade achievement' vol 69, no.2, *Sociology of Education,* pp. 126–141.

Wang, M & Eccles, JS 2012, 'Social support matters: Longitudinal effects of social support on three dimensions of school engagement from middle to high school', *Child Development,* vol. 83, no.3, pp. 877–895.

Younger, M, Warrington, M, & Williams, J 1999, 'The gender gap and classroom interactions: reality and rhetoric?', *British Journal of Sociology of Education,* vol. 20, no.3, pp. 325–341.

Westpac Media Releases 2017, *New Australian research supports need to make maths a national priority,* viewed 2 May 2017, https://www.westpac.com.au/about-westpac/media/media-releases/2017/1-may-1/