

# Wānangatia te Putanga Tauira National Monitoring Study of Student Achievement

## Māori Student Achievement in English: Reading

Key findings 2014





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National Monitoring Study  
of Student Achievement

# Māori Student Achievement in English: Reading

## Key findings 2014

Educational Assessment Research Unit  
and  
New Zealand Council for Educational Research



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**National Monitoring Project of Student Achievement Report 5.2:  
Māori Student Achievement in English: Reading – Key findings 2014**

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- the students who participated in the assessments and their parents, whānau and caregivers
- the teachers who administered the assessments to the students
- the teachers, senior initial teacher education students and others who undertook the marking
- the Ministry of Education Research Team and Steering Committee.

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## Executive Summary

In 2014, the National Monitoring Study of Student Achievement (NMSSA) assessed student achievement at Year 4 and Year 8 in two areas of the *New Zealand Curriculum* (NZC) – English: reading and social studies. This brief report presents the results for Māori students in English: reading.

Māori students made up about 22 percent of the national samples at Year 4 and Year 8. About 80 percent of Māori students attended low or mid decile schools.

Forty-three percent of Māori students at Year 4 achieved above the minimum score associated with achieving level 2 objectives on the Knowledge and Application of Reading in English (KARE) assessment and 44 percent at Year 8 achieved above the minimum score associated with achieving level 4 objectives. These percentages were lower than the corresponding percentages for all students in the national samples. The difference in average scale scores between Māori students in Year 4 and Year 8 was 30 scale units. This was similar to the corresponding difference for all students in the national sample (29 scale score units).

Overall, Māori students at both year levels were positive about reading. Students in Year 4 were generally more positive than students in Year 8. Māori students who scored higher on the Attitude to Reading scale also scored higher, on average, on the KARE assessment.

Māori students who indicated that they read for more than 2 hours a week in their own time scored, on average, about 20 scale score units higher than those who reported that they did no or very little reading in their own time.

Māori students from high decile schools scored higher, on average, on the KARE assessment than students from low decile schools. Students from low decile schools were also under-represented in the group of Māori students who achieved above the national average for all students in their year level.

Māori girls scored higher, on average, than Māori boys on the KARE assessment at both year levels by about 7 scale score units. Māori girls were generally more positive about reading than Māori boys and at Year 8, less likely than boys to report that they did no or very little reading in their own time.

## 1. Introduction

This report provides an overview of findings for Māori<sup>1</sup> students who were involved in the 2014 English: reading<sup>2</sup> assessment programme carried out as part of NMSSA. The report begins with an introduction to NMSSA and the 2014 programme. It then describes how Māori students performed on the assessment of English: reading used in the study, and how they responded to questions in the student questionnaire related to reading. The final section looks at the characteristics of Māori students who performed above the national average for their year level.

This report is part of a series of NMSSA reports about English: reading. A parallel series of reports present the findings from the NMSSA social studies assessment programme<sup>3</sup>.

## 2. The 2014 English: reading study

### The 2014 National Monitoring Study of Student Achievement

NMSSA is a sample-based monitoring project designed to assess and understand student achievement at Year 4 and Year 8 in New Zealand English-medium state schools. NMSSA aims to cover all learning areas of the NZC during a 5-year cycle. In 2014 the study assessed English: reading and social studies. The study was carried out during Term 3 and involved a nationally representative sample of about 2,200 students from 100 schools at each year level.

### How English: reading was assessed

A two-part assessment called Knowledge and Application of Reading in English (KARE) was used to assess English: reading. In Part 1, up to 25 students in each school completed a group-administered paper-and-pencil assessment. In Part 2, eight of the same students in each school took part in a one-to-one interview where they responded orally to a teacher assessor.

The KARE focused on three cognitive targets, which were assessed across a range of written texts:

- locate and recall ideas and information
- integrate and interpret ideas and information
- critique and evaluate ideas and information.

The assessment of vocabulary understanding and application was also included and was integrated across the three targets.

### Reporting achievement

An Item Response Theory (IRT) approach (specifically the Rasch model) was used to construct a measurement scale for the KARE assessment. The scale allows scores for Year 4 and Year 8 students to be reported on the same metric. The scale has been standardised so that 100 scale score units represents the combined average score for Year 4 and Year 8, and 20 scale score units is equal to the average standard deviation for a year level. Refer to Chapter 2 of *English: Reading 2014 – Overview* for more information.

A curriculum alignment exercise was undertaken to link achievement ranges on the KARE scale to the levels of the curriculum. Creating this link allowed scale scores to be reported in terms of curriculum levels.

In the NZC, each of the first four curriculum levels was designed to represent about 2 years of learning at school. In general, the expectations are that students in Year 4 will, on balance, achieve level 2 objectives by the end of the year, and that students in Year 8 will, on balance, achieve level 4 objectives by the end of the year.

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<sup>1</sup> Students were able to identify with up to three ethnicities. This report includes all students who identified as Māori.

<sup>2</sup> The focus for the assessment of reading in 2014 was specifically on reading within the English learning area of the curriculum. This report is one of several reports that have been, or will be released in the first cycle of NMSSA related to the English learning area in the NZC. English: writing was assessed in 2012. English: viewing and English: listening will be assessed in 2015. NMSSA is also collecting information about the use of literacy across the curriculum and plans to report on this in 2017.

<sup>3</sup> Six reports have been written to present the findings for English: reading, and a parallel set of six reports have been written to present the findings for social studies. A list of the reports for each learning area is provided in Appendix 1.

The alignment exercise focused on defining the minimum score (cut-score) on the KARE scale associated with achieving curriculum level 2, 3 and 4 objectives. The exercise is described in Appendix 7 of *Technical Information 2014 – Social Studies, English: Reading*.

## Contextual data

A range of contextual data were collected through questionnaires for students, teachers and principals and a student interview. This report draws on sections of the student questionnaire related to attitudes to reading, learning opportunities and experiences in reading, and the amount of time spent reading outside of school. Additional reporting on contextual data can be found in *English: Reading 2014 – Contextual Report*.

## Māori students participating in the study

Table 1 provides the number of Māori students in the national sample at each year level, by gender and school decile band. Māori students represented about 22 percent of the national samples. There was a greater number of girls than boys in the sample at Year 4 and the reverse was true at Year 8. About half of the Māori students in the Year 4 sample were from low decile schools. At Year 8, about half were from mid decile schools.

**Table 1** Number of Māori students in the national samples for the 2014 NMSSA English: reading study

	Number of students	
	Year 4	Year 8
<b>Year</b>		
All Māori	482	478
<b>Gender</b>		
Girls	262	225
Boys	220	253
<b>School decile band</b>		
Low	240	130
Mid	150	235
High	92	113

## How the findings are presented

Box plots, line graphs and tables of summary statistics have been used throughout the report to present findings from the study. In tables and in the text, average scores (e.g., on the KARE assessment) have been rounded to whole numbers. Any differences between average scores that are reported have been calculated using the non-rounded averages.

Full tables of the results presented in this report can be found in Appendix 2. Refer to Chapter 2 of *English: Reading 2014 – Overview* for more details about the use of graphs and statistical information.

### 3. Māori student achievement in English: reading

#### Achievement against the curriculum

Figures 1 and 2 use line graphs to show the score distribution for Year 4 and Year 8 Māori students on the KARE assessment, respectively, against the agreed alignment of curriculum levels with the KARE scale. The horizontal lines represent the cut-scores (minimum achievement scores) associated with the curriculum levels. The score distributions for all students in the national samples are also provided as a reference.

Forty-three percent of Māori students at Year 4 scored above the minimum score associated with achieving level 2 objectives. Forty-four percent of Year 8 students scored above the minimum score associated with achieving level 4 objectives. The corresponding percentages for all students in the national samples were 58 percent at Year 4 and 59 percent at Year 8. In the NZC, the expectations are that students in Year 4 will, on balance, achieve level 2 objectives by the end of the year, and that students in Year 8 will, on balance, achieve level 4 objectives by the end of the year.

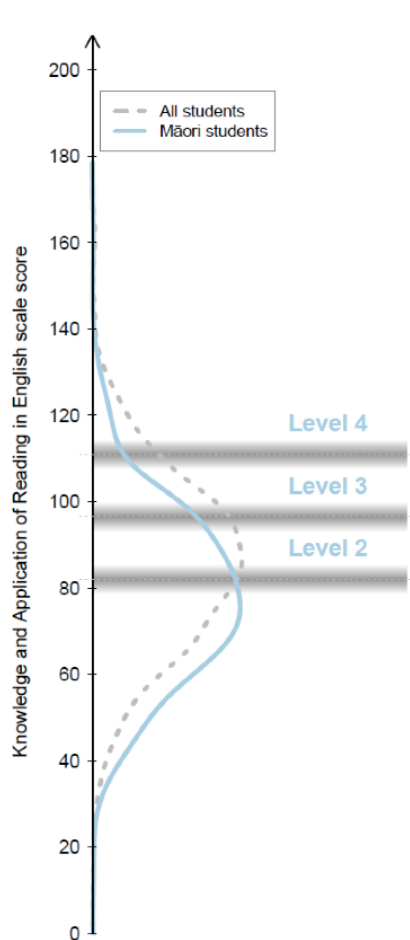


Figure 1 Distribution of Year 4 Māori students' achievement on the Knowledge and Application of Reading in English scale against the NZC levels for English

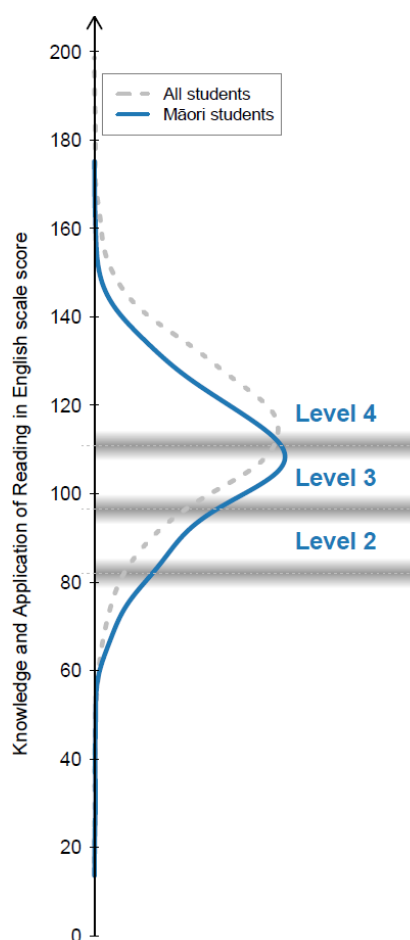


Figure 2 Distribution of Year 8 Māori students' achievement on the Knowledge and Application of Reading in English scale against the NZC levels for English

## Achievement by gender, school decile band and school type

Figures 3 and 4 use box plots to compare the distributions of scores on the KARE assessment for Māori students, by gender, school decile band and type of school in Year 4 and Year 8, respectively.

At both year levels, girls performed higher than boys on average by 7 scale score units. This difference was statistically significant and mirrored results for all students in the national samples.

The average score differences between Māori students in low decile schools and those in high decile schools were also statistically significant (18 scale score units at Year 4 and 13 scale score units at Year 8). At year 4, this difference is equivalent to the amount of ‘progress’ over about 2 years of schooling, and at Year 8, it was less than 2 years. These differences were consistent with the decile band differences observed for all students in the national samples. There were no statistically significant differences in average scale scores for Māori students by school type.

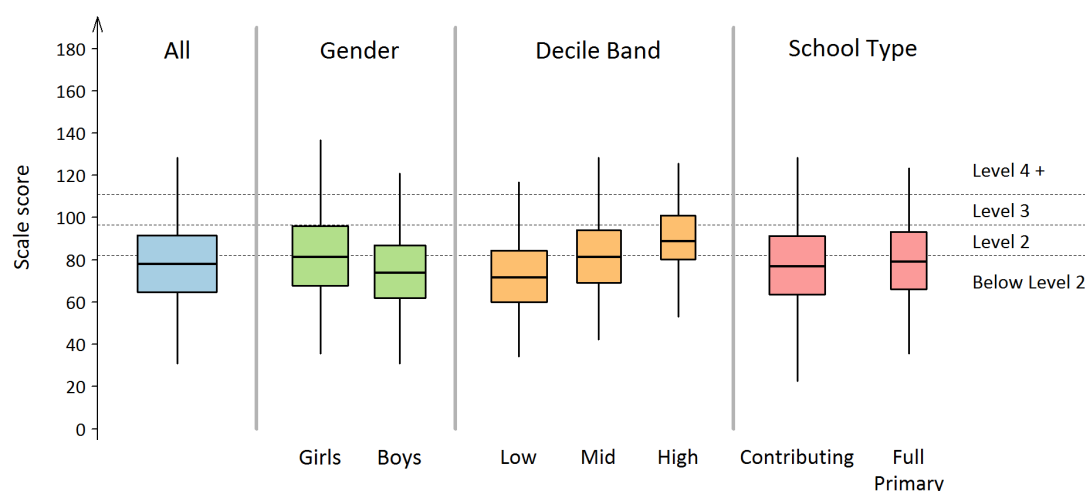


Figure 3 Distribution of Year 4 Māori students' scores on the Knowledge and Application of Reading in English assessment, by gender, decile band and school type

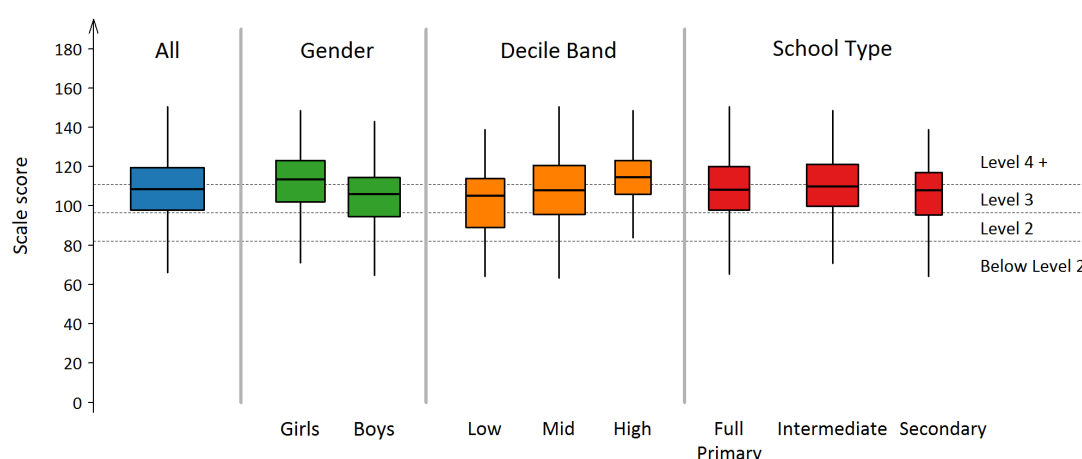


Figure 4 Distribution of Year 8 Māori students' scores on the Knowledge and Application of Reading in English assessment, by gender, decile band and school type



## Difference in achievement between Year 4 and Year 8

Figure 5 shows the distributions of scores on the KARE assessment for Year 4 and Year 8 Māori students. As can be seen, there was a degree of overlap between the distributions – some Year 4 students achieved at a similar level to some students who were in Year 8 and vice versa. At both year levels, achievement ranged over four curriculum levels.

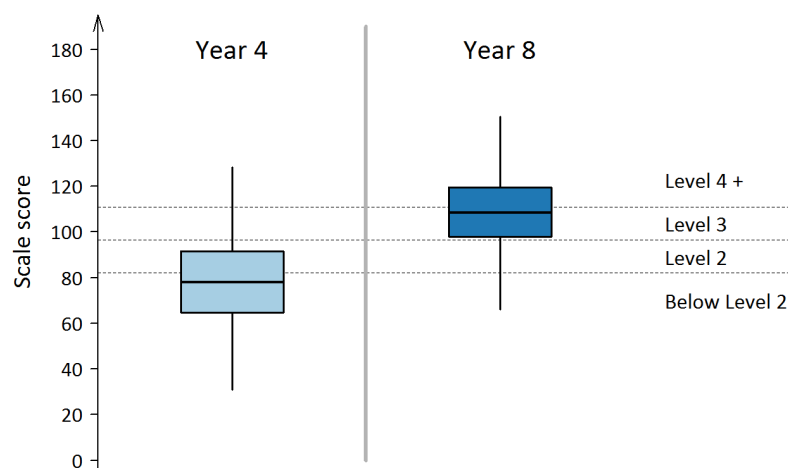


Figure 5 Distribution of Year 4 and Year 8 Māori students' scores on the Knowledge and Application of Reading in English assessment

On average, Māori students in Year 8 scored higher on the KARE scale than Year 4 Māori students by 30 scale score units (an annualised difference of just over 7 scale score units). This was similar to the average score difference between Year 4 and Year 8 for all students in the national samples.

The average score difference between students in Year 4 and Year 8 for students from low decile schools was greater than the corresponding differences recorded for students from mid or high decile schools (31 scale score units for low decile schools compared with 26 scale score units for both mid and high decile schools). These between-decile band differences were not statistically significant.

## 4. Māori students' attitudes to reading and their opportunities to learn in reading

The student questionnaire, which was administered to all students in the study, included sections related to attitudes to reading, learning opportunities and experiences in reading, and the amount of time spent reading outside of school. This part of the report describes how Māori students responded to these sections and compares the responses to patterns in achievement.

### Attitudes to English: reading

Figure 6 shows how Māori students in Year 4 and Year 8 responded to a series of statements about their attitudes to reading. Overall, students were positive about reading, although Year 8 students were less positive than students in Year 4. This pattern of response was similar to the pattern observed for all students in the national samples.

The statement with the greatest level of disagreement was 'Reading is my favourite subject at school'. At Year 8, 44 percent of students disagreed, compared with 18 percent of students at Year 4.

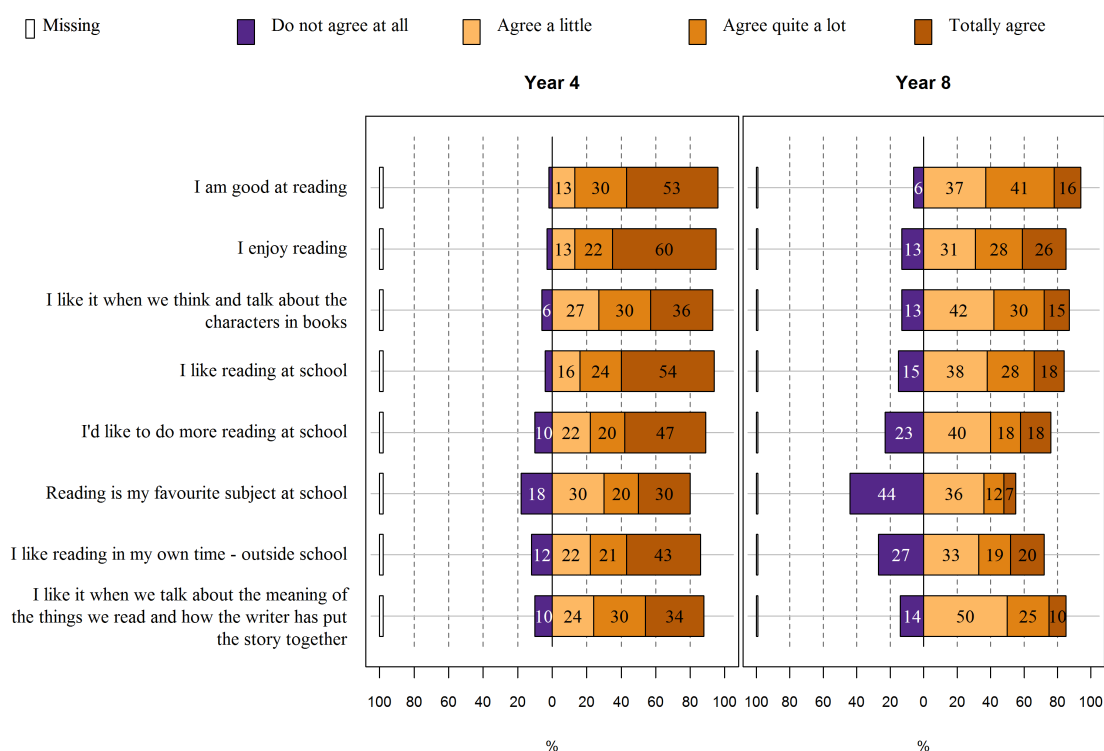


Figure 6 Percentage frequency of Year 4 and Year 8 Māori students' responses to the individual attitude statements

### Attitude to Reading scale

To provide an overall ‘attitude to reading’ measure, each of the responses to the attitude statements was scored from 1 to 4, where a ‘1’ represented ‘do not agree at all’ and a ‘4’ represented a ‘totally agree’ response. IRT<sup>4</sup> was then used to convert each student’s total score to an overall Attitude to Reading scale score. High scores on the scale indicate a very positive response overall to the attitude statements and low scores indicate a generally negative response to the statements.

Figure 7 shows the distribution of Attitude to Reading scale scores for Māori students in Year 4 and Year 8. The scale has been divided into regions associated with the likelihood of different response levels to the attitude statements in the questionnaire. Students with attitude scores in the ‘very positive’ region, for example, typically used the category ‘totally agree’ to respond to the individual statements about attitude.

Year 4 Māori students were located higher on the Attitude to Reading scale than Year 8 Māori students. Although scores for most Year 8 students were still categorised as ‘positive’ or ‘very positive’, about 25 percent had attitude scores located in the ‘negative’ part of the scale. On average, boys were located lower than girls on the Attitude to Reading scale at both year levels by about 7 scale score units.

While the average Attitude to Reading score for Year 4 Māori students was similar to all students in the Year 4 national sample, the average score for Māori students at Year 8 was lower than it was for all students in the Year 8 national sample. At both year levels, the difference in average Attitude to Reading scores across gender for Māori students was consistent with the gender pattern for all students in the national sample.

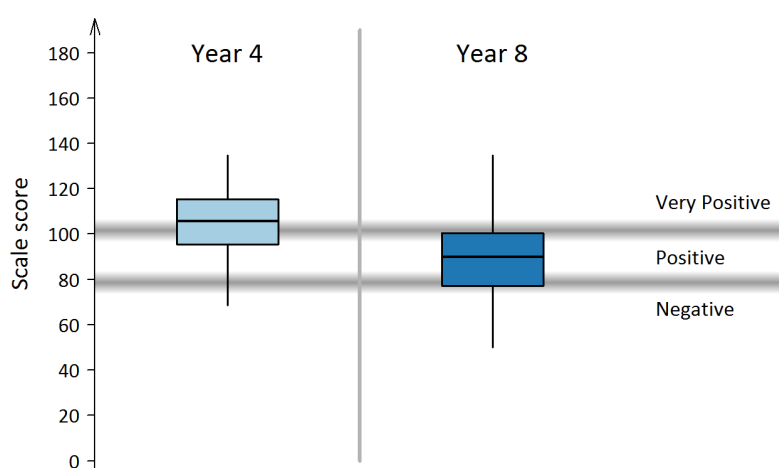


Figure 7 Distribution of Year 4 and Year 8 Māori students’ scores on the Attitude to Reading scale

<sup>4</sup> See Chapter 2 of NMSSA Report 5.1: English: Reading 2014 – Overview for more information about the Attitude to Reading scale.

### Relationship between achievement and attitudes to reading

Figures 8 and 9 show the relationship between Attitude to Reading and achievement on the KARE assessment for Māori students by using the ‘very positive’, ‘positive’ and ‘negative’ regions of the Attitude to Reading scale to form three groups of students based on attitude. In the figures, the distribution of KARE scale scores has been plotted for each attitude grouping. At Year 4 and Year 8, the average difference in achievement between students in the ‘negative’ and ‘very positive’ attitude groups was 10 and 14 scale score units, respectively. These differences were similar to the differences recorded for all students in the national sample; however, the difference was not statistically significant for Māori students at Year 4. Although the difference in these average scores is relatively large, it is important to note the amount of overlap in the achievement distributions for students in the attitude groups. It should be noted that, at Year 4, the number of students categorised as ‘negative’ was very small.

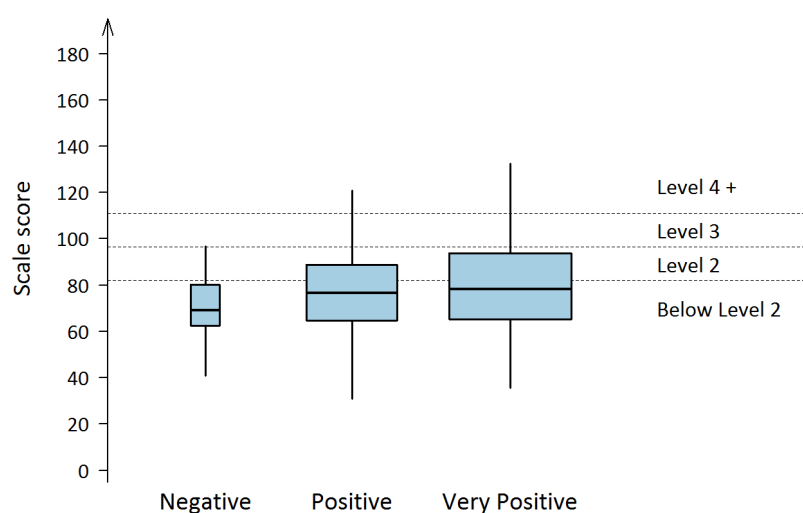


Figure 8 Distribution of Year 4 Māori students' scores on the Knowledge and Application of Reading in English scale, by category of Attitude to Reading

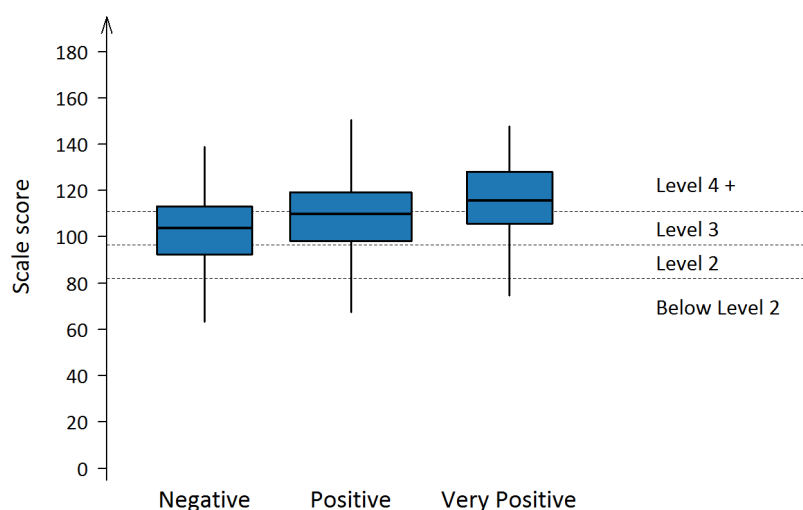


Figure 9 Distribution of Year 8 Māori students' scores on the Knowledge and Application of Reading in English scale, by category of Attitude to Reading

## Learning opportunities and experiences in reading at school

Figure 10 shows how Māori students at each year level responded to a series of statements about their learning opportunities and experiences in reading. Overall, Year 8 students reported slightly less frequent involvement than Year 4 students in most of the opportunities and experiences. Boys' and girls' responses were similar at each year level. At both year levels the statements to which the greatest proportions of students responded 'never' were: 'The things we read in class are about people like me and my family/whānau' and 'In class, we talk about the things we've read'.

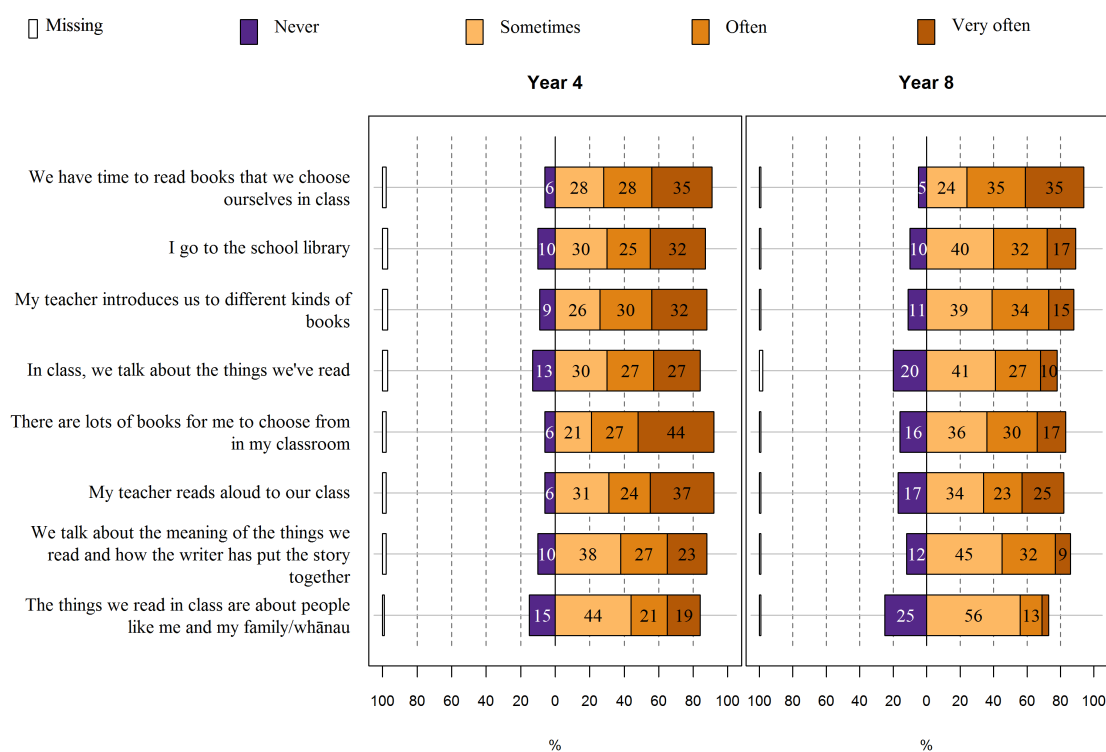


Figure 10 Percentage frequency of Year 4 and Year 8 Māori students' responses to the learning opportunities and experiences statements

## Reading in your own time

The student questionnaire asked students in Year 8 how much reading they did in their own time (when not at school). Figure 11 shows how Māori students responded by gender.

About 70 percent of Māori students used one of the first three response categories: ‘none or very little’; ‘up to an hour a week’; and ‘1–2 hours a week’. This compared with about 60 percent of all students in the national sample. Overall, Māori boys reported that they spent less time than Māori girls reading in their own time. In particular, boys were more likely than girls to report that they did no or very little reading in their own time.

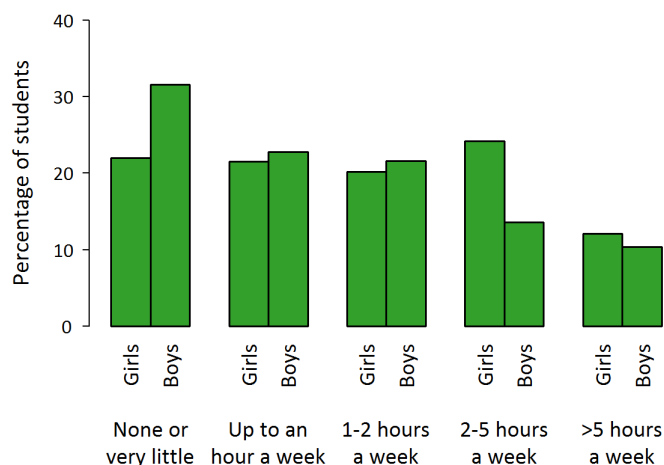


Figure 11 Percentage of Year 8 Māori students reporting reading in their own time, by gender and amount of time

## Relationship between achievement and reading in your own time

Figure 12 shows the distribution of Year 8 Māori students' scores on the KARE scale associated with each of the response categories for the question about reading in their own time. Students who indicated that they read for ‘more than 2–5 hours a week’ and ‘>5 hours a week’ scored about 20 scale score units higher, on average, than students who reported that they did ‘none or very little’ reading. This difference in average scale scores was statistically significant and equivalent to about 3 years of average ‘progress’, based on the annualised difference in scale score averages between Year 4 and Year 8. The group of students who indicated they read for more than 5 hours a week scored slightly lower on average than students who reported they read for ‘more than 2–5 hours a week’. This differed slightly from the pattern for all students in the national sample, where students who read more frequently consistently achieved higher scores on average on the KARE.

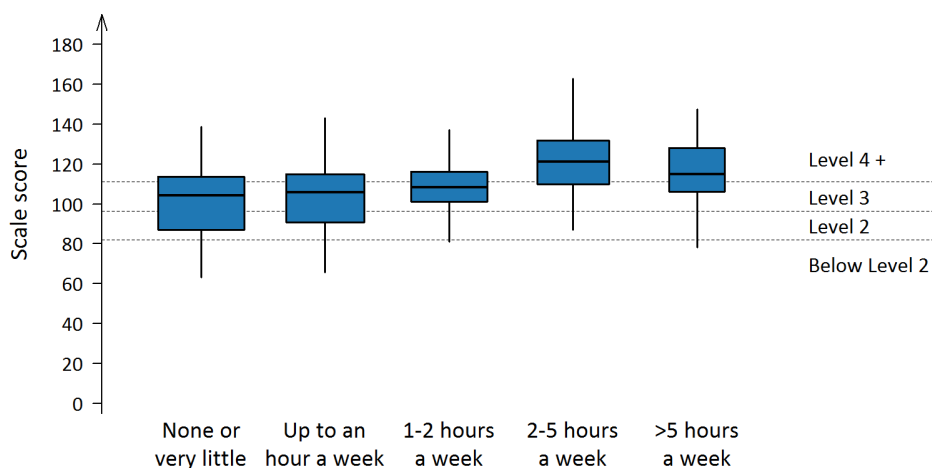


Figure 12 Distribution of Year 8 Māori students' scores on the Knowledge and Application of Reading in English assessment, by amount of own time spent reading

## 5. Benchmarking Māori success

This section examines the profile of Year 4 and Year 8 Māori students who scored above the benchmark (the national average) for all students in their respective year level on the KARE assessment. These groups are defined as the ‘highest achieving’<sup>5</sup>. For comparison purposes, a ‘lowest achieving’ group has also been defined at each year level. This group is equal in size to the ‘highest achieving’ group and is made up of students with the lowest scores.

Thirty-six percent of Māori students at both Year 4 and Year 8 scored above their respective benchmarks. This compared with 51 percent of all students in the national sample at both year levels. Table 2 shows that the average scale scores on the KARE assessment for Māori students in the highest achieving groups at Year 4 and Year 8 were slightly lower than the corresponding averages for all students in the national samples.

**Table 2** Average spread of scores on the Knowledge and Application of Reading in English assessment at Year 4 and Year 8 for Māori students, and for all students in the national sample, scoring above the benchmarks

	Knowledge and Application of Reading in English			
	Year 4 students scoring above the Year 4 benchmark		Year 8 students scoring above the Year 8 benchmark	
	Māori students	All students	Māori students	All students
Average scale score	99	102	126	128
Standard deviation	12	13	9	11

<sup>5</sup> In this first cycle of NMSSA, we have used the national average score at Year 4 and Year 8 as benchmark scores for each learning area. The benchmarks established in this cycle, including those for English: reading, may be used to compare results across future cycles of NMSSA.



## Characteristics of highest and lowest achieving students

Figures 13 to 16 show the percentage of students, by gender and school decile band in the highest and lowest achieving Māori student groups. The corresponding percentages for all Māori students in the national sample are given for reference in each figure.

### Achievement at Year 4

Figure 13 shows that the highest achieving group of Māori students in Year 4 included a greater proportion of girls than boys. This difference was greater than the difference in the relative proportion of boys and girls for all Year 4 Māori students. Conversely, a greater proportion of boys than girls was included in the lowest achieving group.

Figure 14 shows that the highest achieving group of Māori students in Year 4 included similar proportions of students from low, mid and high decile schools. Māori students from low decile schools, however, were under-represented in the highest achieving group and over-represented in the lowest achieving group when compared with the relative proportions of students from each decile band for all Year 4 Māori students. The converse was true for the lowest achieving group, where students from low decile schools were over-represented and students from high decile schools were under-represented.

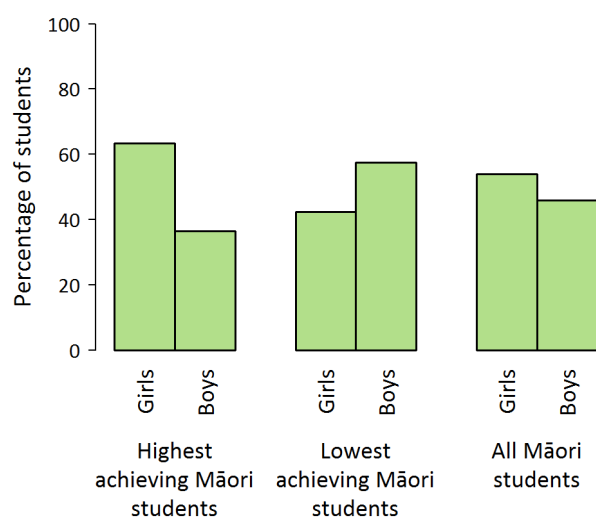


Figure 13 Percentage of Year 4 students in the highest achieving, lowest achieving and all Māori students groups, by gender

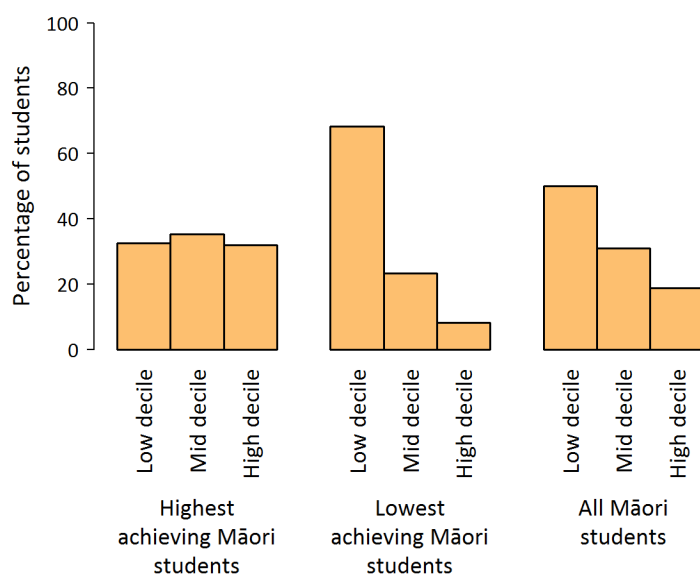


Figure 14 Percentage of Year 4 students in the highest achieving, lowest achieving and all students groups, by school decile band

## Achievement at Year 8

Similarly to Year 4, there was a higher percentage of girls compared with boys in the highest achieving group at Year 8 (see Figure 15). This was despite the greater proportion of boys compared with girls for all Year 8 Māori students. Boys made up the majority of the lowest achieving group of Māori students at Year 8.

The representation of students from different decile bands in the Year 8 high achieving group followed a similar pattern to the one at Year 4. Figure 16 shows that, compared with the proportions for all Year 8 Māori students, Māori students from high decile schools were over-represented and Māori students from low decile schools were under-represented. Conversely, Māori students from high decile schools were under-represented in the lowest achieving group, whereas Māori students from low decile schools were over-represented.

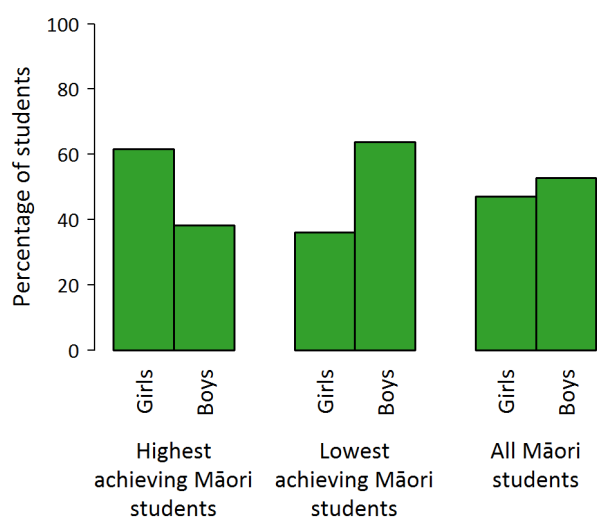


Figure 15 Percentage of Year 8 students in the highest achieving, lowest achieving and all students groups, by gender

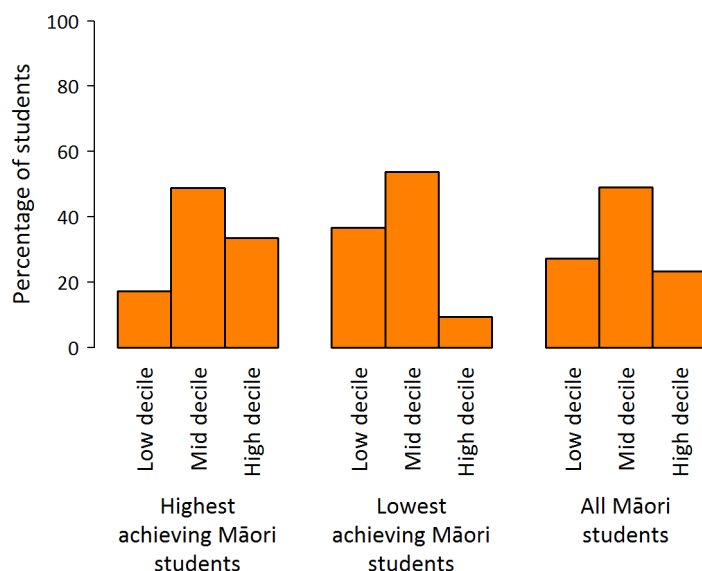


Figure 16 Percentage of Year 8 students in the highest achieving, lowest achieving and all students groups, by school decile band

## Attitudes to English: reading

At Year 4, the average score on the Attitude to Reading scale was similar for the highest and lowest achieving students (109 and 106 scale score units, respectively). At Year 8, the difference was much greater at 95 compared with 82 scale score units for the highest and lowest achieving groups, respectively.

## Learning opportunities and experiences in English: reading at school

Table 3 shows the percentage of highest and lowest achieving Year 4 and Year 8 students who responded with either 'often' or 'very often' to the learning opportunities and experiences in English: reading statements. Only statements where the difference was 20 percent or more are listed.

In Year 4, a greater proportion of students from the highest achieving group than from the lowest achieving group indicated that they 'often' or 'very often' went to the school library. At Year 8, students in the highest achieving group were more likely than students in the lowest achieving group to report they 'often' or 'very often' had time to read books they chose themselves in class.

Students in the highest achieving group at both Year 4 and Year 8 were less likely than students in the corresponding lowest achieving group to use 'often' or 'very often' to respond to the statement: 'The things we read in class are about people like me and my family/whānau'.

Table 3 Percentage of Year 4 and Year 8 highest and lowest achieving Māori students responding with 'often' or 'very often' to the learning opportunities and experiences statements

Statement	Percentage of Year 4 Māori students selecting 'often' or 'very often'		Percentage of Year 8 Māori students selecting 'often' or 'very often'	
	Highest achieving %	Lowest achieving %	Highest achieving %	Lowest achieving %
We have time to read books that we choose ourselves in class	-	-	79	58
I go to the school library	69	49	-	-
The things we read in class are about people like me and my family/whānau	29	51	8	27

## Reading in your own time

At Year 8, 50 percent of students in the highest achieving group reported reading in their own time for 2 or more hours a week compared with 14 percent of the lowest achieving students (see Figure 17). Students in the lowest achieving group were much more likely than students in the highest achieving group to report 'none or very little' reading in their own time (38 percent compared with 16 percent).

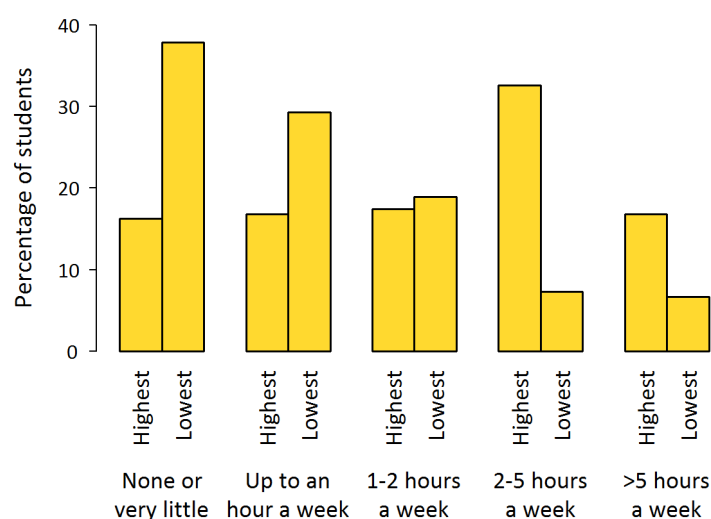


Figure 17 Percentage of Year 8 Māori students reporting reading in their own time, by highest and lowest achieving groups and amount of time

# Appendix 1

## Reports of findings for English: reading

- 5.1 NMSSA English: Reading 2014 – Overview
- 5.2 NMSSA Māori Student Achievement in English: Reading – Key findings 2014
- 5.3 NMSSA Pasifika Student Achievement in English: Reading – Key findings 2014
- 5.4 NMSSA Achievement of Students with Special Education Needs in English: Reading – Key findings 2014
- 5.5 NMSSA English: Reading 2014 – Contextual Report
- 7 NMSSA Technical Information 2014 – Social Studies, English: Reading

## Reports of findings for social studies

- 6.1 NMSSA Social Studies 2014 – Overview
- 6.2 NMSSA Māori Student Achievement in Social Studies – Key findings 2014
- 6.3 NMSSA Pasifika Student Achievement in Social Studies – Key findings 2014
- 6.4 NMSSA Achievement of Students with Special Education Needs in Social Studies – Key findings 2014
- 6.5 NMSSA Social Studies 2014 – Contextual Report
- 7 NMSSA Technical Information 2014 – Social Studies, English: Reading

All reports are available on line at <http://nmssa.otago.ac.nz/reports/index.htm>.

## Appendix 2

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Table A2.1 Achievement on the KARE: Summary statistics for Year 4 Māori students

Group	Actual sample size	Effective sample size	Mean	Confidence interval for the mean	Standard deviation
All	482	323	78	(75.5, 80.0)	21
<b>Gender</b>					
Girls	262	176	81	(78.0, 84.5)	22
Boys	220	147	74	(71.0, 77.0)	19
<b>Decile band</b>					
Low decile	240	161	72	(68.5, 74.5)	19
Mid decile	150	100	82	(77.5, 85.5)	20
High decile	92	62	89	(84.5, 93.5)	18
<b>School type</b>					
Composite school (Years 1–15)	14	9	76	(62.0, 90.5)	22
Contributing school	332	222	78	(75.0, 80.5)	22
Full primary school	136	91	79	(75.0, 82.5)	18

Table A2.2 Achievement on the KARE: Summary statistics for Year 8 Māori students

Group	Actual sample size	Effective sample size	Mean	Confidence interval for the mean	Standard deviation
All	478	320	108	(106.0, 110.0)	18
<b>Gender</b>					
Girls	225	151	112	(109.5, 115.0)	17
Boys	253	170	105	(102.0, 107.0)	18
<b>Decile band</b>					
Low decile	130	87	103	(99.0, 106.0)	17
Mid decile	235	157	108	(104.5, 110.5)	19
High decile	113	76	115	(112.5, 118.5)	13
<b>School type</b>					
Composite school (Years 1–15 & 7–10)	26	17	103	(95.5, 110.5)	16
Full primary school	149	100	109	(105.5, 112.0)	17
Intermediate school	240	161	109	(106.5, 112.0)	18
Secondary school (Years 7–15)	63	42	105	(98.5, 111.0)	20

Table A2.3 Achievement on the KARE: Differences between subgroup means for Year 4 Māori students

Subgroup 1	Subgroup 1 effective sample size	Subgroup 2	Subgroup 2 effective sample size	Difference in means	Confidence interval for difference in means	Effect size
<b>Gender</b>						
Girls	176	Boys	147	<b>7</b>	(3.0, 11.5)	0.36
<b>Decile band</b>						
High decile	62	Mid decile	100	<b>7</b>	(1.5, 13.5)	0.38
High decile	62	Low decile	161	<b>18</b>	(12.0, 23.0)	0.92
Mid decile	100	Low decile	161	<b>10</b>	(5.0, 15.0)	0.51
<b>School type</b>						
Composite school (Years 1–15)	9	Contributing school	222	<b>-1</b>	(-16.0, 13.0)	-0.07
Composite school (Years 1–15)	9	Full primary school	91	<b>-3</b>	(-17.5, 12.0)	-0.14
Contributing school	222	Full primary school	91	<b>-1</b>	(-6.5, 3.5)	-0.06

Table A2.4 Achievement on the KARE: Differences between subgroup means for Year 8 Māori students

Subgroup 1	Subgroup 1 effective sample size	Subgroup 2	Subgroup 2 effective sample size	Difference in means	Confidence interval for difference in means	Effect size
<b>Gender</b>						
Girls	151	Boys	170	<b>8</b>	(3.5, 11.5)	0.43
<b>Decile band</b>						
High decile	76	Mid decile	157	<b>8</b>	(3.5, 12.0)	0.46
High decile	76	Low decile	87	<b>13</b>	(8.0, 17.5)	0.83
Mid decile	157	Low decile	87	<b>5</b>	(0.0, 9.5)	0.27
<b>School type</b>						
Composite school (Years 1–15 & 7–10)	17	Full primary school	100	<b>-6</b>	(-14.0, 2.5)	-0.34
Composite school (Years 1–15 & 7–10)	17	Intermediate school	161	<b>-6</b>	(-14.5, 2.0)	-0.35
Composite school (Years 1–15 & 7–10)	17	Secondary school (Years 7–15)	42	<b>-2</b>	(-11.5, 8.0)	-0.10
Full primary school	100	Intermediate school	161	<b>-0</b>	(-4.5, 4.0)	-0.02
Full primary school	100	Secondary school (Years 7–15)	42	<b>4</b>	(-3.0, 11.0)	0.22
Intermediate school	161	Secondary school (Years 7–15)	42	<b>4</b>	(-2.5, 11.0)	0.23



Table A2.5 Achievement on the KARE: Differences between means for Year 4 Māori and Year 8 Māori, by subgroup

Group	Year 8 effective sample size	Year 4 effective sample size	Difference in means	Confidence interval for difference in means	Effect size
All	320	323	30	(27.0, 33.0)	1.56
<b>Gender</b>					
Girls	151	176	31	(26.5, 35.0)	1.57
Boys	170	147	31	(26.6, 34.5)	1.66
<b>Decile band</b>					
Low decile	87	161	31	(26.5, 36.0)	1.68
Mid decile	157	100	26	(21.0, 31.0)	1.32
High decile	76	62	26	(21.0, 32.0)	1.69

Table A2.6 English: reading curriculum levels: Year 4 Māori students

Group	Actual sample size	Effective sample size	Percentage of students at <L2	Confidence interval for <L2 percentage	Percentage of students at L2	Confidence interval for L2 percentage	Percentage of students at L3	Confidence interval for L3 percentage	Percentage of students at L4+	Confidence interval for L4+ percentage
All	482	323	57%	(51.5%, 62.5%)	25%	(20.0%, 29.5%)	13%	(9.0%, 16.5%)	5%	(3.0%, 8.0%)
<b>Gender</b>										
Girls	262	176	51%	(43.5%, 58.0%)	25%	(18.5%, 31.0%)	17%	(11.5%, 23.0%)	7%	(3.5%, 11.0%)
Boys	220	147	65%	(57.0%, 72.5%)	25%	(18.0%, 32.0%)	7%	(3.0%, 11.5%)	3%	(0.5%, 6.0%)
<b>Decile band</b>										
Low decile	240	161	72%	(65.5%, 79.5%)	18%	(11.5%, 23.5%)	8%	(3.5%, 12.0%)	2%	(0.0%, 4.5%)
Mid decile	150	100	51%	(41.0%, 60.5%)	29%	(20.0%, 37.5%)	14%	(7.0%, 21.0%)	7%	(2.0%, 11.5%)
High decile	92	62	27%	(16.0%, 38.5%)	38%	(26.0%, 50.0%)	23%	(12.5%, 33.5%)	12%	(4.0%, 20.0%)
<b>School type</b>										
Composite school (Years 1–15)	14	9	64%	(33.5%, 95.0%)	21%	(0.0%, 47.5%)	7%	(-9.5%, 23.5%)	7%	(0.0%, 23.5%)
Contributing school	332	222	58%	(52.0%, 65.0%)	23%	(17.5%, 28.5%)	13%	(8.5%, 17.0%)	6%	(3.0%, 9.0%)
Full primary school	136	91	53%	(42.5%, 63.0%)	30%	(20.5%, 39.5%)	13%	(6.5%, 20.0%)	4%	(0.0%, 7.5%)

Table A2.7 English: reading curriculum levels: Year 8 Māori students

Group	Actual sample size	Effective sample size	Percentage of students at <L2	Confidence interval for <L2 percentage	Percentage of students at L2	Confidence interval for L2 percentage	Percentage of students at L3	Confidence interval for L3 percentage	Percentage of students at L4+	Confidence interval for L4+ percentage
All	478	320	8%	(5.0%, 10.5%)	16%	(12.0%, 20.0%)	32%	(27.0%, 37.0%)	44%	(39.0%, 50.0%)
<b>Gender</b>										
Girls	225	151	4%	(1.0%, 7.5%)	13%	(8.0%, 19.0%)	29%	(21.5%, 36.0%)	53%	(45.5%, 61.5%)
Boys	253	170	11%	(6.0%, 15.5%)	18%	(12.5%, 24.0%)	35%	(27.5%, 42.0%)	36%	(29.0%, 43.5%)
<b>Decile band</b>										
Low decile	130	87	13%	(6.0%, 20.0%)	22%	(13.0%, 30.0%)	33%	(23.0%, 43.0%)	32%	(22.5%, 42.0%)
Mid decile	235	157	9%	(4.0%, 13.0%)	17%	(11.5%, 23.5%)	30%	(23.0%, 37.5%)	44%	(36.0%, 51.5%)
High decile	113	76	-	-	6%	(1.0%, 11.5%)	35%	(24.0%, 45.0%)	59%	(48.0%, 70.5%)
<b>School type</b>										
Composite school (Years 1–15 & 7–10)	26	17	12%	(0.0%, 26.5%)	23%	(3.5%, 43.0%)	35%	(12.5%, 57.0%)	31%	(9.0%, 52.5%)
Full primary school	149	100	5%	(1.0%, 10.0%)	18%	(10.5%, 25.5%)	32%	(23.0%, 41.5%)	44%	(34.5%, 54.0%)
Intermediate school	240	161	7%	(3.0%, 11.0%)	14%	(9.0%, 19.5%)	32%	(25.0%, 39.5%)	47%	(39.0%, 54.5%)
Secondary school (Years 7–15)	63	42	14%	(3.5%, 25.0%)	14%	(3.5%, 25.0%)	30%	(16.5%, 44.0%)	41%	(26.5%, 56.0%)

Table A2.8 Attitude to English: reading: Summary statistics for Year 4 Māori students

Group	Actual sample size	Effective sample size	Mean	Confidence interval for the mean	Standard deviation
All	480	322	107	(105.5, 109.5)	18
<b>Gender</b>					
Girls	260	174	111	(108.5, 113.5)	18
Boys	220	147	103	(100.5, 106.0)	18
<b>Decile band</b>					
Low decile	238	159	109	(106.5, 112.0)	18
Mid decile	150	100	106	(103.0, 109.5)	17
High decile	92	62	105	(100.0, 110.5)	21
<b>School type</b>					
Composite school (Years 1–15)	14	9	120	(106.0, 134.0)	22
Contributing school	331	222	108	(105.5, 110.0)	18
Full primary school	135	90	105	(101.5, 109.5)	19

Table A2.9 Attitude to English: reading: Summary statistics for Year 8 Māori students

Group	Actual sample size	Effective sample size	Mean	Confidence interval for the mean	Standard deviation
All	478	320	88	(86.0, 90.5)	21
<b>Gender</b>					
Girls	225	151	92	(88.0, 95.0)	22
Boys	253	170	85	(82.5, 88.5)	20
<b>Decile band</b>					
Low decile	130	87	87	(81.5, 91.5)	23
Mid decile	235	157	89	(85.5, 91.5)	19
High decile	113	76	90	(85.0, 95.0)	22
<b>School type</b>					
Composite school (Years 1–15 & 7–10)	26	17	86	(72.5, 100.5)	30
Full primary school	149	100	91	(86.5, 94.5)	21
Intermediate school	240	161	88	(85.5, 91.0)	18
Secondary school (Years 7–15)	63	42	84	(76.5, 92.5)	27

Table A2.10 Achievement on the KARE, by attitude to English: reading category for Māori students

Group	Attitude to reading category					
	Negative		Positive		Very positive	
	Actual sample size	Mean KARE scale score	Actual sample size	Mean KARE scale score	Actual sample size	Mean KARE scale score
<b>Year 4</b>						
All	17	70	164	76	298	80
Girls	4	81	75	79	181	83
Boys	13	67	89	74	117	75
<b>Year 8</b>						
All	139	102	228	108	111	116
Girls	53	104	102	112	70	118
Boys	86	100	126	105	41	111

Table A2.11 Student Questionnaire – Question 5: Reading in own time for Māori students

Group	Actual sample size	Effective sample size	Question 5: Reading in own time				
			None or very little	Up to an hour a week	1–2 hours a week	2–5 hours a week	>5 hours a week
All	473	317	27%	22%	21%	19%	11%
<b>Gender</b>							
Girls	223	149	22%	22%	20%	24%	12%
Boys	250	168	32%	23%	22%	14%	10%
<b>Benchmark group</b>							
Lowest achievers	172	115	38%	29%	19%	7%	7%
Highest achievers	172	115	16%	17%	17%	33%	17%

Table A2.12 Achievement on the KARE, by response category for reading in own time for Māori students

Group	Response category for reading in own time									
	None or very little		Up to an hour a week		1–2 hours a week		2–5 hours a week		>5 hours a week	
	n	mean	n	mean	n	mean	n	mean	n	mean
All	128	101	105	103	99	109	88	120	53	116
Boys	79	99	57	103	54	105	34	114	26	113
Girls	49	104	48	103	45	113	54	124	27	118



