



NZCER
Me and My School Survey
Making Sense of the Reports



NZCER

Wellington 2008

Introduction

The Me and My School survey asks students to respond to a series of statements regarding their engagement in school and learning. Each statement requires them to choose “strongly agree”, “agree”, “disagree” or “strongly disagree”. The reporting associated with the Me and My School survey uses the students’ responses to provide two types of information. The first involves an overall measure of engagement using scale scores. In several of the reports box plots show the distribution of the engagement scale scores for different groups. The second type of information relates to the way groups of students have responded to each of the individual statements. Strip graphs are used to show the percentage of students in a group who have chosen each of the responses to a statement.

This document provides an introduction to the reports and includes an explanation of the box plots and strip graphs. Further questions can be emailed to: meandmyschool@nzcer.org.nz.

What is student engagement?

Student engagement refers to the connection and commitment students have to school and learning. Engagement is often thought of as being made up of behavioural, affective and cognitive aspects. Behavioural engagement refers to participation in school and learning, for instance attending class, staying on task, and contributing to activities. Affective engagement is concerned with student’s emotional responses to school and learning, for instance liking school, and feeling valued by teachers and peers. Finally, cognitive engagement refers to students’ commitment to and involvement in learning. This includes their ability to focus on tasks and self regulate their learning. Many of the precursors of engagement are presumed to be malleable, that is they can be influenced by changes in school policies and practices.

Data regarding student engagement can be collected from many different sources, for instance through teacher observations, and by studying records of attendance. The Me and My School survey collects data from the students themselves. As described above, students rate how much they agree with a set of statements chosen as indicators of behavioural, affective and cognitive aspects of engagement. These aspects often overlap and statements can represent more than one type of engagement. Some of the reports show how groups of students have responded to each statement, which can help pinpoint indicators of engagement that are strengths in a school or that need work.

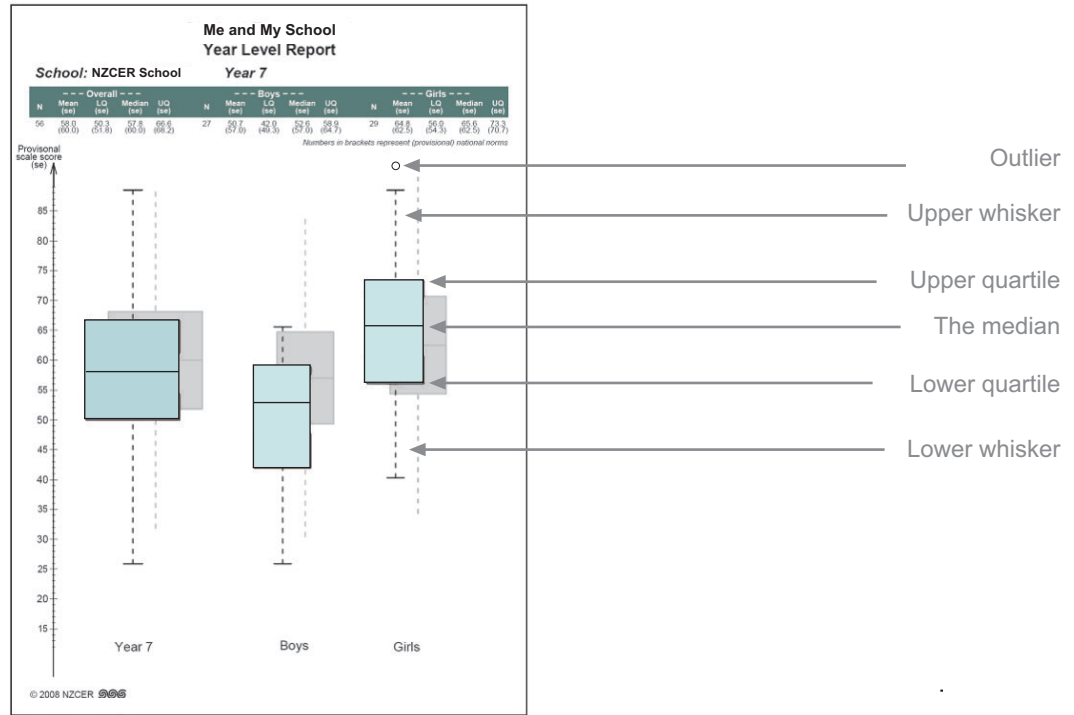
What is the engagement scale?

The Me and My School survey reports levels of student engagement on a measurement scale. Scale scores are produced by scoring the responses to each statement for each student and then converting the total scores over the whole survey to scale scores. Unlike raw scores, each unit on the scale represents the same amount of change in engagement. Moving from 55 units on the scale to 60 units for instance, represents the same change as moving from 65 to 70 scale units.

A measurement scale like this is developed using a statistical model called the Rasch model. The Rasch model is built on strong measurement principles and assumes that a particular probabilistic relationship exists in the way students as a whole respond to the statements. Developing a measurement scale with the Rasch model involves collecting data and testing the items to see how well they fit the model. After a series of pilot trials and a large representative national trial 33 statements were chosen that showed good fit to the model and which researchers deemed were useful indicators of engagement. Three other statements that did not appear to fit the model quite as well, but which were believed to be useful engagement indicators, were retained for reporting purposes, but are not used to create the engagement scale scores.

Reporting engagement using box plots

Several of the reports for Me and My School use box plots to show how engagement for a group is distributed along the measurement scale. Shadow box plots are used to show the distribution of engagement for an appropriate national reference group.



Key to the box plots

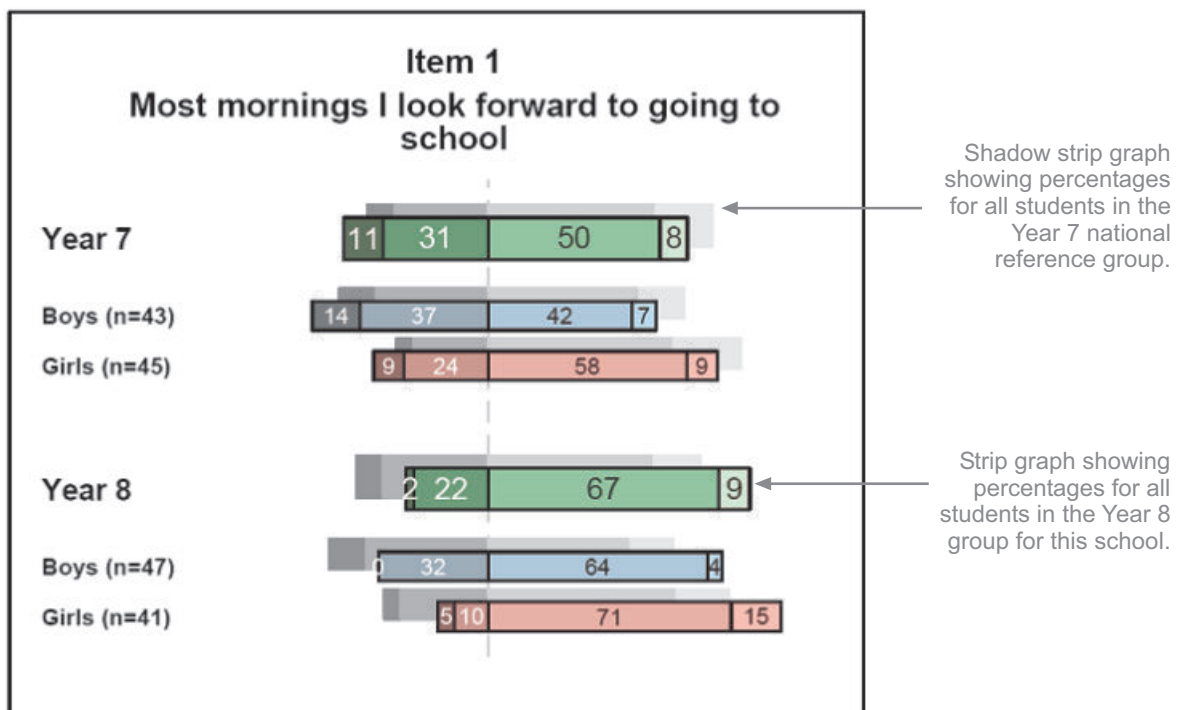
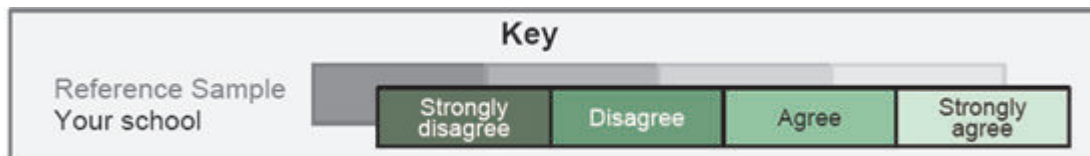
- Median:** This is the mid-point of the data and is shown by the line that divides the box into two parts. Half the scores are greater than or equal to this value and half are less.
- Upper Quartile:** Seventy-five percent of the scores fall below this value, which is represented by the top of the box.
- Lower Quartile:** Twenty-five percent of the scores fall below this value. This means 50 percent of the scores fall within the confines of the box between the upper and lower quartiles.
- Whiskers:** There is an upper and lower whisker. The upper whisker shows the spread of the highest 25 percent of the scores and the lower whisker the spread of the lowest 25 percent of the scores.
- Outlier:** An outlier is a score that lies outside the extremes of the whiskers. It is considered an unusual score compared to the rest of the scores.

The box plots above show that Year 7 boys from NZCER School have lower engagement levels than Year 7 girls.

Statement by statement reporting using strip graphs

Some of the reporting for the Me and My School survey uses strip graphs to show how groups of students have responded to each of the statements in the survey. For example, in the Item Report each statement is displayed accompanied by a series of strip graphs showing the percentage of students in various student groups who have chosen each of the different responses. To help make comparisons between school and national results, the Item Report uses shadow strip graphs behind the school graphs to represent the pattern of responses for appropriate national reference groups. A line running down the centre of the graphs is used to separate the agreement categories from the disagreement categories.

A key at the start of the report is used to show which part of the strip graph refers to each type of response.



The section of an Item Report displayed above shows the results for the first statement: “Most mornings I look forward to going to school”. Overall, there appear to be some differences between the way Year 7 and Year 8 students have responded to the statement. For instance, a larger proportion of Year 8s (76% compared to 58%) and a larger proportion of girls (in Year 8, 86% of girls compared to 68% for boys) either agree or strongly agree that they look forward to going to school each day. Comparisons with the shadow graphs suggest that Year 8s in this school respond more positively to this question than students generally do on a national basis.

When making comparisons like this it is important to bear in mind how many students have responded. In this case over 40 students are represented in each strip graph. When the numbers represented are small (30 students or less) a large percentage difference between groups may equate to only a few students.