

Wānangatia te Putanga Taura  
National Monitoring Study  
of Student Achievement

# Learning Languages 2016 – Key Findings





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National Monitoring Study  
of Student Achievement

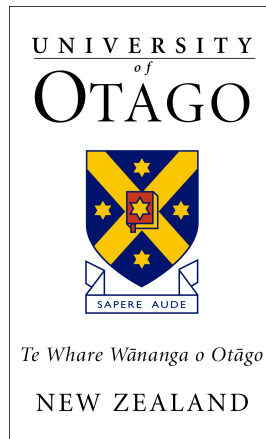
# Learning Languages 2016

## Key Findings

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and  
New Zealand Council for Educational Research



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**Key reports for Learning Languages 2016 – Key Findings**  
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- principals, teachers and Board of Trustees members of the schools that participated in the 2016 main study including the linking study
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- the teachers who administered the assessments to the students
- the teachers and senior initial teacher education students who undertook the marking
- the Ministry of Education Research Team and Steering Committee.

# Executive Summary

## Introduction

In 2016, the *National Monitoring Study of Student Achievement* (NMSSA) assessed student achievement at Year 4 and Year 8 in two areas of the *New Zealand Curriculum* (NZC<sup>1</sup>)—learning languages and technology. This report presents the key findings for learning languages. It is supported by a report of technical information related to different components of the study.

## Learning languages

The learning languages learning area in the NZC emphasises the connection between language, culture and identity building. Moreover, languages connect people across various contexts. The NZC describes learning languages as ‘... a means of communicating with people from another culture and exploring one’s own personal world’ (p. 24).

Unlike other learning areas where curriculum levels generally relate to years at school, this learning area is unique insofar as the levels describe learning progressions that can have as their starting point a 5-year-old student or a 13-year-old student.

## Te reo Māori

Ko te reo te mauri o te mana Māori  
The language is the life force of mana Māori  
- Sir James Henare

Te reo Māori was given legal status nearly 30 years ago and is one of the three official languages of Aotearoa New Zealand, along with English and New Zealand Sign Language (NZSL). The achievement focus for this study was on te reo Māori as described in *Te Aho Arataki Marau mō te Ako i Te Reo Māori – Kura Auraki: Curriculum Guidelines for Teaching and Learning Te Reo Māori in English-medium Schools: Years 1-13*<sup>2</sup>.

There is no compulsion to teach te reo Māori to a particular level of proficiency and, according to the Royal Society of New Zealand (2013<sup>3</sup>), the language receives uneven attention across the education system.

Therefore the achievement focus for this study was on students’ knowledge of te reo Māori, mainly within Level 1 of the curriculum guidelines.

During the writing of this report, there was ongoing public debate about whether teaching and learning te reo Māori should be made compulsory at school. Also during this time, the *Education (Update) Amendment Act 2017*<sup>4</sup> stated that the provision of opportunities for students to learn te reo Māori at school can be requested by parents, and a school board “must take all reasonable steps to provide instruction in tikanga Māori (Māori culture) and te reo Māori (the Māori language) for full-time students whose parents ask for it” (Schedule 6, Boards of Trustees).

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<sup>1</sup> Ministry of Education. (2007). *The New Zealand Curriculum*. Wellington: Learning Media.

<sup>2</sup> Ministry of Education. (2009). *Te Aho Arataki Marau mō te Ako i Te Reo Māori – Kura Auraki: Curriculum Guidelines for Teaching and Learning Te Reo Māori in English-medium Schools: Years 1-13*. Wellington: Ministry of Education.

<sup>3</sup> Royal Society of New Zealand. (2013). *Languages in Aotearoa New Zealand*. Retrieved 3 August 2015 from: <http://www.royalsociety.org.nz/expert-advice/papers/yr2013/languages-in-aotearoa-new-zealand/>

<sup>4</sup> New Zealand Government. (2017). *Education (Update) Amendment Act 2017*. <http://www.legislation.govt.nz/act/public/2017/0020/latest/whole.html#DLM6929060>

## Study features

NMSSA used a two-step sampling procedure to select 100 schools at each year level and up to 27 students within each school. The nationally representative sample at each year level was made up of about 2,300 students (see Appendix 1, *Technical Information 2016* report).

A programme was designed with three data gathering components to gain a broad understanding of learning languages – international languages, New Zealand Sign Language (NZSL) and te reo Māori. Table 1 outlines the features of each component.

Table 1 Components of the 2016 NMSSA learning languages programme

Component	Focus	Approach
1. Student questionnaire	<ul style="list-style-type: none"> <li>attitudes to learning an international language* and te reo Māori</li> <li>learning experiences in an international language* and te reo Māori at school</li> </ul>	<ul style="list-style-type: none"> <li>computer-based</li> <li>completed by around 2,300 students at each year level</li> </ul>
2. Teacher and principal questionnaires	<ul style="list-style-type: none"> <li>views of international language and NZSL instruction in their school*</li> <li>views of te reo Māori instruction in their school</li> <li>teacher confidence as an international language* and te reo Māori educator</li> <li>professional learning and development in international languages*, NZSL, and te reo Māori</li> <li>provision for teaching international languages*, NZSL, and te reo Māori in the school</li> </ul>	<ul style="list-style-type: none"> <li>paper-based</li> <li>completed by more than 230 teachers and 91 principals at each year level</li> </ul>
3. Achievement in Te Reo Māori	<ul style="list-style-type: none"> <li>knowledge and understanding of te reo Māori words and phrases</li> </ul>	<ul style="list-style-type: none"> <li>group-administered tasks mainly presented by computer</li> <li>completed by around 2,300 students at each year level</li> </ul>

\* Applied only to Year 8

The Te Reo Māori<sup>5</sup> (TRM) assessment incorporated the three overlapping strands of learning languages: communicative competency, language knowledge and cultural knowledge. The main emphasis was on language knowledge associated with curriculum level 1 (Taumata 1). Achievement on the TRM assessment was reported on a measurement scale that covered both year levels. The scale was divided into four performance ranges Taumata 1 - Wāhanga 1 (step 1) to Taumata 1 - Wāhanga 4 (step 4).

Other data were collected through questionnaires completed by students, teachers and principals. Questions relating to international languages were included only at the Year 8 level, where there is an expectation that students will have opportunities to learn international languages.

This report draws on the contextual information from the questionnaires to provide key findings across the learning languages area of the NZC (international languages, NZSL, and then te reo Māori). It also explores associations between achievement on the TRM assessment and contextual factors for te reo Māori.

<sup>5</sup> Throughout this report, 'Te Reo Māori' is capitalised when referring to the assessment developed for this study, when it is part of the name of a scale (such as the Te Reo Māori scale), and in chapter headings. Elsewhere in the report, we refer to 'te reo Māori'.

## Key findings about learning languages

### The teaching and learning of languages

#### **International languages**

Sixty-one percent of the students in the Year 8 sample were learning an international language at school in 2016. French and Spanish were the international languages most frequently offered by schools. These were closely followed by Japanese and Mandarin.

Students' attitudes to learning an international language were generally positive. They were more confident in their abilities to speak and understand what they hear in their preferred international language than to read and write it.

A smaller proportion of Māori students, compared with non-Māori, felt that learning an international language at school was 'important' or 'very important' (60 percent compared with 72 percent, respectively). A smaller proportion of Māori students were learning an international language (53 percent compared with 64 percent of non-Māori students). Māori students tended to be less confident about their preferred international language, compared with non-Māori students.

Compared with all students, greater proportions of Pasifika students agreed with statements about their attitude to and confidence in an international language, and also reported more frequent learning experiences. Almost half of Pasifika students were learning a Pasifika language.

Of the teachers who reported teaching an international language (either as a specialist or by incorporating it into their classroom programme), 87 percent rated learning an international language as 'important' or 'very important'. The main reasons they gave for these ratings were that learning an international language helped students develop an understanding of other cultures and languages, and that it was useful for a range of purposes (such as building students' self-confidence and career possibilities in the future).

Sixty percent of teachers of an international language reported their students spend 20 hours or less learning that international language over the school year.

The leading factor that helped principals decide which international language(s) to offer was having an existing staff member who could teach it. A specialist language teacher was employed in 40 percent of schools, most often to teach Mandarin, Japanese, French, or Spanish.

The findings relating to teacher PLD were mixed. Sixty-five percent of principals indicated their teachers had access to PLD opportunities to support their own language learning, and 59 percent agreed that teachers had access to PLD to support their teaching of an international language. However, given a list of professional interactions with other teachers or experts more than 30 percent of teachers indicated that they had never or almost never been involved in each interaction. Thirty-nine percent reported they had never had external PLD focused on the international language they were teaching.

#### **New Zealand Sign Language (NZSL)**

Very few teachers at Year 4 or Year 8 reported having any students in their class with whom they needed to use NZSL. Nonetheless, 20 percent of teachers in the Year 4 sample and 8 percent in the Year 8 sample incorporated planned instruction in NZSL in their programme. The majority of teachers rated the professional support they received in school for teaching NZSL as 'poor' or 'very poor'.

Just over two-thirds of principals at each year level rated learning NZSL at school as 'somewhat important'. Many acknowledged NZSL as an official language of New Zealand, but had no immediate need to use it, or felt the curriculum was already crowded. Many principals indicated they would make learning NZSL a higher priority if they enrol a student at their school who needs to use NZSL to communicate.

Around two-thirds of principals rated their school's provision of opportunities for students to learn NZSL as 'poor'. About a quarter of principals indicated that teachers in their school have access to PLD opportunities to support their own learning, and their teaching of NZSL.

## **Te reo Māori**

### From students

At both year levels, singing waiata was the learning experience that students were most likely to report happened very often, while talking to their classmates in te reo Māori in the playground was the least likely. Greater proportions of Year 8 than Year 4 students indicated they never took part in kapa haka, and never read books or websites written in te reo Māori.

All students responded to a set of statements about their attitudes to learning te reo Māori and a set of statements about their confidence in learning te reo Māori. The majority of students at both year levels expressed positive attitudes to and confidence in learning te reo Māori. A greater proportion of students at both year levels expressed confidence in their ability to hear and speak te reo Māori, and to use the language in performances, than to read and write in te reo Māori. This was also true for Māori students.

From students' responses to each set of statements, an IRT scale was constructed. These were called the Attitude to Te Reo Māori (ATRM) scale and Confidence in Te Reo Māori (CTRM) scale, respectively.

The average score for Year 4 students on the ATRM scale was higher than for Year 8. At both year levels, the average score for girls on the ATRM scale and the CTRM scale was higher than boys. This was also true for Māori students.

Māori students at both year levels were more positive about learning te reo Māori, on average, than non-Māori. This difference was greater at Year 8 than at Year 4. At both year levels, greater proportions of Māori students than non-Māori students thought it was very important to learn te reo Māori. Overall, Māori students reported more frequent te reo Māori learning experiences than did all students. Māori girls scored higher on average than Māori boys on the ATRM scale at both year levels.

### From teachers

Most teachers (97 percent at Year 4 and 88 percent at Year 8) rated students learning te reo Māori at school as 'important' or 'very important'. Reasons given by some of the teachers who thought this was less important reflected a belief that there were other more pressing learning priorities for their students. Teachers' responses indicated that more Year 4 students than Year 8 students spent over 20 hours learning te reo Māori during a school year. ā

The majority of classroom teachers (97 percent at Year 4 and 88 percent at Year 8) said they incorporated teaching te reo Māori in their programme as planned instruction, as well as incidentally. Most teachers thought they were able to draw on students' backgrounds and experiences to support their learning of te reo Māori and indicated they like teaching te reo Māori. At both year levels, 31 percent of teachers' responses indicated they could not hold a simple conversation in te reo Māori.

Singing waiata, taking part in kapa haka and saying karakia were the three te reo Māori experiences most often provided for students at school.

More than half the teachers at both year levels reported they had had PLD that focused on te reo Māori within the last two years, with 10 percent of Year 4 teachers and 21 percent of Year 8 teachers reporting they had never had this kind of PLD. Over half the teachers had 'never or almost never' observed a colleague teaching te reo Māori.

### From principals

A large majority of principals thought it was 'important' or 'very important' for students to learn te reo Māori at school. During 2016, about 45 percent of principals in both the Year 4 and Year 8 samples said they employed specialist language teachers to teach te reo Māori.

At both year levels, most principals (80 percent) indicated all students were offered an opportunity to learn te reo Māori at their school. Nine percent of principals in the Year 4 sample and 14 percent in the Year 8 sample indicated some students at their school were offered this. But this was not always the case. For principals in the Year 4 sample, 11 percent indicated no students at their school were offered an opportunity to learn te reo Māori at Year 4. For Year 8, the figure was 6 percent.

## Achievement in te reo Māori

At Year 4, 13 percent of students achieved in the two highest scoring bands used to report achievement on the Te Reo Māori (TRM) scale (Taumata 1-Wāhanga 3 and Taumata 1-Wāhanga 4). At Year 8, 51 percent of students achieved in these bands.

The difference between the average scores on the TRM scale for Year 4 and Year 8 students was 21 TRM units. This represents an annualised difference of about 5 TRM units. Five TRM units can be understood as the amount of 'progress' associated with 1 year of instruction.

Boys scored, on average, 6 TRM units lower than girls at Year 4 and 8 TRM units lower at Year 8.

At both year levels, Māori students scored higher, on average, than non-Māori (by 13 and 20 TRM units, respectively). At Year 8, Pasifika students scored higher, on average, than non-Pasifika students (by 6 TRM units).

At both Year 4 and Year 8, the average score for students from low and mid decile schools was higher than the average scores for students from high decile schools. At Year 4, the difference between the average scores for students in the low and high decile bands was 4 TRM units. At Year 8 it was 10 TRM units.

At Year 8, the average score for students attending intermediate schools was 3 TRM units higher than for those attending full primary or secondary schools (Year 7 to 15).

### Achievement of priority learner groups

#### **Māori students**

At Year 4, 564 Māori students were assessed in te reo Māori using the TRM assessment and 511 at Year 8.

The average score for Māori students on the TRM assessment was 99 TRM units at Year 4 and 126 TRM units at Year 8.

Māori girls scored higher, on average, than Māori boys at both year levels (by 9 and 6 TRM units, respectively).

At Year 4, Māori students in mid decile schools scored 5 TRM units higher than those in high decile schools. At Year 8, Māori students in mid and low decile schools scored higher on average, than those in high decile schools by 10 and 9 TRM units, respectively.

#### **Pasifika students**

At Year 4, 300 Pasifika students were assessed in te reo Māori and at Year 8, 306.

The average score for Pasifika students on the TRM assessment was 89 TRM units at Year 4 and 116 TRM units at Year 8.

The average score for Pasifika girls at Year 4 was 6 TRM units higher than for Pasifika boys. At Year 8 it was 10 TRM units higher.

At both year levels, Pasifika students in mid decile schools scored higher, on average, than those in low decile schools (by 7 TRM units). Other differences between the average scores for students attending schools in different decile bands were not statistically significant.

#### **Students with special education needs**

There were 140 students with special education needs assessed in te reo Māori at Year 4 and 113 students at Year 8. Most of these students were classified as having moderate needs.

The average TRM score for students with special education needs was 76 TRM units at Year 4 and 100 TRM units at Year 8.

### **Associated with achievement in te reo Māori**

Attitudes to, and confidence in, learning te reo Māori were both strongly associated with achievement in te reo Māori. There were statistically significant positive correlations between TRM achievement scores and both the ATRM and CTRM scales scores at both year levels. The associations were stronger at Year 8 than Year 4, and stronger for CTRM than ATRM.

### **Speaking te reo Māori at home**

Around half of all students at each year level reported they never spoke te reo Māori at home. This compared with 26 percent of Māori students at Year 4, and 15 percent of Māori students at Year 8 who said that they never spoke te reo Māori at home. The difference in average achievement on the TRM scale between those who never spoke te reo Māori at home and those who often or always spoke te reo Māori at home was 12 TRM units at Year 4 and 17 TRM units at Year 8. For Māori students, how often they spoke te reo Māori at home was also associated with achievement, but to a slightly lesser extent than for all students.

# 1 Introduction to NMSSA

This chapter provides a broad overview of the purpose and features of national monitoring, introduces the focus of the study for 2016, and outlines the structure of the learning languages report.

## 1. Purpose and features of national monitoring

NMSSA is designed to assess student achievement at Year 4 and Year 8 in New Zealand English-medium state schools. The main purposes of NMSSA are to:

- provide a snapshot of student achievement against the New Zealand Curriculum<sup>6</sup>
- identify factors that are associated with achievement
- assess strengths and weaknesses across the curriculum
- measure change in student achievement over time
- provide high-quality, robust information for policy makers, curriculum planners and educators.

NMSSA has a particular focus on Māori students, Pasifika students and students with special education needs.

The study began in 2012 and has been carried out over a five-year cycle. During the first cycle, we are setting the baseline for measuring change in student achievement over time in subsequent cycles.

The study continues the monitoring undertaken by the National Education Monitoring Project (NEMP) between 1995 and 2010. It also complements information generated by international evaluation studies, such as the Trends in International Mathematics and Science Study (TIMSS), the Progress in International Reading Literacy Study (PIRLS) and the Programme for International Student Assessment (PISA).

In addition to designing and carrying out an assessment programme, NMSSA collects contextual information from students, teachers and principals to help understand the factors associated with students' achievement. This includes: students' attitudes to, and their opportunities to learn in, the specific learning area being investigated; teachers' confidence in teaching the specific learning area and the learning opportunities students are provided with in classroom programmes; teachers' and principals' views of the professional and curriculum support provided by the school and the provision in the school for the learning area.

Advisory panels of curriculum experts<sup>7</sup>, reference groups for the priority learner groups (Māori, Pasifika and special education needs) and a technical reference group provide support for the project.

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<sup>6</sup> Ministry of Education. (2007). *New Zealand Curriculum*. Wellington: Learning Media.

<sup>7</sup> The learning languages advisory panel comprised language learning experts, advisors, teacher educators and researchers, as well as a representative of the Ministry of Education.

## 2. The focus of the study for 2016

In 2016, the focus for the NMSSA study was learning languages and technology<sup>8</sup>. In learning languages, an assessment programme was designed to allow for the range of international languages that might be included in this learning area, as well as New Zealand's official languages: te reo Māori and New Zealand Sign Language (NZSL). All questionnaires were completed online, supplemented by open responses written on paper for later scanning and coding.

First, nationally representative samples<sup>9</sup> of about 2,300 students from 100 schools at each of Year 4 and Year 8 took part in a group-administered questionnaire that sought their views about, and experiences of, learning te reo Māori. For Year 8 students, an additional set of questions was included about international languages.

Secondly, all students completed a group-administered assessment of te reo Māori.

The assessments were conducted by experienced, specially-trained classroom teachers during Term 3 (July to September) 2016.

Table A1.1 in the Appendix summarises the characteristics of the samples of students, teachers and principals from whom data were collected.

## 3. Structure of the learning languages report

This report provides the key findings from the 2016 NMSSA study of learning languages. As well as a broad overview of language learning opportunities in schools and other contextual factors, a focus is included on te reo Māori – both the contexts in which te reo Māori is taught and learnt, and students' achievement in te reo Māori. This report provides descriptions of the contextual data (including the views of students, teachers and principals), and students' achievement in te reo Māori for students nationally and for priority learner groups.

The report is set out in seven chapters.

- Chapter 1 provides a broad overview of the NMSSA programme.
- Chapter 2 describes the development of the learning languages contextual data collection questionnaires and the assessment of te reo Māori.
- Chapter 3 examines some of the contextual factors related to learning international languages, drawing on the views of principals, teachers and students.
- Chapter 4 takes a brief look at teachers' and principals' perspectives relating to New Zealand Sign Language.
- Chapter 5 is the first of three chapters that focus on te reo Māori. This chapter presents students' achievement in te reo Māori.
- Chapter 6 looks specifically at achievement in te reo Māori of students in priority learner groups.
- Chapter 7 describes contextual factors related to teaching and learning te reo Māori and makes connections between some of these factors and achievement.

The report also contains an appendix providing detailed tables of results. Other background and technical information is contained in the separate report *Technical Information 2016*<sup>10</sup>.

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<sup>8</sup> The findings for technology can be found in *NMSSA Report 13: Technology – Key Findings*.

<sup>9</sup> Information about the sampling process and the achieved samples can be found in Appendix 1 of *NMSSA Report 15: Technical Information 2016*.

<sup>10</sup> *NMSSA Report 15: Technical Information 2016*.

# 2 NMSSA Learning Languages Assessment Programme

This chapter provides an overview of the NMSSA study programme for learning languages. It includes three parts.

- Part 1 describes the learning languages area of the NZC<sup>11</sup>.
- Part 2 describes the components of the 2016 NMSSA learning language programme.
- Part 3 provides information about how the findings are presented in this report.

## 1. Learning languages and the New Zealand Curriculum

The primary aim of the 2016 NMSSA learning languages study was to examine how Year 4 and Year 8 students experience the learning languages learning area of the NZC.

The NZC presents achievement objectives for the learning languages learning area in three strands: communication, which is the core strand, and two supporting strands – language knowledge and cultural knowledge. The objectives are described for a pair of curriculum levels at a time (e.g. levels 1 and 2), up to levels 7 and 8. The learning area is unique in that the levels describe objectives that can have as their starting point a 5-year-old student or a 13-year-old student; unlike other learning areas where curriculum levels generally relate to years at school. All schools with students in Years 7 to 10 are expected to offer students the opportunity to learn a language other than English.

The achievement objectives have been written generically to take into account all the different languages that schools may offer for learning. For some languages, supporting documents have been written to provide more specific guidelines. Detailed guidelines have been developed to support the teaching of te reo Māori in English-medium schools<sup>12</sup>.

The NZC makes special mention of te reo Māori and New Zealand Sign Language (NZSL) as official languages of New Zealand. The special place of Pasifika languages is also noted.

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<sup>11</sup> Ministry of Education. (2007). *The New Zealand Curriculum*. Wellington: Learning Media.

<sup>12</sup> Ministry of Education. (2009). *Te Aho Arataki Marau mō te Ako i Te Reo Māori – Kura Auraki/ Curriculum Guidelines for Teaching and Learning Te Reo Māori in English-medium Schools: Years 1–13*. Wellington: Learning Media.

## 2. 2016 NMSSA programme for learning languages

An advisory panel of learning languages experts met with the NMSSA project team in 2015 to consider the shape of the NMSSA language study. Building on the discussion with the panel, the NMSSA team developed a programme for the 2016 study that involved three components (see Table 2.1). The first two components focused on collecting a range of contextual and attitudinal information about the learning languages learning area from students, teachers and principals using questionnaires. The third component involved an assessment of students' knowledge and understanding of te reo Māori words and phrases.

Table 2.1 Components of the 2016 NMSSA learning languages programme

Component	Focus	Approach
1. Student questionnaire	<ul style="list-style-type: none"> <li>attitudes to learning an international language* and te reo Māori</li> <li>experiences of learning an international language* and te reo Māori at school</li> </ul>	<ul style="list-style-type: none"> <li>computer-based</li> <li>completed by 2,300 students at each year level</li> </ul>
2. Teacher and principal questionnaires	<ul style="list-style-type: none"> <li>teacher and principal views of international language and NZSL instruction in their school*</li> <li>teacher and principal views of te reo Māori instruction in their school</li> <li>teacher confidence as an international language* and te reo Māori educator</li> <li>professional learning and development in international languages*, NZSL, and te reo Māori</li> <li>provision for teaching international languages*, NZSL, and te reo Māori in the school</li> </ul>	<ul style="list-style-type: none"> <li>paper-based</li> <li>completed by more than 230 teachers at each year level and 91 principals at each year level</li> </ul>
3. Achievement in te reo Māori	<ul style="list-style-type: none"> <li>knowledge and understanding of te reo Māori words and phrases</li> </ul>	<ul style="list-style-type: none"> <li>group-administered tasks mainly presented by computer</li> <li>completed by 2,300 students at each year level</li> </ul>

\* Applied only to Year 8 students

### Component 1: Student perspectives on learning languages

The first component of the study programme involved a student questionnaire. At Year 4, the questionnaire was mainly focused on the learning of te reo Māori. At Year 8, several sections were introduced to explore students' perspectives on learning international languages. In both the te reo Māori and international languages sections students were asked about their learning experiences and attitudes. All students in the study were given the opportunity to respond to the questionnaire, which was administered using a computer. About 2,300 responses were recorded at each year level.

Two reporting scales were developed on the basis of students' responses to sections within the questionnaires that were focused on students' viewpoints about learning te reo Māori. The first of these related to students' Attitudes to Te Reo Māori (the ATRM scale) and the second to their level of Confidence in Te Reo Māori (the CTRM scale).

### Component 2: Teacher and principal perspectives on learning languages

The second component involved two separate questionnaires developed for teachers and principals, respectively.

Up to three teachers from each school were asked to fill in a teacher questionnaire. The teachers invited to participate were those who had the most students involved in the NMSSA study, and/or were specialist language teachers<sup>13</sup>.

<sup>13</sup> Teachers were asked whether or not they were employed as a specialist teacher of international languages or te reo Māori. They were not asked about their qualifications for the role. Likewise, principals were asked if their school employed a specialist language teacher for international languages or te reo Māori, but details of such teachers' qualifications were not sought.

Teachers were asked about their views of international languages, NZSL instruction and te reo Māori instruction in their school, the opportunity for professional learning and development in these areas, and their confidence as an international language and/or te reo Māori educator.

The principals of each of the 200 schools involved in the NMSSA study were asked to complete the principal questionnaire. They were asked similar questions to the teachers, with a focus on school-wide provision related to the teaching and learning of international languages, NZSL and te reo Māori in their school.

In the questionnaires, questions about the teaching of international languages were confined to teachers and principals in schools where Year 8 students were part of the study.

### Component 3: The Te Reo Māori (TRM) assessment

The third component of the study involved an assessment of Te Reo Māori (TRM). Given the diverse range of languages taught under the learning languages area the initial plan for the study did not include an assessment component. However, as the planning was further developed it became apparent that a minor assessment focus could be incorporated. This was discussed with the Ministry of Education and a decision made to develop an assessment of students' understanding of te reo Māori words and phrases.

The assessment was computer-based and group-administered. It was completed by all Year 4 and Year 8 students in the study (about 2,300 students at each year level). In the assessment, students answered a mixture of selected-response and short constructed-response questions. Students entered their answers to the selected-response questions using the computer. The constructed-response questions were answered in an accompanying booklet. All of the questions included sound files, enabling students to hear the questions as well as read them.

### Assessment framework

An assessment framework was constructed to guide the development of the TRM assessment (see Table A4.3 in *Technical Information 2016 – Learning Languages, Technology*). Achievement objectives from the te reo Māori curriculum guideline document, *Te Aho Arataki Marau mō te Ako i Te Reo Māori– Kura Auraki* (Ministry of Education, 2009), were used to inform the content of the assessment related to each strand. Table 2.2 shows the specific claims the assessment was designed to assess.

Table 2.2 Conceptual assessment framework for the TRM assessment

Validity claims for the Te Reo Māori assessment	
Strand	Students will be able to:
Communication	<ul style="list-style-type: none"> <li>recognise and make appropriate responses to simple questions in te reo Māori</li> <li>accurately record equivalent English words for te reo Māori words, and vice versa</li> </ul>
Language Knowledge	<ul style="list-style-type: none"> <li>identify English equivalents of te reo Māori words in common use by English speakers ('loan words', such as haka and kai), and vice versa</li> <li>identify English equivalents of te reo Māori words (e.g. body parts, classroom objects), and vice versa</li> </ul>
Cultural Knowledge	<ul style="list-style-type: none"> <li>identify English equivalents of te reo Māori words associated with tikanga Māori (e.g. formal speech), and vice versa (e.g. karanga).</li> </ul>

### Development of the TRM assessment

Test development staff within the NMSSA project team constructed the questions used in the TRM assessment. All questions were carefully reviewed, before being piloted in a range of schools in the Wellington area. The results from the pilots were used to select and fine-tune questions for a larger national trial.

The national trial was held in March of 2016. The trial, which involved about 400 students at each of Year 4 and Year 8, enabled the NMSSA team to further fine-tune questions and then select a final pool of 55 questions for use in the main study. The trial was also used to explore the development of a reporting scale.

Results from the pilots and national trial indicated an appropriate assessment focus for students in English-medium schools would be level 1 of *Te Aho Arataki Marau mō te Ako i Te Reo Māori*.

## Examples of TRM assessment questions

Two questions from the TRM assessment are displayed in Figures 2.1 and 2.2. Both questions are shown as screen shots from the computer platform used to administer the assessment. Figure 2.1 shows an example of a selected-response question and Figure 2.2 shows an example of a short constructed-response question.

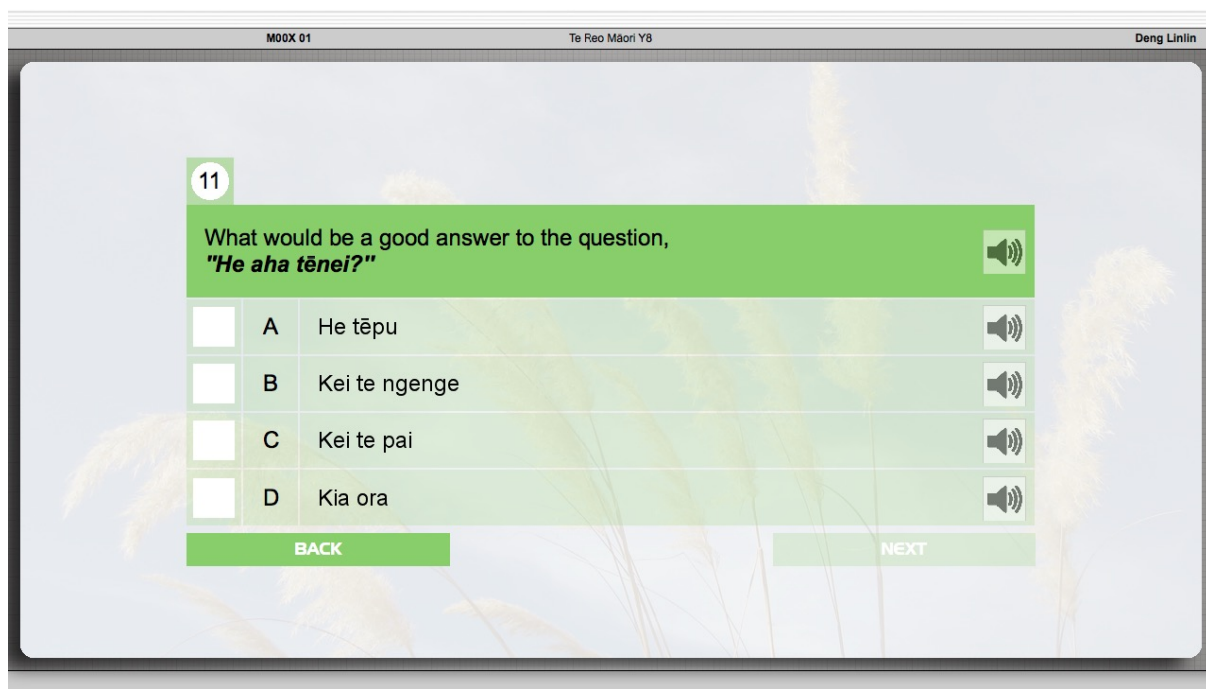


Figure 2.1 An example of a selected-response question from the TRM assessment

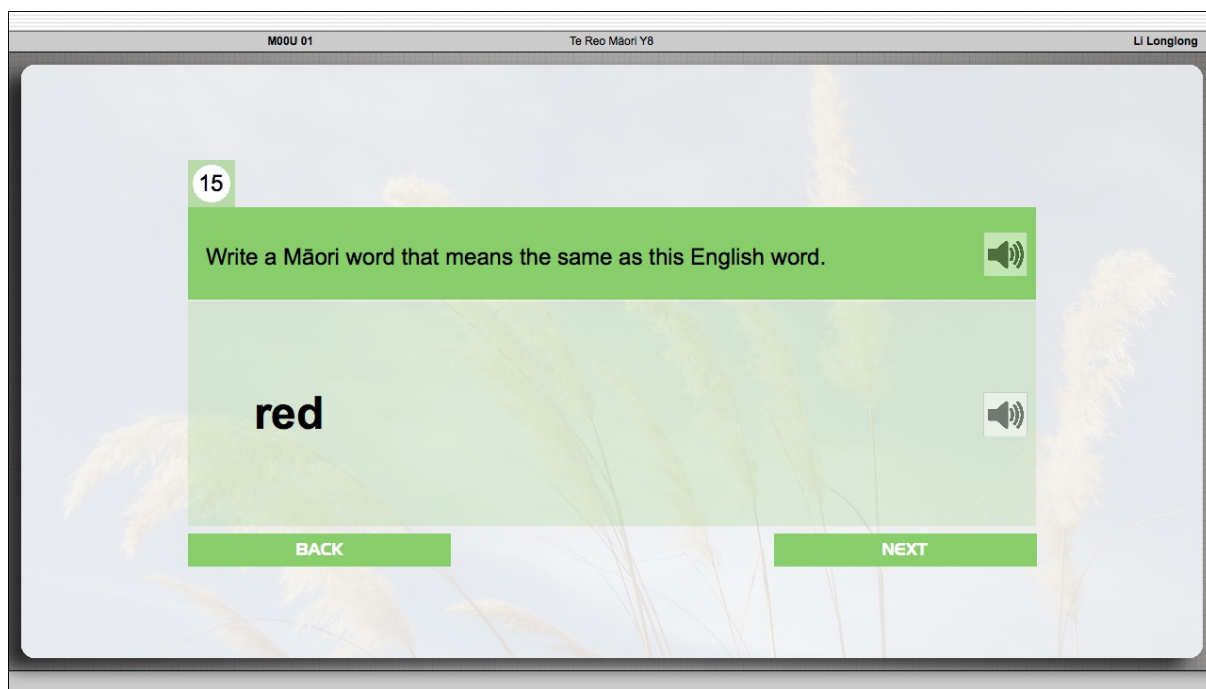


Figure 2.2 An example of a short constructed-response question from the TRM assessment

## Use of the TRM in the 2016 NMSSA study

Eight computer-administered assessment forms were constructed for the 2016 study, based on the question pool (four forms at Year 8 and four at Year 4). Each form contained 15 questions and was linked to the other forms through the use of common questions. The forms for Year 8 students were designed to be more difficult than those prepared for use at Year 4.

Teacher assessors were instructed on how to administer the assessments during a four-day training session prior to the main study. Up to 27 students in each school were each provided with a laptop computer to complete one of the computerised forms in groups of up to six, supervised by a teacher assessor.

Student responses for the selected-response questions were recorded directly to the computer and automatically marked. Two fluent Māori speakers scored the short constructed-response questions. Both markers were trained, and quality assurance procedures were used to monitor and ensure consistency of marking.

## Constructing the TRM scale

An Item Response Theory (IRT) approach<sup>14</sup> was used to construct a measurement scale for the TRM assessment. This included analysing the items used in the assessment for any bias with respect to year level, gender and ethnicity. The techniques used to do the scaling were similar to those used in studies such as PISA and TIMSS.

The IRT approach allowed a set of plausible values to be generated for each student involved in the study. Plausible values take into account the imprecision associated with scores on an assessment, which can produce biased estimates of how much achievement varies across a population. Each set of plausible values represents the range of achievement levels a student might reasonably be expected to attain given their responses to the assessment items. Plausible values provide more accurate estimates of population and subgroup statistics, especially when the number of items answered by each student is relatively small.

## Standardising the scale

For ease of understanding, the TRM scale was standardised so that:

- the average of all students (Year 4 and Year 8 combined) was equal to 100 TRM units
- the average standard deviation for the two year levels was equal to 20 TRM units.

Achievement on the TRM scale ranged from about 25 to 170 TRM units.

## Reporting achievement against curriculum levels

All of the questions in the TRM assessment were written to cover learning objectives specified at curriculum level 1 in *Te Aho Arataki Marau mō te Ako i Te Reo Māori*. To assist with reporting, a small scale-alignment exercise involving the assessment developers was undertaken to categorise score ranges on the TRM scale within curriculum level 1. The developers identified four score bands which were labelled Taumata 1–Wāhanga 1, Taumata 1–Wāhanga 2, Taumata 1–Wāhanga 3, Taumata 1–Wāhanga 4 (level 1–step 1 to level 1–step 4). Each successive band is associated with increasingly sophisticated performance on the level 1 content.

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<sup>14</sup> IRT is an approach to constructing and scoring assessments and surveys that measure mental competencies and attitudes. IRT seeks to establish a mathematical model to describe the relationship between people (in terms of their levels of ability or the strengths of their attitude) and the probability of observing a correct answer or a particular level of response to individual questions. IRT approaches provide flexible techniques for linking assessments made up of different questions to a common reporting scale. The common scale allows the performance of students to be compared regardless of which form of the assessment they were administered. An IRT approach was also used to construct the Attitudes to Te Reo Māori (ATRM) and Confidence in Te Reo Māori (CTRM) scales.

## Curriculum expectations

The curriculum level expectations described in *Te Aho Arataki Marau mō te Ako i Te Reo Māori* were not written to coincide with year levels. Instead, they depend largely on the learning opportunities offered to students. For example, according to the guidelines:

...many students in a year 7 class might work towards level 1 objectives only, but many students beginning to learn te reo Māori in year 9 might be able to meet the achievement objectives for levels 1 and 2 within one year (p.32).

This makes it inappropriate to define a minimum expected score for students in each year level.

## The TRM scale description

Figure 2.3 provides a description of the te reo Māori knowledge and skills measured using the TRM scale. The scale description was developed directly from the data collected using the TRM assessment in the NMSSA learning languages study.

To create the scale description, each question used in the assessment was located on the scale where students achieving at that part of the scale answered the question correctly about 70 percent of the time. The questions themselves were then examined to identify the knowledge and skills they required in terms of te reo Māori. By working from the questions located at the bottom of the scale (Taumata 1–Wāhanga 1) to the ones at the top (Taumata 1–Wāhanga 4) the assessment developers were able to identify how the demands of the questions increased as the scale locations changed. The result was a four-part description organised according to the curriculum 1 score bands, providing a broad indication of what students typically know and can do in te reo Māori when achieving at different places on the scale.

The scale description is provided to give readers a strong sense of how te reo Māori was assessed through the TRM assessment and what was typical achievement associated with different parts of the scale. Readers are encouraged to refer back to the description when considering the meaning of the TRM scale scores provided throughout the report. The scale descriptors have not been written to necessarily ‘line up’ with curriculum levels or achievement objectives. They are a direct reflection of what was assessed and how relatively hard or easy students found the content of the assessment.

## NMSSA Te Reo Māori Scale

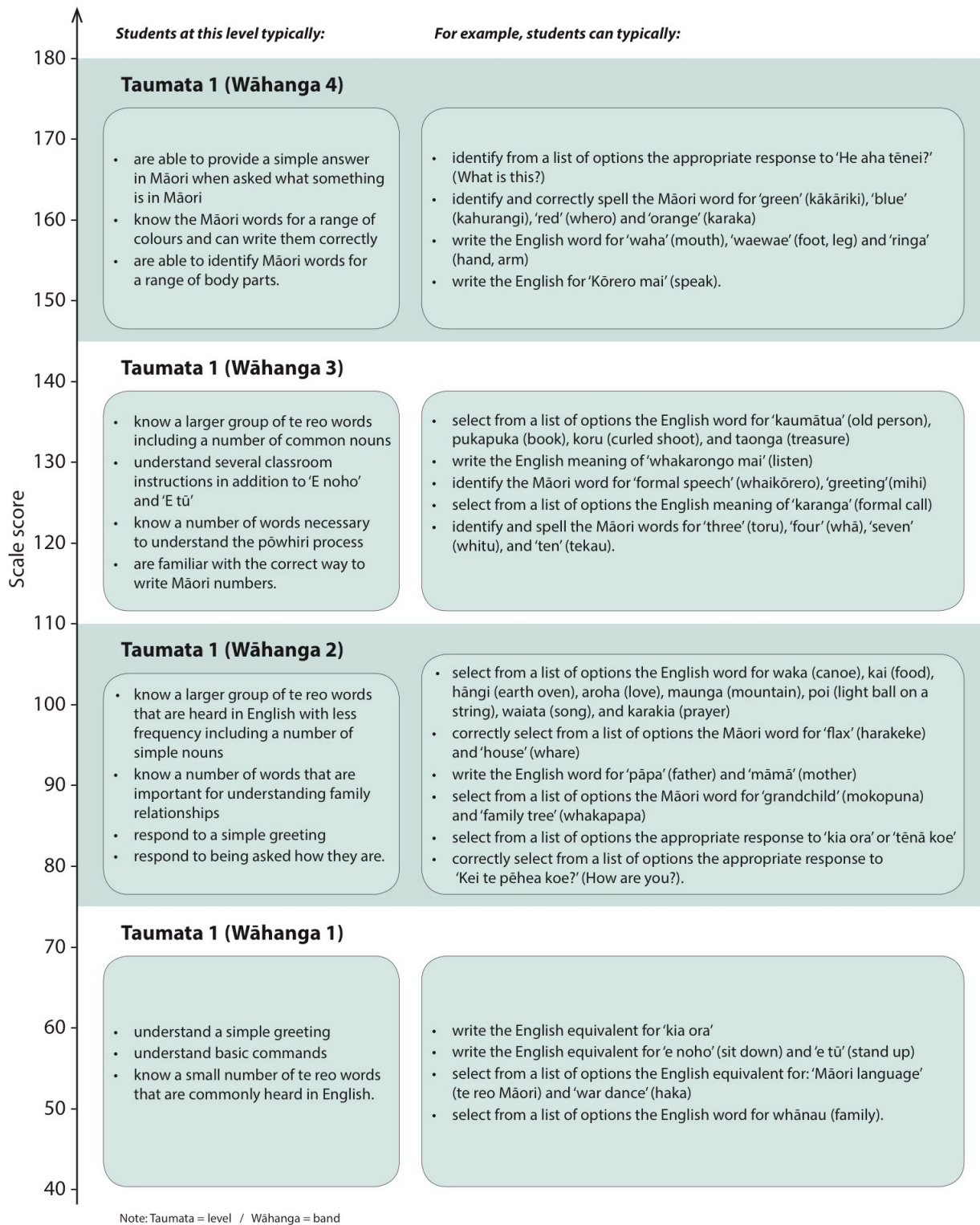


Figure 2.3 Description of the Te Reo Māori scale

### 3. Presentation of the findings

This section describes how graphs and tables are used to present findings in the report, and includes an explanation of some of the statistics used.

#### Box plots

Box and whisker plots (box plots) are used extensively throughout this report to summarise score distributions.

To construct a box plot, scores are ordered from low to high and then divided into four groups of equal size, called quartile groups. These are shown in Figure 2.4.

The box is used to show the range of the middle 50 percent of the scores and the whiskers the top and bottom 25 percent of scores. In this report, the whiskers of the box plot do not include outliers (scores considered to be rare and unusual) and have a maximum length of 1.5 multiplied by the inter-quartile (middle 50 percent) range.

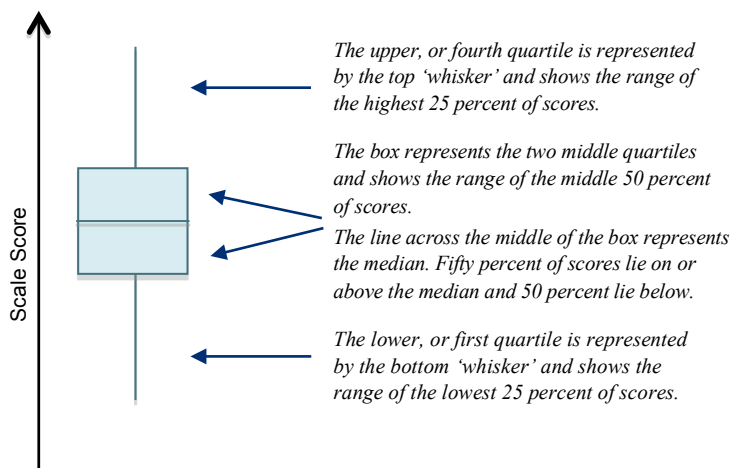


Figure 2.4 Understanding box plots

When box plots for two or more groups are presented as part of the same graphic, the widths of the boxes are used to represent the relative sizes of the groups. For instance, a narrow box indicates that the group size is smaller than that represented by a wider box in the same plot. Box plots have not been drawn when the size of the group falls below 30 students.

The colours for the box plots have been chosen to assist with readability. Different hues have been selected to represent each of the reporting groups (for instance, gender) and two different shades of each hue chosen to represent the group at each year level (a lighter shade for Year 4 and a darker shade for Year 8). The intention behind the use of shades was to show the relationships between the year levels and the different reporting group types at the same time.

For plots involving achievement scales related to the TRM assessment, grey horizontal dotted lines across the graph as shown in Figure 2.5 are used to separate achievement scores into the four bands developed to report achievement (Taumata 1–Wāhanga 1 to Taumata 1–Wāhanga 4).

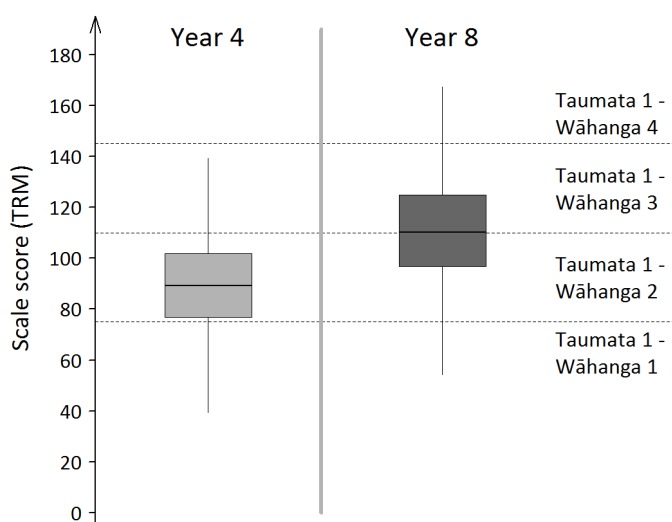


Figure 2.5 Understanding box plots with reporting bands

## Line graphs of score distributions

Another type of graph used to display data in this report is the line graph as shown in Figure 2.6. Line graphs are used to show the distributions of scores for a year level. Horizontal shaded lines are used to indicate the ‘cut-scores’ used to separate achievement at one achievement band from another. The shading around the lines provides a reminder that these lines represent the result of a judgement exercise.

## Tables of numerical results

The TRM measure developed for the NMSSA learning languages study quantifies achievement differences in terms of TRM units. Because the same scale has been used at both Year 4 and Year 8 it is possible to estimate how much change, on average, occurs on an annual basis. Table 2.4 shows the differences in average scale scores on the TRM scale between Year 4 and Year 8, and how this relates to annualised change. As can be seen, scores increased, on average, by about 5 TRM units per year. This figure is useful to keep in mind when interpreting scale score differences throughout the report.

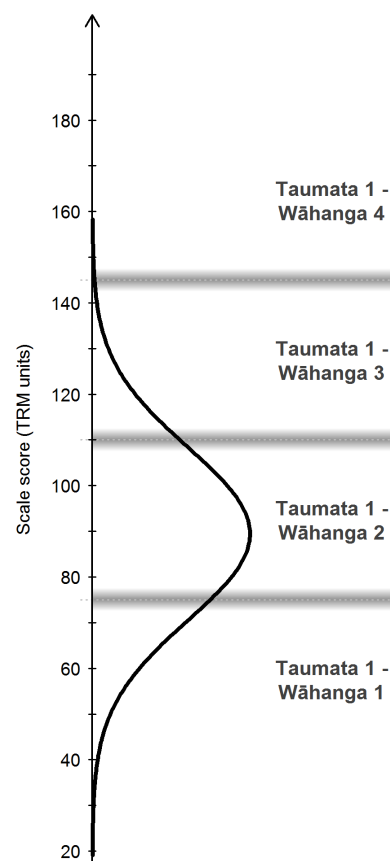


Figure 2.6 An example of a line graph

Table 2.4 Difference between the average scale scores for Year 4 and Year 8 on the TRM assessment

	Year 4	Year 8	Difference between Year 8 and Year 4
	<i>N</i> = 2326	<i>N</i> = 2263	
Average scale score	89	111	<b>21</b>
Confidence interval	(88.5, 90.5)	(110.0, 112.0)	(20.0, 23.0)
Standard deviation	19	21	

Table 2.4 also shows the 95 percent confidence interval associated with the difference in average scores at Year 4 and Year 8. Confidence intervals are used throughout the report and provide a range within which we can be fairly sure the population value for the reported statistic lies. The confidence intervals have been adjusted to account for any design effect created through the sampling procedure (i.e. sampling schools and then sampling students). As a general rule of thumb, when the confidence intervals for two groups do not overlap we can have some confidence that the difference in the statistic reported for the groups represents a real difference at the population level. In other words, the difference is not just the result of the kind of random variation that occurs in sampling studies. In this case we regard the difference as statistically significant.

In this report, any score differences between groups shown in tables are shown in bold font when their associated confidence intervals do not include zero. For instance, in Table 2.4, the Year 8–Year 4 difference of 21 TRM units is in bold font – the difference is considered to be statistically significant.

Effect sizes have sometimes been used to help interpret differences between groups of students<sup>15</sup>. An effect size quantifies the difference between the average scores for two groups in terms of standard deviation units. The calculation of the effect sizes in this report weights the standard deviation for each group by its sample size<sup>16</sup>. Because the standard deviations for groups are often different, the same difference in TRM units will often result in slightly different effect sizes for different pairs of groups. When comparing two effect sizes, it is very important to refer back to the scale score differences to make sure any interpretations are valid.

### The use of rounding

In the tables and text presented in this report, the average scores for each group and subgroup have been rounded to whole numbers. Some tables of findings report the difference between average scale scores for two groups or subgroups. These differences have been calculated using the non-rounded averages and are numerically correct. In some cases, the difference reported may not be the same as the simple difference between the pair of rounded averages shown in the table. Reported percentages have also been rounded to the nearest whole number. All confidence intervals have been rounded to the nearest half scale score unit or percentage point.

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<sup>15</sup> This report is written descriptively to outline the types of responses typical of the students, teachers and principals who made up the sample. It is important to note that two of these groups – the teachers and principals – are not necessarily representative of the corresponding groups in the general population. In addition, the students, teachers and principals are reporting their perceptions based on the meaning they make of the questions and their ability to recall information in order to make a response. Taken together, this means care should be applied when interpreting and generalising from the findings. Overall, however, the findings provide indications and patterns that are useful when seeking to understand the learning area, learning languages.

<sup>16</sup> The formula for the effect size calculation is:  $\frac{M_1 - M_2}{\sqrt{\frac{(n_1 - 1)s_1^2 + (n_2 - 1)s_2^2}{n_1 + n_2 - 2}}}$ , where  $M_1$  and  $M_2$  represent the average scores for group 1 and group 2,

$s_1$  and  $s_2$  their standard deviations and  $n_1$  and  $n_2$  the number in each group.

# 3 Contextual Findings: Learning International Languages

This chapter describes data relating to the teaching and learning of international languages at Year 8. This data was collected using the student, teacher and principal questionnaires.

Teachers and students were asked to specify which languages they were teaching or learning at school, and to answer further questions in relation to the international language they most enjoyed. Principals were asked to specify which languages were being offered to Year 8 students at their school, along with a series of questions about the school’s provision for international language teaching and learning.

In this section, language groups are used to represent the geographical part of the world associated with languages. For instance, the languages French, Spanish and German are grouped as European languages.

## 1. Year 8 students’ perspectives

### Importance of learning an international language

All Year 8 students were asked to rate how important they thought it was for them to learn an international language. Seventy percent thought it was ‘important’ or ‘very important’ (Figure 3.1).

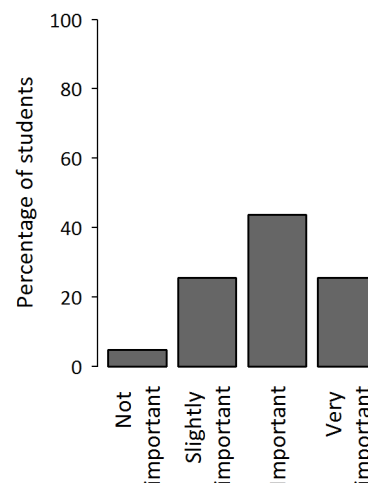


Figure 3.1 Percentage frequency of Year 8 students’ ratings of the importance of learning an international language

Students’ importance ratings are shown by ethnicity in Figure 3.2. Greater proportions of Māori than other groups of non-Māori students thought learning an international language was ‘not important’ or ‘slightly important’.

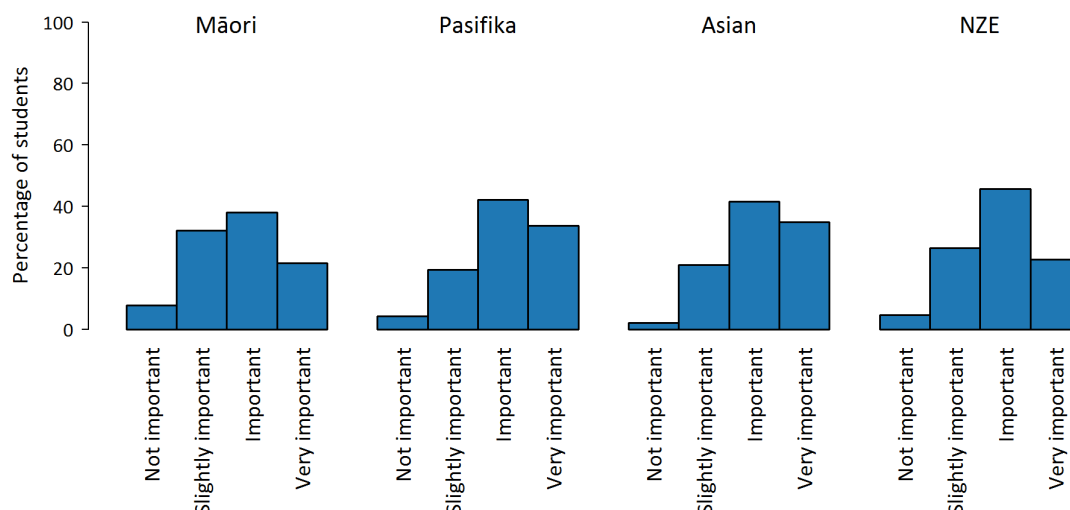


Figure 3.2 Percentage frequency of Year 8 students’ ratings of the importance of learning an international language, by student ethnicity

Students were also asked to explain the reasoning behind the importance rating they gave. The reasons given by the 70 percent of students who rated learning an international language as ‘important’ or ‘very important’ fell into three main themes. These were: usefulness for travel (41 percent of all Year 8 students mentioned this); usefulness for reasons other than travel (28 percent); and general comments that expressed a positive attitude to learning an international language (16 percent). A very small proportion (two percent) of students rated learning an international language as important or very important because they have a family connection to a particular language and culture.

The reasons given by Year 8 students for thinking it was ‘very important’ to learn an international language, are shown for Māori and non-Māori students in Table 3.1<sup>17</sup>. Non-Māori students who rated learning an international language as very important were more likely than Māori students who gave this rating to cite usefulness for overseas travel as a reason for their rating.

Table 3.1 Year 8 students’ reasons for rating learning international languages as ‘very important’, for Māori and non-Māori students\*

	Students	
	Māori (n = 109) (%)	Non-Māori (n = 457) (%)
Useful for overseas travel	46	59
It is useful to learn	38	45
Expressed a positive attitude towards, or valuing of, learning an international language	24	24
Part of my heritage/connected to my family or whānau	2	4

\*Some students gave multiple reasons

### Participation in learning an international language in 2016

Sixty-one percent of Year 8 students indicated they had been learning an international language at school during 2016. Figure 3.3 shows a greater proportion of students at high decile schools<sup>18</sup> were learning an international language than students at mid or low decile schools.

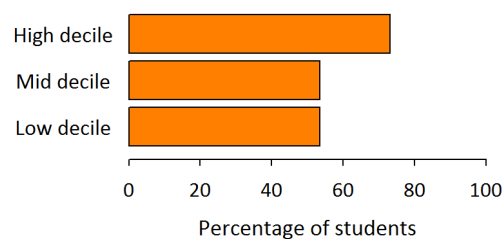


Figure 3.3 Percentage frequency of Year 8 students’ learning an international language in 2016, by school decile band

Figure 3.4 shows there were significantly more girls than boys learning an international language (64 percent compared with 58 percent, respectively).

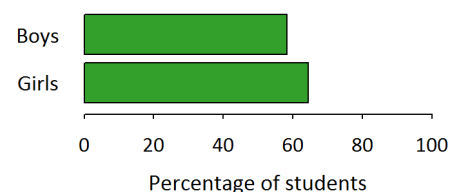


Figure 3.4 Percentage frequency of Year 8 students’ learning an international language in 2016, by gender

The proportion of Year 8 students in priority learner groups who indicated they had been learning an international language at school during 2016 is shown in Figure 3.5. Compared with all students and Pasifika students, smaller proportions of Māori students and students with special education needs (SEN) were learning an international language.

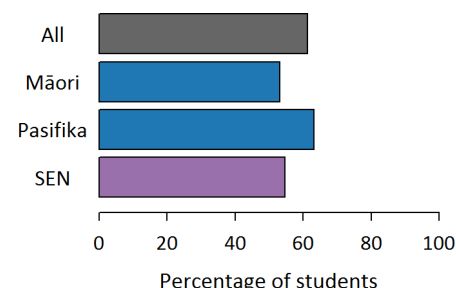


Figure 3.5 Percentage frequency of Year 8 students’ learning an international language in 2016, by priority learner groups

Most of the Year 8 students (69 percent) who had been learning an international language in 2016 were learning one international language. A further 24 percent were learning two international languages, with 7 percent learning at least three international languages. Seventy percent of those who were learning at least one international language indicated they ‘agree a lot’ or ‘totally agree’ they would like to learn other international languages.

<sup>17</sup> Relatively small numbers of students rated learning an international language as ‘not important’ (37 Māori students and 61 non-Māori students) and not all of these students gave a reason for this rating, so we cannot generalise about the reasons they provided.

<sup>18</sup> Throughout the report we refer to the *low* decile band (comprising decile 1 to decile 3 schools), the *mid* decile band (decile 4 to decile 7 schools), and the *high* decile band (decile 8 to decile 10 schools).

The languages students reported learning, and which of those languages they enjoyed the most, are shown in Figures 3.6 and 3.7. The greatest proportion of students reported studying French, followed by Spanish, Mandarin and Japanese. The language students most enjoyed learning largely corresponded with the language they were learning, with one exception. Although a greater proportion of students was learning Spanish than Mandarin, a slightly greater proportion of students chose Mandarin than Spanish as the international language they enjoyed the most. Other international languages specified by students were wide-ranging, with Korean, Tongan and Cook-Island Māori being the most frequently mentioned.

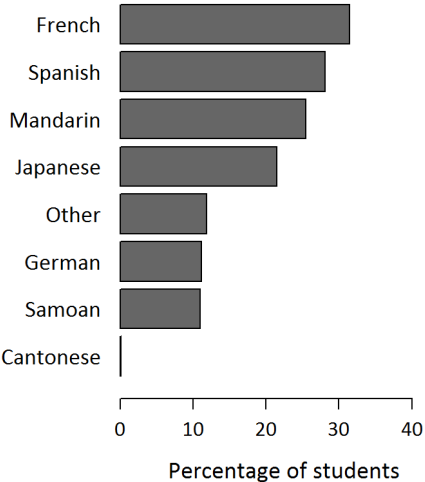


Figure 3.6 Percentage frequency of Year 8 students learning different international languages in 2016

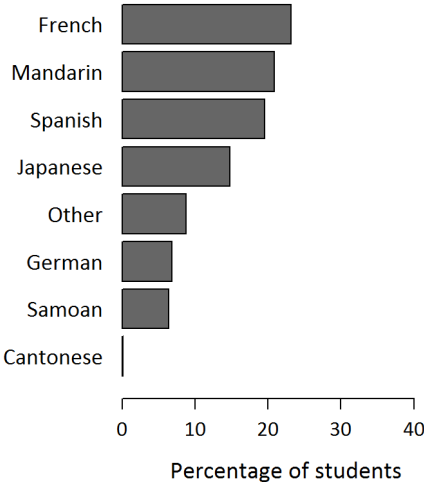


Figure 3.7 Percentage frequency of Year 8 students' responses to which international language they enjoy the most

The international languages being learned by priority learner groups are shown in Table 3.2. The pattern for Māori students and students with special education needs tended to be similar to the national group. However, close to half of the Pasifika students were learning Samoan, and a further quarter were learning other Pasifika languages (e.g. Cook Island Māori, Tokelauan, or Tongan).

Table 3.2 International languages learned by Year 8 students, by priority learner group

Percentage of Year 8 students learning international languages					
Language group	Language	All students	Priority Learner Groups		
		(%)	Māori	Pasifika	SEN
European	French	31	32	20	31
	Spanish	28	24	17	28
	German	11	8	5	11
Asian	Japanese	21	26	15	26
	Mandarin	25	28	15	17
Pasifika	Samoan	11	17	46	11
Other		12	15	33	12

## International language learning experiences at school

Figure 3.8 shows how often students reported having a range of learning experiences and opportunities to practise their preferred international language at school. Students were most likely to indicate that their international language learning included learning to say new words and phrases, learning about culture, and practising using the language in class. More than half of the students never read books or websites in their preferred international language at school. Around two-thirds never talked to their friends in the playground using this language, or heard teachers converse in it.

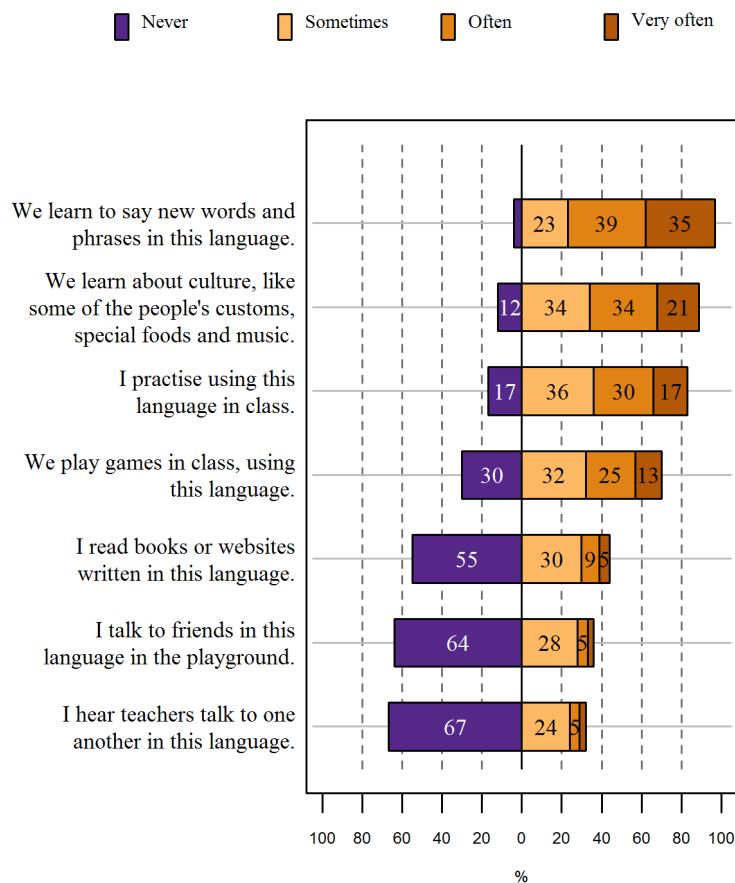


Figure 3.8 Percentage frequency of Year 8 students' responses to statements about learning experiences in their preferred international language

## Attitudes to, and confidence in, learning an international language

Year 8 students' responses in Figures 3.9 and 3.10 give a picture of their attitude to, and confidence in, learning their preferred international language.

Over half the students 'agreed a lot' or 'totally agreed' that learning this language was interesting, that they liked learning it, and that they wanted to learn more of this language at school.

The majority of Year 8 students expressed some confidence in using their preferred international language, with more than 90 percent agreeing, at least a little, that they were good at understanding what they hear, and speaking in this language. Smaller proportions (54–60 percent) agreed, at least a little, that they were good at reading and writing, and performing in this language.

Some different response patterns were also evident in some priority learners' experiences and views of their preferred international language.

Compared with all students, smaller proportions of Māori students agreed with the confidence statements.

Pasifika students reported more frequent learning experiences in their preferred language. They were consistently more likely to respond positively to statements about their attitude to learning, and their confidence in that language.

The responses of students with special education needs did not show a clearly different pattern from those of all Year 8 students. However, when compared with all students, there were two language learning experiences that students with special education needs were more likely to report occurring at least sometimes. These experiences were: ‘Read books or websites written in their preferred language’ (59 compared to 45 percent of all students) and ‘Hear teachers talk to one another in this language’ (48 compared to 33 percent of all students).

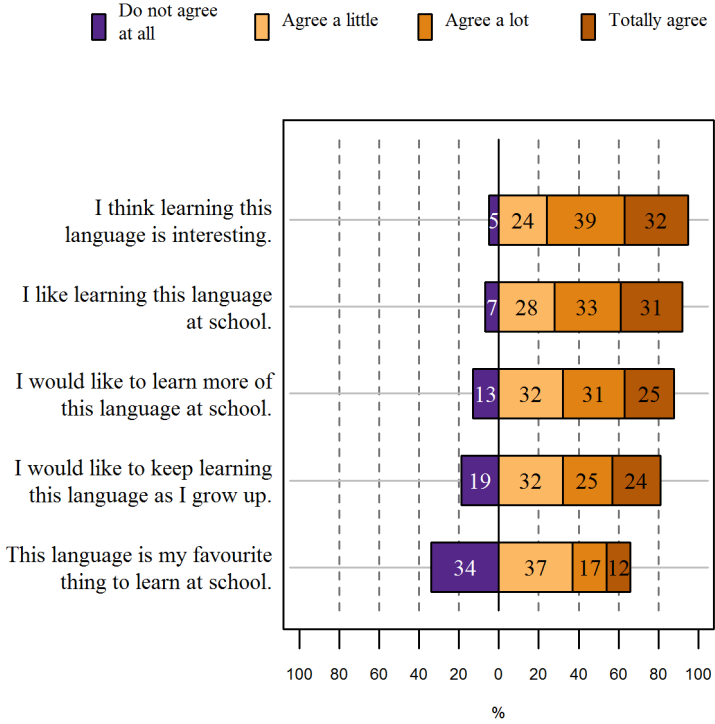


Figure 3.9 Percentage frequency of Year 8 students' responses to statements about their attitude to learning their preferred international language

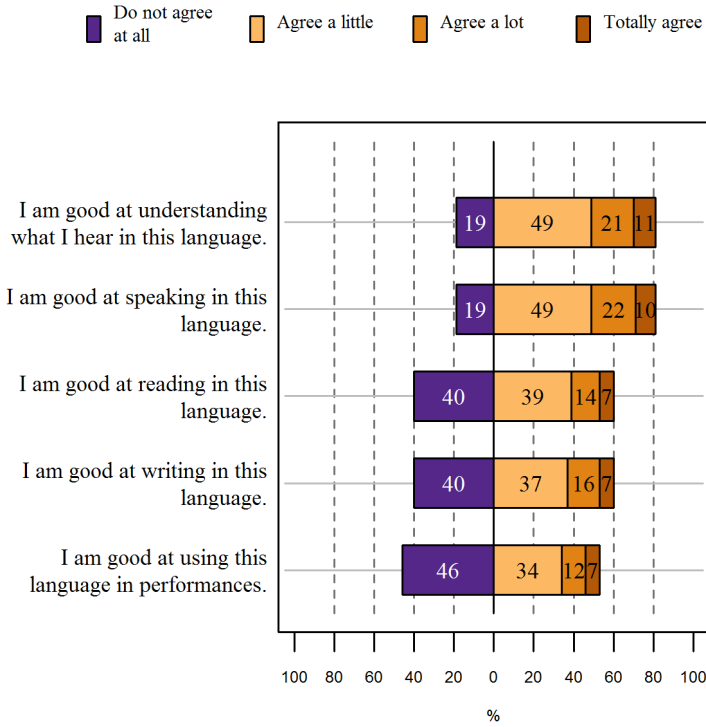


Figure 3.10 Percentage frequency of Year 8 students' responses to statements about their confidence in their preferred international language

## 2. Teachers' perspectives

Approximately 120 classroom (i.e. non-specialist) teachers responded to questions in the international languages section of the questionnaire. Of these, 37 percent said they were solely responsible for teaching their students an international language, while 29 percent said they shared this responsibility with someone else, and 33 percent said someone else had sole responsibility.

Sixty-seven classroom teachers incorporated teaching an international language in their programme as planned instruction. Only these teachers and 18 who were specialist international language teachers were asked to respond to the remainder of the questions in the international languages section. Table 3.3 shows how these 85 teachers were distributed by school decile. Half of the teachers were at schools in the high decile band.

Table 3.3 Number of Year 8 teachers of international languages, by school decile

Number and percent of Year 8 teachers		
School decile band	N	%
Low	18	20
Mid	25	30
High	42	50

### Importance of learning an international language

Eighty-seven percent of teachers of international languages rated learning an international language as 'important' or 'very important' (see Figure 3.11).

Teachers were also asked to explain their importance ratings. Those who rated learning an international language as 'important' or 'very important' gave two main reasons. The first reason related to students developing an understanding of other cultures and languages; the second was about the usefulness of learning an international language (for a range of purposes that included developing self-confidence and business advantage).

### International languages taught

Teachers were asked which international language(s) they taught in 2016. Only 46 out of the 85 teachers (54 percent) responded to this question<sup>19</sup>. Table 3.4 shows how they responded. European and Asian languages were reported by the greatest proportions of teachers. Most notable were: French, Spanish and German; and Japanese and Mandarin.

For the remainder of the questions, teachers who taught multiple languages were asked to focus on the language they *enjoyed teaching most*.

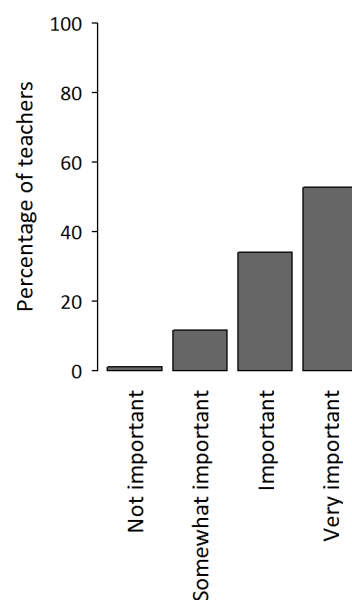


Figure 3.11 Percentage frequency of Year 8 teachers' views of the importance of learning an international language at school

<sup>19</sup> Although teachers were instructed to answer this question only if they had syndicate or school leadership responsibility for teaching and learning an international language (31 teachers indicated they had this responsibility), 46 teachers responded to this item.

Table 3.4 Percentage of teachers who taught different international language in 2016

Year 8 teachers		
Language group	Language	Teachers (%)* N = 46
European	French	30
	Spanish	20
	German	24
	Italian	2
Asian	Japanese	30
	Mandarin	26
	Korean	2
Pasifika	Samoan	4
	Cook Is. Māori	2
	Tongan	2
African	Swahili	2

\* Of the 46 teachers who taught these languages, 13 taught multiple languages. Therefore the total percentage of teachers shown in this table is 144 percent.

### Hours students spend learning an international language

Teachers were asked to indicate approximately how many hours their students spend, over the year, learning the international language that they taught. Teachers' responses are shown in Figure 3.12. The amount of time teachers reported students spend learning an international language varied from less than five hours to more than 40 hours. Sixty percent reported their students spend 20 hours or less learning an international language.

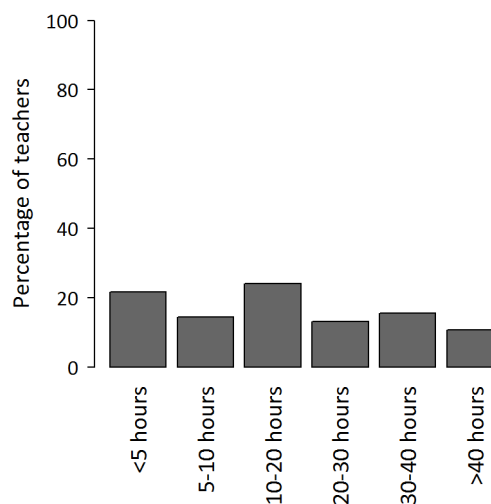


Figure 3.12 Percentage frequency of Year 8 teachers' reporting hours students spend over a year learning an international language

### Attitudes to, and expertise in, teaching an international language

Teachers' attitudes to, and expertise in, teaching an international language are shown in Figure 3.13. More than three-quarters of the teachers thought it was either moderately or very true for them that they could motivate students and draw on students' backgrounds to support their learning of their preferred language, and that they liked teaching this international language. Just over half of the teachers thought it was either moderately or very true that they felt confident to teach this international language (57 percent) or able to hold a simple conversation in this language (53 percent).

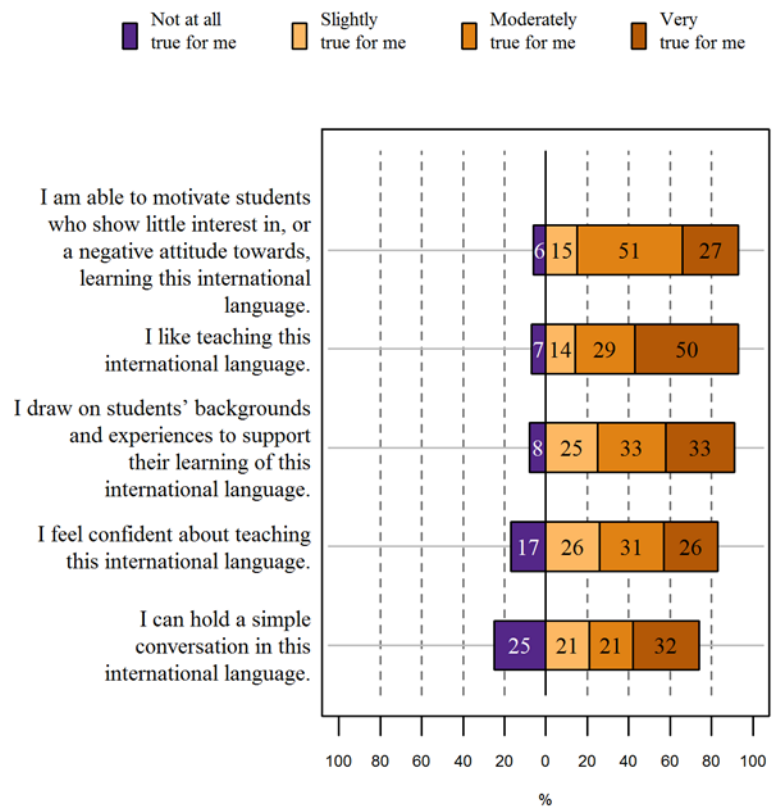


Figure 3.13 Percentage frequency of Year 8 teachers' responses to statements about their attitudes to, and expertise in, teaching an international language

### How teachers organised the teaching of an international language

Teachers were asked how they organised their teaching of their preferred international language. Their responses are shown in Figure 3.14. Whole class activities were used much more often than groups or individualised programmes.

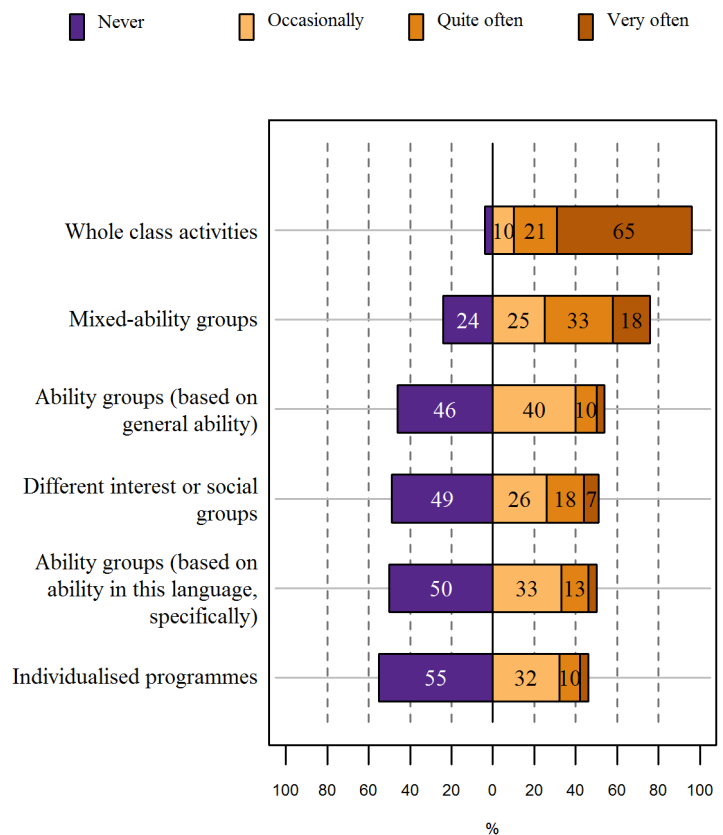


Figure 3.14 Percentage frequency of Year 8 teachers' use of organisational strategies for teaching an international language

## Students' opportunities to learn an international language at school

Figure 3.15 shows teachers' responses to statements about their students' opportunities to learn an international language at school. Three-quarters of the teachers indicated their students 'quite often' or 'very often' learn to say new words or phrases in the international language they were teaching. Almost all teachers said their students had opportunities to practise using the language in class at least occasionally. In contrast to these oral language activities, 40 percent of teachers indicated their students never read books or websites written in this international language. Fewer than half the teachers said their students had opportunities to hear teachers talk to one another in this language.

Both teachers and students indicated that learning to say new words and phrases was the most frequently occurring of the specified international language learning experiences. In general, for learning experiences that both students and teachers were asked about, students were more likely than teachers to report that learning experience never occurred. For example, 67 percent of students said they never hear teachers talk to one another in this language, while 51 percent of teachers said their students never experienced this.

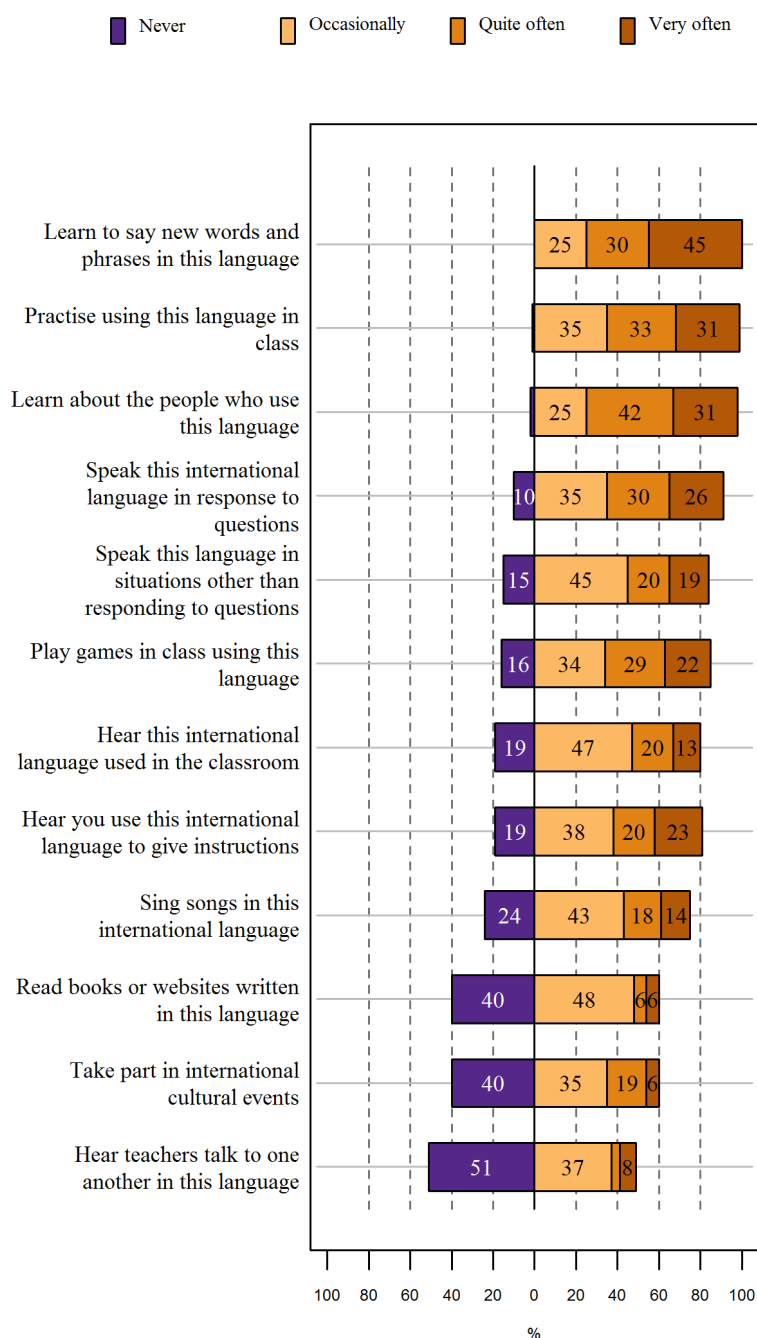


Figure 3.15 Percentage frequency of Year 8 teachers' views on students' opportunities for learning an international language at school

## Professional support for teaching an international language

Figure 3.16 shows the last time teachers reported having external professional learning and development (PLD) focused on the international language they teach. Thirty-nine percent of teachers had never had this type of PLD. Teachers were also asked to indicate how often certain types of interaction with other teachers or experts about teaching and learning an international language occurred. For each type of interaction, more than half of the teachers reported it occurring ‘about once a year’ or ‘never or almost never’ (see Figure 3.17). Given the infrequency of these interactions, it is not surprising that half the teachers rated the professional support they receive in school for teaching an international language as ‘very poor’ or ‘poor’ (on a scale that ranged from ‘very poor’ to ‘excellent’).

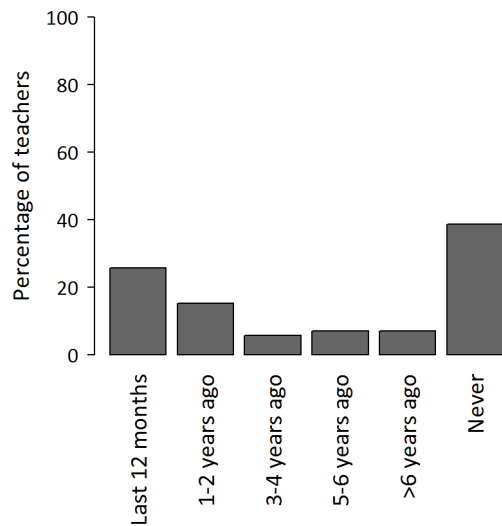


Figure 3.16 Percentage frequency of Year 8 teachers' most recent external professional learning and development, focused on the international language they teach

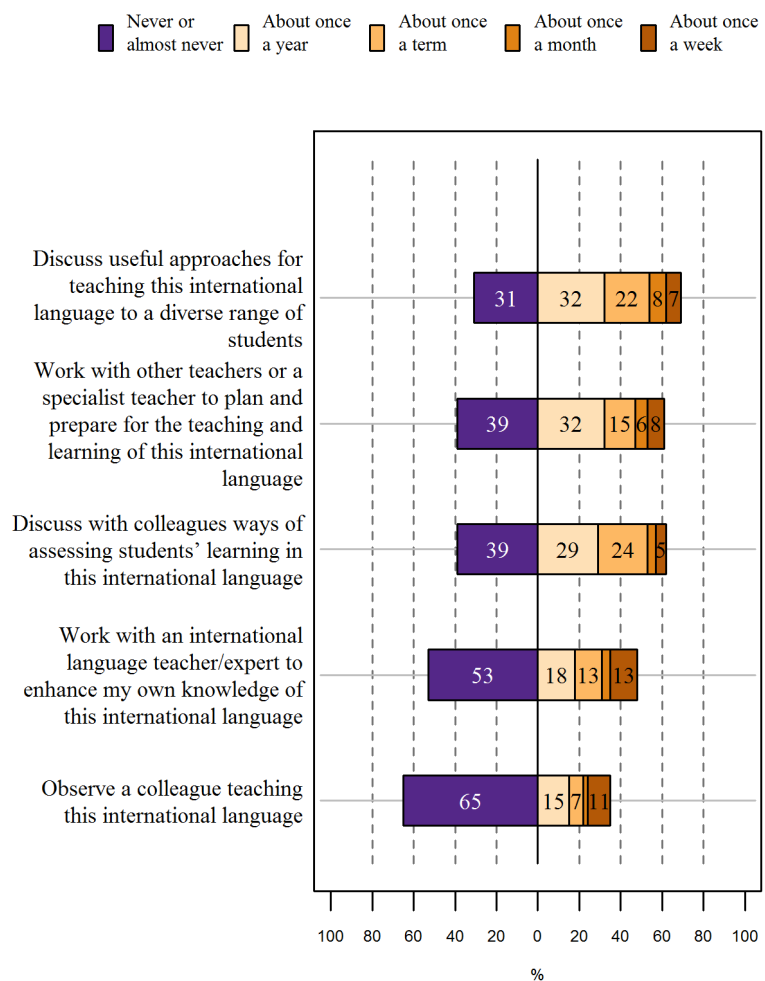


Figure 3.17 Percentage frequency of Year 8 teachers' interactions with other teachers or experts about teaching and learning an international language

### 3. Principals' perspectives

#### Importance of learning an international language

All of the principals in the Year 8 sample were asked to rate the importance of students learning an international language at school. The majority (79 percent) thought it was 'important' or 'very important' (see Figure 3.18). Principals gave two main reasons, similar to those given by teachers, for rating learning an international language as important or very important. First, principals thought that learning an international language develops an understanding of the student's own identity and culture, as well as an understanding of other cultures and languages in New Zealand and globally. The second main reason principals gave, was that it is useful learning, and has potential practical applications (for instance, in business and travel).

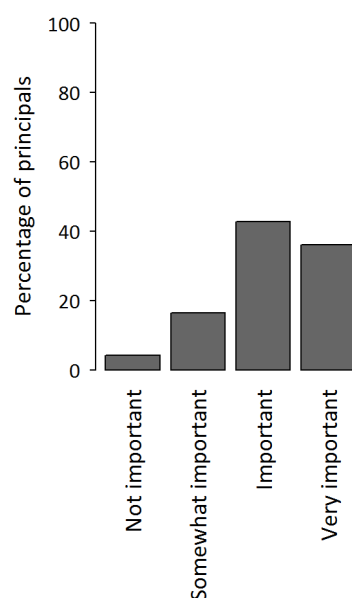


Figure 3.18 Percentage frequency of principals' ratings of the importance of students learning an international language at school

#### Students' opportunities to learn an international language

Just over two-thirds (68 percent) of principals indicated all Year 8 students at their school were offered an opportunity to learn an international language. An additional 21 percent indicated some students were offered this. However, 11 percent of principals indicated no Year 8 students at their school were offered an opportunity to learn an international language.

Opportunities to learn an international language varied according to school decile band. Figure 3.19 shows that a smaller proportion of principals at low decile schools indicated that all their Year 8 students had this opportunity, compared with mid and high decile schools. Twenty-eight percent of principals in low decile schools said that none of their Year 8 students had the opportunity to learn an international language. This contrasts sharply with high decile schools, where 89 percent of principals stated that all students were offered this opportunity, and the remaining 11 percent stated that some students had the opportunity. This decile related difference in provision of opportunities to learn an international language was also reflected in the greater proportion of students in high decile schools who were learning an international language (Figure 3.3).

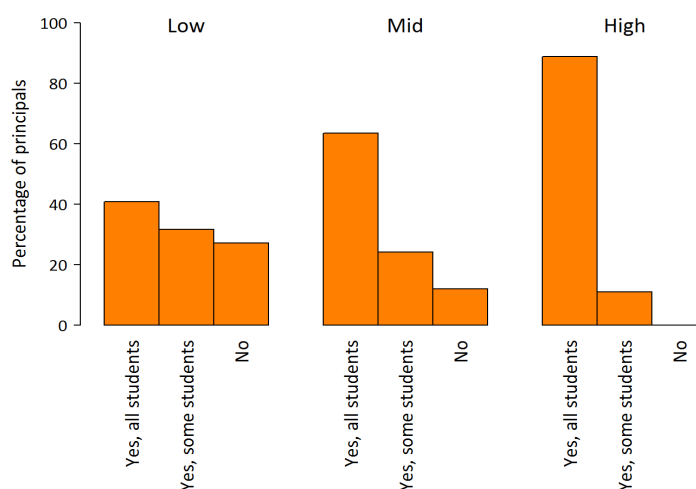


Figure 3.19 Principals' reports of which Year 8 students at their school were offered an opportunity to learn an international language, by school decile band

Most typically, principals reported an international language was first introduced in Year 7. Across all school types, 81 percent of principals indicated this was the case, with all principals of intermediate schools indicating this happens at their school. Fifty-seven percent of principals in full primary schools indicated that an international language was introduced in Year 7, while 39 percent said an international language had been introduced by Year 6. In 14 percent of cases, an international language was first introduced at new entrant level, or Year 1.

## Deciding which international language(s) to offer

Principals who indicated that at least some of their Year 8 students were learning an international language, were asked to select from a list the factors that helped them decide which international language(s) would be offered to Year 8 students in 2016. These factors, and the percentage of principals selecting each one, are shown in Table 3.5. For 70 percent of the principals, having an existing staff member who is able to teach an international language was a factor. Other considerations, such as Ministry-provided resources and funding, a tradition of teaching this language in the school, or students wanting to learn it were factors for smaller proportions.

Community requests for a particular language were a factor for only 7 percent of principals. For twice that proportion, a language representing the culture of many of their students was a factor.

Table 3.5 Factors that helped schools decide which international language/s to offer to Year 8 students in 2016

Factor	Percentage of principals	
		%
An existing staff member is able to teach it		70
It has been taught at this school for a number of years		33
Students have indicated they would like to learn it		32
There are Ministry resources to support the teaching and learning of this language		32
The same language is offered at a local secondary school		22
Someone in our school community is able to teach it		21
Funding is available from the Ministry to support it		17
This language represents the culture of many of our students		15
Our school community has asked for it to be taught		7

Other factors (not listed) were mentioned by 23 percent of principals. Almost half of these factors related to Asian languages, e.g. having a sister school in Japan, an association with the Confucius Institute, or support from the Korean Ministry of Education.

As well as existing staff members' international language teaching abilities being a factor in deciding which language to offer, the ability to teach an international language was reportedly considered by a majority of principals during appointment processes for classroom teachers, with 5 percent saying they 'always' considered this, 51 percent saying they 'sometimes' did, and 44 percent saying that it was 'not a consideration'.

Principals' reports of which international languages were offered to Year 8 students in 2016 are shown in Figure 3.20. French and Spanish were the two most commonly offered languages, followed by Japanese and Mandarin. Other international languages specified by principals included Cook Island Māori, Tokelauan, Tongan, Cantonese, Hindi, Italian, Norwegian, Croatian and Dutch.

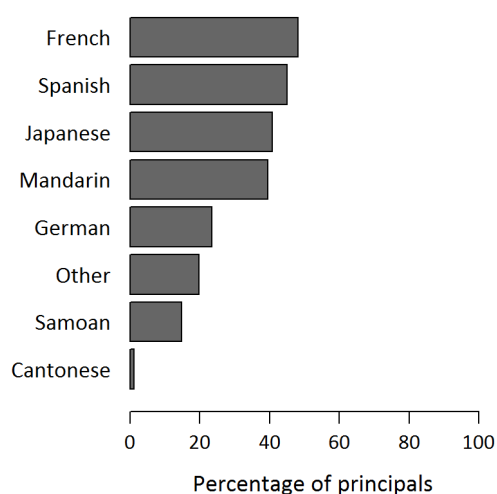


Figure 3.20 Percentage frequency of principals' responses to which international languages were offered to Year 8 students in 2016

## International language programme delivery at the school level

Just over half (56 percent) of the principals indicated the international language programme in their school is delivered over the whole year. Smaller proportions responded that their programme was delivered over one school term (20 percent), over part of a school term (12 percent), or over two terms (10 percent). Fifty-eight percent of principals said their school had a co-ordinated programme for teaching an international language across the different year levels.

Principals' ratings of their school's provision of opportunities for Year 8 students to learn an international language are shown in Figure 3.21. Thirty-nine percent of principals rated their school's provision as 'very good' or 'excellent'.

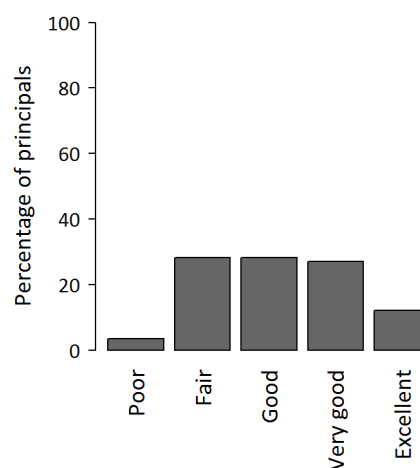


Figure 3.21 Percentage frequency of principals' ratings of their school's provision of opportunities for Year 8 students to learn an international language

## Resourcing and support for teaching an international language

Forty percent of principals in the Year 8 sample indicated that their school employed specialist language teachers to teach an international language in 2016. Principals were also asked to specify which languages specialist teachers were employed to teach. Their responses are shown in Table 3.6 and indicate that Asian languages (particularly Mandarin) were more likely than European languages to be taught by specialist teachers.

Table 3.6 Languages taught by specialist teachers in 2016

	Percentage of specialist teachers employed to teach each language group						
	European			Asian		Pasifika	
	French	Spanish	German	Japanese	Mandarin	Korean	Samoan
(%)							
<i>N</i> = 31	26	23	6	29	42	16	3

Sixty-five percent of principals in the Year 8 sample indicated they 'agree' or 'strongly agree' that the teachers in their school have access to PLD opportunities to support their own learning of an international language. Slightly fewer (59 percent) indicated teachers have access to PLD opportunities to support their teaching of an international language.

## 4. Summary

Sixty-one percent of the students in the Year 8 sample were learning an international language at school in 2016. French and Spanish were the international languages most frequently offered by schools and therefore the most frequently learned by students. These were closely followed by Mandarin and Japanese.

Students' attitudes to learning an international language were generally positive. They were more confident in their abilities to speak and understand what they hear in their preferred international language than to read and write it.

A smaller proportion of Māori students, compared with non-Māori, felt that learning an international language at school was important, and a smaller proportion were learning an international language. This was probably related to there being fewer opportunities for students at low decile schools (which tend to have a higher proportion of Māori students) to learn an international language, according to principals. On average, Māori students were less confident about their preferred international language. In contrast, greater proportions of Pasifika students agreed with statements about their attitude to, and confidence in, an

international language, and also reported more frequent learning experiences, compared with all students. Almost half of Pasifika students were learning a Pasifika language.

Most teachers who taught an international language rated learning an international language as ‘important’ or ‘very important’. The main reasons they gave for these ratings were that learning an international language helped students develop an understanding of other cultures and languages, and that it was useful for a range of purposes (such as building students’ self-confidence and career possibilities in the future).

Just over 60 percent of teachers reported their students spend 20 hours or less learning an international language over the school year.

The leading factor that helped principals decide which international language(s) to offer was having an existing staff member who could teach it. A specialist language teacher was employed in 40 percent of schools, most often to teach Mandarin, Japanese, French, or Spanish.

The findings relating to teacher PLD were mixed. More than half the principals indicated their teachers had access to PLD opportunities to support their own language learning and their teaching of an international language. However, many teachers had never or almost never had interactions with other teachers or experts to support their professional learning, and 39 percent had never had external PLD focused on the international language they were teaching.

# 4 Contextual Findings: Learning New Zealand Sign Language

Teachers and principals of students at both year levels responded to a small set of questions relating to New Zealand Sign Language (NZSL). Their responses are described in this chapter.

## 1. Teachers' perspectives

Teachers were asked to respond to the NZSL section of the teacher questionnaire if they were classroom teachers, or had some responsibility for teaching NZSL. In total, 308 teachers responded to at least one question; 184 teachers of Year 4 students, and 124 teachers of Year 8. Very few teachers reported having any students in their class with whom they needed to use NZSL (4 percent at Year 4, and 2 percent at Year 8). Nonetheless, 20 percent of the Year 4 teachers and 8 percent of the Year 8 teachers indicated some teaching of NZSL was incorporated in their programme as planned instruction, as well as incidentally.

Only the teachers who incorporated NZSL in their programme as planned instruction were asked to complete the remainder of the NZSL section. As the number of these teachers was small (37 at Year 4 and 10 at Year 8), the responses for Year 4 and Year 8 teachers were combined to provide a view of their perspectives on NZSL.

These teachers were asked to rate the professional support they received in school for teaching NZSL on a scale of 'very poor' to 'excellent'. The majority (70 percent) indicated that professional support was 'very poor' or 'poor', and 30 percent or fewer reported having access to external PLD opportunities to support their own learning, or their teaching, of NZSL.

Six teachers reported having syndicate or school leadership responsibility for NZSL teaching and learning. None was employed as a specialist teacher of NZSL.

## 2. Principals' perspectives

In total, 182 principals from the sample of 200 schools completed the principal questionnaire; 91 from each year level.

### Students needing NZSL

Eighty-nine percent of principals indicated that none of their students needed NZSL. Nine percent of principals reported having one student in their school who needed NZSL to communicate and a further 2 percent had more than one student.

### Importance of learning NZSL

Principals were asked to rate how important it is for students to learn NZSL. Their responses are shown in Figure 4.1. Just over two-thirds of the principals at each year level said they thought it was 'somewhat important'. Asked to explain their ratings, principals who rated learning NZSL as 'somewhat important' or 'not important' typically cited an already crowded curriculum, coupled with a lack of immediate need to use NZSL. At the same time, they acknowledged that NZSL is an official language of New Zealand.

Many principals commented that, should they enrol a student at their school who needs to use NZSL to communicate, they would then make learning NZSL a higher priority. The need for adequate resourcing for teaching and learning NZSL was also evident in principals' comments.

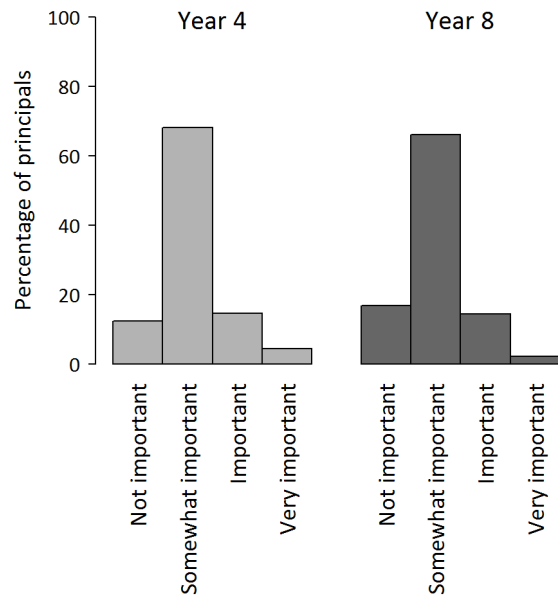


Figure 4.1 Percentage frequency of principals' ratings of the importance of learning NZSL, by year level

### School approaches to teaching and learning NZSL

Principals were asked to respond to three statements about school-wide approaches to teaching and learning NZSL (see Figure 4.2). More than three-quarters of the principals at each year level indicated their school did not: provide opportunities for all students to learn NZSL, have a school-wide approach to improving the teaching and learning of NZSL, or consider being able to teach NZSL as important when appointing a classroom teacher.

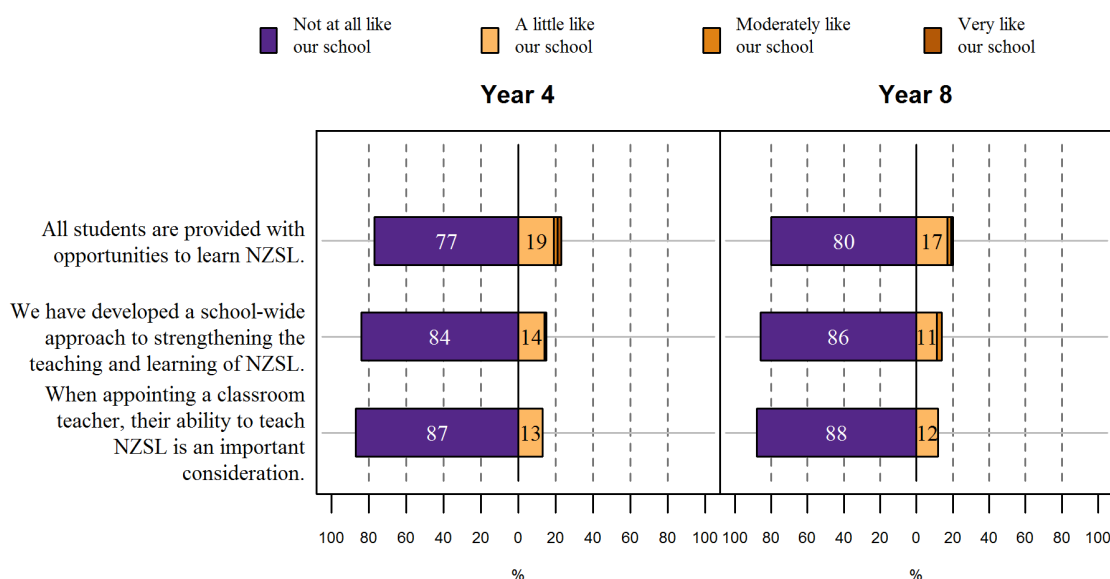


Figure 4.2 Percentage frequency of principals reporting school approaches to teaching and learning NZSL, by year level

### Students' opportunities to learn NZSL

Principals' ratings of their school's provision of opportunities for students to learn NZSL are shown in Figure 4.3. The majority of principals rated their school's provision as 'poor' (65 percent or more) or 'fair' (around 20–30 percent).

### Professional support for teaching NZSL

Only 4 percent of Year 4 principals and none of Year 8 principals, reported employing a specialist teacher of NZSL in 2016.

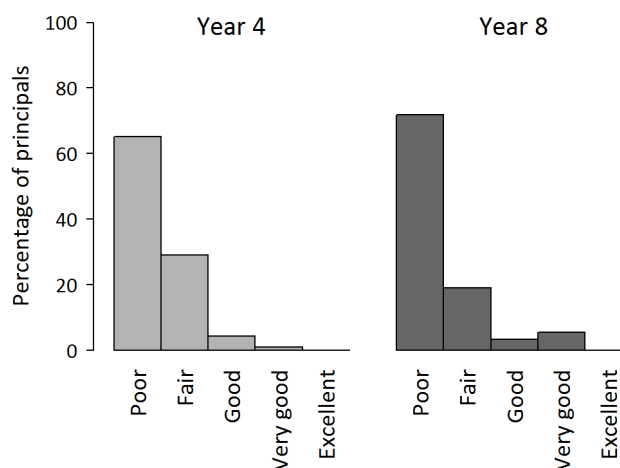


Figure 4.3 Percentage frequency of principals' rating of their school's provision of opportunities for students to learn NZSL, by year level

Principals were asked to rate the professional support provided for their teachers in NZSL. Figure 4.4 shows that at

each year level, about a quarter of principals indicated that teachers in their school have access to PLD opportunities to support their own learning, and their teaching, of NZSL.

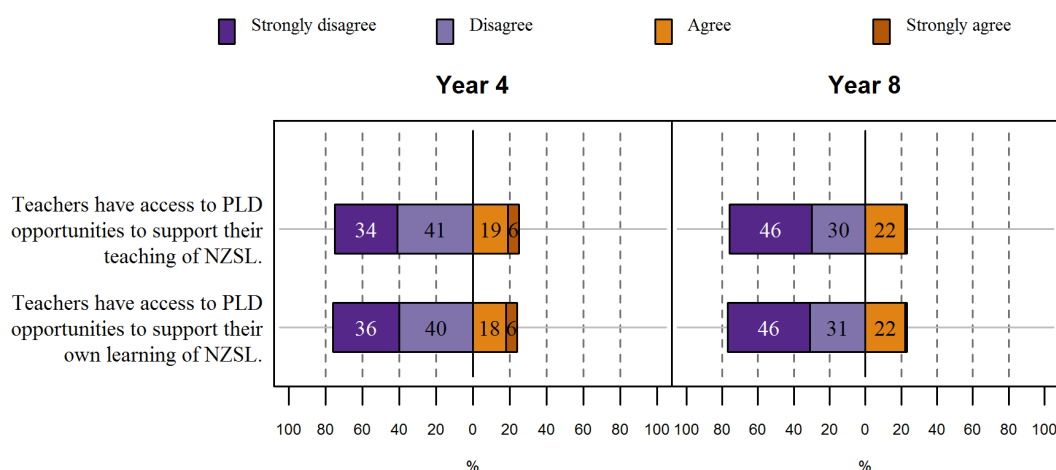


Figure 4.4 Percentage frequency of principals' ratings of teachers' access to PLD opportunities to support teaching and learning of NZSL, by year level

## 3. Summary

Very few teachers reported having any students in their class with whom they needed to use NZSL. Nonetheless, 20 percent of teachers in the Year 4 sample and eight percent of those in the Year 8 sample incorporated planned instruction in NZSL in their programme. The majority of teachers rated the professional support they received in school for teaching NZSL as 'very poor' or 'poor'.

Just over two-thirds of principals at each year level rated learning NZSL at school as 'somewhat important'. Many acknowledged NZSL as an official language of New Zealand, but saw no immediate need to use it, or felt the curriculum was already crowded. Should they enrol a student at their school who needs to use NZSL to communicate, many principals indicated they would then make learning NZSL a higher priority for their staff and students.

Around two-thirds of principals rated their school's provision of opportunities for students to learn NZSL as 'poor'. About a quarter of principals indicated that teachers in their school have access to PLD opportunities to support their own learning, and their teaching, of NZSL.

# 5

## Student Achievement in Te Reo Māori

This chapter describes Year 4 and Year 8 student achievement in te reo Māori based on results from the Te Reo Māori (TRM) assessment. It examines how achievement varies within and between year levels, including variation by gender, ethnicity, school decile and type of school. Detailed tables of means, standard deviations, sample sizes, effect sizes and 95 percent confidence intervals can be found in the appendix.

Within this chapter any reported differences between groups are statistically significant unless stated otherwise.

### 1. Achievement in te reo Māori

Figure 5.1 uses box plots to show the distributions of scores on the TRM assessment for Year 4 and Year 8 students, and Table 5.1 provides summary statistics for each year level. On average, Year 8 students scored 21 units higher on the TRM scale than Year 4 students (an annualised difference of about 5 TRM units per year). The difference in average scores between Year 4 and Year 8 represents an effect size of 1.07 (an annualised effect size of 0.28).

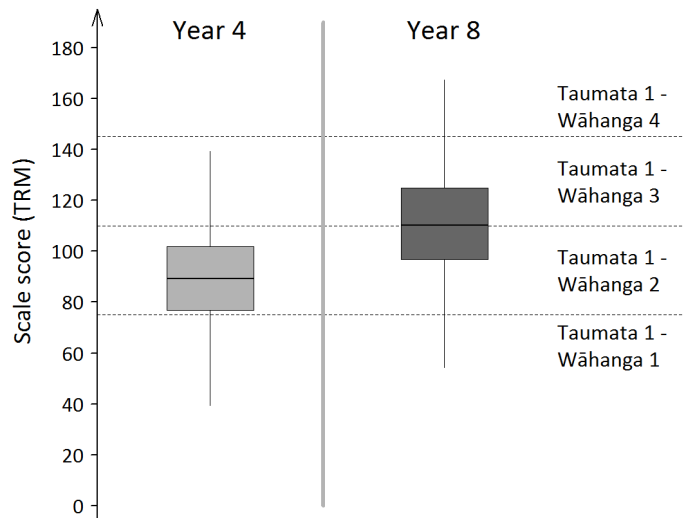


Figure 5.1 Distribution of scores for Year 4 and Year 8 students on the TRM scale

Table 5.1 Summary statistics for Year 4 and Year 8 student achievement on the TRM assessment

	Year 4	Year 8	Difference between Year 8 and Year 4
	<i>N</i> = 2326	<i>N</i> = 2263	
Average scale score	89	111	<b>21</b>
Confidence interval for the average	(88.5, 90.5)	(110.0, 112.0)	(20.0, 23.0)
Standard deviation	19	21	

## 2. Achievement against the curriculum

As described in Chapter 2, the questions developed for the TRM assessment were targeted at curriculum level 1 (Taumata 1). To differentiate degrees of attainment with level 1, scores on the TRM scale were divided into four achievement bands (Wāhanga 1 to Wāhanga 4). Each successive band represents an increasing level of achievement with level 1 content. Figure 5.2 shows how Year 4 and Year 8 students achieved against the four bands. As can be seen, greater proportions of Year 8 students achieved in the higher level bands compared with Year 4 students. The majority of Year 4 students achieved at wāhanga 1 and wāhanga 2. At Year 8, most students were achieving at wāhanga 2 and wāhanga 3.

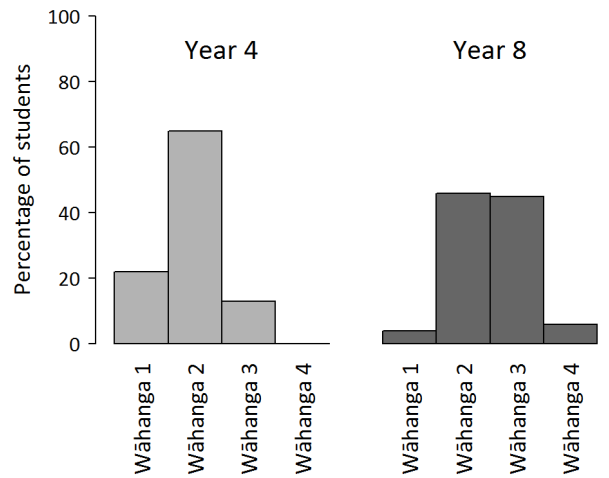


Figure 5.2 Percentage of Year 4 and Year 8 students achieving across the four curriculum level 1 scoring bands according to the TRM assessment

Figures 5.3 and 5.4 use line graphs to show the whole score distribution for Year 4 and Year 8 respectively. The grey horizontal lines represent the cut-scores (minimum scale scores) associated with achieving in wāhanga 2, 3 and 4.

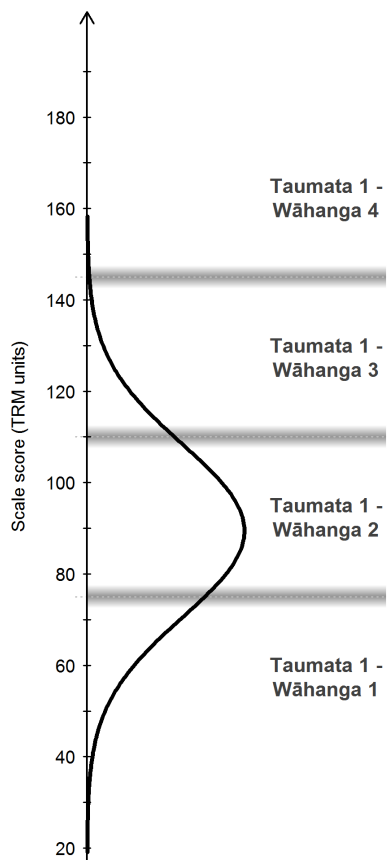


Figure 5.3 Distribution of scores for Year 4 students on the TRM scale

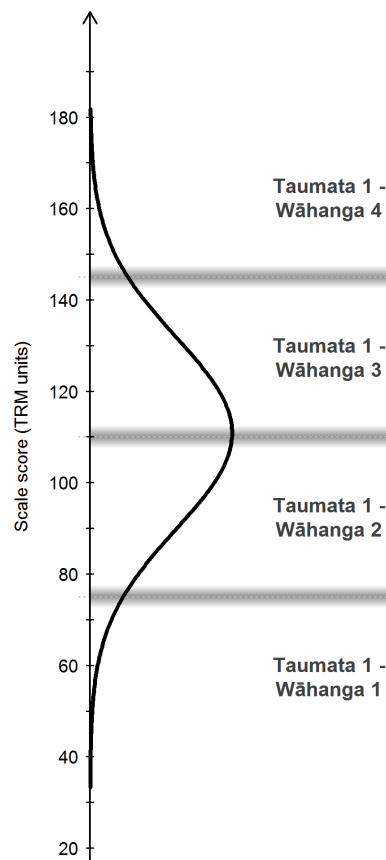


Figure 5.4 Distribution of scores for Year 8 students on the TRM scale

### 3. Achievement by student-level variables

Figures 5.5 and 5.6 display the score distributions on the TRM assessment at Year 4 and Year 8 by gender and ethnicity<sup>20</sup>.

Girls scored higher, on average, than boys at Year 4 and Year 8 (by 6 and 8 TRM units, respectively). The size of the difference between boys and girls was similar across ethnic groups.

At both year levels, Māori students scored higher, on average, than non-Māori (by 13 TRM units at Year 4, and 20 TRM units at Year 8).

At Year 8, Pasifika students scored higher than non-Pasifika by 6 TRM units. At Year 4, the difference between the average scores for Pasifika and non-Pasifika students was not statistically significant.

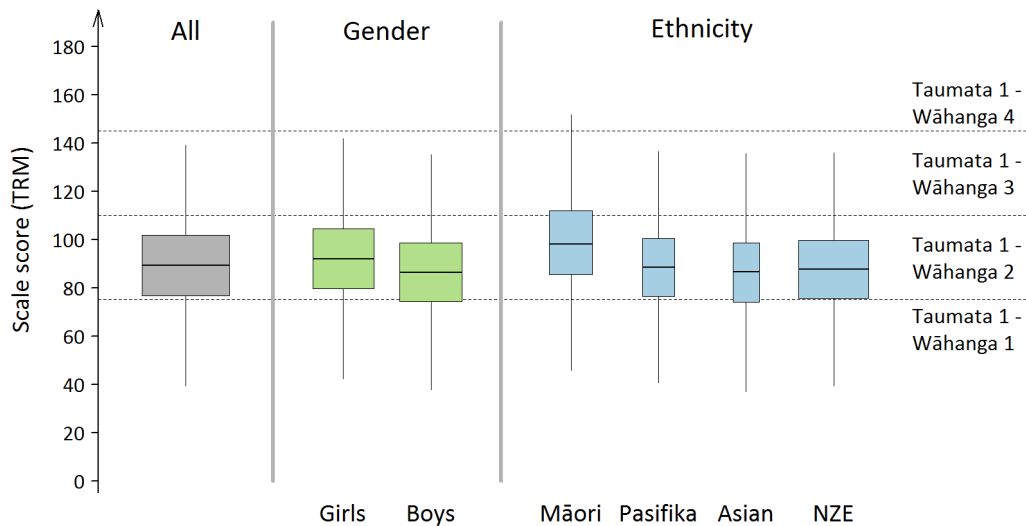


Figure 5.5 Distribution of scores for Year 4 students on the TRM scale, by gender and ethnicity (NZE=New Zealand European)

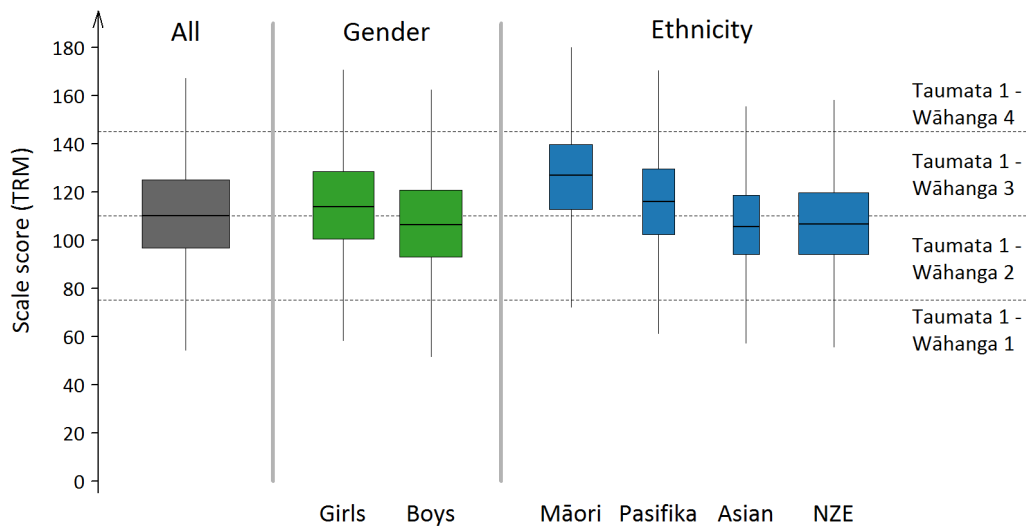


Figure 5.6 Distribution of scores for Year 8 students on the TRM scale, by gender and ethnicity (NZE=New Zealand European)

<sup>20</sup> Non-prioritised ethnicity was used where students could identify with up to three ethnicities. This meant they could be present in multiple ethnic groups. Student ethnicity data were obtained from National Student Number information held on the Ministry of Education ENROL database. The 'New Zealand European' category included New Zealand Pākehā only. The 'Pasifika' category included Tokelauan, Fijian, Niuean, Tongan, Cook Islands Māori, Samoan and other Pacific peoples. The 'Asian' category included Filipino, Cambodian, Vietnamese, Other Southeast Asian, Indian, Chinese, Sri Lankan, Japanese, Korean and other Asians. The 'Other' category included Australians, British/Irish, German, Dutch, Greek, Polish, South Slav, Italian and other Europeans, Middle Eastern, Latin American, African and Not Stated. About 2.5 percent of students in both year levels indicated they belonged to ethnic groups categorised as 'other'.

## 4. Achievement by school-level variables

Figures 5.7 and 5.8 show the performance of students according to school decile band and school type<sup>21</sup>.

At both year levels, the average score for students from high decile schools was lower than the average scores for students from mid and low decile schools. At Year 4, the difference between the average scores for students in the low and high decile bands was 4 TRM units. At Year 8, it was 10 TRM units.

At Year 8, the average score for students attending intermediate schools was 3 TRM units higher than for those attending full primary schools.v

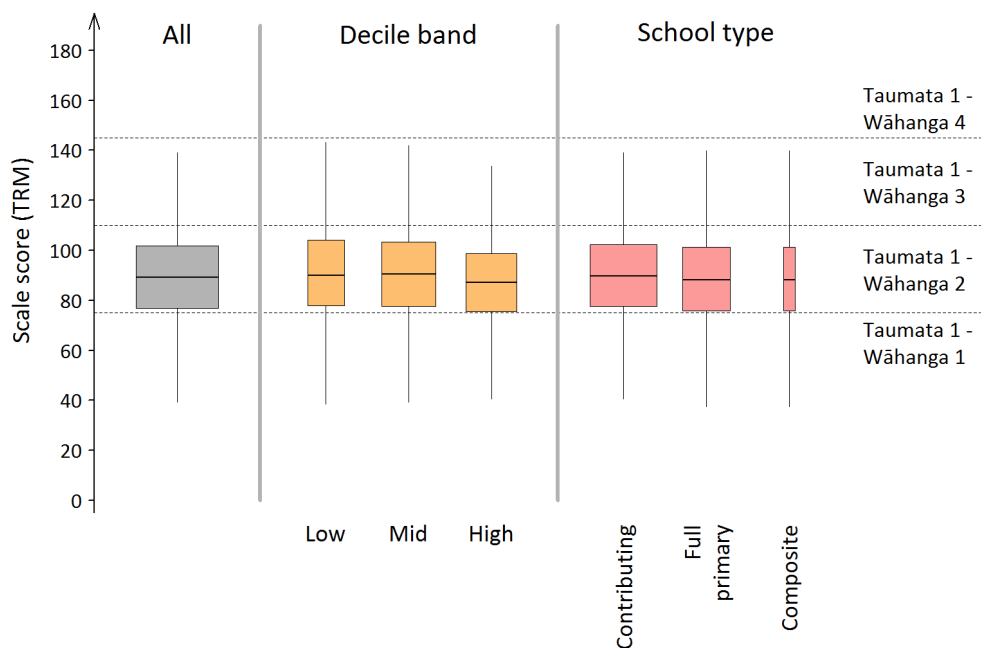


Figure 5.7 Distribution of scores for Year 4 students on the TRM scale, by decile band and school type

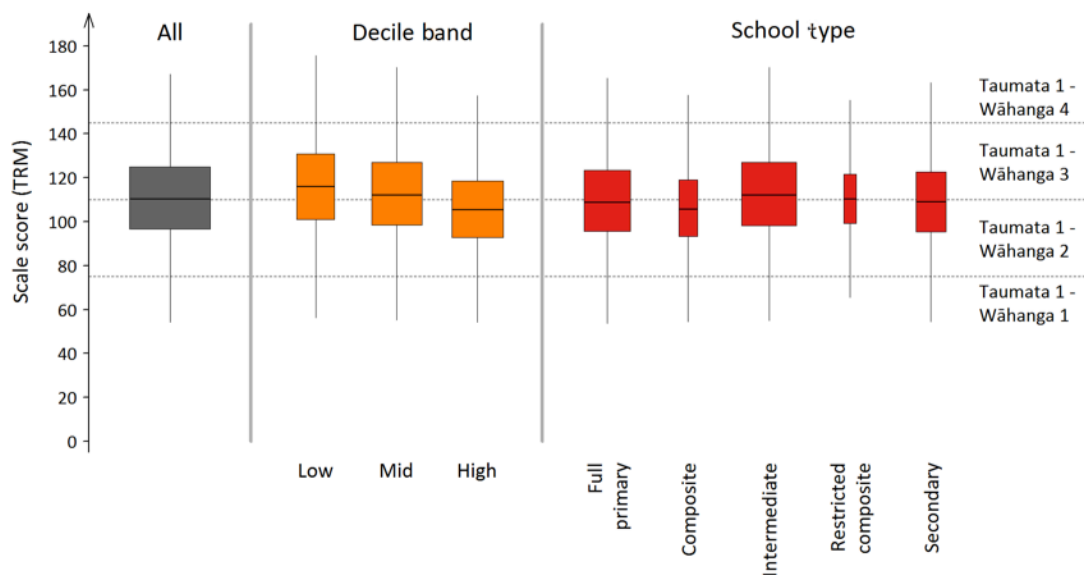


Figure 5.8 Distribution of scores for Year 8 students on the TRM scale, by decile band and school type

<sup>21</sup> A *composite* school combines students from different year levels that are typically found in separate primary or secondary schools. A *restricted composite*, sometimes known as a middle school, caters for Years 7 to 10. A *contributing* school caters for Years 1 to 6 of schooling. A *full primary* school caters for Years 1 to 8 of schooling. *Secondary* schools cater for Year 7 to Year 15 of schooling, although many cater for Year 9 to Year 15 only. An *intermediate* school caters for Years 7 and 8 of schooling.

## 5. Difference in achievement between Year 4 and Year 8

Table 5.2 shows the difference between the average scale scores at Year 4 and Year 8 on the TRM assessment (a proxy for ‘progress’ between Year 4 and Year 8) across a range of groups. The difference in average scale score ranged between 19 and 27 TRM units.

Table 5.2 Difference in average scale scores on the TRM assessment for Year 4 and Year 8 students, by subgroup

Te Reo Māori (TRM)					
	Year 4 average scale score	Year 8 average scale score	Year 4–Year 8 difference in average scale scores	Confidence interval for the difference	Annualised difference in average scale scores
<b>Year</b>					
All	89	111	21	(20.0, 23.0)	5
<b>Gender</b>					
Girls	93	115	22	(20.0, 24.0)	6
Boys	86	107	21	(18.5, 22.5)	5
<b>Ethnicity</b>					
Māori	99	126	27	(24.5, 30.0)	7
Pasifika	89	116	27	(24.0, 31.0)	7
Asian	86	106	20	(15.5, 24.0)	5
New Zealand European	88	107	19	(18.0, 21.0)	5
<b>School decile</b>					
Low	91	116	25	(22.0, 28.0)	6
Mid	91	113	22	(22.0, 24.0)	6
High	87	106	19	(17.0, 21.0)	5
<b>Special educational needs</b>					
	86	111	21	(15.5, 27.0)	5

## 6. Summary

At Year 4, 13 percent of students achieved in the two highest scoring bands used to report achievement on the TRM scale (Taumata 1-Wāhanga 3 and Taumata 1-Wāhanga 4). At Year 8, 51 percent of students achieved in these bands.

The difference between the average scores on the TRM scale for Year 4 and Year 8 students was 21 TRM units. This represents an annualised difference of about 5 TRM units and an annual effect size of 0.27.

Boys scored, on average, 6 TRM units lower than girls at Year 4 and 8 TRM units lower at Year 8.

At both year levels, Māori students scored higher, on average, than non-Māori (by 13 and 20 TRM units, respectively). At Year 8, Pasifika students scored higher, on average, than non-Pasifika students (by 6 TRM units).

At both Year 4 and Year 8, the average score for students from high decile schools was lower than the average scores for students from mid and low decile schools. At Year 4, the difference between the average scores for students in the high and low decile bands was 4 TRM units. At Year 8 it was 10 TRM units.

At Year 8, the average score for students attending intermediate schools was 3 TRM units higher than for those attending full primary or secondary schools (Year 7 to 15).

# 6 Achievement in Te Teo Māori for Priority Learner Groups

This chapter reports on achievement for priority learners: Māori students, Pasifika students and students with special education needs – groups of students who have been identified as historically not experiencing success in New Zealand’s education system. Achievement patterns for each group are examined separately. The final section of the chapter presents summary statistics for the students in each group who scored above the national average at Year 4 and Year 8.

As for the previous chapter, any reported differences between groups are statistically significant unless stated otherwise.

## 1. Achievement patterns for Māori students

### Māori students participating in the study

Table 6.1 provides the number of Māori students who were administered the TRM assessment at each year level by gender and school decile band. At each year level, Māori students represented about 25 percent of the national sample.

Table 6.1 Composition of the Māori samples for the 2016 NMSSA TRM assessment

	Number of Māori students	
	Year 4 <i>N</i> = 564	Year 8 <i>N</i> = 511
<b>Gender</b>		
Girls	268	229
Boys	296	282
<b>School decile</b>		
Low	203	192
Mid	247	231
High	114	88

## Achievement for Māori students

Figures 6.1 and 6.2 use line graphs to show the score distribution on the TRM assessment for Year 4 and Year 8 Māori students. The score distributions for all students in the national samples are also provided as a reference. The average score for Year 4 Māori students was 99 TRM units. The average score for Year 8 Māori students was 126 TRM units. This means that, on average, Māori students in Year 8 scored higher than Māori students in Year 4 by 27 TRM units.

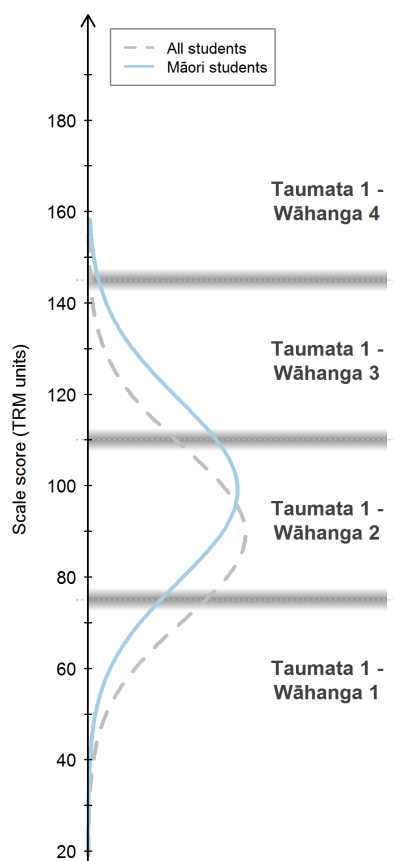


Figure 6.1 Distribution of scores for Year 4 Māori students on the TRM scale

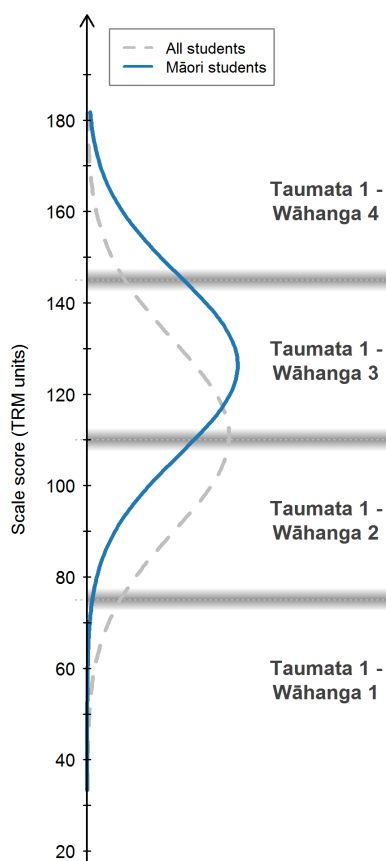


Figure 6.2 Distribution of scores for Year 8 Māori students on the TRM scale

Table 6.2 provides the percentage of Māori students at each year level achieving at each of the scoring bands used to categorise achievement on the curriculum level 1 content that made up the assessment. In Year 8, 17 percent of Māori students scored in the highest achievement band (Wāhanga 4) compared with 2 percent of non-Māori.

Table 6.2 Percentage of Year 4 and Year 8 Māori students achieving across the curriculum level 1 (Taumata 1) scoring bands according to the TRM assessment

Curriculum 1 scoring band	Year 4		Year 8	
	%	Confidence interval %	%	Confidence interval %
Taumata 1: Wāhanga 4	1	(0.0, 2.5)	17	(13.0, 21.0)
Taumata 1: Wāhanga 3	27	(22.0, 31.0)	62	(57.0, 67.5)
Taumata 1: Wāhanga 2	62	(57.0, 66.5)	21	(16.5, 24.5)
Taumata 1: Wāhanga 1	10	(7.5, 13.5)	0	(-0.5, 0.5)

## Achievement for Māori students by gender, school decile band and school type

Figures 6.3 and 6.4 use box plots to compare the distributions of scores on the TRM assessment for Māori students by gender, school decile band and school type in Year and Year 8, respectively.

Māori girls scored higher, on average, than Māori boys at both year levels (by 9 and 6 TRM units, respectively).

There were differences according to school decile at both year levels. At Year 4, Māori students in high decile schools scored lower, on average, than those attending mid decile schools by 5 TRM units. At Year 8, those in high decile schools scored lower on average, than those in mid and low decile schools by 10 and 9 TRM units, respectively.

There were no statistically significant differences in average scale scores for Māori students by school type.

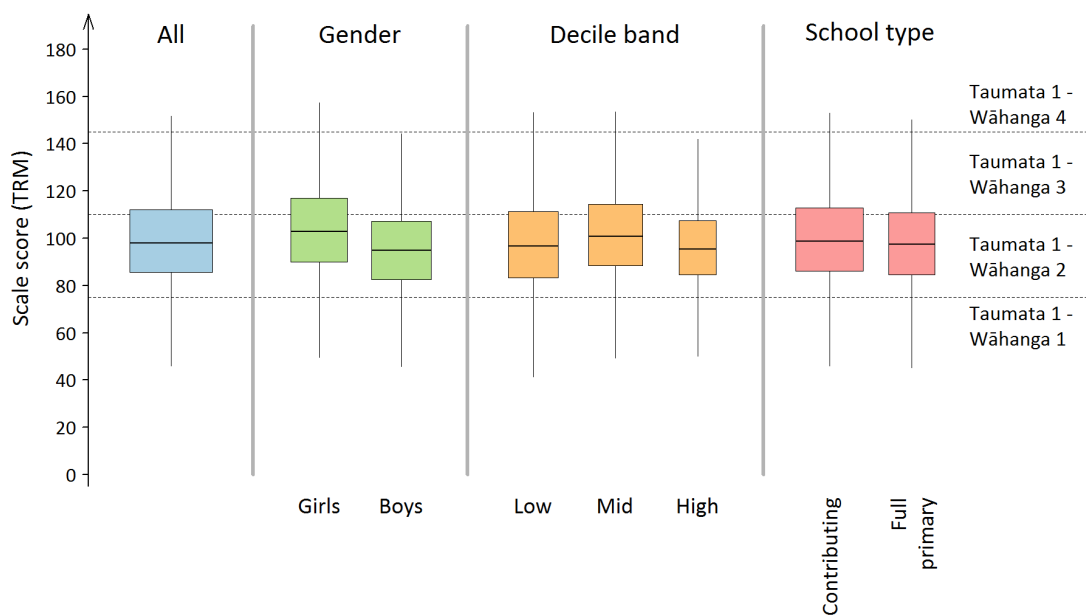


Figure 6.3 Distribution of scores for Year 4 Māori students on the TRM scale, by gender, decile band and school type

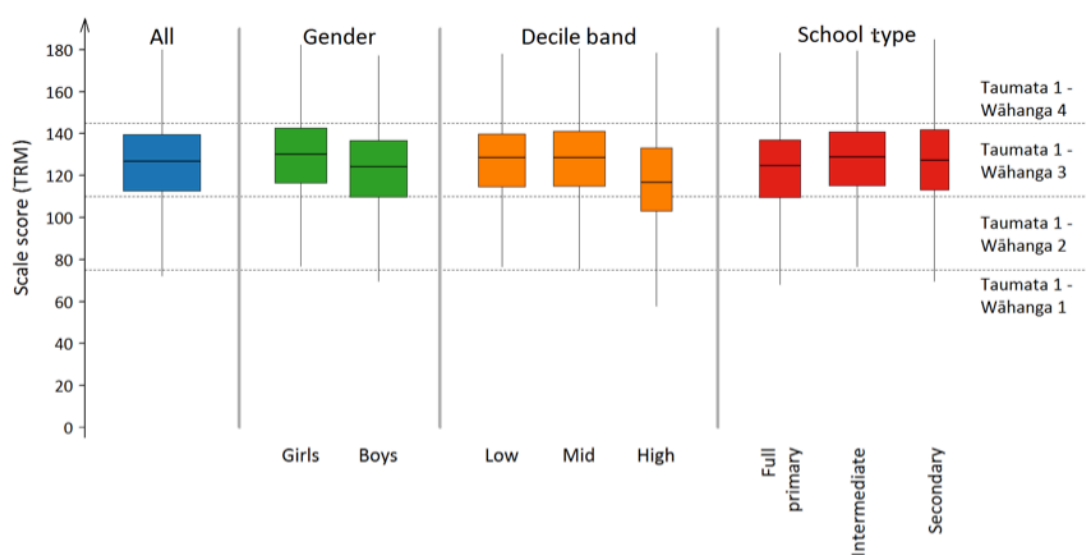


Figure 6.4 Distribution of scores for Year 8 Māori students on the TRM scale, by gender, decile band and school type

## 2. Achievement patterns for Pasifika students

### Pasifika students participating in the study

Table 6.3 provides the number of Pasifika students in the national sample at each year level by gender and school decile band. At each year level, Pasifika students represented about 10 percent of the national sample. A greater proportion of Pasifika students came from low decile schools compared to mid and high decile schools. In the national samples, 62 percent of Pasifika students attended low decile schools at each year level.

Table 6.3 Number of Pasifika students who responded to the TRM assessment

	Number of Pasifika students	
	Year 4 <i>N</i> = 300	Year 8 <i>N</i> = 306
<b>Gender</b>		
Girls	145	164
Boys	155	142
<b>School decile</b>		
Low	183	198
Mid	83	69
High	34	39

### Achievement for Pasifika students

Figures 6.5 and 6.6 show the score distribution on the TRM assessment for Year 4 and Year 8 Pasifika students, respectively. The score distributions for all students in the national samples are also provided as a reference. The average score for Year 4 Pasifika students was 89 TRM units. The average score for Year 8 Pasifika students was 116 TRM units. This means that, on average, Pasifika students in Year 8 scored higher on the TRM scale than Pasifika students in Year 4 by 27 TRM units.

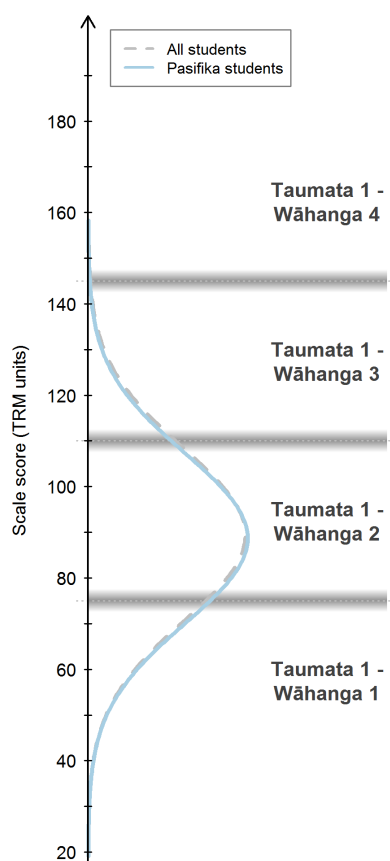


Figure 6.5 Distribution of scores for Year 4 Pasifika students on the TRM scale

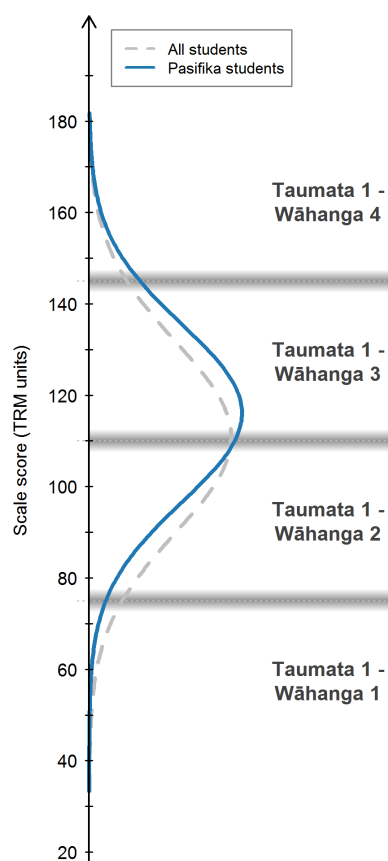


Figure 6.6 Distribution of scores for Year 8 Pasifika students on the TRM scale

Table 6.4 provides the percentage of Pasifika students in each year level achieving at each of the scoring bands used to categorise achievement on the TRM scale.

Table 6.4 Percentage of Year 4 and Year 8 Pasifika students achieving across curriculum level 1 (Taumata 1) scoring bands according to the TRM assessment

Curriculum 1 scoring band	Year 4		Year 8	
	%	Confidence interval %	%	Confidence interval %
Taumata 1: Wāhanga 4	0	(0.0, 0.0)	7	(3.5, 10.5)
Taumata 1: Wāhanga 3	12	(8.0, 17.0)	55	(48.0, 61.5)
Taumata 1: Wāhanga 2	66	(59.5, 72.5)	37	(30.0, 43.0)
Taumata 1: Wāhanga 1	22	(16.0, 27.0)	1	(0.0, 3.0)

### Achievement for Pasifika students by gender, school decile band and school type

Figures 6.7 and 6.8 use box plots to compare the distributions of scores on the TRM assessment for Pasifika students by gender, school decile band and type of school in Year 4 and Year 8, respectively.

Pasifika girls scored, on average, 6 TRM units higher than Pasifika boys at Year 4, and 10 TRM units higher at Year 8.

At both year levels, Pasifika students in mid decile schools scored higher, on average, than those in low decile schools (by 7 TRM units). Other differences between the average scores for students attending schools in different decile bands were not statistically significant.

There were no statistically significant differences in average scale scores for Pasifika students by school type.

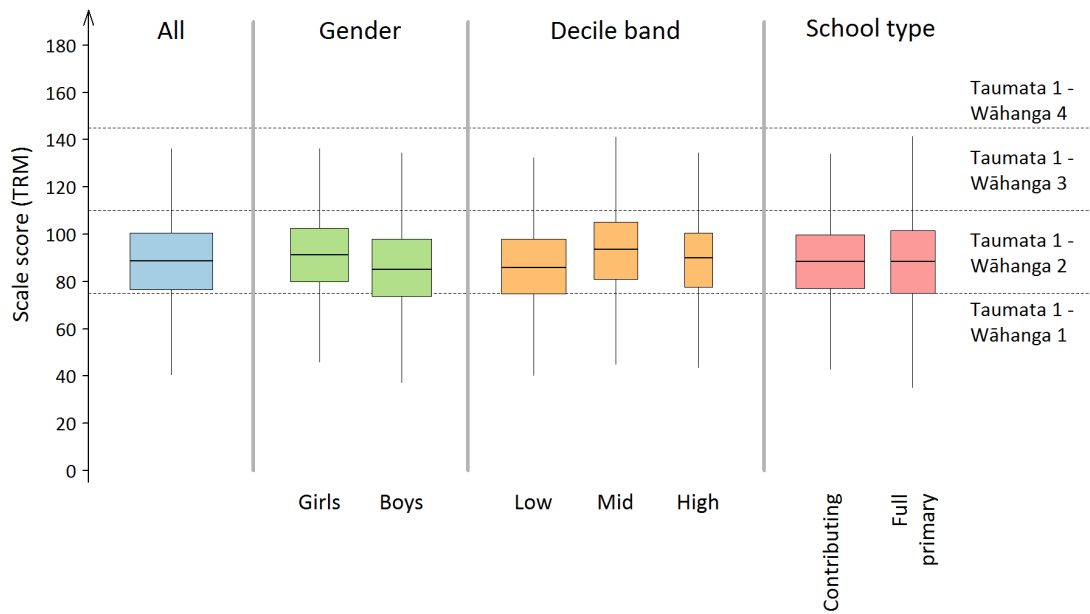


Figure 6.7 Distribution of scores for Year 4 Pasifika students on the TRM scale, by gender, decile band and school type

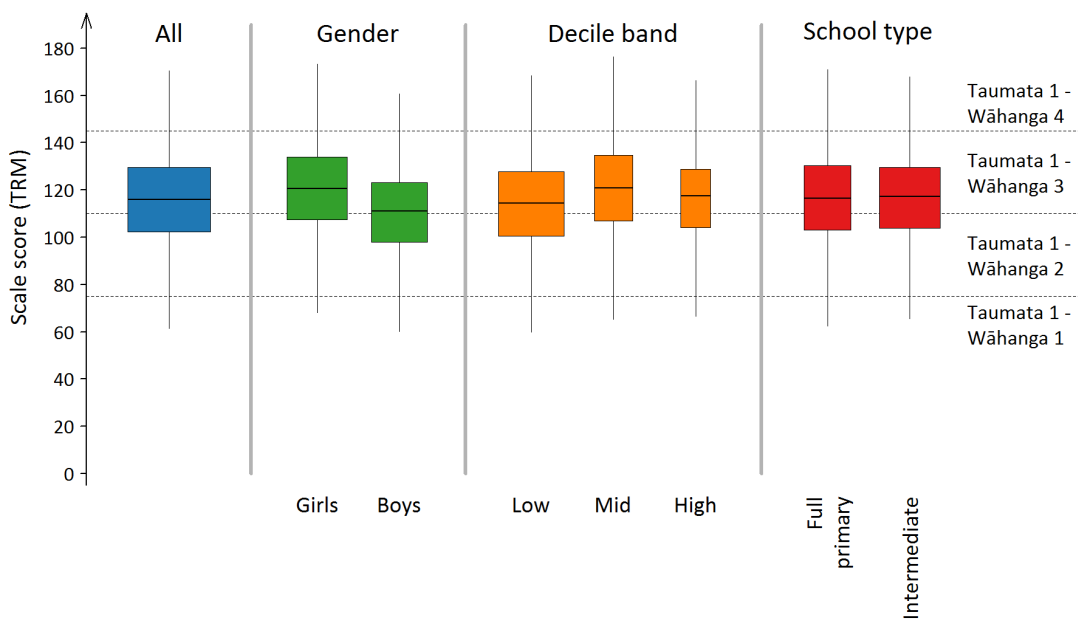


Figure 6.8 Distribution of scores for Year 8 Pasifika students on the TRM scale, by gender, decile band and school type

### 3. Achievement for students with special education needs

#### Students with special education needs participating in the study

The NMSSA includes students with special education needs in the assessment programme. Participating schools identified students' special education needs<sup>22</sup> using the following categories:

- High special education needs: for example, ORS funded, severe behaviour or receiving communication assistance from Special Education
- Moderate special education needs: for example, provided with a teacher aide from school funds, on the case load for Resource Teachers: Learning and Behaviour (RTLB) or Child, Youth and Family Services (CYFS)
- On referral: for example, referred to Special Education or CYFS with action pending.

Students who did not fall into these categories were assigned to the 'no special education needs' group.

Students with special education needs were encouraged to participate in the study using the level of assistance normally provided to them in school. The NMSSA project team also prepared accommodations, such as larger print booklets, when these were requested. Students could choose whether or not to read the larger print booklets.

Schools were able to withdraw any students for whom they believed participation in the study would be inappropriate. Parents were also able to withdraw students from participating in the study. Reasons for withdrawing students were not always related to students having special education needs. They could also include, for example, students who had less than one year's experience with English, or whose parents did not wish their child to be out of the classroom.

Table 6.5 shows the students who were included in the study according to special education needs category. The 'on referral' and 'high needs' groups were very small at each year level and cannot be considered nationally representative. Overall, about 7 percent of students were included in either the 'high needs', 'moderate needs' or 'on referral' categories.

Boys with special education needs outnumbered girls with special education needs at both year levels. At Year 4 there were 115 boys compared with 71 girls. At Year 8 there were 88 boys compared with 48 girls.

Table 6.5 Breakdown of Year 4 and Year 8 samples according to the special education needs category

	Year 4	Year 8
	<i>N</i>	<i>N</i>
High special education needs	4	10
Moderate special education needs	162	96
On referral	20	21
No special education needs	2,140	2,133
<b>Total*</b>	<b>2,326</b>	<b>2,260</b>

\* Three students at Year 8 who participated in the study did not have a special education needs category

22 The categories of special education needs were those commonly used in schools and therefore easy for schools to respond to. Schools were asked to describe the funding supports in place for children with special education needs to access the curriculum, through ORS, RTLB, MoE specialist staff and school funds. To capture any unmet needs, they were also asked to note students who were on referral to MoE specialist staff, RTLB, etc. These categories were discussed and endorsed by the NMSSA special education needs reference group.

## Achievement for students with special education needs

Table 6.6 shows how Year 4 and Year 8 students with special education needs achieved against the scoring bands used to categorise achievement on the curriculum level 1 content that made up the assessment.

Table 6.6 Percentage of Year 4 and Year 8 students with special education needs achieving across the curriculum level 1 (Taumata 1) scoring bands according to the TRM assessment

Curriculum 1 scoring band	Year 4		Year 8	
	%	Confidence interval %	%	Confidence interval %
Taumata 1: Wāhanga 4	1	(0, 3.0)	5	(0.5, 9.0)
Taumata 1: Wāhanga 3	11	(5.5, 16.0)	39	(29, 49.5)
Taumata 1: Wāhanga 2	58	(49.5, 66.5)	50	(39.0, 60.0)
Taumata 1: Wāhanga 1	30	(22.0, 38.0)	6	(1.0, 11.5)

### Achievement for students with special education needs by gender

Figures 6.9 and 6.10 show the distributions of TRM scale scores at Year 4 and Year 8 respectively, for all students with special education needs, and by gender.

The average score for Year 4 students with special education needs was 86 TRM units. The average score for Year 8 students with special education needs was 107 TRM units. This means that, on average, students with special education needs in Year 8 scored higher on the TRM scale than those in Year 4 by 21 TRM units.

At Year 4, girls with special education needs scored higher, on average, than boys with special education needs by 8 TRM units. The difference in average scores between boys and girls at Year 8 (3 TRM units) was not statistically significant.

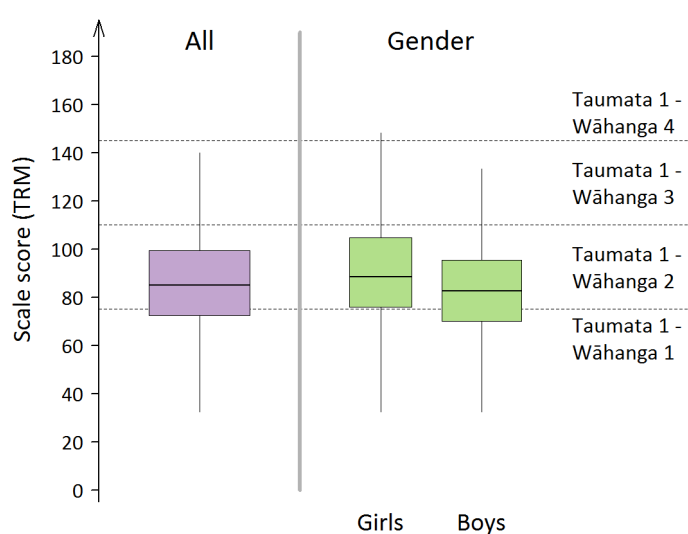


Figure 6.9 Distribution of scores for Year 4 students with special education needs on the TRM scale, by gender

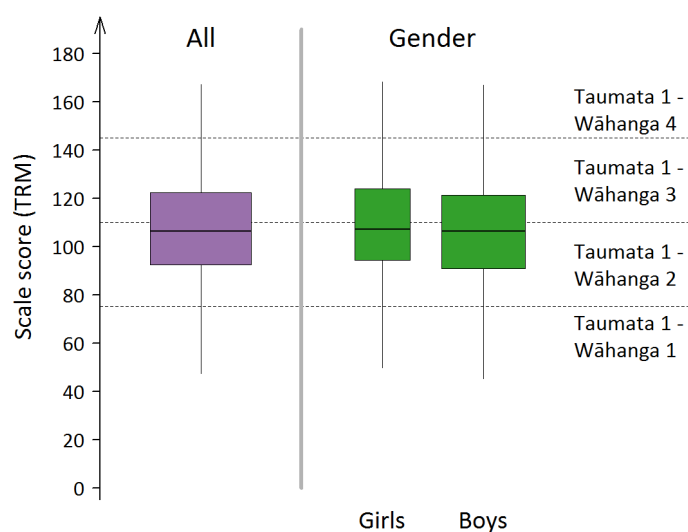


Figure 6.10 Distribution of scores for Year 8 students with special education needs on the TRM scale, by gender

## 4. Benchmarking success for priority learners

Tables 6.7 and 6.8 display summary statistics for Year 4 and Year 8 students, respectively, who scored above the national average on the TRM assessment for their year level. The statistics are provided for each priority learner group and for all students in the national sample. During this cycle of NMSSA, the national average at each year level has been used as a benchmark for comparison purposes.

At both year levels, a greater proportion of Māori students achieved at or above the respective benchmark compared with the proportion for all students. In addition, the average TRM scale scores for Māori students achieving above the benchmark score was higher than for all students. At Year 8 the same was true for Pasifika students. The percentage of students with special education needs scoring above the benchmark score at each year level was similar to the percentage for all students.

Table 6.7 Summary statistics for Year 4 students scoring above the Year 4 average score benchmark, by group

Te Reo Māori (TRM)					
Group	Percentage at or above benchmark (%)	Confidence interval (%)	Average score (TRM units)	Confidence interval (TRM units)	Standard deviation (TRM units)
Māori	68	(63.5, 73.0)	109	(107.5, 110.5)	14
Pasifika	48	(41.0, 55.0)	104	(102.5, 105.5)	12
Special education needs	47	(38.0, 55.5)	104	(101.5, 106.5)	14
All students	49	(47.0, 51.5)	105	(104.5, 105.5)	12

Table 6.8 Summary statistics for Year 8 students scoring above the Year 8 average score benchmark, by group

Te Reo Māori (TRM)					
Group	Percentage at or above benchmark (%)	Confidence interval (%)	Average score (TRM units)	Confidence interval (TRM units)	Standard deviation (TRM units)
Māori	78	(73.5, 82.0)	134	(132.5, 135.5)	15
Pasifika	60	(53.5, 66.5)	129	(127.5, 130.5)	13
Special education needs	50	(39.0, 60.0)	125	(122.0, 128.0)	14
All students	49	(46.5, 51.0)	128	(127.5, 128.5)	13

## 5. Summary

### Māori students

At Year 4, 564 Māori students were assessed in te reo Māori using the TRM assessment and 511 at Year 8.

The average score for Māori students on the TRM assessment was 99 TRM units at Year 4 and 126 TRM units at Year 8.

Māori girls scored higher, on average, than Māori boys at both year levels (by 9 and 6 TRM units, respectively).

At Year 4, Māori students in mid decile schools scored 5 TRM units higher than those in high decile schools. At Year 8, Māori students in mid and low decile schools scored higher, on average, than those in high decile schools by 10 and 9 TRM units, respectively.

### Pasifika students

At Year 4, 300 Pasifika students were assessed in te reo Māori and at Year 8, 306.

The average score for Pasifika students on the TRM assessment was 89 TRM units at Year 4 and 116 TRM units at Year 8.

The average score for Pasifika girls at Year 4 was 6 TRM units higher than for Pasifika boys. At Year 8 it was 10 TRM units higher.

At both year levels, Pasifika students in mid decile schools scored higher, on average, than those in low decile schools (by 7 TRM units). Other differences between the average scores for students attending schools in different decile bands were not statistically significant.

**Students with special education needs**

There were 140 students with special education needs assessed in te reo Māori at Year 4 and 113 students at Year 8. Most of these students were classified as having moderate needs.

The average TRM score for students with special education needs was 76 TRM units at Year 4 and 100 TRM units at Year 8.

# 7 Contextual Findings: Learning Te Reo Māori

This chapter describes contextual data relating to the teaching and learning of te reo Māori. This data was collected using the student, teacher and principal questionnaires.

Detailed tables of means, standard deviations, sample sizes, effect sizes and 95 percent confidence intervals can be found in the appendix.

## 1. Students' perspectives

### Students' views about the importance of te reo Māori

Students were asked to rate how important they thought it was to learn te reo Māori. Their responses are shown in Figure 7.1. A slightly greater proportion of Year 4 students than Year 8 students (66 percent and 60 percent, respectively) thought it was 'important' or 'very important' to learn te reo Māori.

Students' perspectives were also examined by ethnicity and special education needs.

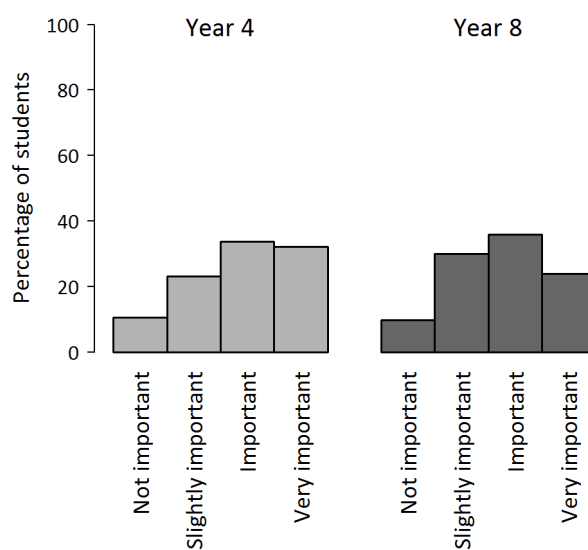


Figure 7.1 Percentage frequency of students' ratings of the importance of learning te reo Māori, by year level

At both year levels, greater proportions of Māori students, compared with non-Māori, thought it was 'very important' to learn te reo Māori (see Figures 7.2 and 7.3). This is in contrast to international languages, which Year 8 Māori students were more likely than non-Māori to rate as being 'not important' or 'slightly important'. This suggests learning te reo Māori is a higher priority for a proportion of Māori students.

At both year levels, Pasifika students were less likely than Māori, but more likely than Asian or New Zealand European students, to rate learning te reo Māori as 'very important'.

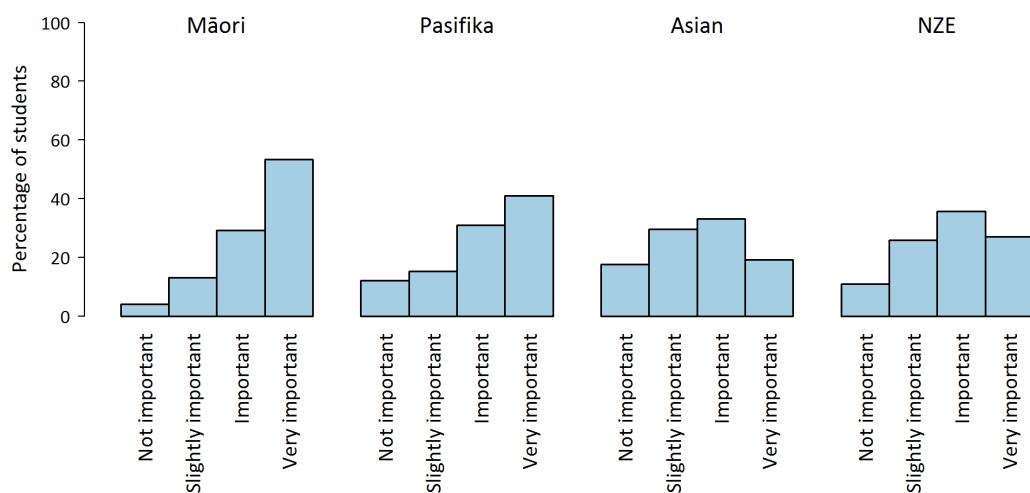


Figure 7.2 Percentage frequency of Year 4 students' ratings of the importance of learning te reo Māori, by ethnicity

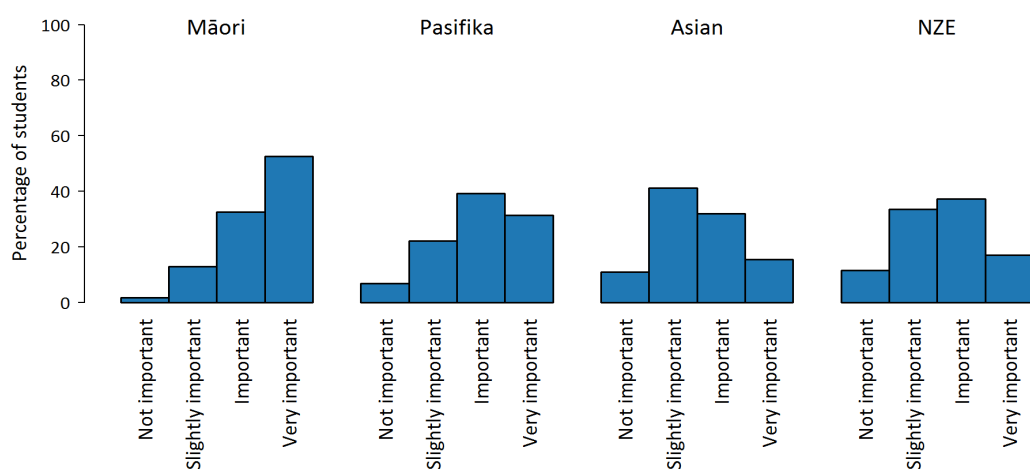


Figure 7.3 Percentage frequency of Year 8 students' ratings of the importance of learning te reo Māori, by ethnicity

At both year levels, students with special education needs responded similarly to the whole sample with respect to the importance of te reo Māori. For example, 58 percent of students with special education needs at Year 4 and Year 8 thought te reo was 'important' or 'very important', compared with 66 percent and 60 percent, respectively, of the national samples.

As well as rating the importance of learning te reo Māori, students were asked to give a reason for their rating. Among those who thought it was 'important' or 'very important' to learn te reo Māori, three main themes emerged from their reasons. The first of these themes related to te reo Māori being part of New Zealand's culture and identity and more particularly, part of Māori culture. The second theme was about the usefulness of te reo Māori, now and in the future. The third theme encompassed general expressions of a positive attitude toward, or valuing of, te reo Māori. Another less common theme was having a family or whānau connection with te reo Māori.

Among those students who rated learning te reo Māori as 'not important' or 'slightly important', the dominant theme in the reasons given was a lack of usefulness or relevance.

### Year 8 Māori students' reasons for 'very important' ratings

Of the Year 8 students, 53 percent of Māori and 16 percent of non-Māori students rated learning te reo Māori as 'very important'. The reasons they gave for this view are shown for Māori and non-Māori students in Table 7.1. Almost half of Māori students who rated learning te reo as 'very important' said this was because they saw it as part of their heritage, or connected to their whānau. Only 6 percent of the non-Māori students who rated learning te reo Māori as 'very important' explained this was because of their heritage or whānau connections.

Interestingly, a greater proportion of non-Māori than Māori students explained that it was 'very important' because te reo Māori is part of Māori culture. Māori students' reasons, on the other hand, were more likely to locate te reo Māori as 'part of my heritage/connected to my family or whānau'.<sup>23</sup>

Table 7.1 Year 8 students' reasons for rating learning te reo Māori as 'very important', for Māori and non-Māori students\*

	Students	
	Māori (n = 265) (%)	Non-Māori (n = 269) (%)
Part of my heritage/connected to my family or whānau	45	6
Expressed a positive attitude towards, or valuing of, te reo Māori	37	32
It is useful to learn	29	35
Part of Māori culture	13	21

\*Some students gave multiple reasons

Twelve percent of non-Māori students rated learning te reo Māori as 'not important'. Over half of these students (58 percent) explained that this was because it was not useful to them. Two percent of Māori students rated learning te reo Māori as 'not important'.

<sup>23</sup> When invited to explain why they rated learning an international language as 'very important' (see Table 3.1), non-Māori Year 8 students were more likely than Māori students to explain that an international language is useful for overseas travel or useful to learn (e.g. to help them learn about grammar, or as a gateway to more intensive language learning at secondary school). On the other hand, Māori students were more likely to rate learning te reo Māori as 'very important' because of a personal connection to the language.

## Te reo Māori learning experiences

Students were asked how often a range of learning experiences in te reo Māori happened for them at school. Figure 7.4 shows that, at both year levels, singing waiata was the learning experience that was most likely to be reported as happening ‘very often’, while talking to their classmates in te reo Māori in the playground was the least likely. Slightly greater proportions of Year 8 than Year 4 students indicated they ‘never’ took part in kapa haka, and ‘never’ read books or websites written in te reo Māori.

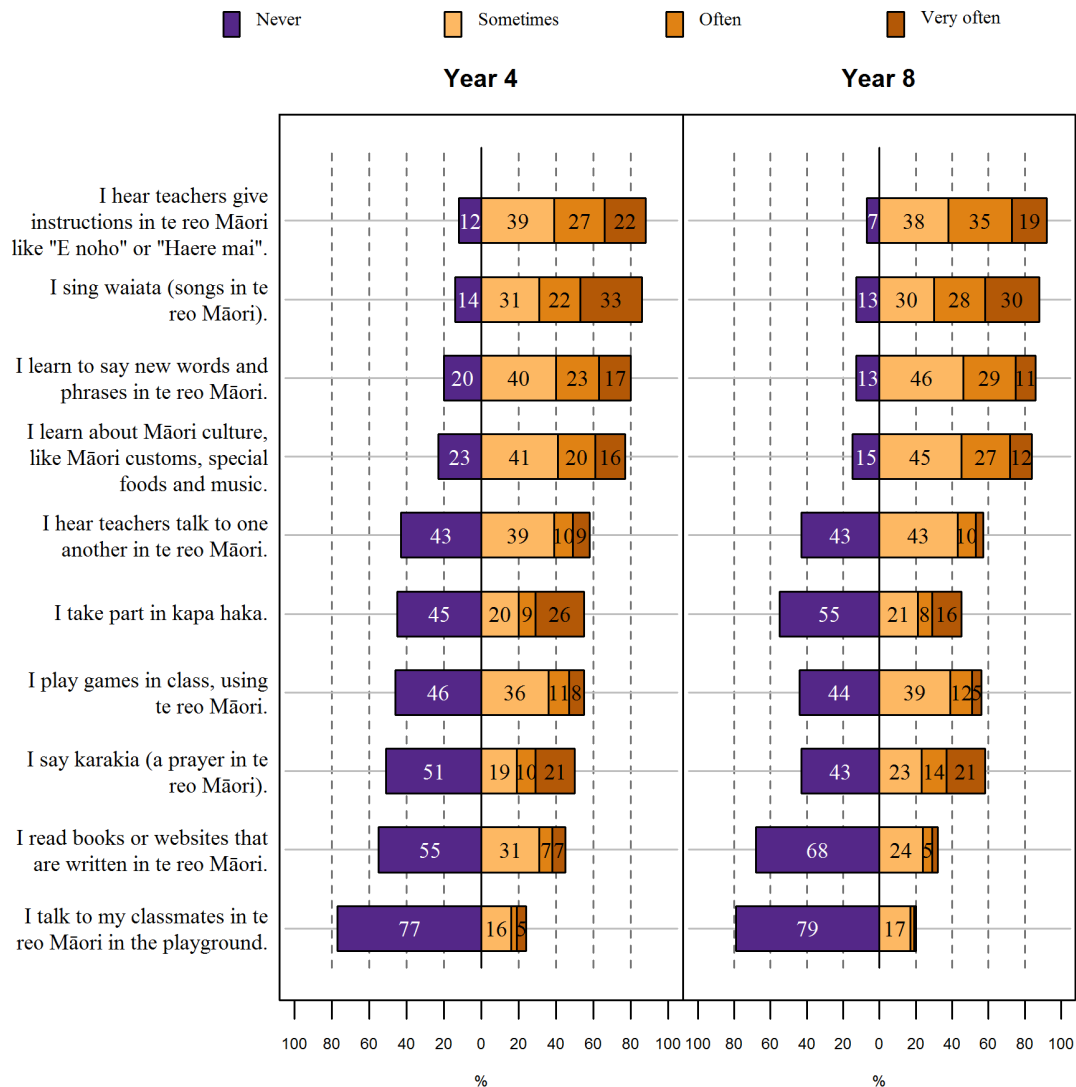


Figure 7.4 Percentage frequency of students' te reo Māori learning experiences at school, by year level

Figure 7.5 shows Māori students’ responses to the statements about learning experiences in te reo Māori at school. In general, Māori students reported more frequent te reo Māori learning experiences than did all students, particularly saying karakia, reading books or websites that are written in te reo Māori, taking part in kapa haka, and talking to their classmates in te reo Māori in the playground.

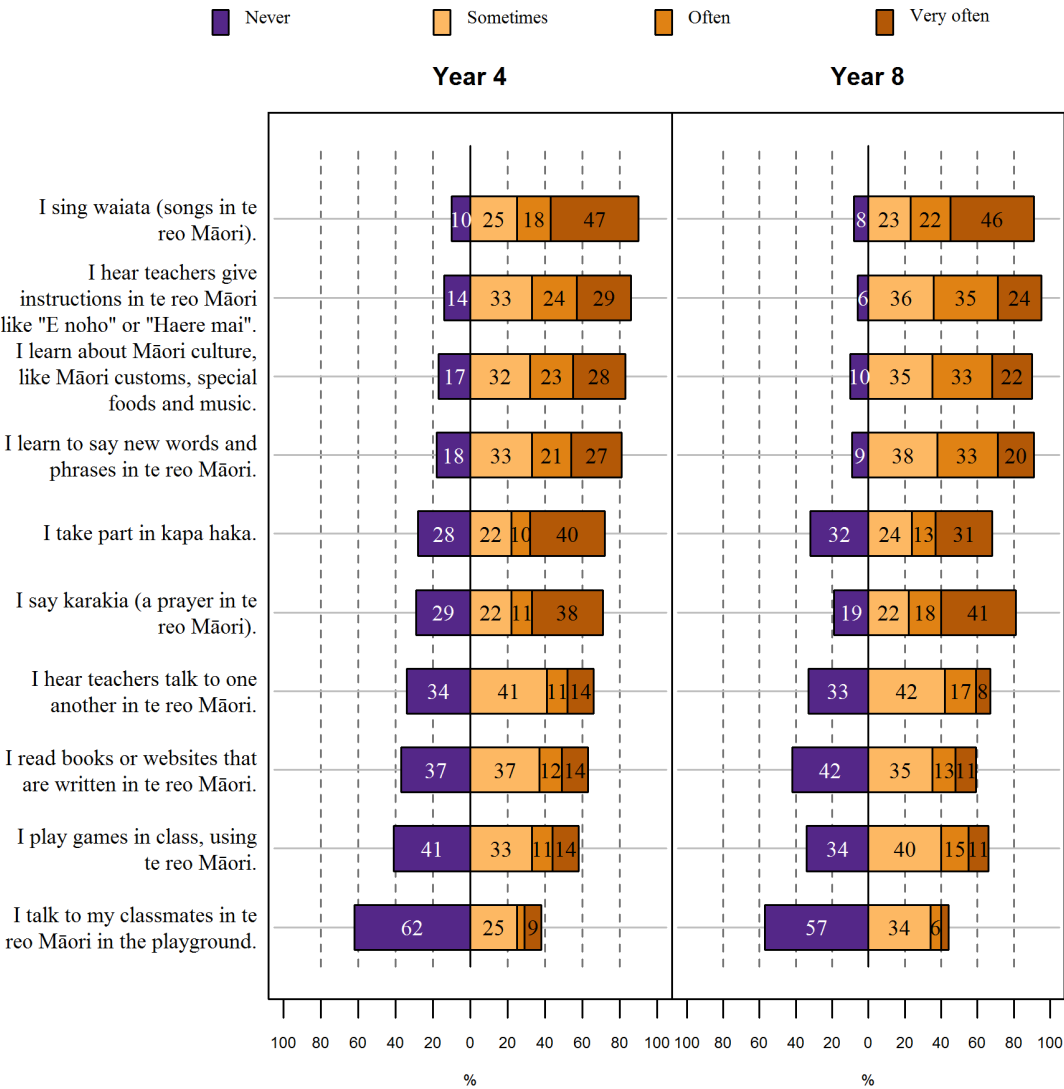


Figure 7.5 Percentage frequency of Māori students’ te reo Māori learning experiences at school, by year level

The pattern of responses to the learning experience statements from Pasifika students was very similar to that of all students, at both year levels. Students with special education needs also had a similar pattern of response to all students, with one clear exception. At both year levels, greater proportions of students with special education needs indicated they read books or websites that are written in te reo Māori, at least sometimes (54 percent compared with 23 percent at Year 4, and 46 percent compared with 21 percent at Year 8).

## Attitudes to learning te reo Māori

Students' responses to a range of statements concerning their attitudes to learning te reo Māori are shown in Figure 7.6. Smaller proportions of Year 8 than Year 4 students tended to 'totally agree' with these statements. Fifty-seven percent of Year 8 students reported that they 'did not agree at all' that te reo Māori was their favourite thing to learn at school, compared with 41 percent of Year 4 students. At both Year 4 and Year 8, 29 percent of students strongly agreed they would rather learn a different language.

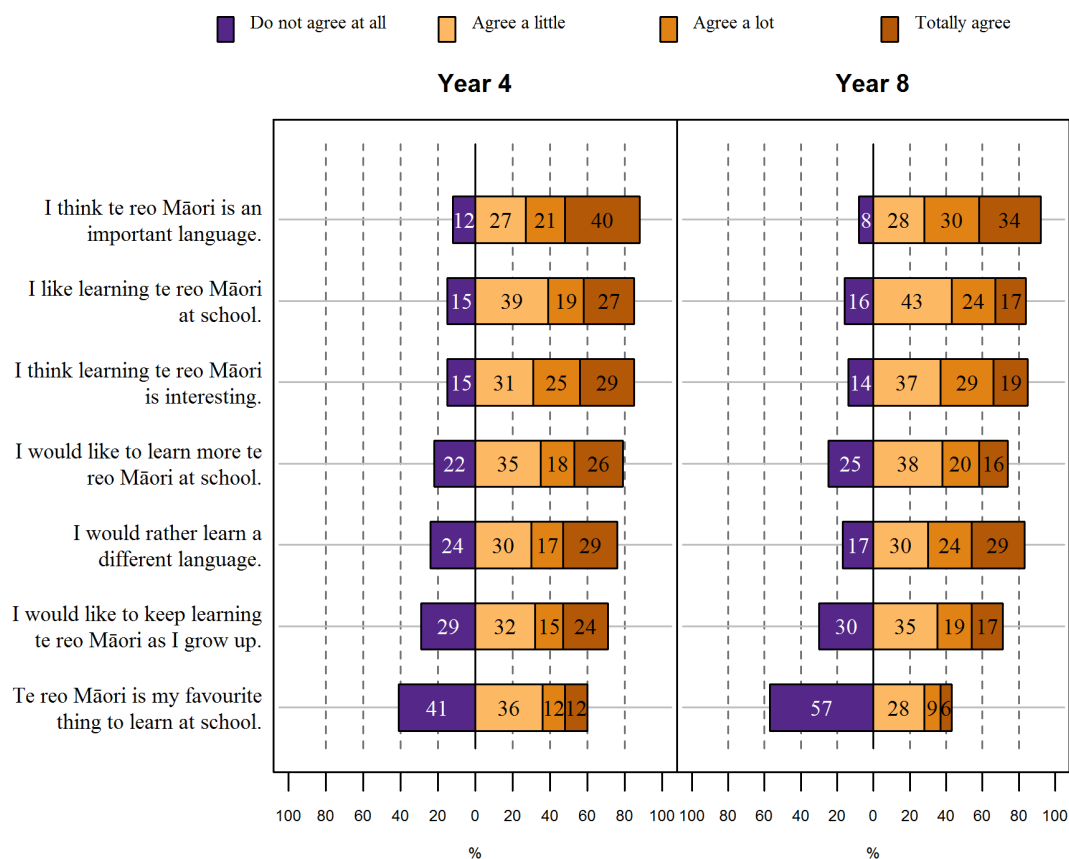


Figure 7.6 Percentage frequency of students' responses to statements about their attitudes to learning te reo Māori, by year level

Responses to the individual attitude statements were combined to construct an Attitudes to Te Reo Māori<sup>24</sup> (ATRM) scale. The ATRM scale has been divided into three regions associated with the response categories students used to respond to the attitude statements. The 'very positive' region shows the part of the scale where total agreement was most probable. That is, students whose overall attitude score was located in this part of the scale were more likely to have selected the 'totally agree' category, than any of the other categories, when responding to the attitude statements. The 'not positive' region is the part of the scale where 'do not agree at all' responses were most probable.

<sup>24</sup> Throughout this report, 'Te Reo Māori' is capitalised when referring to the assessment developed for this study, when it is part of the name of a scale (such as the Attitudes to Te Reo Māori scale), and in chapter headings. Elsewhere in the report, we refer to 'te reo Māori'.

Figure 7.7 shows the distributions of scale scores on the ATRM scale for Year 4 and Year 8 students. Year 4 students showed a marginally higher median score than Year 8 students. The majority of students at both year levels were categorised as having either a positive or very positive attitude toward learning te reo Māori.

Figures 7.8 and 7.9 show the distributions of ATRM scale scores by gender and ethnicity for Year 4 and Year 8, respectively.

Māori students at both year levels were more positive about learning te reo Māori than non-Māori. This difference

was greater at Year 8 than at Year 4. Pasifika students were also more positive, on average, than non-Pasifika students at both year levels, though the differences were less marked than between Māori and non-Māori.

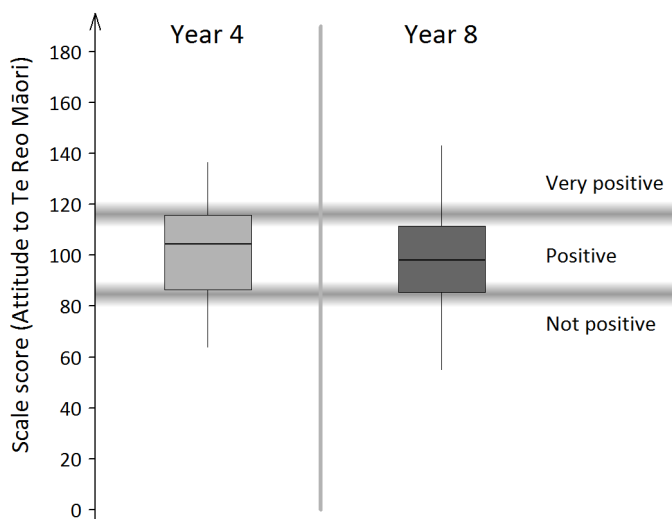


Figure 7.7 Distribution of students' scores on the Attitudes to Te Reo Māori (ATRM) scale, by year level

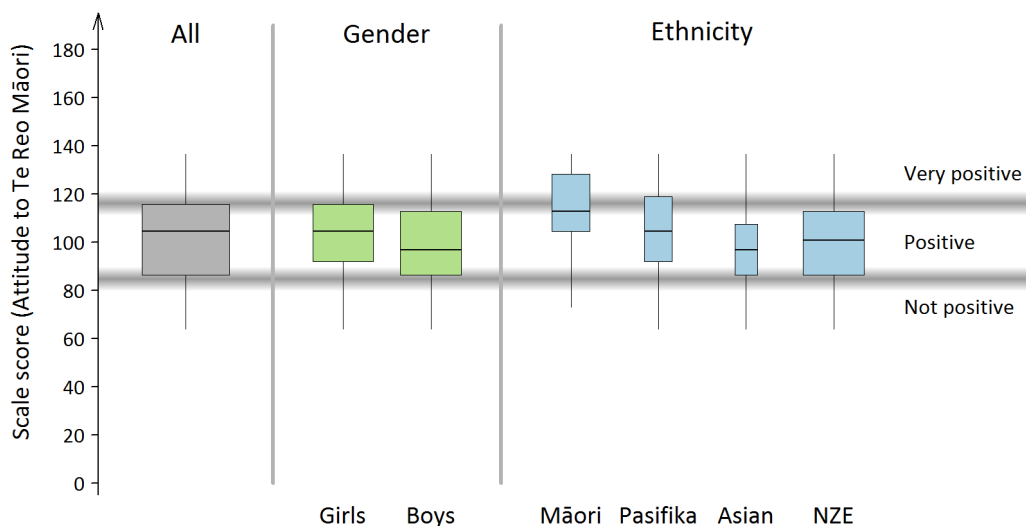


Figure 7.8 Distribution of Year 4 students' scores on the Attitudes to Te Reo Māori (ATRM) scale, by gender and ethnicity



Figure 7.9 Distribution of Year 8 students' scores on the Attitudes to Te Reo Māori (ATRM) scale, by gender and ethnicity

Looking at average ATRM scale scores, girls at both year levels were more positive than boys. The effect size associated with this gender difference was 0.35 at Year 4, but only 0.17 at Year 8.

Figures 7.10 and 7.11 show the distributions of ATRM scale scores by school decile and type for Year 4 and Year 8, respectively. In terms of average scores on the ATRM scale, there were several statistically significant differences between different groups of students. At both Year 4 and Year 8, students in low decile schools were more positive, on average, about learning te reo Māori than those in mid or high decile schools. Year 4 students in full primary schools were slightly more positive, on average, than those in contributing schools. Year 8 students in intermediate schools tended to be more positive than those in composite schools. At Year 8, students in composite schools were less positive, on average, than those in intermediate schools<sup>25</sup>.

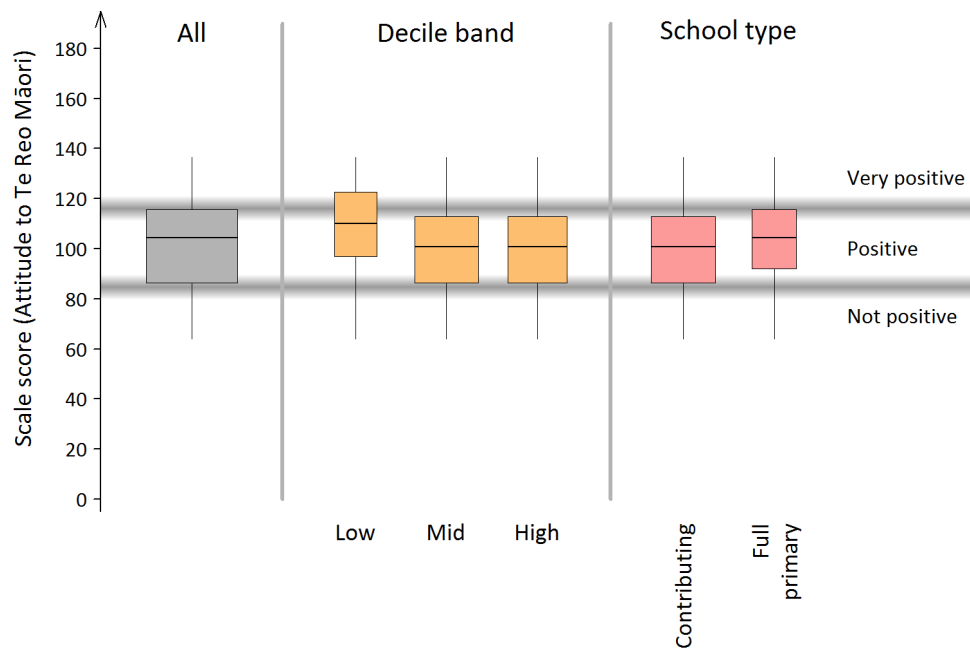


Figure 7.10 Distribution of Year 4 students' scores on the Attitudes to Te Reo Māori (ATRM) scale, by school decile band and school type

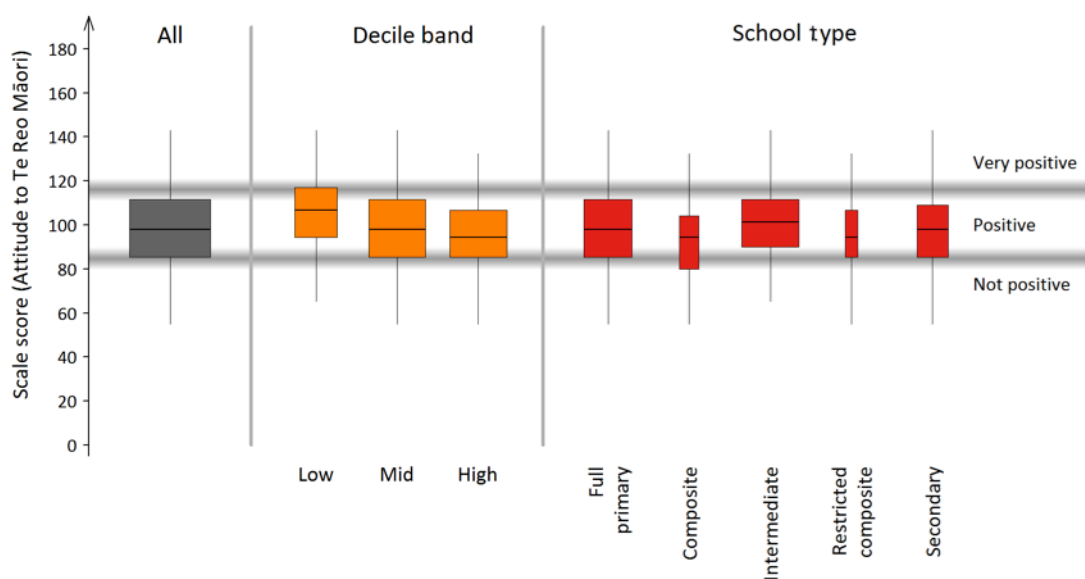


Figure 7.11 Distribution of Year 8 students' scores on the Attitude to Te Reo Māori (ATRM) scale, by school decile band and school type

<sup>25</sup> Care should be taken when making comparisons between types of schools. In some cases, a school type is represented by a relatively small number of schools, potentially confounding school type and other school level variables. School types with an effective sample size of 30 students or fewer are not shown in box plots.

## Relationship between attitudes to, and achievement in, te reo Māori

There was a positive correlation between achievement on the TRM assessment and the ATRM scale at both year levels (0.27 at Year 4 and 0.39 at Year 8). Both were statistically significant.

Figures 7.12 and 7.13 show the relationship between achievement and attitude by using the ‘not positive’, ‘positive’ and ‘very positive’ regions of the ATRM scale to form three attitude score groups. At Year 4, the difference in the average achievement score for students in the very positive group compared with those in the not positive group was 12 TRM units. At Year 8, it was 18 TRM units.

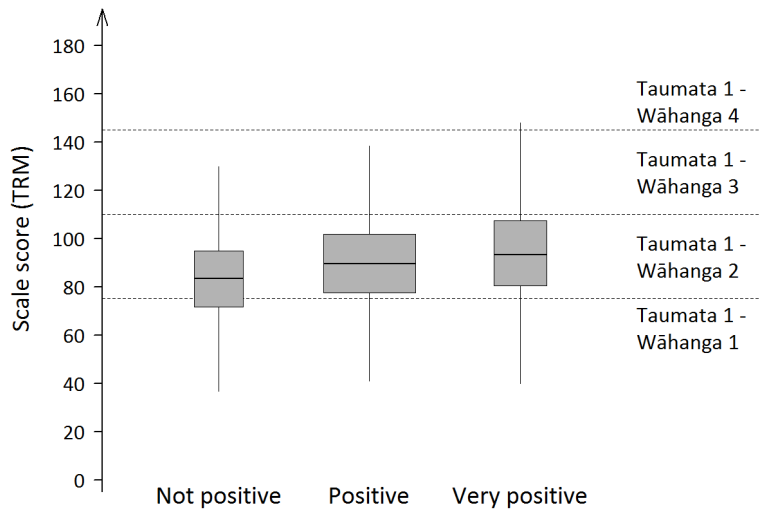


Figure 7.12 Distribution of Year 4 students' achievement on the Te Reo Māori (TRM) assessment, by Attitudes to Te Reo Māori (ATR)

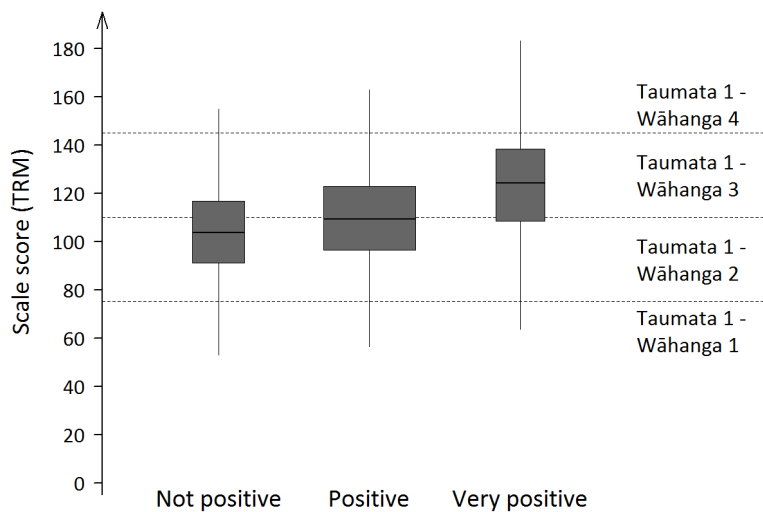


Figure 7.13 Distribution of Year 8 students' achievement on the Te Reo Māori (TRM) assessment, by Attitudes to Te Reo Māori (ATR)

## Confidence in te reo Māori

Students' responses to statements about their confidence in te reo Māori are shown in Figure 7.14. At both Year 4 and Year 8, greater proportions of students expressed confidence in their ability to hear and speak te reo Māori, and to use the language in performances, than to read and write in te reo Māori.

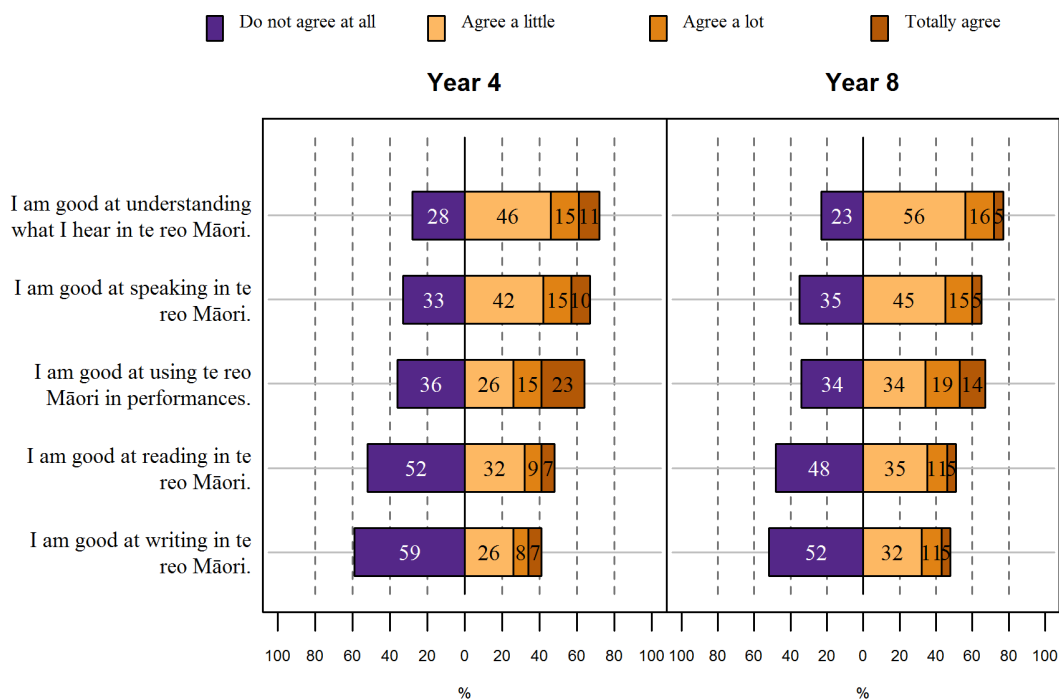


Figure 7.14 Percentage frequency of students' responses to statements about their confidence in te reo Māori, by year level

Responses to the items shown in Figure 7.14 were used to construct the Confidence in Te Reo Māori (CTRM) scale. The distributions of students' scores on this scale are shown by year level in Figure 7.15. Once again, the scale was divided into regions, with the 'very confident' region being the part of the scale where 'totally agree' responses were most probable, and the 'not confident' region being where 'do not agree at all' responses were most probable. The distributions of CTRM scale scores by year level were very similar, with only a small proportion of students in the 'very confident' region (8 percent at Year 4, and 7 percent at Year 8).

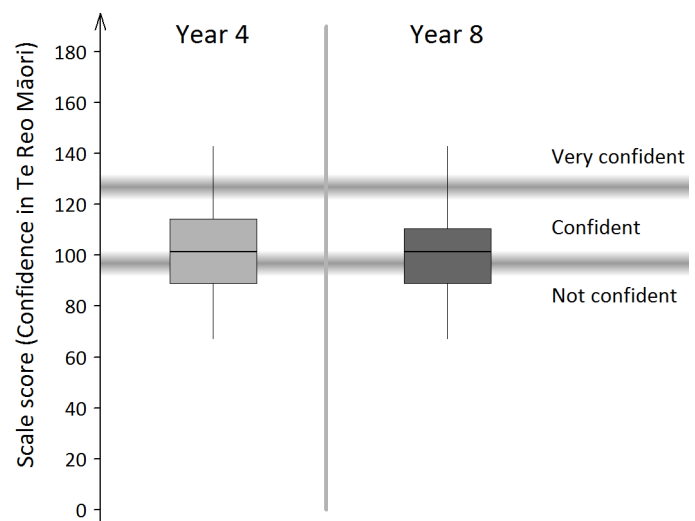


Figure 7.15 Distribution of students' scores on the Confidence in Te Reo Māori scale, by year level

Figures 7.16 and 7.17 show students' scores on the CTRM scale by students' gender and ethnicity. On the confidence scale, as on the attitudes scale, the average score for girls was higher than boys, and Māori students higher than non-Māori, at both Year 4 and Year 8. The average score for Pasifika students was higher than non-Pasifika students at Year 8.

For Māori students, while girls were more confident, on average, than boys at Year 4, there were no significant differences by gender at Year 8. There were no significant gender differences at either year level among students with special education needs, or among Pasifika students.



Figure 7.16 Distribution of Year 4 students' scores on the Confidence in Te Reo Māori scale, by gender and ethnicity

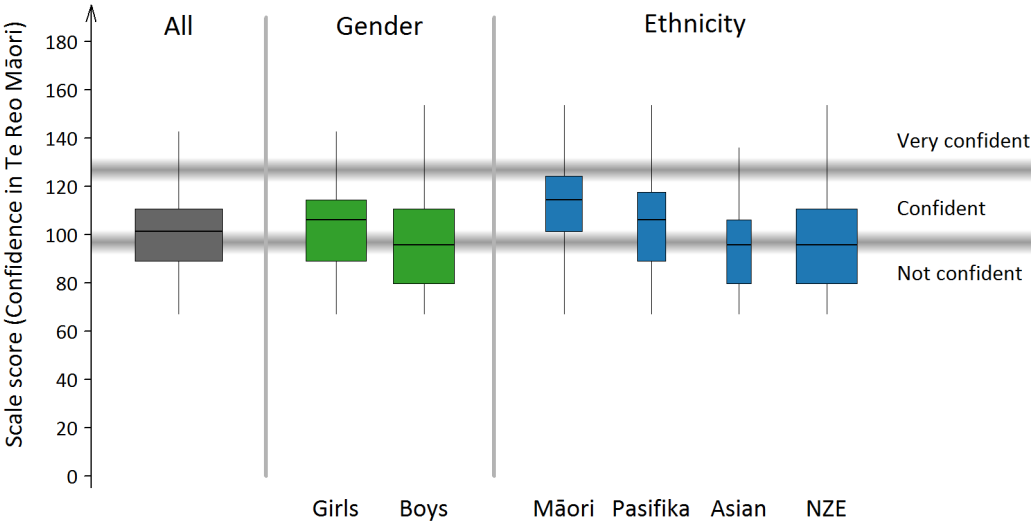


Figure 7.17 Distribution of Year 8 students' scores on the Confidence in Te Reo Māori scale, by gender and ethnicity

On average, at Year 4, students in low decile schools were more confident than those in mid or high decile schools, while at Year 8 those in low decile schools were more confident than those in high decile schools (Figures 7.18 and 7.19). There were no statistically significant differences in average confidence scale score by school type at Year 4. At Year 8, students in composite schools were less positive, on average, than students in any of the other school types.

There were no statistically significant differences in mean confidence scores by decile band among Māori students at either year level.

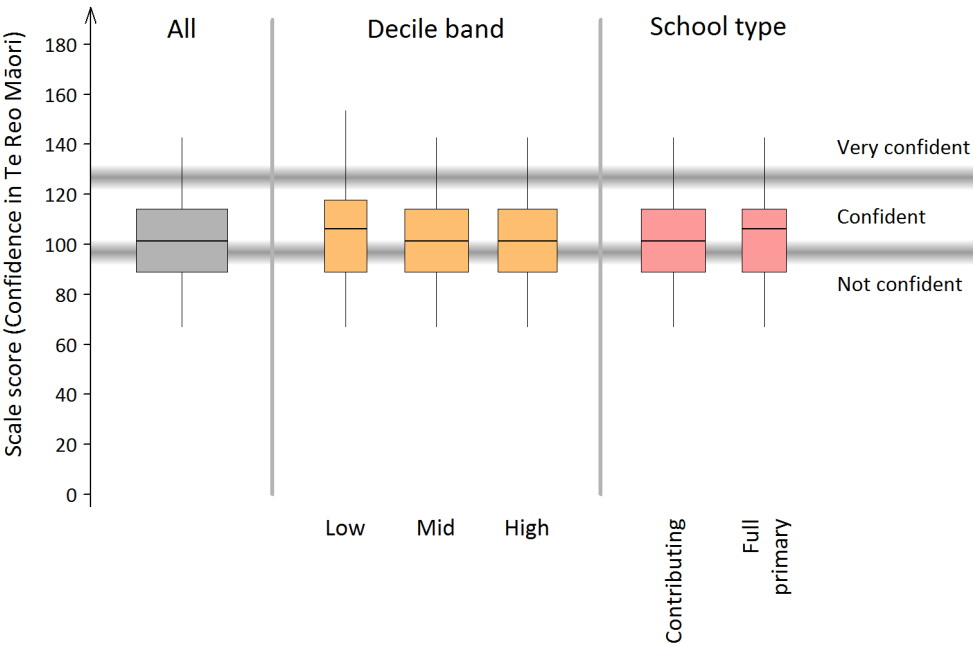


Figure 7.18 Distribution of Year 4 students' scores on the Confidence in Te Reo Māori scale, by school decile band and type

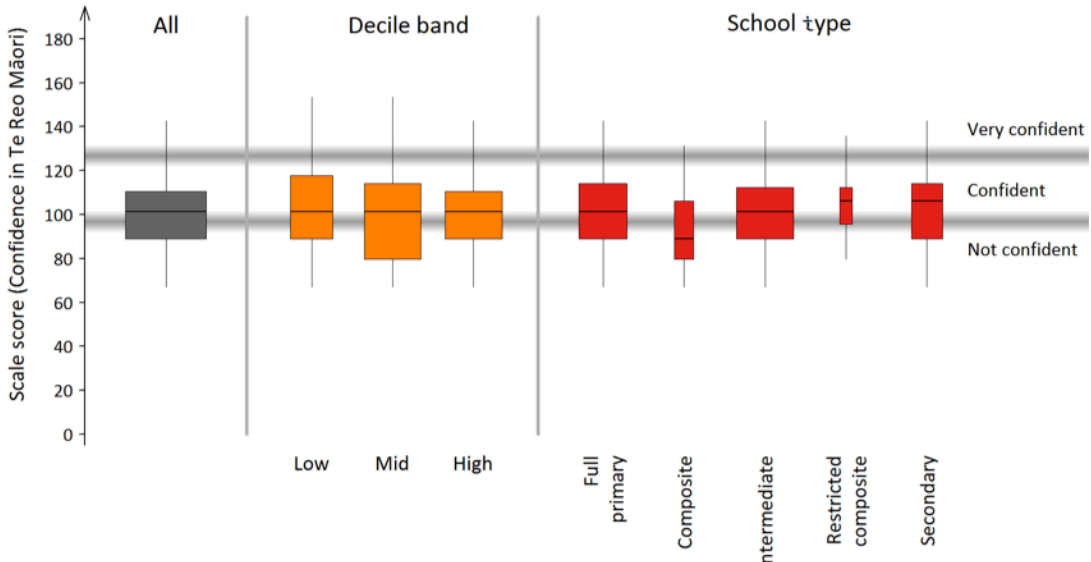


Figure 7.19 Distribution of Year 8 students' scores on the Confidence in Te Reo Māori scale, by school decile band and type

## Relationship between confidence and achievement in te reo Māori

There was also a positive correlation between achievement and scores on the Confidence in Te Reo Māori scale at both year levels (0.32 at Year 4 and 0.49 at Year 8). Again, both correlations were statistically significant.

Figures 7.20 and 7.21 show the relationship between achievement and confidence by using the ‘not confident’, ‘confident’ and ‘very confident’ regions of the confidence scale to form three confidence score groups. At Year 4 the difference in the average achievement score for students in the very confident group compared with those in the not confident group was 13 TRM units. At Year 8 it was 25 TRM units.

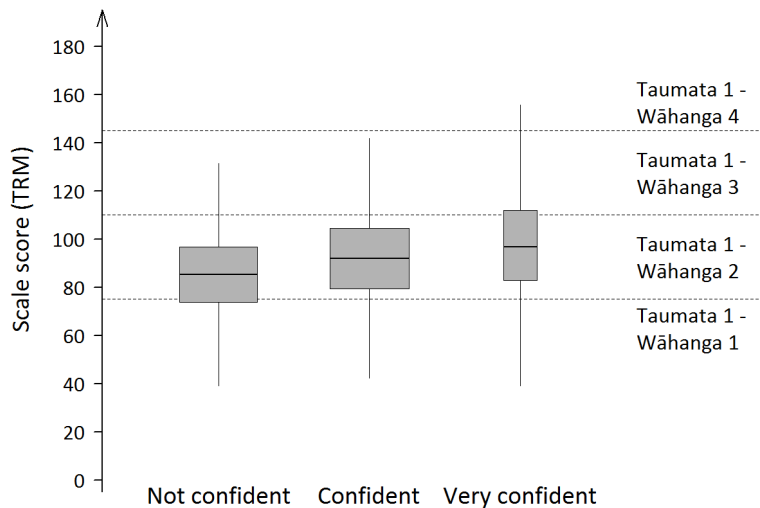


Figure 7.20 Distribution of Year 4 students' achievement scores, by level on the Confidence in Te Reo Māori scale

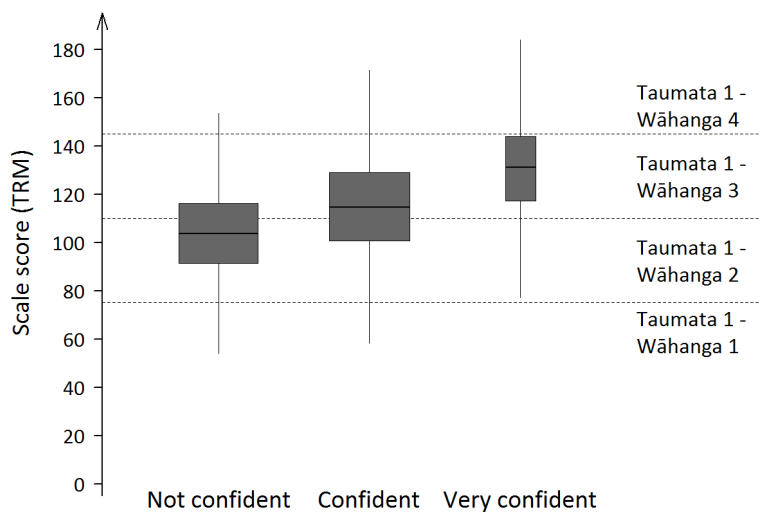


Figure 7.21 Distribution of Year 8 students' achievement scores, by level on the Confidence in Te Reo Māori scale

## Their classmates' engagement with te reo Māori

Figure 7.22 shows students' views about their classmates' engagement with te reo Māori. Most students agreed at least a little that their classmates enjoy learning te reo Māori at school and can say Māori names properly. A greater proportion of Year 4 than Year 8 students disagreed that their classmates can say Māori names properly.

The proportion of students agreeing 'a lot' or 'totally agreeing' with each of the statements was greater among Māori, Pasifika, and students with special education needs. The only exception was that students with special education needs at Year 8 were no more likely to agree a lot or totally agree that their classmates can say Māori names properly when compared with all Year 8 students in the sample.

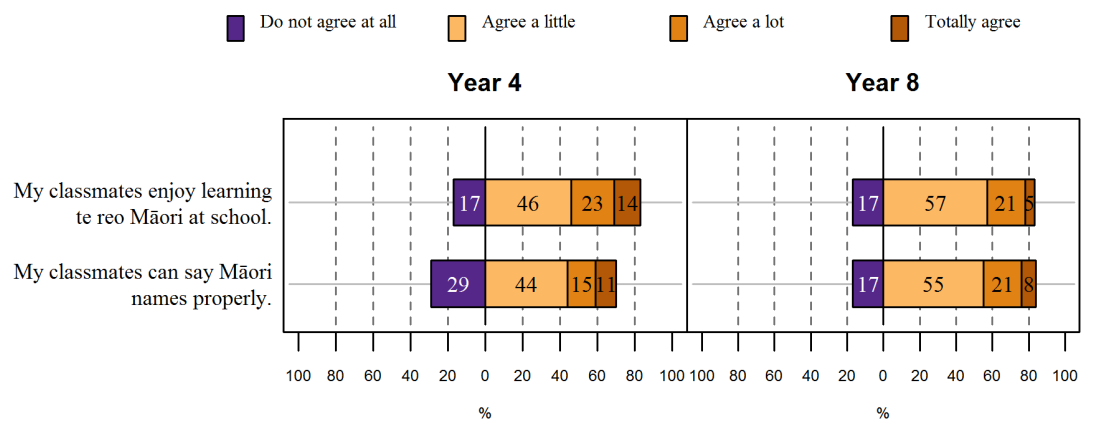


Figure 7.22 Percentage frequency of students' responses to statements about their classmates' engagement with te reo Māori, by year level

## Speaking te reo Māori at home

Students were asked how often they spoke te reo Māori at home. Figure 7.23 shows how they responded.

Around half of all students at each year level reported they never spoke te reo Māori at home. Only small proportions said they spoke te reo Māori often or always at home.

Unsurprisingly, Māori students reported speaking te reo Māori at home more frequently than students in other ethnic groups (see Figures 7.24 and 7.25). About 26 percent of Māori students at Year 4, and 15 percent at Year 8 said that they never spoke te reo Māori at home.

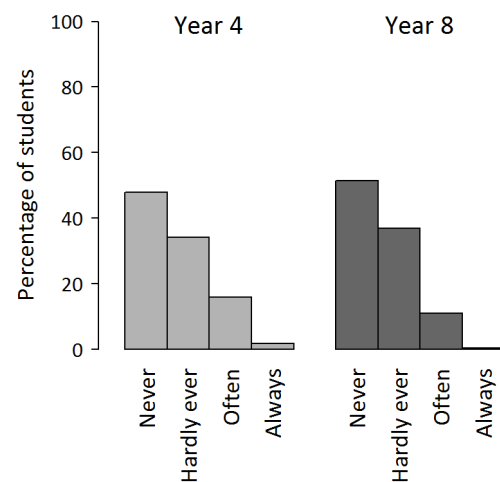


Figure 7.23 Percentage frequency of students' reports of how often they spoke te reo Māori at home, by year level

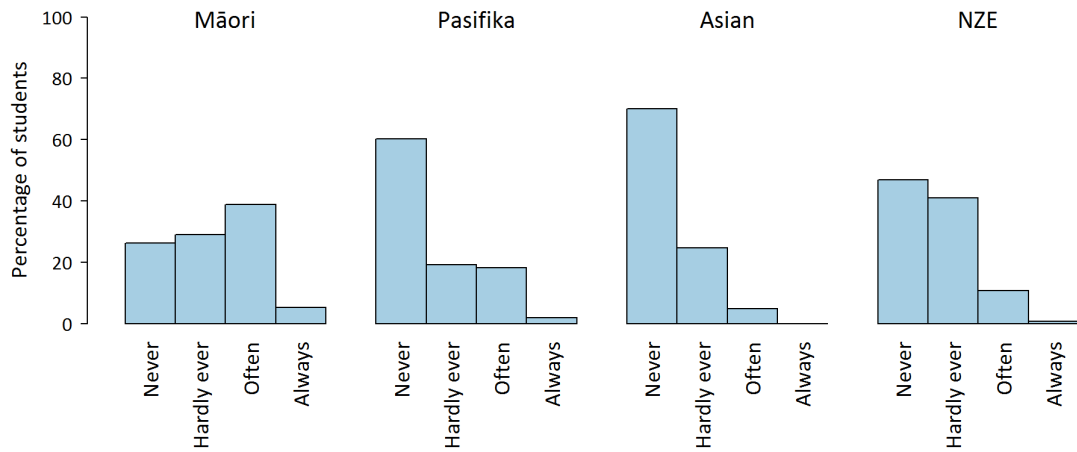


Figure 7.24 Percentage frequency of Year 4 students' reports of how often they spoke te reo Māori at home, by ethnicity

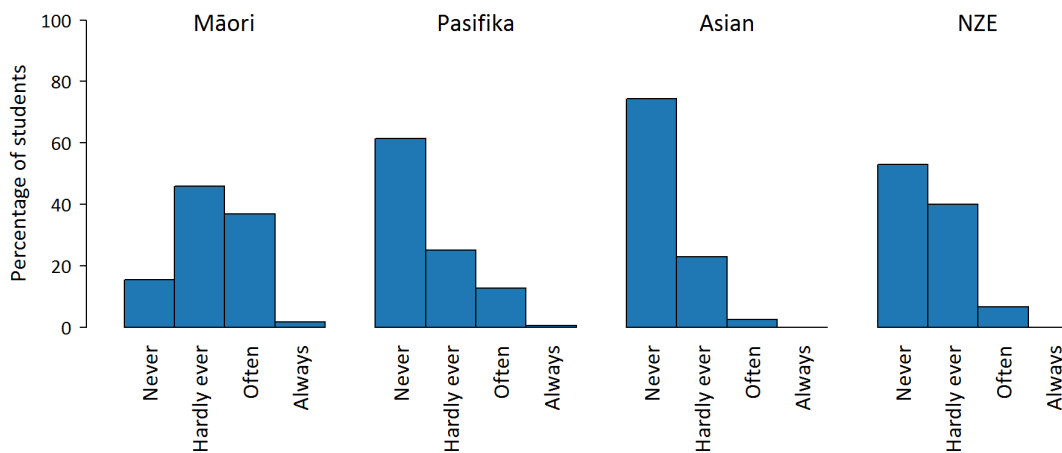


Figure 7.25 Percentage frequency of Year 8 students' reports of how often they spoke te reo Māori at home, by ethnicity

At Year 4, greater proportions of students with special education needs reported never speaking te reo Māori at home, compared with all Year 4 students (see Figure 7.26). At Year 8, greater proportions of students with special education needs reported often speaking te reo Māori at home, compared with all Year 8 students.

### Relationship between amount of te reo Māori spoken at home and achievement in te reo Māori

As the group of students in each of the Year 4 and Year 8 samples who reported always speaking te reo Māori at home was very small, the categories of 'always' and 'often' have been combined in order to examine associations between speaking te reo Māori at home and achievement on the Te Reo Māori (TRM) scale.

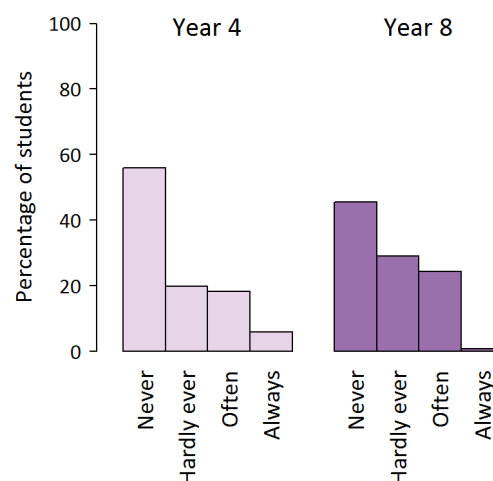


Figure 7.26 Percentage frequency of students with special education needs' reports of how often they spoke te reo Māori at home, by year level

Box plots showing achievement on the TRM scale by how often te reo Māori was spoken at home are presented in Figures 7.27 and 7.28. Students who reported they spoke te reo Māori at home ‘often or always’ tended to have higher TRM scale scores. For example, for Year 4 students who ‘often or always’ spoke te reo Māori at home, 50 percent of their scores were in wāhanga 2. In contrast, 50 percent of the TRM scores for Year 4 students who reported they ‘never’ spoke te reo Māori at home were in wāhanga 1 and wāhanga 2.

The difference in the average scores on the TRM assessment between those who ‘never’ spoke te reo Māori at home and those who ‘often or always’ spoke te reo Māori at home was 12 TRM units at Year 4 and 17 TRM units at Year 8.

For Māori students, how often they spoke te reo Māori at home was also associated with achievement, but to a slightly lesser extent. The difference in average achievement between Māori students who never spoke te reo Māori at home and those who often or always did was 10 TRM units at each of Years 4 and 8.

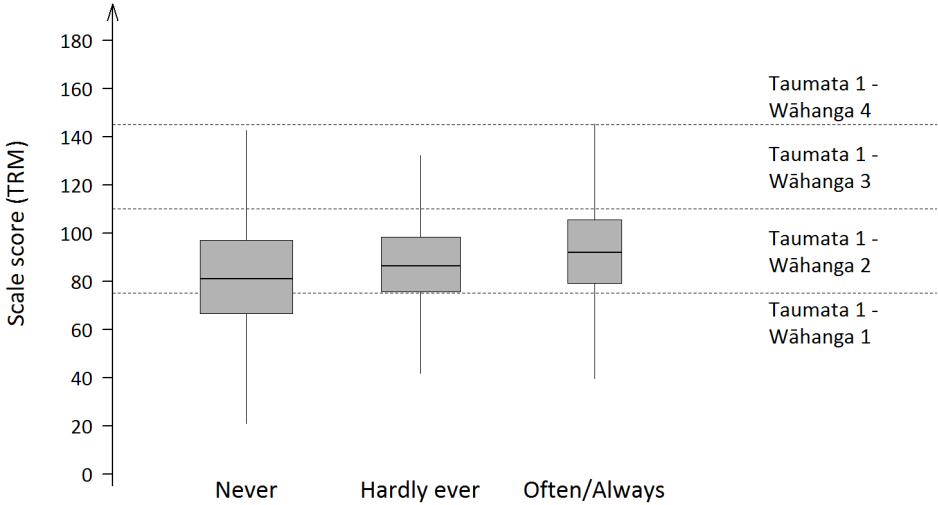


Figure 7.27 Distribution of Year 4 students’ achievement on the Te Reo Māori assessment, by how often te reo Māori was spoken at home

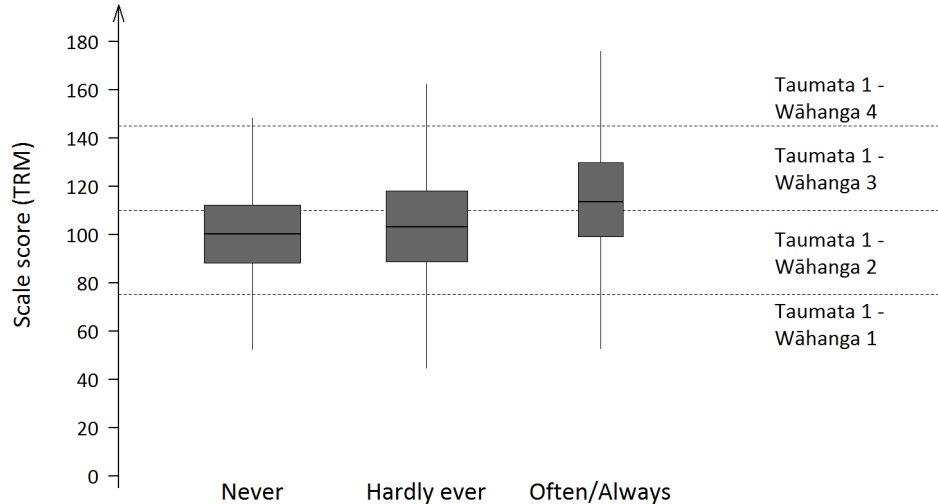


Figure 7.28 Distribution of Year 8 students’ achievement on the Te Reo Māori assessment, by how often te reo Māori was spoken at home

## 2. Teachers' perspectives

Classroom teachers and specialist teachers of te reo Māori at Year 4 and 8 were asked to complete the te reo Māori section of the teacher questionnaire. Around 220 teachers at Year 4 and 170 at Year 8 responded. Of these, 13 teachers at Year 4, and 22 at Year 8 identified themselves as specialist teachers of te reo Māori.

### Teachers' views of the importance of learning te reo Māori

The majority of classroom teachers (97 percent at Year 4 and 88 percent at Year 8) said they incorporated teaching te reo Māori in their programme as planned instruction, as well as incidentally. When asked to rate the importance of students learning te reo Māori, most teachers rated it as 'important' or 'very important' (see Figure 7.29).

Teachers were also asked to explain the importance ratings that they gave. Among those teachers who rated learning te reo Māori as 'important' or 'very important', the main theme was an acknowledgement of te reo Māori as an official language of New Zealand, and as an accepted and valued aspect of our bicultural country. Another main theme was the role te reo Māori plays in relation to culture and identity in our country. Included in these comments were

those that voiced a concern for revitalising the language and sustaining it in the future. A number of teachers also pointed to the place of te reo Māori in an inclusive curriculum, with some seeing particular benefits for Māori students.

Reasons given by some of the teachers who rated learning te reo Māori as 'not important' or 'somewhat important' reflected a belief that there were other more pressing learning priorities for their students.

### Responsibility for teaching te reo Māori in the school

Small proportions of teachers who completed a questionnaire were employed as a specialist teacher of te reo Māori (6 percent at Year 4 and 13 percent at Year 8).

At the Year 4 level, 30 percent of teachers reported having syndicate or school leadership responsibility for te reo Māori teaching and learning. At Year 8, this applied to 39 percent of the teachers.

Figure 7.30 shows that classroom teachers (those not employed as specialist teachers of te reo Māori) of Year 4 students were more likely to be solely responsible for teaching their students te reo Māori than classroom teachers of Year 8 students. In fact, for 19 percent of Year 8 teachers, someone else was solely responsible for teaching their students te reo Māori.

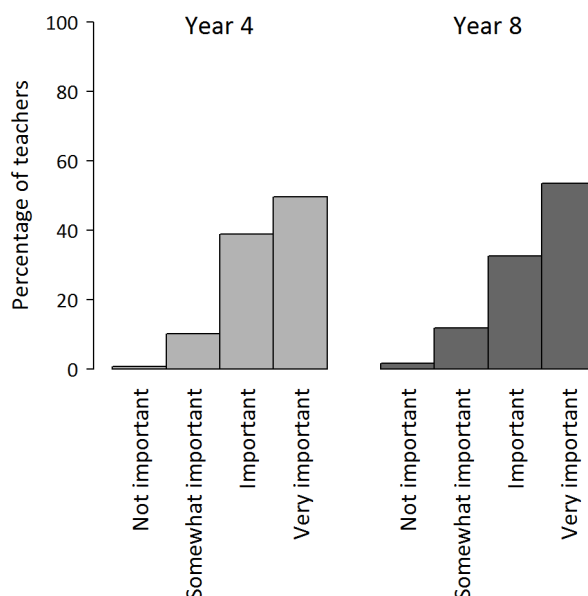


Figure 7.29 Percentage frequency of teachers' ratings of the importance of students learning te reo Māori at school, by year level

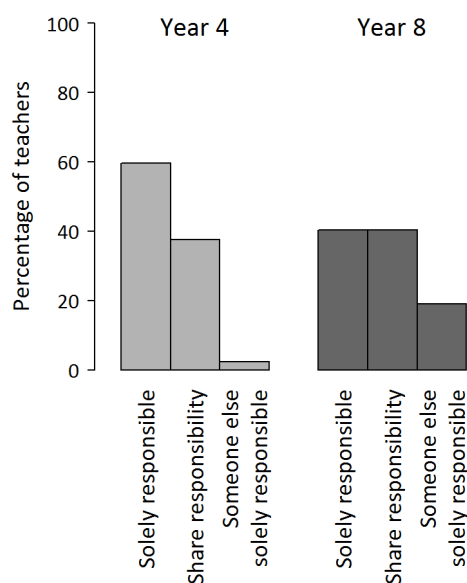


Figure 7.30 Percentage frequency of teachers' responsibility for teaching their students te reo Māori, by year level

## Teachers' attitudes to, and expertise in, teaching te reo Māori

Teachers' attitudes to, and expertise in, teaching te reo Māori are shown in Figure 7.31. Generally, Year 8 teachers were more positive to all statements and responded using the 'Very true for me' category more than Year 4 teachers, who tended to use the 'Moderately true for me' category.

More than 80 percent of teachers thought it was either moderately or very true for them that they drew on students' backgrounds and experiences to support their learning of te reo Māori. Around three quarters of the teachers indicated they like teaching te reo Māori and could motivate students who show little interest in, or have a negative attitude to, learn te reo Māori.

Teachers tended to be more confident about teaching, and assessing students' progress in, te reo Māori than their own ability to speak te reo Māori, particularly at Year 4. At both year levels, 31 percent of teachers indicated they could not hold a simple conversation in te reo Māori. This included one teacher in the Year 4 sample who had indicated they were employed as a 'specialist teacher of te reo Māori'.

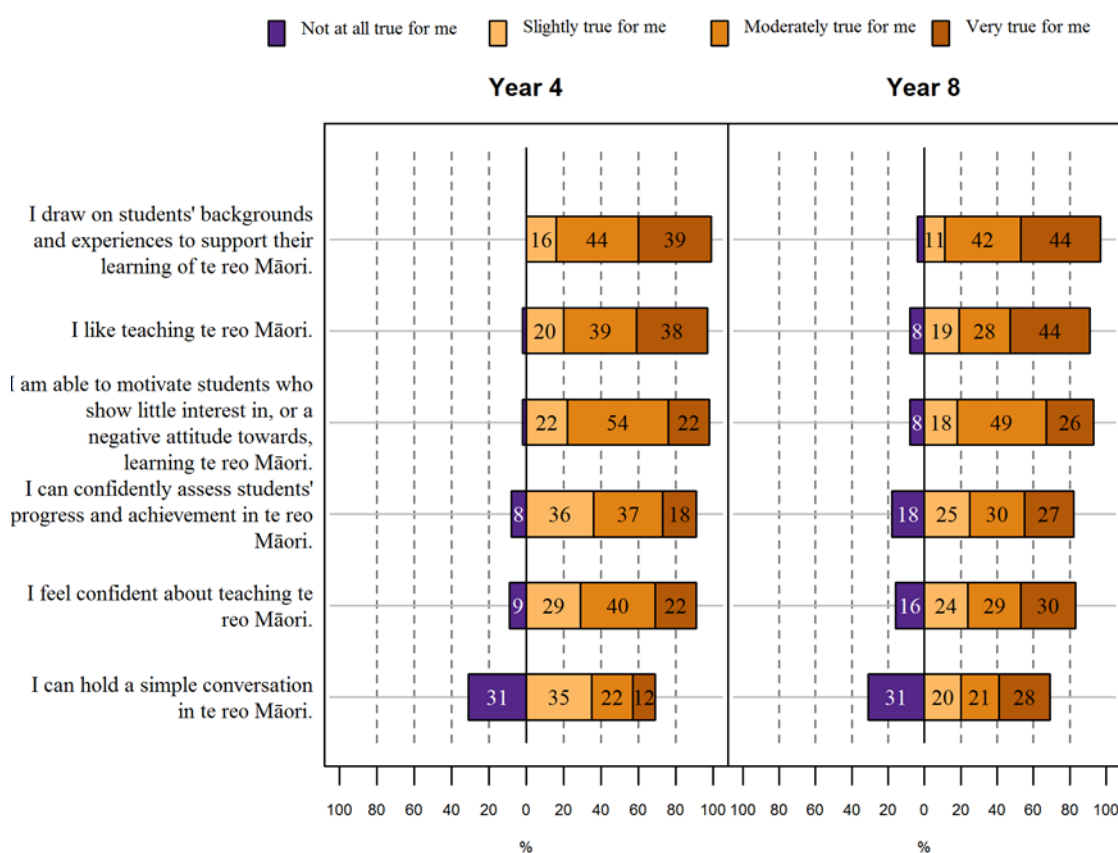


Figure 7.31 Percentage frequency of teachers' responses to items relating to attitudes to, and expertise in, teaching te reo Māori, by year level

## How teachers organised the teaching of te reo Māori

For teaching te reo Māori, the organisational strategy used by more than three quarters of teachers ‘quite often’ or ‘very often’ was whole class activities (see Figure 7.32). Ability-based groupings and individualised programmes were much less frequently used, particularly with Year 4 students.

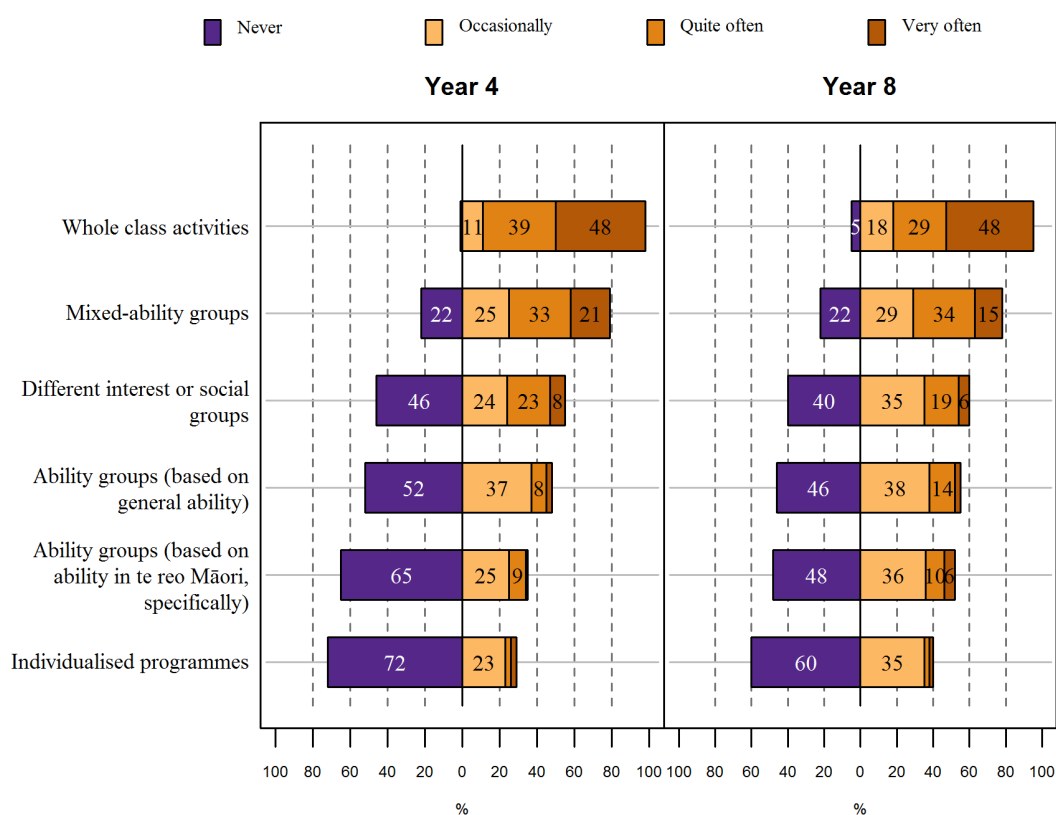


Figure 7.32 Percentage frequency of teachers' use of organisational strategies for teaching to te reo Māori, by year level

## Hours students spent learning te reo Māori

The approximate total hours teachers reported students spent learning te reo Māori over the year is shown in Table 7.2 and was very variable, ranging from less than 5 hours over the school year to more than 40 hours. At Year 4, two thirds (66 percent) of teachers indicated their students spent more than 20 hours learning te reo Māori over the school year. At Year 8, just over half (54 percent) the teachers reported this was the case.

Table 7.2 Teachers' estimates of the hours students spent learning te reo Māori over the year, by year level

	Teachers	
	Year 4 (%)	Year 8 (%)
Less than 5 hours	4	10
5-10 hours	12	13
11-20 hours	19	24
21-30 hours	29	20
31-40 hours	18	21
More than 40 hours	19	13

Note that rounding to whole number means that these percentages total 101 percent.

### Students' opportunities to learn te reo Māori

Teachers were asked to indicate how frequently students in their class had a list of opportunities to learn te reo Māori at school. Their responses are shown in Figure 7.33. Singing waiata, taking part in kapa haka and saying karakia are the three te reo Māori learning opportunities most often reported for students at school. Teachers' responses suggested students were much less likely to hear teachers talk to one another in te reo Māori, or to read books or websites that are written in te reo Māori, particularly at Year 8.

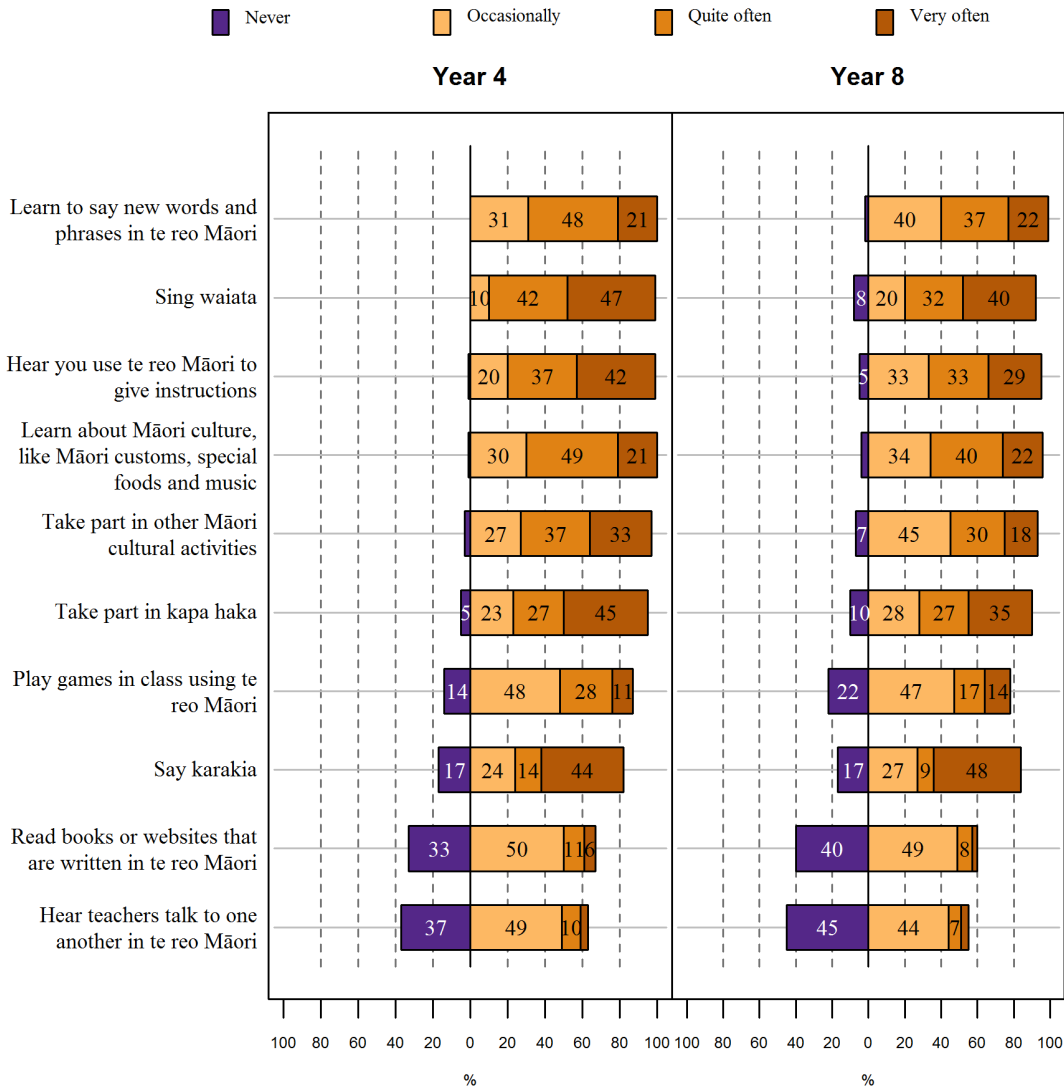


Figure 7.33 Percentage frequency of te reo Māori learning opportunities provided at school for students, by year level

In addition to these experiences, a slightly greater proportion of teachers of Year 8 students had taken their class on a marae visit in 2016 (26 percent compared with 19 percent of teachers of Year 4 students).

Teachers and students gave their views about some of the same learning opportunities, with teachers thinking about the opportunities provided at school and students thinking about their participation in these opportunities to learn te reo Māori. The four learning experiences that almost all teachers indicated were available to their students at least occasionally (at the top of Figure 7.33) were also the four learning experiences that the greatest proportions of students reported having at least sometimes (see Figure 7.34). With other items common to teachers and students, noticeably larger proportions of students than teachers reported learning experiences never occurring. For example, around half the students at each year level said they never took part in kapa haka, while 10 percent or less of teachers indicated this opportunity was never provided. This suggests that although various opportunities may have been provided at school, students have not necessarily been taking up these opportunities. Students' participation in kapa haka might also be affected by it often being positioned outside the regular classroom programme, with attendance often voluntary.

## Professional support for teaching te reo Māori

More than half the teachers at both year levels reported they had had external PLD that focused on te reo Māori within the last two years (see Table 7.3). Small proportions had never had this kind of PLD.

Table 7.3 Percentage frequency of teachers reporting the last time they had external te reo Māori-focused PLD, by year level

Teachers		
	Year 4 (%)	Year 8 (%)
In the last 12 months	46	33
1 or 2 years ago	17	21
3 or 4 years ago	13	14
5 or 6 years ago	4	1
More than 6 years ago	10	9
Never	10	21

Note that due to rounding, the percentages for Year 8 total 99%

Teachers' interactions with other teachers or te reo Māori experts about teaching and learning te reo Māori, also contribute to their professional learning. Figure 7.34 shows the frequency of these kinds of interactions that teachers reported having. Only small proportions of teachers were experiencing these interactions once a month or more often. Over half the teachers had never or almost never observed a colleague teaching te reo Māori.

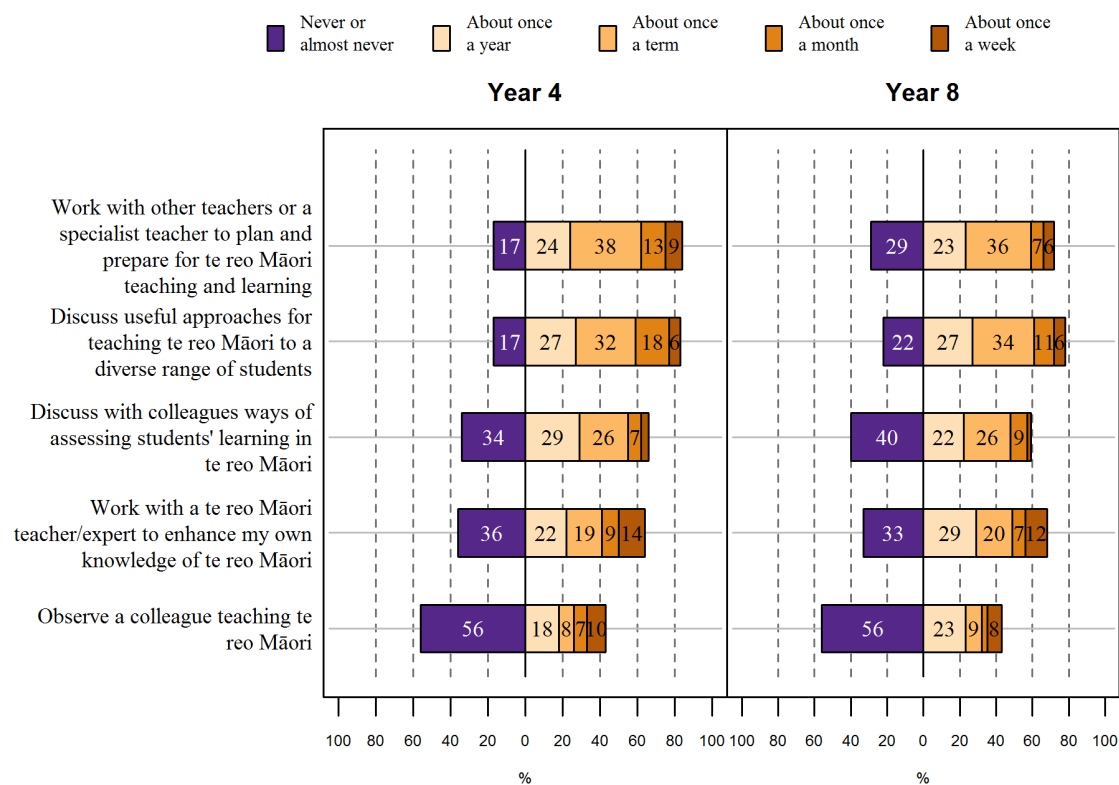


Figure 7.34 Percentage frequency of teachers' interactions with other teachers or te reo Māori experts about teaching and learning te reo Māori, by year level

Teachers' overall ratings of the professional support they receive in school for teaching te reo Māori are shown in Figure 7.35. Greater proportions of teachers of Year 4 students than Year 8 students rated their support positively (44 percent of Year 4 teachers chose 'good' or 'excellent' ratings, compared with 28 percent of Year 8 teachers).

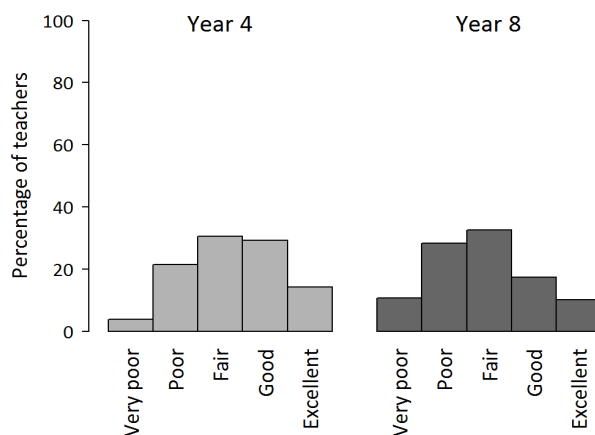


Figure 7.35 Percentage frequency of teachers' overall rating for professional support they receive for teaching te reo Māori, by year level

### 3. Principals' perspectives

All principals were asked to complete the questions relating to teaching and learning te reo Māori.

#### Principals' views of the importance of learning te reo Māori

Principals were asked to rate the importance of students learning te reo Māori at school. A large majority of principals rated it as 'important' or 'very important' (see Figure 7.36).

Principals' reasons for their ratings touched on similar themes to those that emerged from teachers' reasons. In addition to acknowledging te reo Māori as an official language of New Zealand, culture and identity was one of the main themes in principals' reasons, with some also referring to the importance of revitalising te reo Māori.

Another theme in principals' reasons was te reo Māori being an integral part of the school's curriculum, with particular benefits for Māori students.

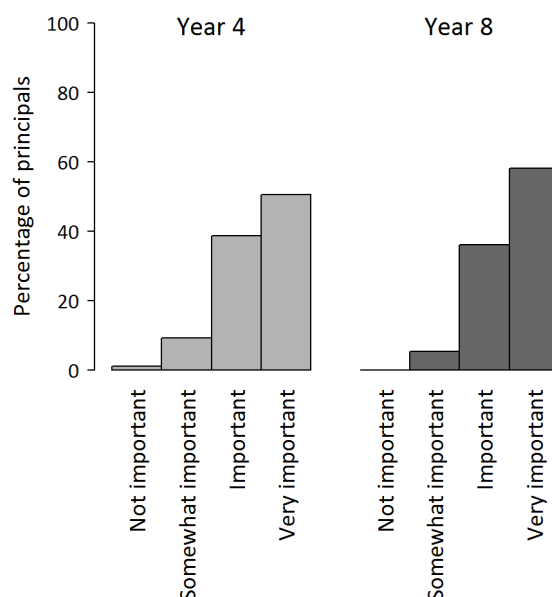


Figure 7.36 Percentage frequency of principals' ratings of the importance of students learning te reo Māori at school, by year level

#### School approaches to teaching and learning te reo Māori

Principals were asked to what degree the approaches shown in Figure 7.37 were like their school's approaches to teaching and learning te reo Māori. More than half the principals indicated these approaches were moderately or very like their school, with one exception. Less than half indicated that it was moderately or very like their school for an ability to teach te reo Māori to be an important consideration when appointing a classroom teacher.

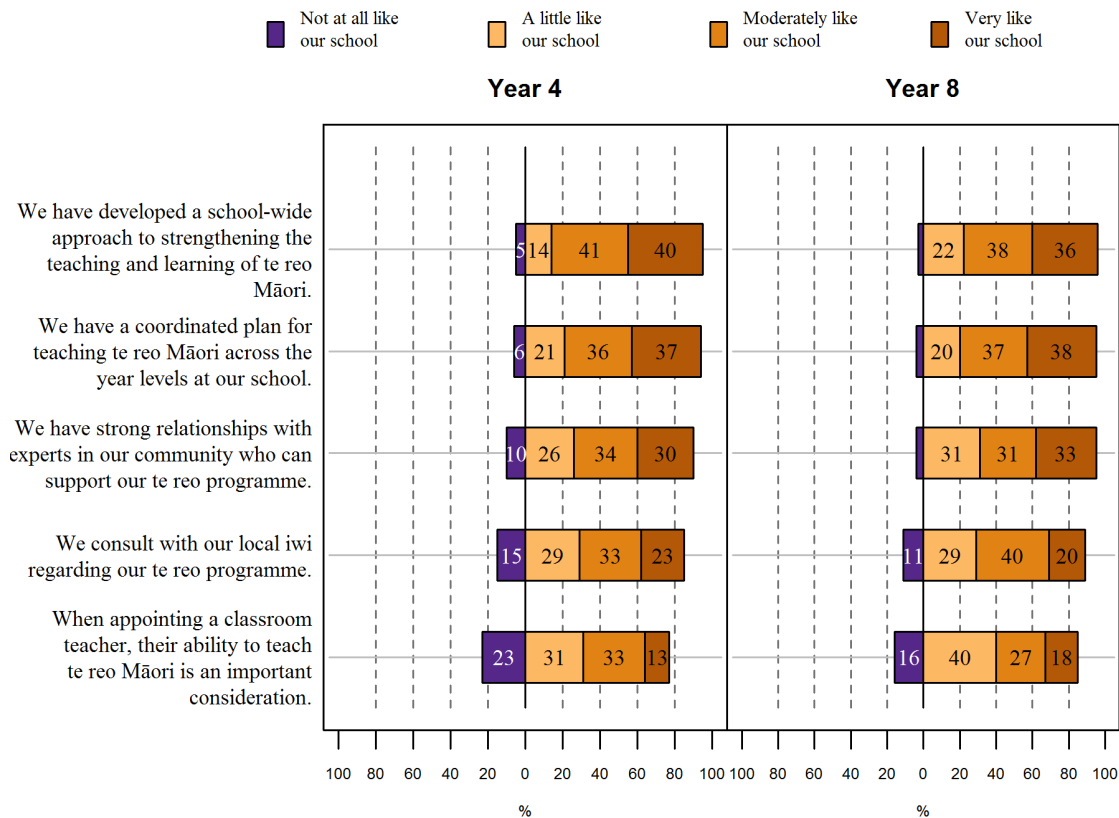


Figure 7.37 Percentage frequency of principals' reports of school approaches to teaching and learning te reo Māori, by year level

### Students' opportunities to learn te reo Māori

At both year levels, most principals (80 percent) indicated all students at these year levels were offered an opportunity to learn te reo Māori at their school. An additional 9 percent of principals in the Year 4 sample and 14 percent of principals in the Year 8 sample indicated some students had this opportunity. No students at their school were offered an opportunity to learn te reo Māori at Year 4 or Year 8 by 11 percent and 6 percent, respectively. Eleven percent of principals in the Year 4 sample indicated no students at their school were offered an opportunity to learn te reo Māori at Year 4. For Year 8, the figure was 6 percent.

At both year levels, students' opportunities to learn te reo Māori did not vary significantly by school decile band.

Principals' overall ratings of their school's provision of opportunities for students to learn te reo Māori are shown in Figure 7.38. Just over a third of principals at both year levels rated their school's provision as very good or excellent. A greater proportion of principals in the Year 4 sample rated their school's provision as poor or fair (33 percent) compared with principals in the Year 8 sample (19 percent).

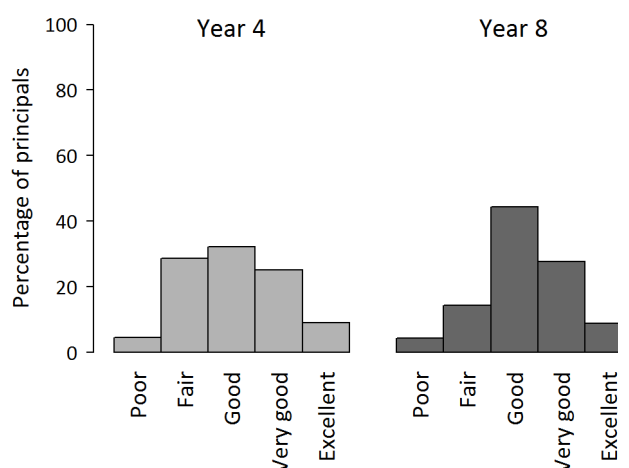


Figure 7.38 Percentage frequency of principals' ratings of their school's provision of opportunities for students to learn te reo Māori, by year level

## Resourcing and support for teaching te reo Māori

During 2016, around 45 percent of principals in both the Year 4 and Year 8 samples said they employed specialist language teachers to teach te reo Māori.

Schools can receive Māori Language Programme (MLP) funding for students who spend at least 3 hours of their school week learning te reo Māori or who learn in Māori immersion settings more than half the week. In our sample of English-medium schools, the responses of principals regarding MLP funding were very similar at both year levels. Most indicated their school did not receive this funding (78 percent for Year 4 and 76 percent for Year 8), and a small number were unsure (about 5 percent at both year levels). A range of MLP funding levels was being received by the remaining 16 percent of principals in the Year 4 sample and 19 percent in the Year 8 sample.

### Professional learning and development for teachers

Around 90 percent of principals at both year levels agreed or strongly agreed that teachers at their school have access to PLD opportunities to support their own learning, and their teaching, of te reo Māori (see Figure 7.39).<sup>26</sup>

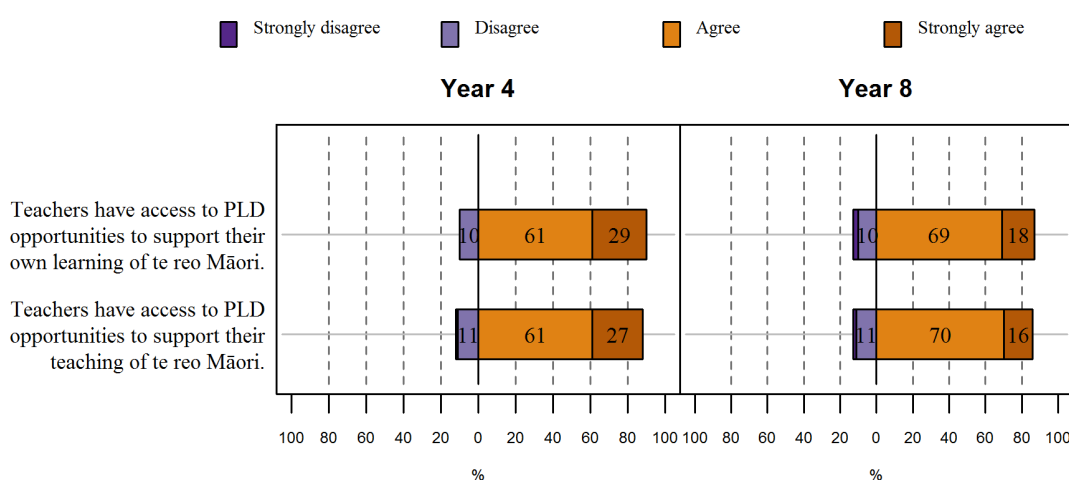


Figure 7.39 Percentage frequency of principals' responses regarding the provision of PLD for teachers, by year level

## 4. Summary

A large majority of principals thought it was important or very important for students to learn te reo Māori at school. During 2016, around 45 percent of principals in both the Year 4 and Year 8 samples said they employed specialist language teachers to teach te reo Māori.

At both year levels, most principals indicated all students at these year levels were offered an opportunity to learn te reo Māori at their school. But this was not always the case. For principals in the Year 4 sample, 11 percent indicated no students at their school were offered an opportunity to learn te reo Māori at Year 4. For Year 8, the figure was 6 percent.

The provision of opportunities for all Year 8 students in a school to learn te reo Māori varied by school decile band. A smaller proportion of principals of low decile schools reported all their Year 8 students being offered these opportunities.

Most teachers rated students learning te reo Māori at school as 'important' or 'very important'. Reasons given by some of the teachers who thought this was less important reflected a belief that there were other more pressing learning priorities for their students. Teachers' responses indicated that more Year 4 students than Year 8 students spent over 20 hours learning te reo Māori during a school year.

The majority of classroom teachers said they incorporated teaching te reo Māori in their programme as planned instruction, as well as incidentally. Most teachers thought they were able to draw on students'

<sup>26</sup> The survey question asked about PLD generally and did not specify whether these were opportunities for external or internal PLD.

backgrounds and experiences to support their learning of te reo Māori and indicated they like teaching te reo Māori. Singing waiata, taking part in kapa haka and saying karakia are the three te reo Māori experiences most often provided for students at school.

More than half the teachers at both year levels reported they had had PLD that focused on te reo Māori within the last two years. Small proportions had never had this kind of PLD. Over half the teachers had never or almost never observed a colleague teaching te reo Māori. At both year levels, about one third of teachers' responses indicated they could not hold a simple conversation in te reo Māori.

The majority of students at both year levels expressed positive attitudes toward learning te reo Māori. At both year levels, girls reported more positive attitudes to learning te reo Māori and more confidence in te reo Māori, on average, than boys.

Greater proportions of students at both year levels expressed confidence in their ability to hear and speak te reo Māori, and to use the language in performances, than to read and write in te reo Māori.

There were statistically significant positive correlations between achievement and Attitudes to Te Reo Māori (ATRM), and achievement and Confidence in Te Reo Māori (CTRM) at both year levels, with stronger associations at Year 8 than Year 4. Achievement on the TRM assessment was more strongly related to students' scores on the CTRM measure than their scores on the ATRM measure.

At both year levels, singing waiata was the learning experience that students were most likely to report happening very often, while talking to their classmates in te reo Māori in the playground was the least likely. Greater proportions of Year 8 than Year 4 students indicated they never took part in kapa haka, and never read books or websites written in te reo Māori.

Māori students at both year levels were more positive about learning te reo Māori, on average, than non-Māori. This difference was greater at Year 8 than at Year 4. At both year levels, greater proportions of Māori students than non-Māori students thought it was very important to learn te reo Māori. In general, Māori students reported more frequent te reo Māori learning experiences than did all students. Māori girls scored higher, on average, than Māori boys on the Attitudes to Te Reo Māori scale at both year levels.

Around half of all students at each year level reported they never spoke te reo Māori at home. Only 26 percent of Māori students at Year 4, and 15 percent of Māori students at Year 8 said that they never spoke te reo Māori at home. The difference in average achievement between those who never spoke te reo Māori at home and those who often or always spoke te reo Māori at home was 12 TRM units at Year 4 and 17 TRM units at Year 8. For Māori students, how often they spoke te reo Māori at home was also associated with achievement, but to a slightly lesser extent than for all students.

## Appendix: Summary Statistics

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### Note:

The tables present an 'actual sample size' and an 'effective sample size'. The latter makes an adjustment to the calculation of statistics because of the way the study is designed. That is, schools are sampled and then students are sampled from within those schools. See Appendix 3 of the Technical Information report for an explanation of the procedure used.

Table A1.1 Summary of achievement and contextual data collected from students, teachers and principals

	Year 4	Year 8
	<i>N</i>	<i>N</i>
Number of schools	100	100
<b>Students</b>		
Number of students completing TELI assessment	2337	2284
Number of students completing questionnaire	2319	2265
<b>Teachers and principals</b>		
Number of teachers completing questionnaire	231	270
Number of principals completing questionnaire	91	91

The student samples for each assessment component and the questionnaire are considered to be nationally representative (see Appendix 1 of the Technical Information 2016 report). The following tables in this appendix show the breakdown of the national, Māori, Pasifika and students with special education needs samples by subgroups (gender, ethnicity, school decile band and school type).

Table A1.2 Achievement on the TRM scale: Summary statistics for Year 4 students

Group	Actual sample size	Effective sample size	Mean	Confidence interval for the mean	Standard deviation
All	2326	1628	89	(88.5, 90.5)	19
<b>Gender</b>					
Girls	1144	801	93	(91.0, 94.0)	19
Boys	1182	827	86	(85.0, 87.5)	18
<b>Ethnicity</b>					
Māori	564	395	99	(97.0, 101.0)	20
Non-Māori	1762	1233	86	(85.5, 87.5)	18
Pasifika	300	210	89	(86.0, 91.0)	19
Non-Pasifika	2026	1418	90	(88.5, 90.5)	19
Asian	203	142	86	(83.0, 89.0)	18
Non-Asian	2123	1486	90	(89.0, 90.5)	19
NZE	1476	1033	88	(86.5, 88.5)	18
Non-NZE	850	595	93	(91.0, 94.5)	20
<b>Decile band</b>					
Low decile	1008	706	91	(89.5, 92.5)	20
Mid decile	872	610	87	(85.5, 88.5)	18
High decile	1532	1072	90	(89.0, 91.0)	19
<b>School type</b>					
Contributing school	1532	1072	90	(89.0, 91.0)	19
Full primary school	750	525	89	(87.0, 90.5)	19
Composite school (Year 1-15)	44	31	80	(74.0, 86.5)	18
<b>Special education needs</b>					
SEN (combined)	186	130	86	(82.5, 89.5)	21
No SEN	2140	1498	90	(89.0, 90.5)	19

Table A1.3 Achievement on the TRM scale: Summary statistics for Year 8 students

Group	Actual sample size	Effective sample size	Mean	Confidence interval for the mean	Standard deviation
All	2263	1584	111	(110.0, 112.0)	21
<b>Gender</b>					
Girls	1119	783	115	(113.5, 116.0)	20
Boys	1144	801	107	(105.5, 108.5)	21
<b>Ethnicity</b>					
Māori	511	358	126	(124.5, 128.5)	20
Non-Māori	1752	1226	106	(105.0, 107.5)	19
Pasifika	306	214	116	(113.5, 118.5)	20
Non-Pasifika	1957	1370	110	(109.0, 111.0)	21
Asian	226	158	106	(103.0, 109.0)	19
Non-Asian	2037	1426	111	(110.5, 112.5)	21
NZE	1413	989	107	(106.0, 108.5)	20
Non-NZE	850	595	117	(115.5, 119.0)	22
<b>Decile band</b>					
Low decile	495	346	116	(113.5, 118.0)	21
Mid decile	876	613	113	(111.0, 114.5)	21
High decile	892	624	106	(104.5, 107.5)	20
<b>School type</b>					
Full primary school	740	518	110	(107.5, 111.5)	21
Intermediate school	1038	727	113	(111.0, 114.0)	21
Composite school (Year 1-15)	120	84	107	(102.5, 110.5)	19
Secondary school (Year 7-15)	314	220	110	(107.0, 112.5)	21
Restricted composite school (Year 7-10)	51	36	111	(105.0, 116.0)	17
<b>Special education needs</b>					
SEN (combined)	127	89	107	(103.0, 112.0)	22
No SEN	2133	1493	111	(110.0, 112.0)	21

Table A1.4 Achievement on the TRM scale: Differences between subgroup means for Year 4 students

Subgroup 1	Effective sample size subgroup 1	Subgroup 2	Effective sample size subgroup 2	Difference in means*	CI for the difference in means	Effect size
<b>Gender</b>						
Girls	801	Boys	827	<b>6</b>	(4.5, 8.0)	0.32
<b>Ethnicity</b>						
Māori	395	Non-Māori	1233	<b>13</b>	(10.5, 15.0)	0.69
Pasifika	210	Non-Pasifika	1418	-1	(-3.5, 2.0)	-0.05
Asian	142	Non-Asian	1486	<b>-4</b>	(-7.0, -0.5)	-0.19
NZE	1033	Non-NZE	595	<b>-5</b>	(-7.0, -3.0)	-0.27
<b>Decile band</b>						
High decile	610	Mid decile	706	<b>-4</b>	(-6.0, -2.0)	-0.21
High decile	610	Low decile	312	<b>-4</b>	(-6.5, -1.5)	-0.22
Mid decile	706	Low decile	312	0	(-2.5, 2.5)	-0.01
<b>School type**</b>						
Contributing	1072	Full primary school	525	1	(-0.5, 3.5)	0.07
<b>Special education needs</b>						
No SEN	1498	SEN (combined)	130	4	(-0.0, 7.5)	0.19

\* Differences in means in bold font are statistically significant \*\* Composite (Yr 1-15) schools comparisons excluded, N=31

Table A1.5 Achievement on the TRM scale: Differences between subgroup means for Year 8 students

Subgroup 1	Effective sample size subgroup 1	Subgroup 2	Effective sample size subgroup 2	Difference in means*	CI for the difference in means	Effect size
<b>Gender</b>						
Girls	783	Boys	801	<b>8</b>	(5.5, 9.5)	0.37
<b>Ethnicity</b>						
Māori	358	Non-Māori	1226	<b>20</b>	(17.5, 22.5)	1.04
Pasifika	214	Non-Pasifika	1370	<b>6</b>	(3.0, 9.0)	0.29
Asian	158	Non-Asian	1426	<b>-5</b>	(-8.5, -2.0)	-0.25
NZE	989	Non-NZE	595	<b>-10</b>	(-12.0, -8.0)	-0.49
<b>Decile band</b>						
High decile	624	Mid decile	613	<b>-7</b>	(-9.0, -4.5)	-0.34
High decile	624	Low decile	346	<b>-10</b>	(-12.5, -7.5)	-0.49
Mid decile	613	Low decile	346	<b>-3</b>	(-6.0, -0.5)	-0.14
<b>School type**</b>						
Full primary	518	Intermediate school	727	<b>-3</b>	(-5.5, -0.5)	-0.14
Full primary	518	Secondary school (Year 7-15)	220	0	(-3.5, 3.0)	-0.02
Intermediate	727	Secondary school (Year 7-15)	220	3	(-0.5, 6.0)	0.13
<b>Special education needs</b>						
No SEN	1493	SEN (combined)	89	4	(-1.0, 8.5)	0.17

\* Differences in means in bold font are statistically significant

\*\* Restricted composite and composite (Year 1-15) comparisons excluded, N=36 and N=84, respectively.

Table A1.6 Achievement on the TRM scale: Differences between means for Year 4 and Year 8 by subgroup

Group	Year 8 effective sample size	Year 4 effective sample size	Year 8–Year 4 difference in means	CI for difference in means	Effect size
All	1584	1628	21	(20.0, 23.0)	1.07
<b>Gender</b>					
Girls	783	801	22	(20.0, 24.0)	1.12
Boys	801	827	21	(18.5, 22.5)	1.05
<b>Ethnicity</b>					
Māori	358	395	27	(24.5, 30.0)	1.38
Pasifika	214	210	27	(24.0, 31.0)	1.43
Asian	158	142	20	(15.5, 24.0)	1.07
NZE	989	1033	19	(18.0, 21.0)	1.03
<b>Decile band</b>					
Low decile	346	312	25	(22.0, 28.0)	1.21
Mid decile	613	706	22	(20.0, 24.0)	1.09
High decile	624	610	19	(17.0, 21.0)	1.02
<b>Special education needs</b>					
SEN (combined)	89	130	21	(15.5, 27.0)	1.00

Table A1.7 TRM levels: Year 4 students

Group	Sample size	W1%	CI (W1%)	W2%	CI (W2%)	W3%	CI (W3%)	W4%	CI (<W4)
All	2326	22	(20.0, 24.0)	65	(62.5, 67.0)	13	(11.5, 15.0)	0	(0.0, 0.5)
<b>Gender</b>									
Girls	1144	17	(14.5, 20.0)	65	(62.0, 68.5)	17	(14.5, 19.5)	1	(0.0, 1.0)
Boys	1182	26	(23.5, 29.0)	64	(61.0, 67.5)	10	(7.5, 11.5)	0	(-0.0, 0.5)
<b>Ethnicity</b>									
Māori	564	10	(7.5, 13.5)	62	(57.0, 66.5)	27	(22.0, 31.0)	1	(0.0, 2.5)
Non-Māori	1762	26	(23.0, 28.0)	65	(63.0, 68.0)	9	(7.5, 10.5)	0	(-0.0, 0.0)
Pasifika	300	22	(16.0, 27.0)	66	(59.5, 72.5)	12	(8.0, 17.0)	0	(0.0, 0.0)
Non-Pasifika	2026	22	(20.0, 24.0)	64	(62.0, 67.0)	13	(11.5, 15.0)	0	(0.0, 0.5)
Asian	203	27	(20.0, 34.5)	64	(56.0, 72.0)	9	(4.0, 13.5)	0	(0.0, 0.0)
Non-Asian	2123	21	(19.5, 23.5)	65	(62.0, 67.0)	14	(12.0, 15.5)	0	(0.0, 0.5)
NZE	1476	24	(21.5, 26.5)	65	(62.5, 68.0)	11	(8.5, 12.5)	0	(-0.0, 0.5)
Non-NZE	850	18	(15.0, 21.0)	64	(59.5, 67.5)	18	(14.5, 21.0)	1	(0.0, 1.5)
<b>Decile band</b>									
Low decile	446	20	(15.5, 24.5)	63	(57.5, 68.0)	17	(12.5, 20.5)	0	(-0.5, 1.0)
Mid decile	1008	21	(17.5, 23.5)	64	(60.5, 67.5)	15	(12.5, 17.5)	0	(-0.0, 1.0)
High decile	872	24	(21.0, 27.5)	66	(62.5, 70.0)	9	(7.0, 11.5)	0	(-0.0, 0.5)
<b>School type</b>									
Contributing school	1532	20	(18.0, 23.0)	65	(62.5, 68.5)	14	(11.5, 16.0)	0	(0.0, 1.0)
Full primary school	750	23	(20.0, 27.0)	64	(59.5, 68.0)	13	(10.0, 15.5)	0	(-0.0, 0.5)
Composite school	44	43	(25.5, 60.5)	52	(34.5, 70.0)	5	(-3.0, 12.0)	0	(0.0, 0.0)
<b>Special education needs</b>									
SEN combined	186	30	(22.0, 38.0)	58	(49.5, 66.5)	11	(5.5, 16.0)	1	(-0.5, 3.0)
No SEN	2140	21	(19.0, 23.0)	65	(63.0, 67.5)	13	(11.5, 15.0)	0	(0.0, 0.5)

Table A1.8 TRM levels: Year 8 students

Group	Sample size	W1%	CI (W1%)	W2%	CI (W2%)	W3%	CI (W3%)	W4%	CI (<W4)
All	2263	4	(3.0, 5.0)	46	(43.0, 48.0)	45	(42.5, 47.5)	6	(4.5, 6.5)
<b>Gender</b>									
Girls	1119	2	(1.0, 3.0)	40	(36.5, 43.5)	51	(47.5, 54.5)	7	(5.5, 9.0)
Boys	1144	6	(4.0, 7.5)	51	(48.0, 55.0)	39	(35.5, 42.5)	4	(2.5, 5.5)
<b>Ethnicity</b>									
Māori	511	0	(-0.5, 0.5)	21	(16.5, 24.5)	62	(57.0, 67.5)	17	(13.0, 21.0)
Non-Māori	1752	5	(4.0, 6.0)	53	(50.0, 56.0)	40	(37.0, 42.5)	2	(1.5, 3.0)
Pasifika	306	1	(-0.0, 3.0)	37	(30.0, 43.0)	55	(48.0, 61.5)	7	(3.5, 10.5)
Non-Pasifika	1957	4	(3.5, 5.5)	47	(44.5, 49.5)	43	(40.5, 46.0)	5	(4.0, 6.5)
Asian	226	6	(2.0, 9.5)	54	(46.0, 61.5)	38	(31.0, 46.0)	2	(-0.5, 4.0)
Non-Asian	2037	4	(3.0, 5.0)	45	(42.0, 47.5)	46	(43.0, 48.0)	6	(4.5, 7.0)
NZE	1413	5	(3.5, 6.0)	52	(49.0, 55.0)	40	(37.0, 43.5)	3	(2.0, 4.0)
Non-NZE	850	3	(1.5, 4.0)	35	(31.5, 39.0)	53	(48.5, 56.5)	10	(7.5, 12.0)
<b>Decile band</b>									
Low decile	495	2	(1.0, 4.0)	37	(31.5, 42.0)	52	(47.0, 57.5)	9	(5.5, 11.5)
Mid decile	876	3	(2.0, 4.5)	43	(39.0, 46.5)	47	(43.5, 51.5)	7	(5.0, 8.5)
High decile	892	6	(4.0, 7.5)	54	(49.5, 57.5)	38	(34.5, 42.0)	3	(1.5, 4.0)
<b>School type</b>									
Full primary	740	4	(2.5, 6.0)	48	(44.0, 52.5)	43	(38.5, 47.0)	5	(3.0, 6.5)
Intermediate	1038	4	(2.5, 5.0)	42	(38.5, 46.0)	48	(44.0, 51.5)	6	(4.5, 8.0)
Composite (Yrs 1-15)	120	3	(-0.5, 7.0)	54	(43.5, 65.0)	40	(29.5, 50.5)	2	(-1.0, 6.0)
Restricted composite (Yrs 7-10)	51	2	(-2.5, 6.5)	51	(34.5, 67.5)	45	(29.0, 61.5)	2	(-2.5, 6.5)
Secondary (Yrs 7-15)	314	4	(1.5, 7.0)	48	(41.0, 54.5)	41	(35.0, 48.0)	7	(3.5, 10.0)
<b>Special education needs</b>									
SEN (combined)	127	6	(1.0, 11.5)	50	(39.0, 60.0)	39	(29.0, 49.5)	5	(0.5, 9.0)
No SEN	2133	4	(3.0, 5.0)	45	(43.0, 48.0)	45	(42.5, 47.5)	6	(4.5, 7.0)

Table A1.9 Achievement on the TRM scale: Summary statistics for Year 4 Māori students

Group	Actual sample size	Effective sample size	Mean	Confidence interval for the mean	Standard deviation
All	564	395	99	(97.0, 101.0)	20
<b>Gender</b>					
Girls	268	188	104	(100.5, 106.5)	20
Boys	296	207	95	(92.0, 97.5)	19
<b>Decile band</b>					
Low decile	203	142	97	(94.0, 101.0)	20
Mid decile	247	173	102	(98.5, 104.5)	20
High decile	114	80	96	(92.5, 100.0)	17
<b>School type</b>					
Contributing school	377	264	100	(97.0, 102.0)	20
Full primary school	176	123	98	(94.5, 101.5)	19
Composite school (Year 1-15)	11	8	91	(80.5, 101.5)	15

Table A1.10 Achievement on the TRM scale: Summary statistics for Year 8 Māori students

Group	Actual sample size	Effective sample size	Mean	Confidence interval for the mean	Standard deviation
All	511	358	126	(124.5, 128.5)	20
<b>Gender</b>					
Girls	229	160	130	(127.0, 133.0)	20
Boys	282	197	124	(121.0, 126.5)	20
<b>Decile band</b>					
Low decile	192	134	128	(124.5, 131.0)	19
Mid decile	231	162	128	(125.0, 131.0)	20
High decile	88	62	119	(113.5, 123.5)	21
<b>School type</b>					
Full primary school	141	99	123	(119.5, 127.5)	21
Composite school (Year 1-15)	19	13	120	(108.5, 131.5)	21
Intermediate school	271	190	128	(126.0, 131.0)	19
Restricted composite school (Yr 7-10)	10	7	116	(102.5, 129.0)	18
Secondary school (Year 7-15)	70	49	127	(121.5, 133.0)	21

Table A1.11 Achievement on the TRM scale: Differences between subgroup means for Year 4 Māori students

Subgroup 1	Effective sample size subgroup 1	Subgroup 2	Effective sample size subgroup 2	Difference in means*	CI for the difference in means	Effect size
<b>Gender</b>						
Girls	188	Boys	207	<b>9</b>	(5.0, 12.5)	0.45
<b>Decile band</b>						
High decile	80	Mid decile	173	<b>-5</b>	(-10.0, -0.5)	-0.27
High decile	80	Low decile	142	-1	(-6.5, 4.0)	-0.07
Mid decile	173	Low decile	142	4	(-0.5, 8.5)	0.20
<b>School type**</b>						
Contributing school	264	Full primary school	123	2	(-2.5, 6.0)	0.08

\* Differences in means in bold font are statistically significant

\*\* Composite (Yr 1-15) schools comparisons excluded, N=8

Table A1.12 Achievement on the TRM scale: Differences between subgroup means for Year 8 Māori students

Subgroup 1	Effective sample size subgroup 1	Subgroup 2	Effective sample size subgroup 2	Difference in means*	CI for the difference in means	Effect size
<b>Gender</b>						
Girls	160	Boys	197	<b>6</b>	(2.0, 10.5)	0.32
<b>Decile band</b>						
High decile	62	Mid decile	162	<b>-10</b>	(-15.5, -3.5)	-0.48
High decile	62	Low decile	134	<b>-9</b>	(-15.5, -3.5)	-0.48
Mid decile	162	Low decile	134	0	(-4.0, 4.5)	0.01
<b>School type**</b>						
Full primary school	99	Intermediate school	190	-5	(-10.0, 0.0)	-0.26

\* Differences in means in bold font are statistically significant

\*\* Restricted composite, composite (Year 1-15) and secondary (Year 7-15) comparisons excluded, N=7, N=13, and N=49, respectively.

Table A1.13 Achievement on the TRM scale: Differences between means for Year 4 and Year 8 Māori by subgroup

Group	Year 8 Effective sample size	Year 4 Effective sample size	Year 8–Year 4 difference in means	CI for difference in means*	Effect size
All	358	395	27	(24.5, 30.0)	1.38
<b>Gender</b>					
Girls	160	188	26	(22.0, 30.5)	1.32
Boys	197	207	29	(25.0, 32.5)	1.49
<b>Decile band</b>					
Low decile	134	142	30	(26.0, 35.0)	1.55
Mid decile	162	173	27	(22.5, 31.0)	1.33
High decile	62	80	22	(16.0, 28.5)	1.18

Table A1.14 Achievement on the TRM scale: Summary statistics for Year 4 Pasifika students

Group	Actual sample size	Effective sample size	Mean	Confidence interval for the mean	Standard deviation
All	300	210	89	(86.0, 91.0)	19
<b>Gender</b>					
Girls	145	102	92	(88.5, 95.5)	18
Boys	155	108	86	(82.0, 89.0)	19
<b>Decile band</b>					
Low decile	183	128	86	(83.0, 89.5)	19
Mid decile	83	58	94	(88.5, 98.5)	19
High decile	34	24	90	(83.0, 96.0)	16
<b>School type</b>					
Contributing school	208	146	89	(86.0, 92.0)	18
Full primary school	88	62	88	(83.0, 93.5)	21
Composite school (Year 1-15)	4	3	85	(61.5, 108.0)	20

Table A1.15 Achievement on the TRM scale: Summary statistics for Year 8 Pasifika students

Group	Actual sample size	Effective sample size	Mean	Confidence interval for the mean	Standard deviation
All	306	214	106	(103.5, 109.0)	20
<b>Gender</b>					
Girls	164	115	111	(107.0, 114.5)	20
Boys	142	99	101	(97.0, 104.5)	19
<b>Decile band</b>					
Low decile	198	139	102	(98.5, 105.0)	20
Mid decile	69	48	110	(105.0, 115.5)	18
High decile	39	27	120	(113.5, 127.0)	18
<b>School type</b>					
Full primary school	100	70	109	(104.0, 113.5)	20
Composite school (Year 1-15)	27	19	97	(87.0, 106.5)	21
Intermediate school	167	117	106	(102.0, 109.5)	20
Secondary school (Year 7-15)	12	8	110	(100.0, 120.0)	15

Table A1.16 Achievement on the TRM scale: Differences between subgroup means for Year 4 Pasifika students

Subgroup 1	Effective sample size subgroup 1	Subgroup 2	Effective sample size subgroup 2	Difference in means*	CI for the difference in means	Effect size
<b>Gender</b>						
Girls	102	Boys	108	<b>6</b>	(1.0, 11.0)	0.33
<b>Decile band</b>						
High decile	24	Mid decile	58	-4	(-12.0, 4.0)	-0.22
High decile	24	Low decile	128	3	(-4.0, 10.5)	0.18
Mid decile	58	Low decile	128	<b>7</b>	(1.5, 13.0)	0.38
<b>School type**</b>						
Contributing school	146	Full primary school	62	1	(-5.5, 6.5)	0.03

\* Differences in means in bold font are statistically significant

\*\* Composite (Yr 1-15) schools comparisons excluded, N=3

Table A1.17 Achievement on the TRM scale: Differences between subgroup means for Year 8 Pasifika students

Subgroup 1	Effective sample size subgroup 1	Subgroup 2	Effective sample size subgroup 2	Difference in means*	CI for the difference in means	Effect size
<b>Gender</b>						
Girls	115	Boys	99	<b>10</b>	(5.0, 15.0)	0.53
<b>Decile band</b>						
High decile	27	Mid decile	48	-4	(-13.5, 5.5)	-0.20
High decile	27	Low decile	139	3	(-5.5, 11.0)	0.14
Mid decile	48	Low decile	139	<b>7</b>	(0.5, 13.0)	0.35
<b>School type**</b>						
Full primary school	70	Intermediate school	117	0	(-5.5, 6.0)	0.02

\* Differences in means in bold font are statistically significant

\*\* Composite (Year 1-15) and secondary (Year 7-15) comparisons excluded, N=19 and N=8, respectively.

Table A1.18 Achievement on the TRM scale: Differences between means for Year 4 and Year 8 Pasifika students by subgroup

Group	Year 8 Effective sample size	Year 4 Effective sample size	Year 8–Year 4 difference in means	CI for difference in means	Effect size
All	214	210	27	(24.0, 31.0)	1.43
<b>Gender</b>					
Girls	115	102	29	(24.0, 34.0)	1.54
Boys	99	108	25	(20.0, 30.0)	1.34
<b>Decile band</b>					
Low decile	139	128	28	(23.5, 32.5)	1.47
Mid decile	48	58	27	(20.0, 34.5)	1.43
High decile	27	24	27	(17.5, 37.5)	1.50







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