

Main samples

In 1999, 2866 children from 253 schools were in the main samples to participate in national monitoring. About half were in year 4, the other half in year 8. At each level, 120 schools were selected randomly from national lists of state, integrated and private schools teaching at that level, with their probability of selection proportional to the number of students enrolled in the level. The process used ensured that each region was fairly represented. Schools with fewer than four students enrolled at the given level were excluded from these main samples, as were special schools and Māori immersion schools (such as *Kura Kaupapa Māori*).

Early in June 1999, the Ministry of Education provided computer files containing lists of eligible schools with year 4 and year 8 students, organised by region and district, including year 4 and year 8 roll numbers drawn from school statistical returns based on enrolments at 1 March 1999.

From these lists, we randomly selected 120 schools with year 4 students and 120 schools with year 8 students. Schools with four students in year 4 or 8 had about a one percent chance of being selected, while some of the largest intermediate (years 7 and 8) schools had a more than 90 percent chance of inclusion. In the two cases where the same school was chosen at both year 4 and year 8 level, a replacement year 4 school of similar size was chosen from the same region and district, type and size of school.

Additional samples

From 1999 onwards, national monitoring includes additional samples of students to allow the performance of special categories of students to be reported.

To allow results for Pacific Island students to be compared with those of Māori students and other students, ten additional schools were selected at year 4 level and ten at year 8 level. These were selected randomly from schools that had not been selected in the main sample, had at least twenty percent Pacific Island students attending the school, and had at least twelve students at the relevant year level.

To allow results for Māori students learning in Māori immersion programmes to be compared with results for Māori children learning in English, ten additional schools were selected at year 8 level only. They were selected from Māori immersion schools (such as *Kura Kaupapa Māori*) that had at least four year 8 students, and from other schools that had at least four year 8 students in classes classified as Level 1 immersion (80 to 100 percent of instruction taking place in Māori).

Pairing small schools

At the year 8 level, five of the 120 chosen schools in the main sample had less than twelve year 8 students. For each of these schools, we identified the nearest small school meeting our criteria to be paired with the first school. Wherever possible, schools with eight to eleven students were paired with schools with four to seven students, and vice versa. However, the travelling distances between the schools were also taken into account. Three of the ten schools in the year 8 Māori immersion sample also needed to be paired with other schools of the same type.

Similar pairing procedures were followed at the year 4 level. Eight pairs were required in the main sample of 120 schools.

Contacting schools

During the second and third weeks of June, we made telephone contact with the principals or acting principals of all schools in the year 8 samples (excluding the 13 schools in the Māori immersion sample).

In our telephone calls with the principals, we briefly explained the purpose of national monitoring, the safeguards for schools and students, and the practical

demands that participation would make on schools and students. We informed the principals about the materials which would be arriving in the school (a copy of a twenty minute NEMP videotape plus copies for all staff and trustees of the general NEMP brochure and the information booklet for sample schools). We asked the principals to consult with their staff and Board of Trustees and confirm their participation by the middle of July.

A similar procedure was followed in July with the principals of the schools selected in the year 4 samples, and they were asked to respond to the invitation by the end of August. The principals of the 13 schools in the Māori immersion sample at year 8 level were included at that time, and were sent brochures in both Māori and English.

Response from schools

Of the 293 schools invited to participate, 286 agreed. Five schools in the year 8 sample declined, and two in the year 4 sample. A reason for the higher than usual proportion declining at year 8 level appeared to be the short time between the first contact with these schools and the planned start of assessments. Because of delays in the provision of school roll information, year 8 schools had only two months' notice instead of the usual three months. Four schools declined participation because of extensive other commitments during the assessment period, two because of major building work taking place, and one because its Board did not approve participation.

Sampling of students

With their confirmation of participation, each school sent a list of the names of all year 4 or year 8 students on their roll. Using computer generated random numbers, we randomly selected the required number of students (twelve, or four plus eight in a pair of small schools), at the same time clustering them into random groups of four students. The schools were then sent a list of their selected students and invited to inform us if special care would be needed in assessing any of those children (e.g. children with disabilities or limited skills in English).

At the year 8 level, we received 96 comments from schools about particular students. In 28 cases, we randomly selected replacement students because the children initially selected had left the school between the time the roll was provided and the start of the assessment programme in the school, or were expected to be away throughout the assessment week. The remaining 68 comments concerned children with special needs. Each such child was discussed with the school and a decision agreed. Three students were replaced because they were very recent immigrants who had extremely limited English language skills. Twenty students were replaced because they had disabilities or other problems of such seriousness that it was agreed that the students would be placed at risk if they participated. Participation was agreed upon for the remaining 45 students, but a special note was prepared to give additional guidance to the teachers who would assess them.

In the corresponding operation at year 4 level, we received 111 comments from schools about particular students. Forty-two students originally selected needed to be replaced because they had left the school or were expected to be away throughout the assessment week. Eight students were replaced because of their NESB (non-English speaking background) status and very limited English. Twenty students were replaced because they had disabilities or other problems of such seriousness the students appeared to be at risk if they participated (twelve because of severe disabilities and eight because of limited ability to cope emotionally with the assessment situation). Special notes for the assessing teachers were made about 41 children retained in the sample.

Communication with parents

Following these discussions with the school, Project staff prepared letters to all of the parents, including a copy of the NEMP brochure, and asked the schools to address the letters and mail them. Parents were told they could obtain further information from Project staff (using an 0800 number) or their school principal, and advised that they had the right to ask that their child be excluded from the assessment.

Our 0800 number was monitored in evenings, as well as during the day, for at least a week following each mailing of letters to parents.

At the year 8 level, we received about twenty phone calls including several from students wanting more information about what would be involved. The main issues raised by parents were our reasons for selection of their child, a wish for fuller details or reiteration of what would be involved, concerns about the use of video equipment, or reluctance of the child to take part. Six children were replaced as a result of these contacts, four at the child's request, and two at the parents' request (one parent was concerned about difficulties associated with her child's NESB status and the other gave no reason).

At the year 4 level we also received about twenty phone calls from parents. Some wanted details confirmed or explained (notably about reasons for selection). Four children were replaced at parents' request because the parents were concerned about additional stress for their children. Two children were replaced at their own request: one because of shyness and the other because of worry about falling behind in class. The other eight children were replaced at the request of their parents (two because the parents were Exclusive Brethren and did not want their children viewing video material, two because of concern about the emotional demands on their children, one because of concern about missing class time, and three with no reason given).

Practical arrangement with schools

On the basis of preferences expressed by the schools, we then allocated each school to one of the five assessment weeks available and gave them contact information for the two teachers who would come to the school for a week to conduct the assessments. We also provided information about the assessment schedule and the space and furniture requirements, offering to pay for hire of a nearby facility if the school was too crowded to accommodate the assessment programme.

Results of the sampling process

As a result of the considerable care taken, and the attractiveness of the assessment arrangements to schools and children, the attrition from the initial sample was quite low. Less than three percent of selected schools did not participate, and about two percent of the originally sampled children had to be replaced for reasons other than their transfer to another school. The sample can be regarded as very representative of the population from which it was chosen (all children in New Zealand schools at the two class levels except the one to two percent in special schools or schools with less than four year 4 or year 8 children).

Of course, not all the children in the sample actually were able to be assessed. Eight year 8 students and eight year 4 students left school at short notice and could not be replaced. A further 41 year 8 students and 19 year 4 students were absent from school throughout the assessment week. Some others were absent from school for some of their assessment sessions, and a small percentage of performances were lost because of malfunctions in the video recording process. Some of the students, particularly in the Māori immersion sample, ran out of time to complete the schedule of tasks. Nevertheless, for many tasks over 95 percent of the student sample were assessed. No task had less than 90 percent of the student sample assessed. Given the complexity of the Project, this is a very acceptable success.

Composition of the sample

Because of the sampling approach used, regions were fairly represented in the sample, in approximate proportion to the number of school children in the regions.

Region

PERCENTAGES OF STUDENTS FROM EACH REGION		
REGION	% OF YEAR 4 SAMPLE	% OF YEAR 8 SAMPLE
Northland	4.0	5.1
Auckland	31.8	29.3
Waikato	10.1	10.3
Bay of Plenty/Poverty Bay	8.2	8.1
Hawkes Bay	4.2	4.2
Taranaki	2.3	3.3
Wanganui/Manawatu	6.7	6.8
Wellington/Wairarapa	10.9	10.7
Nelson/Marlborough/West Coast	4.3	4.1
Canterbury	10.6	11.5
Otago	4.3	4.1
Southland	2.6	2.6

Demography

DEMOGRAPHIC VARIABLES: PERCENTAGES OF STUDENTS IN EACH CATEGORY			
VARIABLE	CATEGORY	% YEAR 4 SAMPLE	% YEAR 8 SAMPLE
Gender	Male	50	49
	Female	50	51
Ethnicity	Non-Māori	84	80
	Māori	16	20
Geographic Zone	Greater Auckland	32	29
	Other North Island	46	49
	South Island	22	22
Community Size	> 100,000	58	57
	10,000–100,000	27	23
	< 10,000	15	20
School SES Index	Bottom 30 percent	23	28
	Middle 40 percent	38	43
	Top 30 percent	39	29
School % Māori	< 10%	46	31
	10–30%	38	51
	> 30%	16	18
School % Pacific Island	Up to 5%	85	83
	> 5%	15	17
Size of School	< 20 y4 students	16	
	20–35 y4 students	18	
	> 35 y4 students	66	
	< 35 y8 students		19
	35–150 y8 students		39
	> 150 y8 students		42
Type of School	Full Primary		33
	Intermediate		52
	Other (not analysed)		15