THE ENGAGEMENT – PERFORMANCE LINK

We are currently supporting the Centre for Education Statistics and Evaluation (CESE) in the NSW Department of Education to establish a powerful data resource from which to develop a better understanding of student engagement in the state and in Australia more broadly. The project uses cutting-edge statistical modelling techniques, including Structural Equation Modelling, multilevel models and panel regression models, and uses large-scale linked administrative and survey data to study the relationship between student engagement and student outcomes. The scope of the work has recently expanded beyond advanced statistical modelling to also cover qualitative work to understand how evidence from data is used for school improvement, and to identify best practice examples of local data-driven programs and initiatives to enhance student outcomes.

The New South Wales government school system is one of the largest school systems in the world; and the data used in this study is notable in terms of longitudinal cohort size, as well as the scope of indicators available for analysis, and linkage with robust performance data. The models developed from this rich and comprehensive dataset allow us to explore multiple relationships within the data, and establish indicators of engagement and classroom practice that best predict student outcomes. Working collaboratively with colleagues at CESE throughout the course of the project, we have delivered a number of findings to the department for use in policy development, where there is strong potential to have a real impact on school practice.
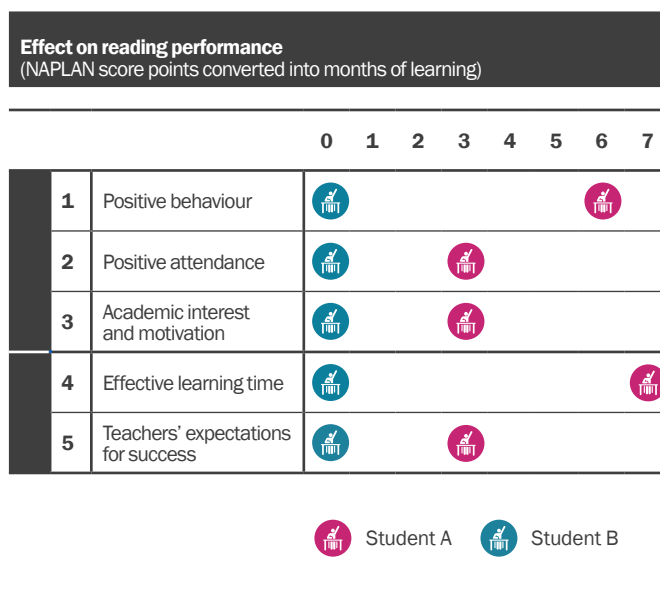
One example is analyses looking at how students' engagement, performance and experience of classroom practices in Year 7 affect their engagement and performance in Year 9, the results of which have been published in an official departmental publication *The Learning Curve*. This research confirmed that when students are engaged at school, they learn more and perform better, and that student engagement improves when presented with effective teaching practices. Significantly, this study also provides a strong quantitative basis for confirming the difference made to student performance by: three engagement indicators – positive behaviour, positive attendance, and academic interest and motivation; and two classroom practices – effective learning time and teachers' expectations for success. For instance, the results show that when students report their teachers demonstrating practices that promote effective learning time, they are, on average, seven months ahead in their learning by Year 9 compared with students whose teachers do not demonstrate effective learning time. The research highlighted that engagement is a function of both the student and the school context, and can be improved when teachers use certain teaching practices.

In addition to providing the department with results from statistical modelling, the collaboration with CESE aims to build and enhance the internal data analytic capabilities within the department, to maximise the future use and impact of the powerful departmental data holdings.

KEY FINDINGS

- Engagement matters for learning. Students who are positively engaged are up to six months ahead in their learning, after socioeconomic status and prior achievement are taken into account.

- Effective classroom and teaching practices matter for learning. Students whose teachers use effective teaching practices and set high expectations for all can be up to seven months ahead in their learning, after socioeconomic status and prior achievement are taken into account.

- Students respond positively to better classroom practices, not only through direct improvements in their learning, but also through greater engagement with school.

- The relationship between performance and engagement goes both ways – engagement affects performance, but improvements in performance also positively affect engagement.

- Student engagement and classroom practices can change. School leaders and teachers can take practical steps to improve both.

WHAT WORKS TO DRIVE PERFORMANCE IN YEAR 9

Effect on reading performance (NAPLAN score points converted into months of learning)									
		0	1	2	3	4	5	6	7
1	Positive behaviour	B						A	
2	Positive attendance	B		A					
3	Academic interest and motivation	B		A					
4	Effective learning time	B							A
5	Teachers' expectations for success	B		A					

A — Student A   B — Student B

Key findings and Figure 2 are as published in *The Learning Curve* (issue 18), based on this research.