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Overview: In the age of information, understanding the information skills of New Zealand's schoolchildren has never been more important. The salience of technology, both its positive and negative aspects could not be better exemplified than by noting that in the 2009 administration of the Information Skills Survey, 96% of year 8 children report that when they need to find information, they go to the internet. This figure is twice as high as the next most popular response, going to a parent.

Although children are eager users of information, they are not always adept users, or savvy users. Students are fairly good, particularly at year 8, at finding and using basic information, but not as good at judging the merits of that information, comparing multiple sources of information, or organising and employing information to buttress arguments. At year 4, students have difficulty in determining what their information needs are, although there is substantial growth in this ability from year 4 to year 8. Overall we see a general pattern of skill development in all areas from year 4 to year 8 in terms of information skills.

There are some gains seen in performance overall from the 2005 administration of information skills. Girls slightly outperform boys, and Pakeha children outperform Māori and Pasifika children. The socio-economic status of the school (as indicated by its decile level) continues to be the strongest determinant of performance in information skills. Other school level variables have little impact on overall performance.



New Zealand's National Education Monitoring Project commenced in 1993, with the task of assessing and reporting on the achievement of New Zealand primary school children in all areas of the school curriculum. Children are assessed at two class levels: year 4 (halfway through primary education) and year 8 (at the end of primary education). Different curriculum areas and skills are assessed each year, over a four-year cycle. The main goal of national monitoring is to provide detailed information about what children can do so that patterns of performance can be recognised, successes celebrated, and desirable changes to educational practices and resources identified and implemented.

Each year, small random samples of children are selected nationally, then assessed in their own schools by teachers specially seconded and trained for this work. Task instructions are given orally by teachers, through video presentations, on laptop computers, or in writing. Many of the assessment tasks involve the children in the use of equipment and supplies. Their responses are presented orally, by demonstration, in writing, in

computer files, or through submission of other physical products. Many of the responses are recorded on videotape for subsequent analysis.

The use of many tasks with both year 4 and year 8 students allows comparisons of the performance of year 4 and 8 students in 2009. Because some tasks have been used twice, in 2005 and again in 2009, trends in performance across the four-year period can also be analysed.

In 2009, the third year of the fourth cycle of national monitoring, three areas were assessed: mathematics, social studies and information skills. This report presents details and results of the assessments of information skills.



ASSESSING INFORMATION SKILLS

Chapter 2 explains the place of information skills in the New Zealand curriculum and presents the framework for information skills. This identifies three main content areas or strands: clarifying information needs, finding and gathering information, and thinking about and using information. Within each of these areas, various strategies, skills and processes were identified. The importance of attitudes and motivation was also noted.

CLARIFYING INFORMATION NEEDS

Chapter 3 presents information about students' skills in clarifying information needs based on 8 assessment tasks. Year 8 students were more successful than year 4 students. Averaged across 63 task components attempted by both years, 13% more year 8 than year 4 students succeeded well with these components.

Averaged across 23 trend task components attempted by year 4 students in both 2005 and 2009, 2% more students succeeded in 2009 than in 2005. This is a small increase. At year 8 level, with 29 components included, on average there was an increase of 3% from 2005 to 2009. Thus we see a small, but positive trend overall.



FINDING & GATHERING INFORMATION

Chapter 4 presents results for 16 tasks that involved finding and gathering information. Year 8 students enjoyed substantially more success than year 4 students. Averaged across 67 components of tasks attempted by both years, 14% more year 8 than year 4 students succeeded on these components.

Averaged across 38 components attempted by year 4 students in both 2005 and 2009, 1% more students succeeded in 2009 than in 2005. This is a small increase. At year 8 level, with 50 components included, on average 1% more students succeeded in 2009, again a small increase.



THINKING ABOUT & USING INFORMATION

Chapter 5 presents results for 18 tasks that asked students to think about and use information. Year 8 students enjoyed substantially more success than year 4 students. Averaged across 78 components attempted by both years, 11% more year 8 than year 4 students succeeded well with these components.

Averaged across 37 components attempted by year 4 students in both 2005 and 2009, there was no change from 2005 to 2009. At year 8 level, with 59 task components in common, there was a 2% decline in 2009. This is a small change.



INFORMATION SKILLS SURVEY

Chapter 6 focuses on the results of a survey that sought information from students about their strategies for, involvement in, and enjoyment of information gathering and interpreting activities. The message here is straightforward and clear: students use the internet a lot and they enjoy doing so. The internet continues to be by far the primary source of information for students at both

years, showing a substantial increase in 2009 over 2005, which in turn had shown a substantial increase over 2001. For year 8 students, 96% reported that they turn to the internet for information (77% at year 4). In contrast, they report using the school library significantly less often. As was the case in previous NEMP assessments, more year 8 than



year 4 students reported that they had to find information for a project or topic “heaps” or “quite a lot”. Also similar to earlier administrations, year 8 students were much less inclined than year 4 students to be enthusiastic about hunting for information and about writing down the information they found. Most students are quite happy to share with others the information they have found.

PERFORMANCE OF SUBGROUPS

Chapter 7 details the results of analyses comparing the performance of different demographic subgroups. School type (full primary, intermediate, or year 7 to 13 high school), school size, community size and geographic zone did not seem to be important factors predicting achievement on the information skills tasks. The same was true for the three previous assessments of information skills. However, there were statistically significant differences in the performance of students from low, medium and high decile schools on 66% of the tasks at year 4 level (compared to 57% in 2005, 43% in 2001 and 81% in 1997) and 79% of the tasks at year 8 level (compared to 54% in 2005, 71% in 2001 and 56% in 1997).

For the comparisons of boys with girls, Pakeha with Māori, Pakeha with Pasifika students, and students for whom the predominant language at home was English with those for whom it was not, effect sizes were used. Effect size is the difference in mean (average) performance of the two groups, divided by the pooled standard deviation of the scores on the particular task. For this summary, these effect sizes were averaged across all tasks.

Year 4 girls averaged slightly higher than boys, with a mean effect size of 0.11 (compared to 0.14 in 2005 and 0.06 in

2001). Year 8 girls averaged slightly higher than boys, with a mean effect size of 0.16 (compared to 0.27 in 2005 and 0.15 in 2001). As was also true in 2005 and 2001, the information skills survey results at both year levels indicated some evidence that girls were more positive than boys about information skills activities.

Pakeha students averaged moderately higher than Māori students, with mean effect sizes of 0.40 for year 4 students and 0.33 for year 8 students (the corresponding figures in 2005 were 0.36 and 0.27, and in 2001 were 0.25 and 0.39). Differences on the Information Skills Survey were small.

Year 4 Pakeha students averaged substantially higher than Pasifika students, with a mean effect size of 0.49 (compared to 0.37 in 2005 and 0.40 in 2001). Year 8 Pakeha students averaged moderately to substantially higher than Pasifika students, with a mean effect size of 0.41 (compared to 0.48 in 2005 and 0.46 in 2001). Differences on the Information Skills Survey were small.

Compared to students for whom the predominant language at home was English, students from homes where other languages predominated averaged slightly or moderately lower, with mean effect sizes of 0.18 for year 4 students and 0.26 for year 8 students. Comparable mean effect sizes for 2005 were 0.16 and 0.18 respectively.



OVERALL TRENDS

Overall trends can be assessed by considering all trend tasks from Chapters 3 to 5. For year 4 students, based on 93 components, on average 1% more students succeeded with the task components in 2009 than in 2005. For year 8 students, based on 138 task components, 1% fewer students than in 2005 succeeded with the task components in 2009. Both of these trends are too small to be meaningful.

In the report on the 2005 information skills assessments, averaged across all trend task components, about 1% fewer year 4 students and 1% more year 8 students than in 2001 succeeded with those components. Four years earlier, the 2001 report compared performance in 1997 and 2001, showing an increase of 4% at year 4 level and no change at year 8 level.

Overall then, there appears to have been a small gain in the performance of year 4 students over the 12 years between 1997 and 2009. At year 8 level, the evidence suggests no change in information skills performance overall for that same 12-year period.