



Demographic and Statistical Analysis Unit

Achievement at Māori immersion & bilingual schools

Update for 2005 results

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Data source: National Qualifications Framework data from NZQA

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Purpose

This paper provides 2005 achievement results for candidates¹ at Māori immersion and bilingual schools. It updates the information given in two previous reports: *Māori achievement & achievement at Māori immersion and bilingual schools*; and *Achievement at Māori immersion & bilingual schools: Update for 2004 data*. It makes comparisons between years and between groups of candidates.

Introduction

The achievement patterns of candidates involved in Māori-medium education, and whether they differ from the general population, are of interest to many groups, including school communities and policy makers. This paper compares results from immersion and bilingual schools in 2003, 2004 and 2005. It also looks at the achievement by Māori candidates in English medium schools as compared with candidates enrolled in immersion and bilingual schools.

However, the small number of Māori-medium candidates makes comparisons with Māori candidates in English medium schools, as well as between candidates at immersion and bilingual schools, difficult and sometimes misleading. This is because one or two high- or low-performing students can skew the results in a small population, whereas these effects are evened out in larger groups.

Summary of findings

The results in this report, as well as those in the previous two reports on NCEA achievement at immersion and bilingual schools, show that candidates at immersion and bilingual schools are achieving at least as well as Māori candidates in English medium schools. The main findings of this report are:

- The majority of candidates at immersion and bilingual schools gain NCEA qualifications.
- Year 13 candidates at immersion and bilingual schools were more likely to gain University Entrance (UE) in 2005 than in 2004. This probably reflects greater awareness of the requirements for UE under the new qualifications system.
- Year 11 candidates at these schools have strong literacy skills. Each year around 90% of Year 11 candidates at immersion and bilingual schools have met the literacy requirement for NCEA level 1 by the end of Year 11.
- The majority of Year 11, Year 12 and Year 13 candidates at these schools gained credits in te reo Māori, English and mathematics. However, less than 40% of these candidates gained credits in science.

¹ A candidate is a student who has gained at least one credit on the National Qualifications Framework.

The difference between students and candidates

This paper reports on results for candidates. A candidate is a student who has achieved at least one credit on the National Qualifications Framework. The number of candidates is smaller than the cohort of secondary students who could take part in gaining credits.

The measure of candidates is used because not all schools report students who attempted but did not achieve internally assessed credits. Including these students would therefore make the analysis outcomes unreliable. In addition, the student enrolment numbers collected by the Ministry of Education are a snapshot in the middle of the year, whereas the achievement data collected by the New Zealand Qualifications Authority spans a full year. Comparing these two figures at a national level gives a good indication of participation in gaining NQF credits. But comparing these two numbers for smaller groups can give surprising results for several reasons:

- Students move or leave schools throughout the year.
- Some small schools are not accredited with NZQA to award qualifications. Students enrolled at such schools have their assessment recorded against an affiliated school that is accredited.
- Measures like year of schooling and ethnicity are not always aligned in the two collections.

Candidates is the standard measure used in Ministry of Education analysis of NZQA senior secondary school data. Other published sources, most notably the NZQA website, use student numbers from the roll returns to determine achievement rates.

In immersion and bilingual schools in 2005, over 80% of Year 11 and Year 12 students and just under 80% of Year 13 students were candidates (see Table 1). Over 100% of Year 11 students at bilingual schools participated in NQF study. The unexpected result is an illustration of the issues discussed above.

Table 1: Participation in NQF study at immersion & bilingual schools, 2005

	Year 11		Year 12		Year 13	
	No. of students in Jul 05	% who were candidates in 2005	No. of students in Jul 05	% who were candidates 2005	No. of students in Jul 05	% who were candidates in 2005
Immersion school	173	82%	92	89%	57	79%
Bilingual school	208	113%	215	90%	99	77%

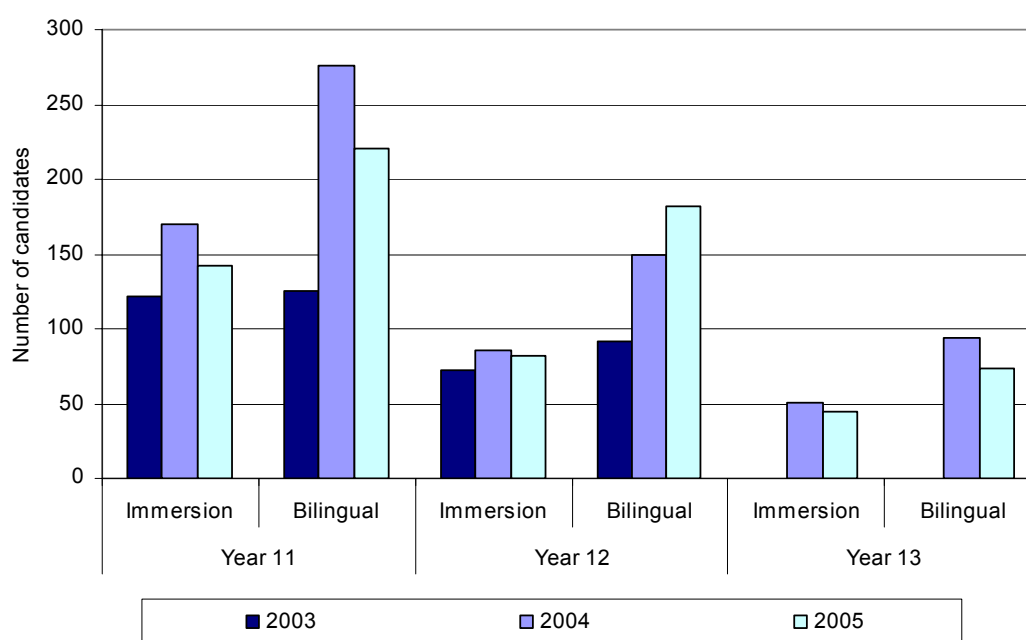
Population of candidates

The population used for analysis each year depends on how many schools meet the criteria for Māori immersion and bilingual schools. A Māori immersion school is where all students at the school receive over 20 hours per week of their instruction time in te reo Māori. A Māori bilingual school is where all students at the school receive 3 hours or more per week of their instruction time in te reo Māori. These criteria are constructs of the Ministry of Education and are not permanently attached to schools. For example, a small number of schools have been bilingual schools one year and immersion schools the following year, and vice versa.

The number of schools within each group varies from year to year. So too does the number of candidates. Figure 1 illustrates the number of candidates at immersion and bilingual schools between 2003 and 2005. The sharp increase in the number of bilingual school candidates between 2003 and 2004 is due mainly to two established secondary schools that met the criteria in 2004 but not in 2003.

In 2005 there were fewer Year 11 candidates than in 2004. For immersion schools this was due to one school that was immersion in 2004, but bilingual in 2005. At bilingual schools the number of Year 11 candidates has dropped while the number of Year 12 candidates has risen between 2004 and 2005. This appears to be due to fluctuations in rolls at some of these schools.

Figure 1: Number of candidates at immersion and bilingual schools by year of schooling, 2003 – 2005



In addition to immersion and bilingual schools, there are also students involved in Māori-medium education at immersion and bilingual units in English medium schools. Although these students account for just over half of the students involved in Māori-medium education at senior secondary level, they are not included in the analysis in this paper. This is because it is currently not possible from our data to identify which students at these schools are in the immersion or bilingual units. The Ministry of

Education is moving towards collecting data on individual students, so looking at achievement of students at immersion and bilingual units, as well as identifying students who did not achieve any NQF credits, should be possible in a few years' time.

NCEA qualifications attained in 2005

Candidates at both immersion and bilingual schools are very likely to gain a National Certificate of Educational Achievement (NCEA) qualification (see Table 2).

Table 2: Highest NCEA qualification achieved by senior secondary candidates at Māori immersion and bilingual schools and Māori at English medium schools, 2005

		Total Number of Candidates	Percentage who achieved NCEA L3 in 2004	Percentage of candidates achieving NCEA L3	Percentage of candidates achieving NCEA L2	Percentage of candidates achieving NCEA L1	Total percentage achieving an NCEA
		No.	%	%	%	%	%
Immersion School	Year 11	142	1%	4%	17%	32%	54%
	Year 12	82	5%	13%	37%	6%	61%
	Year 13	45	9%	58%	4%		71%
Bilingual School	Year 11	234			11%	49%	60%
	Year 12	194	1%	6%	69%	6%	81%
	Year 13	76	1%	62%	7%		70%
Māori in English medium schools	Year 11	9,555			1%	39%	39%
	Year 12	6,060			45%	13%	58%
	Year 13	3,638	1%	29%	17%	3%	50%

Note: Some students who gained NQF credits in 2005 had already achieved an NCEA level 3 in 2004. Because these candidates had already gained the highest NCEA the previous year, they were not able to gain an NCEA in 2005. These candidates are counted in the total achieving an NCEA in 2005 because it provides the full picture of NCEA achievement.

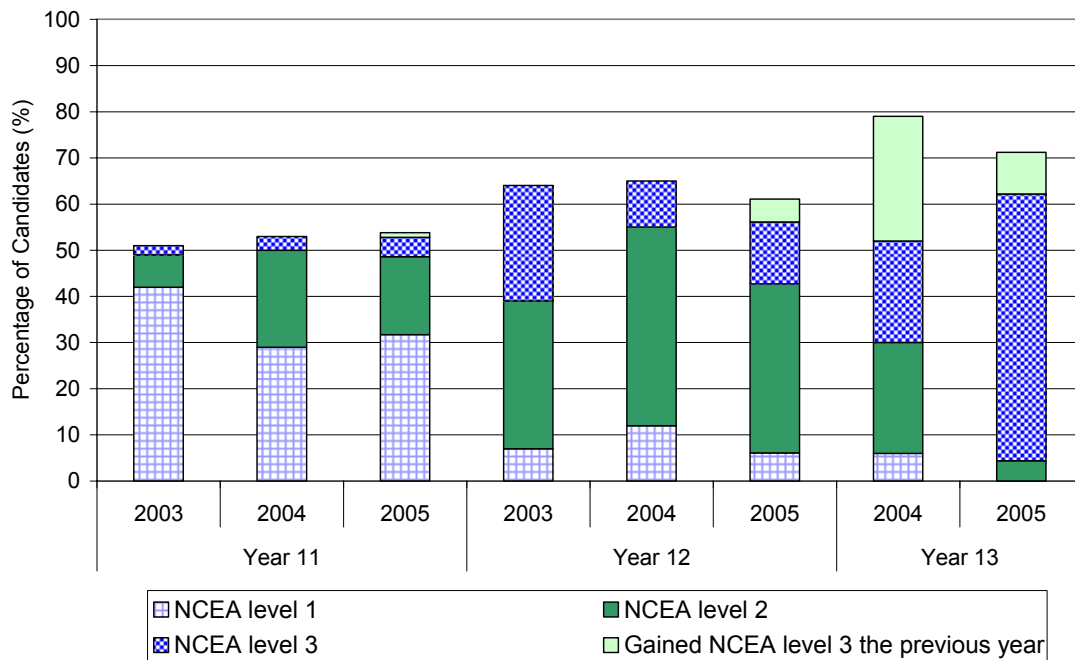
The overall patterns in 2005 are the same as in 2004:

- Year 11 and Year 12 candidates at bilingual schools were more likely to gain an NCEA qualification than their immersion school counterparts.
- Immersion and bilingual candidates were more likely than Māori in mainstream schools to gain NCEA qualifications above the typical level for their year of schooling.
- Compared to Māori in mainstream schools, bilingual and immersion candidates are more likely to gain an NCEA level 3, either as Year 12 or Year 13.

Immersion school candidates

Overall, the percentage of Year 11 and Year 12 candidates gaining NCEA has remained very similar in 2003, 2004 and 2005 (Figure 2). However, the percentage gaining different levels of NCEA has varied over these three years. Much of this variation is probably due to the small numbers of candidates and the diversity within these schools.

Figure 2: Highest NCEA qualification attained by IMMERSION school candidates, in 2003, 2004 & 2005



Year 11 candidates are more likely to gain NCEA level 2 and level 3 in 2004 and 2005 compared to 2003.

Although the overall proportion of Year 13 candidates gaining an NCEA has declined, a higher percentage of the 2005 Year 13 candidates had an NCEA level 3 compared to the 2004 Year 13 candidates (67% in 2005 compared to 49% in 2004). However, the small numbers of candidates in Year 13 means that differences between years could be due mainly to differences in the cohorts.

Bilingual school candidates

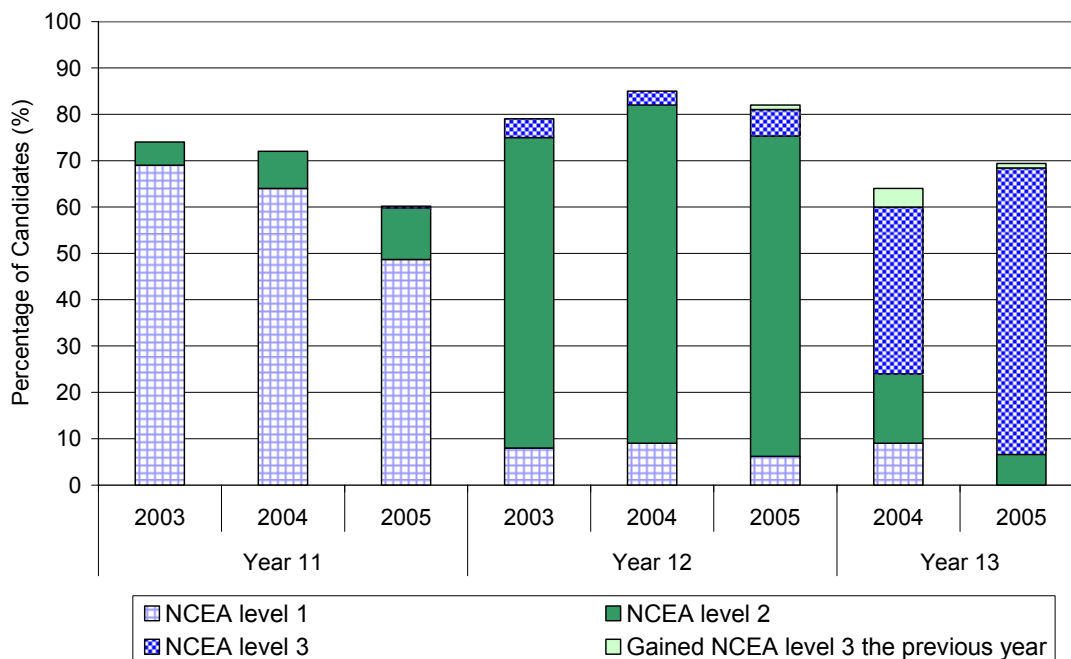
Achievement at bilingual schools is slightly different in 2005 compared to 2004 (see Figure 3). However, the small number of candidates means that variations are more likely than in larger populations. Thus any changes in achievement should not be viewed as the start of a trend, as next year's achievement is likely to be different again.

Year 11 candidates were less likely to gain an NCEA qualification in 2005 than in previous years.

The achievement levels for Year 12 candidates are very similar from 2003 to 2005.

A higher proportion of Year 13 candidates gained NCEA level 3 in 2005 than in 2004. This also may be a variation due to small numbers.

Figure 3: Highest NCEA qualification attained by BILINGUAL school candidates, in 2003, 2004 & 2005



Gaining University Entrance

University Entrance (UE) is an award that can be gained in conjunction with NCEA and non-NCEA qualifications. Although most candidates gaining UE also gain an NCEA level 3, some do not. Candidates can accumulate credits towards UE over a number of years. University Entrance was first available as part of the NQF in 2004.

The numbers of Year 13 candidates at immersion and bilingual schools are very small, so the percentages shown in Table 3 should be viewed with caution. For example, the number of Year 13 candidates at bilingual schools who gained UE only increased by 5 between 2004 and 2005, yet the percentage has increased dramatically due to the small number of total candidates.

In spite of the small numbers involved, the 2005 results are a definite improvement on 2004. This may be because teachers and students are now more aware of the requirements for UE through the new system. More years of information are needed in order to determine whether this is the case, or whether the increase is due to the cohort of students in 2005.

Table 3: Year 13 candidates to meet the UE requirements, 2004 and 2005

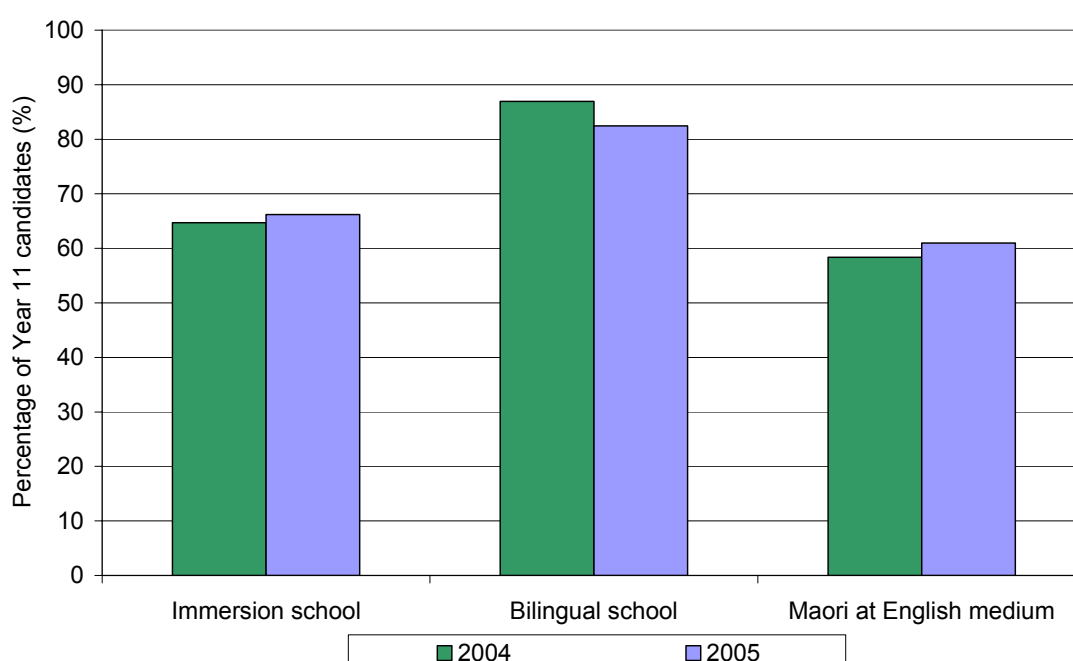
	2004 - Year 13 candidates who attained UE		2005 - Year 13 candidates who attained UE	
	No.	% of total	No.	% of total
Immersion school	11	22%	25	56%
Bilingual school	33	35%	38	52%

Literacy and numeracy requirements for NCEA Level 1

To gain an NCEA level 1, candidates must achieve 8 literacy credits and 8 numeracy credits.

The way we are reporting meeting the literacy and numeracy requirements has changed since the last report on achievement at immersion and bilingual schools. In the last report only literacy and numeracy credits gained in Year 11 were counted in this measure. In this report all literacy and numeracy credits gained before Year 11, as well as those gained in Year 11, are counted.

Figure 4: Percentage of Year 11 candidates* to meet both the literacy and numeracy requirements, 2004 & 2005



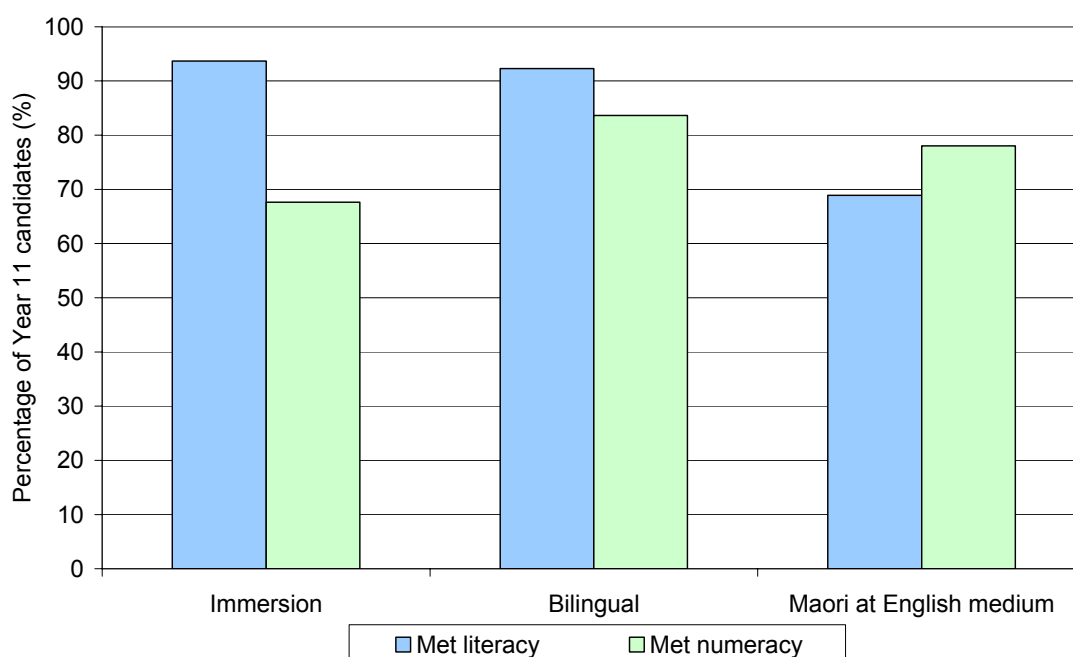
* Excludes non-Māori at English medium schools and those with unknown ethnicity at English medium schools. Māori in immersion or bilingual units are counted under Māori at English medium schools.

Figure 4 depicts the percentage of Year 11 candidates who met both the literacy and numeracy requirements for an NCEA level 1. Immersion school candidates were just as likely as Māori in English medium schools to meet both the requirements. Bilingual school candidates were more likely to meet both requirements than other candidates.

When literacy and numeracy are looked at separately (shown in Figure 5), we see that candidates at immersion and bilingual schools have very high rates of meeting the literacy requirement. This is consistent with the pattern in previous years.

Interestingly, immersion school candidates tend to start gaining literacy credits through te reo Māori domains while in Year 9 and Year 10. This contributes to the high rate of meeting the literacy requirement at immersion schools.

Figure 5: 2005 Year 11 candidates* - percentage to meet the literacy requirement, percentage to meet the numeracy requirement



* Excludes non-Māori at English medium schools and those with unknown ethnicity at English medium schools. Māori in immersion or bilingual units are counted under Māori at English medium schools.

Note: Includes those who met both requirements as well as those who met only one.

Subject participation

Subject achievement in an NCEA context can be looked at in many different ways. This section gives a brief overview of subject participation and achievement at immersion and bilingual schools. It looks at how many candidates gained credits in four 'core' subjects: te reo Māori, mathematics, science and English. It does not look at the level of the credits gained, the number of credits gained, or the quality (excellence, merit or achieved) of credits gained. This is because the small numbers at immersion and bilingual schools means that detailed breakdowns tend to say more about individual students than about the population. For the same reason Year 11, Year 12 and Year 13 candidates have been aggregated together when looking at English, mathematics and science.

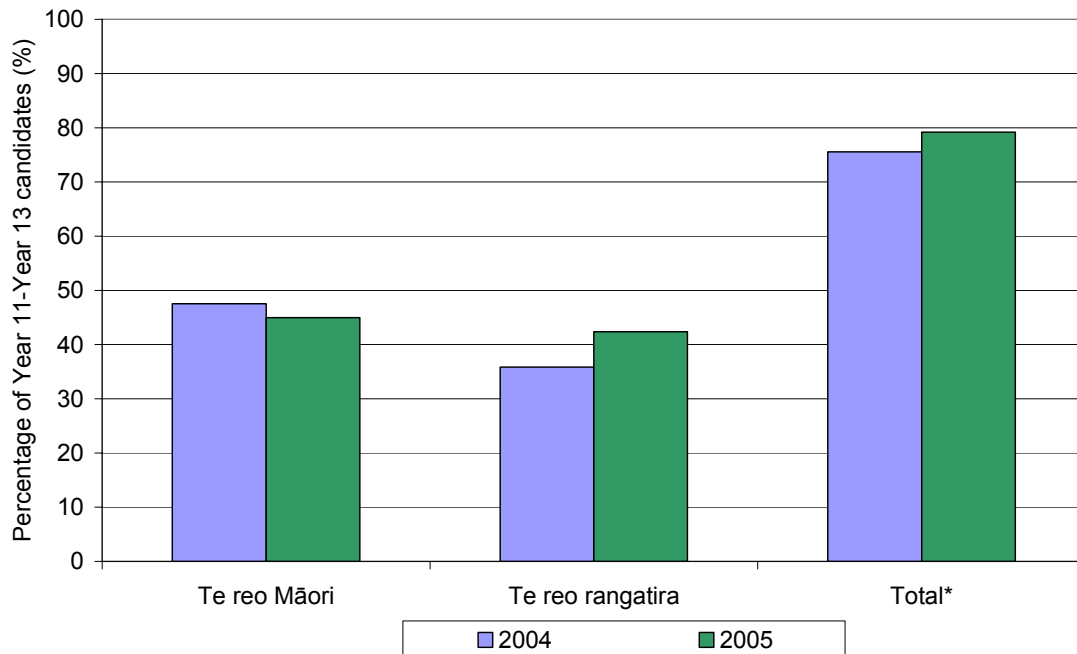
Te reo Maori and te reo rangatira

The majority of Year 11 to Year 13 candidates at immersion and bilingual schools gain credits in either te reo Maori² or te reo rangatira³ (see Figure 6 and Figure 7 overleaf). Not surprisingly, immersion school candidates are more likely to gain te reo rangatira credits than bilingual school candidates.

² Te reo Maori is defined here as the NQF domains panui, tuhituhi, whakarongo and korero at NQF levels 1-3 (NZQA website has details of the standards this includes – www.nzqa.govt.nz).

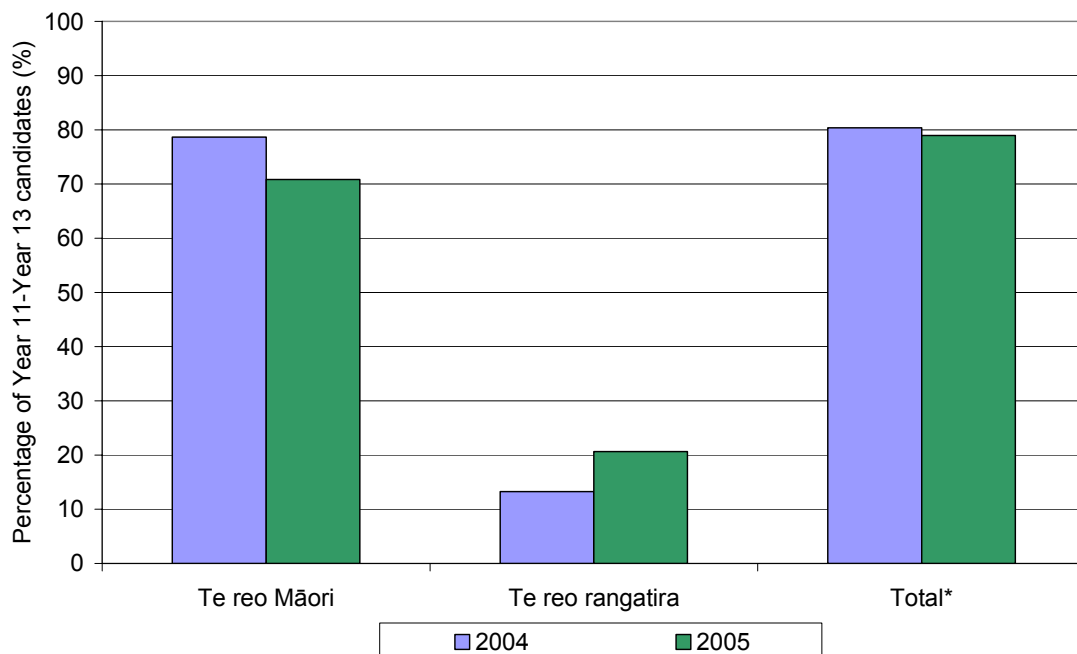
³ Te reo rangatira is defined here as the NQF domain te reo rangatira (all levels), and the domains panui, tuhituhi, whakarongo and korero above level 3.

Figure 6: Percentage of IMMERSION school Year 11 – Year 13 candidates to gain at least one credit in te reo Maori and te reo rangatira, 2004 and 2005



* Some candidates gained credits in both te reo Maori and in te reo rangatira. These candidates are only counted once in the total.

Figure 7: Percentage of BILINGUAL school candidates to gain at least one credit in te reo Maori and te reo rangatira, 2004 and 2005



* Some candidates gained credits in both te reo Maori and in te reo rangatira. These candidates are only counted once in the total.

A relatively large number of immersion school candidates begin gaining credits in te reo Maori in Year 9 and Year 10 (see Table 4). In contrast, bilingual school candidates are tend to start gaining credits in te reo Maori in Year 11.

Table 4: Number of Year 9 – Year 13 candidates to gain credits in te reo Maori and te reo rangatira, 2004 and 2005

		Total no. to gain credits in te reo Māori		Total no. to gain credits in te reo rangatira		Total no. to gain credits in te reo*	
		2004	2005	2004	2005	2004	2005
Immersion School	Year 9	126	115	18	49	142	148
	Year 10	128	142	36	51	146	182
	Year 11	94	80	79	49	155	120
	Year 12	40	36	25	49	61	74
	Year 13	12	5	6	16	16	19
Bilingual School	Year 9	42	25			42	25
	Year 10	45	41			45	41
	Year 11	241	170	30	50	242	198
	Year 12	114	137	24	42	119	149
	Year 13	54	50	15	12	57	51

* Some candidates gained credits in both te reo Maori and in te reo rangatira. These candidates are only counted once in the total.

English, Mathematics and Science

Similar percentages of immersion and bilingual school candidates gained credits in English, mathematics and science (Figure 8 and Figure 9 overleaf). Candidates in both groups were very likely to gain credits in mathematics and English. Bilingual school candidates were more likely to gain credits in English than immersion school candidates, which is perhaps not surprising, given that more instruction time at bilingual schools is in English.

Very few candidates in the two groups gained credits in science. This is a concern as it may limit the future career and tertiary pathways of many of these candidates. In addition, science literacy is important for understanding and participating in many debates in wider society. A lack of science resources in te reo Māori and difficulty in recruiting science teachers who can teach in an immersion context are probably factors in the low participation and achievement in science in these schools.

Figure 8: Percentage of IMMERSION school candidates to gain at least one credit in English, mathematics and science, 2004 and 2005

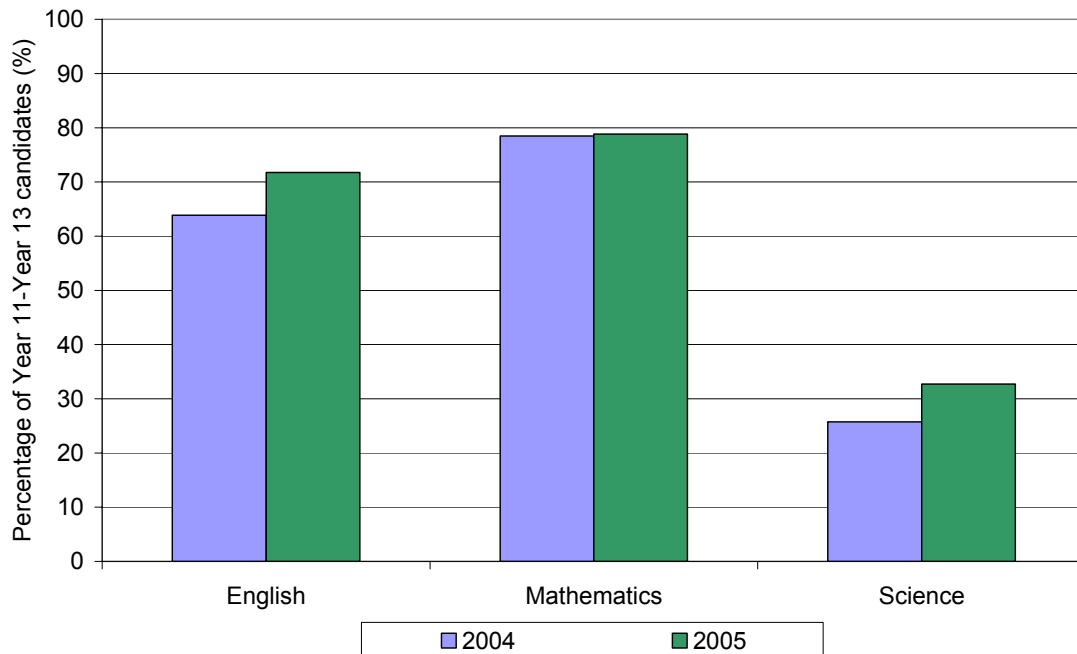


Figure 9: Percentage of BILINGUAL school candidates to gain at least one credit in English, mathematics and science, 2004 and 2005

