Student engagement:

Key data metrics

Student engagement is a key driver of positive student outcomes across all facets of life and can have lasting impacts both while students are in school, as well as after school (Jackson 2016; Fredricks et al. 2004).

This article provides insights into data that is indicative of student engagement and can be influenced by school practice. The research found that the below metrics are indicative of engagement across school settings:

Primary school:

- A to E behaviour
- Short suspensions
- School opinion survey

Secondary school:

- A to E behaviour
- Real retention
- Short suspensions
- Long suspensions
- Cancellations of enrolment

What is student engagement?

Engagement consists of three dimensions:

▸ cognitive – students are personally invested in, and take ownership of, their learning;

▸ behavioural – a student's participation in all areas of the school including academic, social and extracurricular activities; and

▸ emotional – a student's relationship with learning, teachers and others in the learning environment; feeling included in the school; and having feelings of belonging to the school.
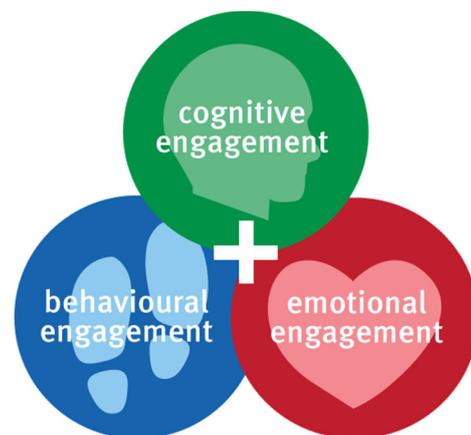
(Fredricks et al. 2004)

The research

The Queensland Department of Education partnered with Deloitte Access Economics to undertake research to identify the most reliable indicators for measuring student engagement, as well as engagement measures that correlate with learning gain. The findings from this research guide what indicators can be used to measure the level of engagement within a school, and across schools, regions and the state.

Approach to research

Deloitte Access Economics analysed 27 existing metrics collected by the department:

▸ Each data item was tested for its empirical reliability using the following three criteria: variability across schools; stability over time; and conceptual validity.

▸ The data items were tested for their link to school practice, student learning gain and correlation with other indicators.

▸ The datasets covered the Queensland schooling system from 2012 to 2017, and included a very large number of student and school-level observations.

Key findings

School engagement is multi-faceted and as such multiple and complementary measures of engagement should be used, rather than a single measure.

NAPLAN tests show engaged students are up to **5 months** ahead of their counterpart disengaged student.

>> 1.4 – 5 months ahead

Positive student engagement was found to have a significant effect on student learning gain, particularly in secondary schools.

▸ The analysis conducted through this study indicates that student engagement has a positive effect on student learning gain (measured on NAPLAN, A – E achievement and OP scores). This effect is apparent even after controlling for differences in student prior achievement and background.

A – E behaviour and real retention are strong correlates with engagement and learning gain.

▸ Positive engagement in A to E behaviour was found to have larger effects on student learning gain relative to attendance.

The measures of engagement where there appears to be the most variation in the effects of school practice include:

▸ A to E behaviour (for both primary and secondary schools);

▸ real retention (for secondary schools); and

▸ short suspensions (for both primary and secondary schools).

Different engagement indicators may be more relevant for different school contexts.

▸ For primary schools, the school opinion survey and short suspensions were found to have stronger links to variations in school practice. For secondary schools (in addition to retention) long suspensions and cancellations were found to be more relevant indicators, as they appear to be more related to variations in school practice.

Limitations and risks

As with all studies of this nature, the results are a function of the modelling assumptions and available data. While the most relevant contextual variables have been included, there could be potential omitted variable bias. There is also the risk that despite the analysis seeking to control for the effects of other contextual factors, the effects of the analysis cannot be interpreted as strictly causal. The results should be interpreted noting these limitations.

Queensland Government