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. Seven demographic variables are available for creating subgroups, with students divided into two or three subgroups on each variable, as detailed in Chapter 1 (p5).

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 team tasks, the critical level was raised to p = .05, because of the smaller sample size (120 teams, rather than about 450 students).

For the first three of the seven demographic variables, statistically significant differences among the subgroups were found on less than 10 percent of the tasks at both year 4 and year 8. For the remaining four variables, statistically significant differences were found on more than 10 percent of the tasks at one or both levels. In the report below, all "differences" mentioned are statistically significant (to save space, the words "statistically significant" are omitted).

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 was a difference among the three subgroups on 1 of the 36 tasks. Students from main centres scored lowest on Link Task 11 (p48). There were no differences on questions of the Social Studies Survey.

For year 8 students, there was a difference among the three subgroups on 2 of the 41 tasks. Students from provincial cities scored lowest on Time Line (p50). Students from main centres scored lowest on Link Task 16 (p48), but highest on Time Line (p50). There were no differences on questions of the Social Studies Survey.

School size

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

For year 4 students, there were differences among the three subgroups on 2 of the 36 tasks. Students attending small schools scored highest on Link Task 11 (p48) and Link Task 18 (p59). There were no differences on questions of the Social Studies Survey.

For year 8 students there were no differences among the three subgroups on any of the 41 tasks, nor on any of the questions of the Social Studies Survey.

School type

Results were compared for year 8 students attending full primary schools and year 8 students attending intermediate schools. Differences between the two subgroups were found on 3 of the 41 tasks. Students from full primary schools scored higher than did students from intermediate schools on Tree Troubles (p18), A Good Team Member (p21) and Famous New Zealanders (p53). There were no differences on questions of the Social Studies Survey.

Gender

Results achieved by male and female students were compared.

For year 4 students, there were differences between boys and girls on 7 of the 30 tasks.

Girls scored higher than boys on two tasks: Equal and Different (p14) and Link Task 1 (p26). However, boys scored higher than girls on five tasks: Link Task 8 (p36), Where in the World Are We? (p46), Link Task 11 (p48), Link Task 12 (p48), and Time Line (p50). There were no differences on questions of the Social Studies Survey.

For year 8 students, there were differences between boys and girls on 5 of the 35 tasks. Girls scored higher than boys on: Samoan Family (p38), Link Task 13 (p48) and Link Task 18 (p59). Boys scored higher on New Zealand's Shape (p44) and Where in the World are We? (p46). On question 12 of the Social Studies Survey (p61), girls were

more positive learning about how people lived "in the olden days".

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 7 of the 36 tasks. Students from the South Island scored highest and students from Auckland scored lowest on 3 tasks: Equal and Different (p14), Link Task 14 (p48), and Link Task 18 (p59). Students from the South Island scored higher than the other two groups on Town and Country (p40), but lower than students from the North Island (other than Auckland) on 3 tasks: Marae Meeting (p30), Link Task 7 (p36), and Link Task 11 (p48). Auckland students were more positive than South Island students on two questions of the Social Studies Survey (p60): how they feel about learning or doing more social studies as they get older (question 5), and how much they like learning about the way people work together and do things in groups (question 6).

For year 8 students, there were differences among the three subgroups on 9 of the 41 tasks. Students from the

South Island scored higher than the other two groups on 2 tasks: Link Task 10 (p36) and Link Task 12 (p48). South Island students also scored higher than Auckland students did on Tree Troubles (p18), and higher than students elsewhere in the North Island on 4 tasks: Leaders (p19), Knowing New Zealand (p39), Link Task 11 (p48), and Link Task 16 (p48). Students elsewhere in the North Island scored lower than the other two groups on Time Line (p50), but higher than South Island students on Link Task 16 (p48). On question 3 of the Social Studies Survey (p60), students from the South Island were least positive about learning or doing more social studies at school. Students from the North Island (other than Auckland) felt more positive than South Island students about learning or doing more social studies as they get older (question 5).

Student ethnicity

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

For year 4 students, there were differences in performance on 11 of the 30 tasks. In all cases except one (Link Task 7 p36), non-Māori students scored higher than Māori students did. These differences were spread evenly across the chapters. Because of the large number of tasks involved, they are not listed here. Māori students were more positive than non-Māori students on three questions of the Social Studies Survey (p60): how they feel about learning or doing more social studies as they get older (question 5), how often they learn about the work people do and how they make a living (question 17), and how often they learn about living in the future (question 21).

For year 8 students, there were differences in performance on 20 of the 35 tasks. Non-Māori students scored higher than Māori students did on 18 of these 20 tasks. These differences were spread evenly across the chapters. Because of the large number of tasks involved, they are not listed here. On two tasks Māori students scored higher: Marae Meeting (p30) and Link Task 7 (p36). There were no differences on questions of the Social Studies Survey.

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 24 of the 36 tasks. Because of the number of tasks involved, the specific tasks are not listed here. In each case except one, performance was lowest for students in the low SES group. Students in the high SES group generally performed better than did students in the medium SES group, but these differences often were smaller. On Marae Meeting (p30), students in the low SES group performed better than students in the other two groups. On the Social Studies Survey (p60), students in the low SES group were more positive on seven attitude questions (questions 1-7). Students also indicated more frequent opportunities to learn in four areas: the way people work together and do things in groups (question 14), other places in the world and how people live there (question 15), why people have different ideas (question

18), and living in the future (question 21).

For year 8 students, there were differences among the three subgroups on 33 of the 41 tasks. Because of the number of tasks involved, the specific tasks are not listed here. For 31 tasks, performance was lowest for students in the low SES group, while students in the high SES group generally performed better than did students in the medium SES group. On two tasks: Link Task 7 (p36) and Marae Meeting (p30), performance of students in the low SES group was highest. In both cases students in the medium SES group, in turn, performed better than students in the high SES group. On the Social Studies Survey (p60), students in the low SES group were more positive learning about other places in New Zealand and how people live there (question 8). Students in the low SES group also reported more frequent learning in four different areas of social studies: the way people work together and do things in groups (question 14), the work people do and how they make a living (question 17), why people have different ideas (question 18), and living in the future (question 21).

Summary

As was true in 1997, there were very few statistically significant differences in task performance among the subgroups based on school size, school type or community size.

There were more differences associated with geographic zone in 2001 than in 1997, when students from the South Island performed best on 5 percent of the year 4 tasks and 22 percent of the year 8 tasks. The corresponding percentages in 2001 were 11 and 20, but this time South Island students also performed worst on some tasks (8 percent at year 4 and 2 percent at year 8). All of the latter tasks involved Māori contexts.

Patterns of gender differences also changed between 1997 and 2001. In 2001, year 4 girls scored better than boys on 7 percent of tasks (none in 1997) and worse on 17 percent of tasks (14 percent in 1997). Year 8 girls performed better than boys on 9 percent of tasks (16 percent in 1997) and worse on 6 percent (32 percent in 1997).

Māori and non-Māori students performed differently on 36 percent of year 4 tasks in both 1997 and 2001, with non-Māori students performing better in almost all cases. At year 8 level, non-Māori students performed better than Māori students on 51 percent of the 2001 tasks (substantially lower than 68 percent in 1997).

The SES index (based on school deciles) showed the strongest pattern of differences. In 2001, students in low decile schools scored lowest on 67 percent of the year 4 tasks (53 percent in 1997) and 76 percent of the year 8 tasks (73 percent in 1997). Year 4 students in low decile schools were distinctly more positive about studying social studies than their counterparts in medium and high decile schools.