

Although national monitoring has been designed primarily to present an overall national picture of student achievement, there is some provision for reporting on performance differences among subgroups of the sample. Nine demographic variables are available for creating subgroups, with students divided into two or three subgroups on each variable, as detailed in Chapter 1 (p6).

The analyses of the relative performance of subgroups used an overall score for each task, created by adding scores for the most important components of the task.

Where only two subgroups were compared, differences in task performance between the two subgroups were checked for statistical significance using t-tests. Where three subgroups were compared, one way analysis of variance was used to check for statistically significant differences among the three subgroups.

Because the number of students included in each analysis was quite large (approximately 450), the statistical tests were quite sensitive to small differences. To reduce the likelihood of attention being drawn to unimportant differences, the critical level for statistical significance was set at $p = .01$ (so that differences this large or larger among the subgroups would not be expected by chance in more than one percent of cases).

For the first four of the nine demographic variables, statistically significant differences among the subgroups were found for less than fifteen percent of the tasks at both year 4 and year 8. For the remaining five variables, statistically significant differences were found on a substantial proportion of tasks at one or both levels. In the report below, all “differences” mentioned are statistically significant differences (to save space, the words “statistically significant” are omitted).

School Type

Results were compared for year 8 students attending full primary and intermediate schools. No differences were found on any of the 29 tasks or any questions of the *Writing Survey*.

School Size

Results were compared from students in larger, medium sized, and small schools (exact definitions were given in Chapter 1).

For year 4 students, there was a difference among the subgroups on one of the 24 tasks: students from small schools scored highest on the poetry task, *Me* (p18). There were no differences on questions of the *Writing Survey*.

For year 8 students, there was also a difference on just one of the 29 tasks: students from medium sized schools scored highest on *Santa* (p22). There were no differences on questions of the *Writing Survey*.

Zone

Results achieved by students from Auckland, the rest of the North Island, and the South Island were compared.

For year 4 students, there were differences among the three subgroups on three of the 24 tasks. Students from the South Island scored highest on two tasks: *Santa* (p22) and *Bookshop Letter* (p43). Students from the North Island other than Auckland scored lower than other students on *Handwriting* (p52). There was also a difference on one question of the *Writing Survey* (p57), with students from Auckland indicating that they had more writing opportunities in school than students from the South Island (question 7).

For year 8 students, there were differences among the three subgroups on three of the 29 tasks. Students from areas of the North Island other than Auckland scored lower than other students on all three tasks: *My Place* (p15), *A Tale of Two Donkeys* (p26) and *Coke* (p48). There was also a difference on one question of the *Writing Survey* (p57), with students from Auckland indicating higher enthusiasm for writing at school (question 1).

Community Size

Results were compared for students living in communities containing over 100,000 people (main centres), communities containing 10,000 to 100,000 people (provincial cities), and communities containing less than 10,000 people (rural areas).

For year 4 students, there were no differences among the three subgroups on any of the 24 tasks, or on questions of the *Writing Survey*.

For year 8 students, there were differences on two of the 29 tasks. Students from main centres scored highest on both *Coke* (p48) and *Link Task 10* (p56). There were no differences on questions of the *Writing Survey*.

Gender

Results achieved by male and female students were compared.

For year 4 students, there were differences between boys and girls on 19 of the 24 tasks. Girls scored higher than boys on all of these tasks. Because so many tasks were involved, they are not listed here. Girls also scored higher than boys on four questions of the *Writing Survey* (p57), indicating greater enjoyment of writing at school (question 1), greater frequency of writing at school (question 7), higher self-perception as writers (question 2), and greater enjoyment of writing in their own time (question 5).

For year 8 students, there were differences between boys and girls on 24 of the 28 tasks. Girls scored higher than boys on all of these tasks. Girls also scored higher than boys on one question of the *Writing Survey* (p57), indicating greater enjoyment of writing in their own time (question 5).

Socio-Economic Index

Schools are categorised by the Ministry of Education based on census data for the census mesh blocks where children attending the schools live. The SES index takes into account household income levels, categories of employment, and the ethnic mix in the census mesh blocks. The SES index uses ten subdivisions, each containing ten percent of schools (deciles 1 to 10). For our purposes, the bottom three deciles (1-3) formed the low SES group, the middle four deciles (4-7) formed the medium SES group, and the top three deciles (8-10) formed the high SES group. Results were compared for students attending schools in each of these three SES groups.

For year 4 students, there were differences among the three subgroups on 20 of the 24 tasks. Because of the large number of tasks involved, they will not be listed here. In each case, students in the low SES schools performed worst. While students from high SES schools generally did better than students from medium SES school, these differences were usually smaller than the differences between students from low and medium SES schools. There were also differences on three questions of the *Writing Survey* (p57), with students from low SES schools indicating greater enjoyment of writing in school (question 1), more positive teacher perceptions of their writing skills (question 3), and greater enjoyment of writing in their own time (question 5).

For year 8 students, there were differences among the three subgroups on 21 of the 29 tasks. In general, there was a steady trend of improvement from lower SES schools to higher SES schools. There was also a difference on one question of the *Writing Survey* (p57), with students from high SES schools indicating a lower frequency of writing things like stories, poems or letters at school (question 7).

Student Ethnicity

Results achieved by Māori and non-Māori students were compared.

For year 4 students, there were differences on 11 of the 24 tasks, spread across chapters 3, 4 and 5. In each case, non-Māori students scored higher than Māori students. There was also a difference on one question of the *Writing Survey* (p57), with Māori students expressing greater enjoyment of writing at school (question 1).

For year 8 students, there were differences between Māori and non-Māori students on 11 of the 28 tasks, spread across chapters 3, 4 and 5. In each case, non-Māori students scored higher than Māori students. There were no differences on questions of the *Writing Survey*.

Proportion of Māori Students in Schools

Schools were categorised into three subgroups: schools with less than 10 percent Māori students, schools with 10 to 30 percent Māori students, and schools with more than 30 percent Māori students. Results were compared for students attending schools in these three categories.

For year 4 students, differences between the three subgroups were found on 14 of the 24 tasks, spread across chapters 3, 4 and 5. In all cases, performance levels declined as the proportion of Māori students increased. There were also differences on two questions of the *Writing Survey* (p57), with students from schools with less than ten percent Māori students less positive about how their teachers (question 3) and their parents (question 4) viewed their writing skills.

For year 8 students, differences between the three subgroups were found on 14 of the 29 tasks, spread across chapters 3, 4 and 5. In all cases, performance levels declined as the proportion of Māori students increased. There were no differences on questions of the *Writing Survey*.

Proportion of Pacific Island Students in Schools

Because most of the Pacific Island students are concentrated into relatively few schools, it was difficult to create sensible subgroups for schools with higher or lower percentages of Pacific Island students. Two subgroups were formed: students attending schools with up to five percent Pacific Island students, and students attending schools with more than five percent Pacific Island students. Results were compared for students in these two subgroups.

For year 4 students, differences between the two subgroups were found on 13 of the 24 tasks, spread across chapters 3, 4 and 5. In each case, students attending schools with more than five percent of Pacific Island students scored lower. There were no differences on questions of the *Writing Survey*.

For year 8 students, differences between the two subgroups were found on just two of the 29 tasks. Students attending schools with more than five percent of Pacific Island students scored lower on *Party Time (computer)* (p45) and *Link Task 4* (p50). There were no differences on questions of the *Writing Survey*.

Summary

School size, school type (full primary or intermediate), community size or geographic zone did not seem to be important factors predicting achievement on the writing tasks, or on attitudes to writing. Non-Māori students outperformed Māori students on about forty percent of the tasks at both year levels. Students attending schools with high proportions of Māori students performed worse than students attending other schools on about half of the tasks at both year levels. This contrasted with the improvement observed for students attending schools with more than five percent Pacific Island students: they performed worse than students at other schools on about half of the year 4 tasks but on less than ten percent of the year 8 tasks. There were statistically significant differences in the performance of students from low, medium and high decile schools on 83 percent of the year 4 tasks and 72 percent of the year 8 tasks. The most startling result, however, was the comparison of results for boys and girls. At both year levels, girls performed better than boys on a very high proportion of tasks (79 percent of year 4 tasks and 86 percent of year 8 tasks), and also displayed more positive attitudes to writing.