Contents

An overview of PISA .................................................................................................................. 2
Key results.................................................................................................................................. 3
Introduction ................................................................................................................................. 4
I. How PISA 2018 defines and measures global competence ................................................. 7
II. Students’ global competence ................................................................................................. 10
III. Learning opportunities and environment for global competence ................................. 32
IV. Summary of global competence index relationships ......................................................... 49
Conclusion ................................................................................................................................. 55
References ................................................................................................................................ 57
Further information from PISA 2018 .................................................................................... 58
An overview of PISA

The Programme for International Student Assessment (PISA) is an international research programme. It assesses and compares how well education systems around the world are preparing their students to meet real-life opportunities and challenges after they finish school.

PISA assesses and surveys 15-year-old students, at which age they have completed around 10 years of compulsory schooling and are on the verge of taking a new role in society by moving on to work, training or further education.

PISA findings provide New Zealand’s education decision makers with a robust and independent source of information, measuring progress against our goal of building a world-leading education system that equips all New Zealanders with the skills for success and informed citizenship in the modern world. PISA also provides international benchmarks that we can use to evaluate the performance of our students and education system.

PISA is an initiative of the Organisation for Economic Co-operation and Development (OECD) and these findings represent the culmination of several years of highly collaborative effort. A group of international research organisations was responsible for developing and overseeing PISA 2018 internationally. In New Zealand, the Ministry of Education is responsible for the implementation of PISA and analysis of the results.

A random representative sample of New Zealand schools and students participated in PISA

Schools and students are selected to ensure the sample is representative of the New Zealand 15-year-old population. Almost 6,200 15-year-old students from 194 schools took part in PISA 2018.

Schools are selected by the international statistical organisation from a list of all schools in New Zealand with PISA-eligible students enrolled. All students in New Zealand are eligible for PISA if they are aged between 15 years 3 months and 16 years 2 months (hereafter, ‘15-year-olds’) and enrolled in Year 7 and above. Schools are randomly selected based on the following characteristics: school size (number of students), decile, location (major urban or smaller communities), authority (state or independent) and type (coeducational or single-sex). Students are selected randomly from all PISA-eligible students in each school. Schools’ and students’ identities remain confidential.

The PISA 2018 sample of students is representative of 54,190 PISA-age students nationwide. Therefore, when interpreting the findings, consider that every 1% of New Zealand students reported here represents approximately 542 15-year-old students around New Zealand.

We can be confident that these findings are accurate

The OECD puts in place a high number of stringent quality assurance procedures, nationally and internationally, for every step of the development, implementation and analysis of PISA to ensure that high-quality data and findings are obtained.

These procedures include rigorous training of national PISA teams, detailed documentation, meticulous inspection of all sampling procedures, numerous quality checks and tracking of progress throughout national adaptations and data collection, and stringent procedures for coding assessment responses and data cleaning and checking. For further details, see the PISA 2018 Technical Report (OECD, n.d.).

PISA is one of New Zealand’s major system-data collections and its quality – and importance for informing decision making – is reflected in its classification by Statistics NZ as a ‘Tier 1’ collection.
Key results

New Zealand students’ awareness of global issues was slightly lower relative to students in OECD countries on average. They were most aware of gender equality and climate change and least aware of international conflicts, global health and economic issues.

Positive attitudes towards immigrants, respect for people from other cultures and adaptability were relatively high amongst New Zealand students; perspective-taking and interest in other cultures were similar to the OECD average.

When talking to someone whose native language is different from theirs, New Zealand students reported slightly higher than average communication skills. Compared to their peers of similar background, Asian, Pacific and Māori students reported greater awareness of intercultural communication.

Compared to the OECD average, New Zealand students reported greater agency regarding global issues (80% thought of themselves as global citizens), but lower capacity to take action (less than 30% participated in activities like signing petitions). Pacific students reported greater agency than non-Pacific students; Pākehā/European students reported lower agency than non-Pākehā/European students.

Students’ exposure to learning activities that promote global competence was similar to the OECD average; however, this was not equitable between socio-economically advantaged and disadvantaged students and between boys and girls.

Most students’ schools included global issues (ie, migration and international conflicts) in their formal curriculum, but topics about intercultural understanding (ie, respect for cultural diversity and critical thinking skills) were included less than the OECD average.

Multicultural teaching practices were considered widespread by principals, with almost all students learning about different cultural perspectives on historical and social events. Students were more than twice as likely as the average OECD student to be in a school that celebrates festivities from other cultures.

Contact with people from other countries was more common for New Zealand students than the OECD average, especially for Pacific and Asian students, and this experience was associated with greater global competence. Pākehā/European students were less likely to have contact with people from other countries.

While multilingualism and learning a language were less common in New Zealand than on average across OECD countries, Asian, Pacific and Māori students were multilingual and were learning languages at rates higher than their peers – qualities associated with higher global competence.

Nearly all students’ principals said that many or all teachers in their school shared ‘multicultural and egalitarian’ beliefs such as the importance of students learning that people from other cultures can have different values.

However, 15% of students reported that most, all, or almost all their teachers had lower academic expectations for students of some cultural groups. Māori and Pacific students reported significantly greater discriminatory school environments compared with non-Māori and non-Pacific students, respectively.

Across many global competence measures, girls, immigrant and socio-economically advantaged students’ self-reports were higher than their peers. This was particularly the case for attitudes towards immigrants, respect for and interest in other cultures, perspective-taking, and agency regarding global issues. Differences may be attributed to varying opportunities to learn, as reported by students themselves.
Introduction

The wider context

In the 21st century learners’ lives are continually influenced by global environmental, economic, digital and cultural forces. This interconnection is why one of the targets set out in the United Nation’s Sustainable Development Goal 4 is that by 2030 all learners should:

“...acquire the knowledge and skills needed to promote sustainable development, including, among others, through education for sustainable development and sustainable lifestyles, human rights, gender equality, promotion of a culture of peace and non-violence, global citizenship and appreciation of cultural diversity and of culture’s contribution to sustainable development”.¹

To capture how countries are progressing towards this goal of global citizenship, PISA developed an assessment and questionnaire on ‘global competence’. New Zealand took part in the questionnaire.

Teaching sustainable development and global citizenship is important for New Zealand’s future, not only because it is a commitment made as part of the UN’s Sustainable Development Goals, but also because the development of skills, knowledge and capabilities that are needed to live, work and learn across cultural and national boundaries is a valued outcome of the New Zealand education system.

Global competence is reflected across the New Zealand Curriculum (NZC) and Te Marautanga o Aotearoa (TMoA) in various ways. The NZC social sciences strand articulates the importance of developing students’ knowledge and skills that enable them to participate in and contribute to their local, national and global communities. The key competencies of relating to others and participating and contributing also directly relate to PISA’s global competence framework.

Environmental health as personal health is a principle in TMoA that aligns well with the UN view of global citizenship encompassing sustainability, as do the values of generosity, peacefulness, empathy and respect. The New Zealand National Commission for UNESCO has prioritised global citizenship education as a strategic area of its programme for 2014-2021, which includes the launch of the national Award in Global Citizenship Education².

This report

This report focuses on findings from the PISA 2018 global competence questionnaire items and is organised into four parts:

» Part I provides an overview of how global competence is defined and measured in PISA 2018.

» Part II covers the findings from questions measuring the four dimensions of global competence as defined by PISA: examining local, global and intercultural issues; understanding and appreciating the perspectives and worldviews of others; engaging in open, appropriate and effective communication across cultures and; taking action for collective wellbeing and sustainable development.

» Part III focuses on learning environments of students that can promote or hinder their global competence.

» Part IV summarises the global competence indices and relationships.

New Zealand’s standing is presented relative to the average of OECD countries who participated in the global competence questionnaire. Several OECD countries did not participate, including the US, Finland, Norway, Denmark, Netherlands, Japan and Sweden.

When interpreting data presented in this report, it is important to note the following:

**Questionnaires**

Information is presented from student and principal questionnaires only. Data relating to teachers, such as teaching practices, were provided by students or principals (or principals’ delegates).

The focus in this report is on students; therefore, school level data are analysed and reported to make statements about the proportions of students attending schools with a particular characteristic rather than the proportion of schools.

**Ethnicity groupings**

Students were free to identify with as many ethnicities as they wished. These were then aggregated into ethnicity groupings for reporting: Pākehā/European, Māori, Asian and Pacific (due to the sample being too small, students identifying with another ethnicity are not reported). Using terms such as Pacific, Asian or Pākehā to define a population is not ideal. However, the statistics collected through PISA are not separated into sub-groups because the samples are too small to make meaningful comparisons. Although statistics presented in this report will be for the entire ethnic group, readers should keep in mind the cultural diversity that exists within them. Similarly, caution needs to be exercised in generalising the findings presented here to all learners within a particular ethnic group.

No priority is given to any one of the students’ choices in the analysis of the findings. This means that when looking at results by ethnicity, an individual student can, and does, ‘count’ in more than one grouping. About 20% of students identified with more than one ethnicity grouping. For example, a student who identified as Māori and Asian would be included in any analysis for Māori students and any analysis for Asian students. This approach means that the results for each ethnic grouping cannot be directly compared to each other (eg, Māori cf. Pacific, or Asian cf. Pākehā). If we did do this, students’ responses would be counted multiple times and students who chose more than one ethnic grouping would effectively be compared to themselves. Comparisons on ethnicity are therefore limited to one grouping compared to everyone not identifying with that ethnicity (eg, Māori cf. non-Māori, Pākehā cf. non-Pākehā).

Of the students who took part in PISA 2018:

- 68% identified with a New Zealand Pākehā or European ethnicity
- 21% identified with Māori
- 16% identified with an Asian ethnicity
- 13% identified with a Pacific ethnicity
- 3% identified with another ethnicity (mainly Middle Eastern, Latin American / African ethnic groups, often referred to as MELAA).

**Socio-economic status**

Socio-economic status is a measure of the social and economic resources of an individual or group of individuals. The measure can be used to help understand differences between social and economic groups in society. In the PISA assessment, a student’s socio-economic status is estimated by the PISA Index of Economic, Social and Cultural Status (ESCS). This index is based on information about the level of parents’ education and occupation, the number of home possessions that can be considered as material wealth, and the educational resources available at home. Students in this report are classified as socio-economically advantaged if their values on the ESCS index were among the top quarter in New Zealand. They are classified as socio-economically disadvantaged if their values on the ESCS index were among the bottom quarter.
**Immigrant status**

Students are classified into one of three categories based on their and their parents’ immigrant background. Non-immigrant students are students whose mother or father (or both) was born in the country where the student sat the PISA test, regardless of whether the student was born in that country. In 2018, 74% of 15-year-olds were in this category.

Immigrant students are those whose mother and father were born in a country other than the one in which the student sat the PISA test. Amongst immigrant students, a distinction was made between first- and second-generation students, based on whether the student was born in or outside the country of assessment. In 2018, 26% of 15-year-olds were immigrants.

- First-generation immigrant students are foreign-born students whose parents are both foreign-born. In 2018, 15% of students were first-generation immigrants.
- Second-generation immigrant students are students born in the country of assessment but whose parents are both foreign-born. In 2018, 11% of students were in this category.

**Indices**

In the PISA questionnaire, students were asked a series of questions on different topics. We can look at the percentage of students who answered in certain ways against individual questions (such as the percentage who agreed or disagreed with a statement) and this gives us one level of detail.

In addition, a group of questions can be combined into a composite index, which is intended to measure an underlying attitude or belief. For example, students were asked four individual questions related to how much discrimination they perceive at their school by their teachers. The results of these were then combined into an index of discriminating school climate.

An index measure is a value calculated relative to the average across all students in participating OECD countries, which is standardised to have a mean value of 0 and a standard deviation of 1. However, the analyses in this paper were restricted to students in schools with the modal ISCED level for 15-year-olds, and so index values presented for the OECD average in this paper are slightly different from 0. A negative index value means that students have responded less positively than the average OECD student. It does not mean that students have necessarily responded negatively to the individual questions.

**Limitations**

While we can be sure that the findings presented are statistically accurate, there are some limitations to the PISA study. In New Zealand, PISA only assesses in English. At the time of sampling for PISA 2018, 1% of the total population of New Zealand’s PISA-eligible students were studying in Māori-medium education (immersion levels 1 and 2). Because PISA does not assess students in a language different from the language of instruction, students in these settings were classified as exclusions. Also excluded were students whose teachers deemed the PISA assessment and questionnaire to be inappropriate for them due to a physical, cognitive, behavioural or emotional disability; or if they had not had a full year of instruction in English and did not have English language proficiency. These students made up about 5% of the sample.

The global competence framework, measures and topics, are generally more reflective of a liberal European worldview, and thus will omit other values and issues that may be unique to, or of more importance to, the diverse range of cultural groups in New Zealand. The localisation of curriculum is a valuable component of New Zealand’s education system that is not represented in these findings, and its omission should not be perceived as that knowledge being less important, but rather that it is out of PISA’s scope as an international study. Also, some of the issues are broadly described and students may have been able to recognise them more easily if they were situated in a local or real-life context. Lastly, students may have been better able to better demonstrate these competencies in action, rather than submitting self-reports.

These limitations should be kept in mind when interpreting the findings, which provide a partial, but still important, view of New Zealand students’ global competence.
I. How PISA 2018 defines and measures global competence

Global competence framework
PISA 2018 defines global competence as a set of four highly inter-related dimensions, which are the:

» capacity to examine issues and situations of local, global and cultural significance (e.g., poverty, economic interdependence, migration, inequality, environmental risks, conflicts, cultural differences and stereotypes)

» capacity to understand and appreciate different perspectives and worldviews

» ability to establish positive interactions with people of different national, ethnic, religious, social or cultural backgrounds or gender

» capacity and disposition to take constructive action towards sustainable development and collective wellbeing.

Figure 1. The four dimensions of global competence

Each dimension is built on specific knowledge, skills, attitudes and values and is dependent on the other dimensions.

Knowledge about the world and other cultures is the first critical foundation for global competence. PISA considers an effective curriculum to be one that imparts knowledge on culture and intercultural relations, socio-economic development and interdependence, environmental sustainability, and formal and informal institutions that support peaceful relationships.

Skills to understand the world, communicate with others and take action is the second foundation. This is observed in students who can reason with information from different sources,
communicate effectively and respectively, take others’ perspectives, engage in conflict management and resolution and adapt in novel contexts.

**Attitudes of openness, respect for people from different cultural backgrounds and agency regarding global issues**, the third foundation, involves being open and willing to engage with perspectives from other cultures, respecting the dignity, rights and freedoms of all human beings and their right to their own beliefs, and having a worldview where one feels connected and a sense of responsibility towards members of the global community.

**Valuing human dignity and diversity** is the final foundation of global competence. It emphasises general beliefs about the importance of dignity, human rights and cultural diversity that motivate behaviours and attitudes and serve as standards for making judgements across different situations. However, given the complexity of the task, PISA 2018 did not examine students’ values, but rather aimed to capture knowledge, skills and attitudes in the context of the four dimensions of global competence.

Developing global competence is central to living harmoniously in multicultural societies, flourishing in a diverse and interconnected labour market, using media technologies in a responsible and effective manner, and supporting the Sustainable Development Goals. Moreover, three categories of actions at school may be used to support the development of students’ global competence: actions based on intergroup contact (eg, study abroad programmes, virtual contact), actions based on pedagogic approaches (eg, cooperative or project-based learning), and actions based on institutional policies (eg, culturally sensitive and inclusive curriculums).

For further details on the global competence framework, see *PISA 2018 results (volume VI): Are Students Ready to Thrive in Global Societies?*.

**Measuring global competence**

Although New Zealand did not take part in the PISA global competence cognitive test examining knowledge and cognitive skills, these were also addressed in the questionnaire, alongside social skills and attitudes. Students were presented with one or more sets of questions for each of the four dimensions underlying global competence. Further detail on each question is presented in the following sections, but within each dimension they cover:

I. **Examining local, global and intercultural issues**
   » Awareness of global issues
   » Self-efficacy regarding global issues

II. **Understanding and appreciating the perspectives and worldviews of others**
   » Ability to understand perspectives of others
   » Interest in learning about other cultures
   » Respect for people from other cultures
   » Cognitive adaptability
   » Attitudes towards immigrants

III. **Engaging in open, appropriate and effective communication across cultures**
   » Awareness of intercultural communication

IV. **Taking action for collective wellbeing and sustainable development**
   » Engagement with global issues
   » Capacity to take action

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3 OECD (2020).
In addition, questions were directed at students and principals to explore the extent to which learning opportunities and environments foster global competence. The questions covered:

- engagement in global competence learning activities
- the inclusion of global issues and intercultural knowledge in the curriculum
- contact with people from other countries
- multilingualism and language learning
- multicultural learning opportunities at school
- teachers’ multicultural beliefs and attitudes towards people from other cultural groups

In general, there are several commonalities between the global competence framework and measures, and the NZC. The first and last dimension aligns well with the NZC area of social sciences, where “students explore how societies work and how they themselves can participate and take action as critical, informed, and responsible citizens”4. The achievement objectives for social sciences encompass four conceptual strands (identity, culture and organisation; places and environment; continuity and change; and the economic world), all of which are reflected in the PISA questionnaire. In addition, the key competencies of participating and contributing, students participating in their community and connecting with and creating opportunities for others are illustrated in various measures across the dimensions.

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II. Students’ global competence

Global competence is increasingly important in modern society as environmental, economic, social, cultural and digital dynamics influence young people’s lives. New Zealand is becoming an increasingly global and diverse country in terms of both its population and labour market. Digital media is transforming how young people live and learn, connecting them to the world and unprecedented amounts of information. New Zealand took part in the PISA questionnaire which measured students’ evaluations of their capacity to live in an interconnected world and contribute to sustainable development.

The four inter-related dimensions of global competence are knowledge of global issues, the ability to understand and appreciate the perspectives of others, cross-cultural communication skills, and willingness to take action for sustainability and collective wellbeing. This section presents New Zealand students’ self-reported global competence along these four dimensions.

Key results

» New Zealand students reported slightly less awareness of, and confidence in their ability to explain, global issues than students across the OECD on average. Many students (~60%) were aware of gender equality and climate change while fewer (~60%) were aware of global health and international conflicts. Around three-quarters of students said they could discuss refugee and climate change issues and around half were confident with economic ones.

» Students’ perspective-taking and interest in other cultures were similar to the OECD average, with about six in ten saying they look at both sides of a question or disagreement and a similar proportion wanting to learn about how people live in different countries.

» New Zealand students reported relatively high respect for people from other cultures, and positive attitudes towards immigrants compared to the OECD average. Nine in ten students respect people from other cultures as equal human beings and believe immigrant children should have the same opportunities for education that other children have.

» At least four in five students reported having intercultural communication skills, such as listening and choosing words carefully and observing others’ reactions.

» Compared to the OECD, a larger proportion of students thought of themselves as global citizens, but New Zealand students were slightly less likely to take actions on global issues than the average student in the OECD.

» On average, girls, immigrants and socio-economically advantaged students reported greater positivity towards immigrants, respect for and interest in other cultures, perspective-taking and agency regarding global issues.

» Māori, Pacific and Asian students reported greater interest in learning about other cultures and intercultural communication skills than non-Māori, non-Pacific and non-Asian students, respectively, after accounting for gender, immigrant and socio-economic background. Pākehā/European students reported less interest in learning about other cultures and lower agency regarding global issues than non-Pākehā/European students.
Examining local, global and intercultural issues

The first dimension of global competence covers students’ knowledge and familiarity of global issues, spanning economics, environment, culture, history and media. This dimension was measured through two sets of questions, one on awareness of global issues and the other on self-efficacy regarding global issues. Several of the questions aligned with the curriculum level of the social sciences strand most PISA students should be learning at, in particular those pertaining to how people move between places, how economic decisions impact others, environmental sustainability, and human rights.

Awareness of global issues

Students’ awareness of global issues was measured by asking students to report the extent to which they were familiar with various issues, with response options: ‘I have never heard of this’, ‘I have heard about this but I would not be able to explain what it is really about’, ‘I know something about this and could explain the general issue’, and ‘I am familiar with this and I would be able to explain this well’. It’s important to keep in mind that because the response options are not just asking students if they are aware of the issue, but also if they feel they can explain the issue, the findings may partially reflect students’ confidence, in addition to their sense of familiarity.

Figure 2 shows the proportion of students who, for each issue, said they knew something about this and could explain the general issue, or were familiar with this and would be able to explain the issue well.

New Zealand students were most aware of gender equality and climate change and least aware of global health and international conflicts.

In 2018, at least eight in ten New Zealand students reported knowing about, and being able to explain, equality between men and women in different parts of the world, and climate change. Around three-quarters of students were familiar with causes of poverty, migration and hunger or malnutrition. Lesser-known issues were international conflicts and global health. A smaller proportion of New Zealand students were aware of the issues of migration, hunger, international conflict and global health than on average across participating OECD countries.
The relatively high proportion of students (83%) who were familiar enough with climate change and global warming to explain the issue in 2018 is interesting when contrasting it with the 60% of students in 2015 who said they could explain the problem of increasing greenhouse gases. Either awareness of this issue has increased in the three years between cycles, or students were less familiar with the terminology of ‘greenhouse gases’ and more familiar with ‘climate change’ and ‘global warming’.

Answers to the items above were used to construct an index of awareness of global issues. Positive values in this index mean that the student expressed a greater awareness of global issues than did the average student across all students in participating OECD countries. Figure 3 displays each country’s index (on average across students within the country), and highlights English-speaking countries including New Zealand, as well as the OECD average. New Zealand’s mean index (-0.06) was slightly lower than the OECD average and lowest amongst participating English-language countries; Malta’s was the highest (0.23).

One of several factors positively associated with awareness of global issues is interest in and enjoyment of reading, which in New Zealand has declined significantly since 2009 and in 2018 was lower than Singapore, Malta and Canada but similar to the OECD average. When students read more, they are exposed to different topics and issues they might not learn about in school. The positive relationship between enjoyment of reading and awareness of global issues was significant even after accounting for students’ and schools’ socio-economic profile in all countries and economies, including New Zealand.

Figure 3. New Zealand students reported the lowest awareness of global issues amongst English-language countries

Mean index of awareness of global issues of English-language countries with comparable data

<table>
<thead>
<tr>
<th>Country</th>
<th>Index</th>
</tr>
</thead>
<tbody>
<tr>
<td>New Zealand</td>
<td>-0.06</td>
</tr>
<tr>
<td>OECD average</td>
<td>0.09</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>0.09</td>
</tr>
<tr>
<td>Australia</td>
<td>0.10</td>
</tr>
<tr>
<td>Ireland</td>
<td>0.12</td>
</tr>
<tr>
<td>Canada</td>
<td>0.14</td>
</tr>
<tr>
<td>Malta</td>
<td>0.23</td>
</tr>
</tbody>
</table>

*Note: Singapore did not meet the threshold for comparing its mean index across countries.*

**Socio-economically advantaged students reported the greatest overall level of awareness of global issues in New Zealand.**

While boys and girls reported similar awareness, immigrant students reported greater awareness than non-immigrant students, and socio-economically advantaged reported substantially greater awareness than disadvantaged students, which was also much higher than the average student in OECD countries. This difference could indicate that students from lower socio-economic backgrounds are not provided with opportunities to learn about global issues as much as their more advantaged peers, both inside and outside of the classroom, and through different levels of social studies schooling. In addition to the potential for this question to be measuring students’ confidence, differences in awareness may reflect how different schools choose to localise their curriculum, and how much emphasis they put on global versus local issues.

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6 Medina (2019).
There were no differences based on ethnicity (e.g., Pākehā/European vs non Pākehā/European) after accounting for the variables that were most influential across the global competence indices (gender, immigrant status and socio-economic background). While no gender differences were observed, Māori boys reported lower awareness than Māori girls.

Figure 4. Socio-economically advantaged and immigrant students reported the highest awareness of global issues

Mean index of awareness of global issues

<table>
<thead>
<tr>
<th>Status</th>
<th>New Zealand</th>
<th>Greater awareness of global issues</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Gender</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Girls</td>
<td>-0.06</td>
<td>[Solid bar]</td>
</tr>
<tr>
<td>Boys</td>
<td>-0.04</td>
<td>[Empty bar]</td>
</tr>
<tr>
<td><strong>Immigrant background</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Immigrant</td>
<td>-0.07</td>
<td>[Empty bar]</td>
</tr>
<tr>
<td>Non-immigrant</td>
<td>0.04</td>
<td>[Solid bar]</td>
</tr>
<tr>
<td><strong>Socio-economic</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Disadvantaged</td>
<td>-0.33</td>
<td>[Empty bar]</td>
</tr>
<tr>
<td>Advantaged</td>
<td>0.27</td>
<td>[Solid bar]</td>
</tr>
</tbody>
</table>

Note: Solid bars indicate values were statistically different from the comparison group. Empty bars indicate values that were not statistically different from the comparison group.

**Self-efficacy regarding global issues**

PISA defines self-efficacy as students’ confidence in their ability to achieve desired results through their actions. To apply this to global issues, students were asked to report the extent to which they could explain and discuss global issues on their own, with response options: ‘I could not do this’, ‘I would struggle to do this on my own’, ‘I could do this with a bit of effort’, and ‘I could do this easily’.

**Most New Zealand students could discuss refugee and climate change issues while students were less confident with economic issues.**

Figure 5 shows that at least three-quarters of New Zealand students could explain easily, or with some effort, why people become refugees and why some countries suffer more from climate change than others. About half could explain how economic crises in a single economy affect the global economy and the connection between prices of textiles and working conditions. The average student across OECD countries was more confident in explaining economic issues than the average New Zealand student, but the opposite was seen for climate change issues.

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9 OECD (2020).
Figure 5. New Zealand students were most confident in their ability to discuss refugee or climate change issues, and least confident with economic issues

Proportion of New Zealand students who responded, 'I could do this with a bit of effort' or 'I could do this easily', and the average proportion across participating OECD countries

<table>
<thead>
<tr>
<th>Topic</th>
<th>New Zealand</th>
<th>OECD average</th>
</tr>
</thead>
<tbody>
<tr>
<td>Discuss the different reasons why people become refugees</td>
<td>78</td>
<td>77</td>
</tr>
<tr>
<td>Explain why some countries suffer more from global climate change than others</td>
<td>75</td>
<td>72</td>
</tr>
<tr>
<td>Explain how carbon-dioxide emissions affect global climate change</td>
<td>69</td>
<td>63</td>
</tr>
<tr>
<td>Discuss the consequences of economic development on the environment</td>
<td>60</td>
<td>65</td>
</tr>
<tr>
<td>Explain how economic crises in single countries affect the global economy</td>
<td>54</td>
<td>61</td>
</tr>
<tr>
<td>Establish a connection between prices of textiles and working conditions in the countries of production</td>
<td>48</td>
<td>58</td>
</tr>
</tbody>
</table>

A statistical check to ensure comparability between countries showed that New Zealand's index was below the required threshold of invariance, and thus it is not shown compared to other participating countries and economies. However, the index can be used to look at student groups within a country.

**New Zealand had disparities in self-efficacy between boys and girls, but larger still were those between socio-economically advantaged and disadvantaged students.**

Answers to the individual items shown in Figure 5 were combined to create an index of self-efficacy regarding global competence. Higher index values represent greater self-efficacy. Disparities are evident when examining mean values on this index by gender, socio-economic and immigrant status (Figure 6).

Socio-economically advantaged and immigrant students reported higher self-efficacy regarding global issues than their peers, similar to their self-reported awareness of global issues. Girls (-0.15) reported significantly lower self-efficacy than boys, who were closer to the OECD average (0.00). This gender difference was significant amongst Māori, Asian and Pākehā/European students, but not Pacific students. More generally, Māori, Asian and Pākehā/European students reported similar self-efficacy to their peers, while Pacific students reported slightly lower self-efficacy when compared to non-Pacific students, before and after controlling for gender, socio-economic and immigrant background.

Like awareness of global issues, these disparities may reflect schools choosing topics for their curricula in relation to the needs of their local community. For instance, some may wish to focus more on Pacific migration, local iwi, or other New Zealand-specific issues that are culturally relevant, whereas other communities may focus on more global issues. It is also important to keep in mind that these results are not reflective of students' actual ability to engage with global issues, but only their perception of their ability. Historically, PISA has shown that socio-economically disadvantaged and female students report less confidence in their reading, maths and science abilities. Socio-economically disadvantaged students' confidence might also reflect that global issues are of less relevance to them in the face of more immediate and local issues and challenges they face in their everyday lives.
Figure 6. Boys, immigrant and advantaged students reported high self-efficacy regarding global issues

Mean index of self-efficacy regarding global issues

<table>
<thead>
<tr>
<th>Gender</th>
<th>New Zealand</th>
</tr>
</thead>
<tbody>
<tr>
<td>Girls</td>
<td>-0.15</td>
</tr>
<tr>
<td>Boys</td>
<td>0.00</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Immigrant status</th>
<th>Higher self-efficacy with global issues</th>
</tr>
</thead>
<tbody>
<tr>
<td>Immigrant students</td>
<td>-0.11</td>
</tr>
<tr>
<td>Non-immigrant</td>
<td>0.05</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Socio-economic status</th>
<th>New Zealand</th>
</tr>
</thead>
<tbody>
<tr>
<td>Disadvantaged</td>
<td>-0.41</td>
</tr>
<tr>
<td>Advantaged</td>
<td>0.32</td>
</tr>
</tbody>
</table>

Note: Solid bars indicate values were statistically different from the comparison group. Empty bars indicate values that were not statistically different from the comparison group.
Understanding and appreciating others' perspectives

The second pillar of global competence rests on students’ understanding and appreciation of cultures that are different from their own. Doing this requires certain attitudes and dispositions, such as having respect for others and interest in who they are. The ability to understand and appreciate others' worldviews was measured by asking students about their perspective-taking, interest in learning about other cultures, respect for people from other cultures, cognitive adaptability, and attitudes towards immigrants. The NZC key competence of relating to others is relevant to this dimension, with the goal being that students can interact effectively with a diverse range of people and in a variety of contexts, including the ability to listen to and understand different viewpoints.

Ability to understand perspectives of others

Perspective-taking requires both self-awareness and an understanding of how a person’s worldview is affected by their background and experiences. PISA asked students to report on their ability to understand different perspectives by responding to five statements with response options: ‘very much like me’, ‘mostly like me’, ‘somewhat like me’, ‘not much like me’, and ‘not at all like me’.

_Around six in ten students said they look at everybody’s side of a disagreement, believe there are two sides to every question, and try to understand their friends better from their perspective._

Over 60% of students said they believe there are two sides to every question to look at and that they sometimes try to better understand their friends’ perspectives. A similar proportion reported trying to look at everybody’s side of a disagreement before making decisions. Less commonly reported was trying to take the perspective of another person when upset, with 38% of students doing so. Student reports of perspective-taking were not very different from the average across OECD countries.

_Figure 7. New Zealand students’ perspective-taking abilities were similar to the average student across participating OECD countries_

<table>
<thead>
<tr>
<th>Statement</th>
<th>New Zealand</th>
<th>OECD Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>I believe that there are two sides to every question and try to look at them both.</td>
<td>63</td>
<td>63</td>
</tr>
<tr>
<td>I sometimes try to understand my friends better by imagining how things look from their perspective.</td>
<td>63</td>
<td>64</td>
</tr>
<tr>
<td>I try to look at everybody’s side of a disagreement before I make a decision.</td>
<td>61</td>
<td>59</td>
</tr>
<tr>
<td>Before criticising somebody, I try to imagine how I would feel if I were in their place.</td>
<td>54</td>
<td>55</td>
</tr>
<tr>
<td>When I’m upset at someone, I try to take the perspective of that person for a while.</td>
<td>38</td>
<td>40</td>
</tr>
</tbody>
</table>
Responses were combined into an index of students’ ability to understand the perspectives of others. A higher value on this index indicates a greater perceived ability to understand and take different perspectives, with a value of 0 representing the average student across all participating OECD countries. New Zealand’s mean index was equivalent to this average (Figure 8). Amongst English-speaking countries, the UK had the lowest mean index value of perspective-taking (-0.07), while Australia (0.05), Canada (0.14), Ireland (0.14), Singapore (0.17) and Malta (0.18) had significantly higher values than New Zealand.

Figure 8. Perspective-taking abilities were highest in Malta and Singapore, and lowest in the UK, amongst English-language countries

Mean index of perspective-taking of English-language countries with comparable data

Girls reported greater levels of perspective-taking than boys across all students, and all ethnic groups.

Perspective-taking was highest amongst socio-economically advantaged and immigrant students - similar to the previous global competence indices. Depending on where immigrant students were born, they may have more opportunity to practise perspective-taking as they live with at least two cultural perspectives in their daily lives: that of their country of immigration and that of their country of origin.

Also consistent with other indices, New Zealand girls (0.12) reported significantly greater perspective-taking than boys (-0.13), whose mean perspective-taking index was lower than the OECD average. This gender gap is perhaps unsurprising, given that adolescent girls tend to self-report higher on a related construct, empathy, than boys. In fact, a gender gap in perspective-taking was observed across all countries except the Dominican Republic. This may be influenced by social expectations for girls to uphold the gender norm of being more empathetic and understanding (and boys to be less so). Nevertheless, these findings might not reflect students’ actual perspective-taking since they are based on self-report. There is some evidence to suggest that gender differences in empathy, for instance, are minimised when empathy is measured directly (e.g., in an experimental task), as compared to self-report. Across all ethnic groups, girls reported significantly higher perspective-taking than boys.

When comparing students of similar gender, socio-economic and immigrant background, there were no differences between ethnic groups and their comparisons.

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8 Mestre et al. (2009).
9 Van der Graaff et al. (2014).
10 Baez et al. (2017).
Interest in learning about other cultures

Students who are interested in learning about other cultures possess curiosity and a willingness to engage with different worldviews. PISA asked students four questions about their interest in learning about other cultures with the response options: ‘very much like me’, ‘mostly like me’, ‘somewhat like me’, ‘not much like me’, and ‘not at all like me’.

**Students were most interested in learning how people in different countries and cultures live and see the world, and less interested in learning about the religions of the world.**

When it came to learning about other cultures, around half of New Zealand students reported an interest. Between 50% and 60% of students wanted to learn about how people live in different countries, how people from different cultures see the world, and the traditions of other cultures. Students were least interested in learning about world religions, though still 40% said it interested them.
Figure 10. New Zealand students were similar to the OECD average in their interest in learning about other cultures

Proportion of New Zealand students who responded that the statements below were ‘very much like me’ or ‘mostly like me’ and the average proportion across participating OECD countries

<table>
<thead>
<tr>
<th>Statement</th>
<th>New Zealand</th>
<th>OECD Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>I am interested in how people from various cultures see the world.</td>
<td>57</td>
<td>55</td>
</tr>
<tr>
<td>I want to learn how people live in different countries.</td>
<td>57</td>
<td>59</td>
</tr>
<tr>
<td>I am interested in finding out about the traditions of other cultures.</td>
<td>55</td>
<td>54</td>
</tr>
<tr>
<td>I want to learn more about the religions of the world.</td>
<td>40</td>
<td>40</td>
</tr>
</tbody>
</table>

As with the previous measures of global competence, responses on the questions covering students’ interest in other cultures were used to derive an index for comparison across groups and countries. More positive values in the index indicate that the student exhibits a greater interest in learning about other cultures. In line with the data presented in Figure 10, this index revealed that New Zealand students’ interest in learning about other cultures (0.03) was very close to the OECD average, and similar to Canada (0.04) and Malta (0.05). Students in Singapore (0.19) reported the highest interest in learning about other cultures, and UK students the lowest (-0.16) amongst English-speaking countries (see Figure 11).

Figure 11. New Zealand students’ interest in learning about other cultures was very close to the average across OECD countries, as were Canada and Malta

Mean index of interest in other cultures of English-language countries with comparable data

<table>
<thead>
<tr>
<th>Country</th>
<th>Index</th>
</tr>
</thead>
<tbody>
<tr>
<td>United Kingdom</td>
<td>-0.16</td>
</tr>
<tr>
<td>Ireland</td>
<td>-0.10</td>
</tr>
<tr>
<td>Australia</td>
<td>-0.03</td>
</tr>
<tr>
<td>Average</td>
<td>0.00</td>
</tr>
<tr>
<td>New Zealand</td>
<td>0.03</td>
</tr>
<tr>
<td>Canada</td>
<td>0.04</td>
</tr>
<tr>
<td>Malta</td>
<td>0.05</td>
</tr>
<tr>
<td>Singapore</td>
<td>0.19</td>
</tr>
</tbody>
</table>
Girls and non-Pākehā/European students were typically more interested in learning about other cultures than boys and Pākehā/European students.

As with the other measures of global competence, girls, immigrant and socio-economically advantaged students reported greater interest in learning about other cultures than boys, non-immigrants, and socio-economically disadvantaged students, respectively. However, the gender gap is much larger than for other global competence measures, and the socio-economic gap is smaller. Asian, Māori and Pacific students also had higher index values for interest in learning about other cultures compared to their peers, as was the case for non-Pākehā/European compared to Pākehā/European students, after holding immigrant, socio-economic background and gender constant.

Figure 12. Girls, immigrant and advantaged students reported the greatest interest in learning about other cultures

<table>
<thead>
<tr>
<th>Mean index of interest in other cultures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
</tr>
<tr>
<td>Girls</td>
</tr>
<tr>
<td>Boys</td>
</tr>
<tr>
<td>Immigrant status</td>
</tr>
<tr>
<td>Immigrant</td>
</tr>
<tr>
<td>Non-immigrant</td>
</tr>
<tr>
<td>Socio-economic</td>
</tr>
<tr>
<td>Disadvantaged</td>
</tr>
<tr>
<td>Advantaged</td>
</tr>
</tbody>
</table>

Note: Solid bars indicate values were statistically different from the comparison group. Empty bars indicate values that were not statistically different from the comparison group.

Respect for people from other cultures

Respect for people from different cultures is based on the assumption that all people inherently have worth and a right to their beliefs, practices and opinions. Students were asked five questions, presented in Figure 13, about their respect for people from other cultures, with the response options: ‘very much like me’, ‘mostly like me’, ‘somewhat like me’, ‘not much like me’, and ‘not at all like me’.

A large majority of New Zealand students agreed with statements signalling respect for people from other cultures, more so than the OECD average.

Over eight in ten students reported they respect people from other cultures as equals, treat others with respect, give space to people to express themselves, and respect others’ values and opinions. Across all items, a greater proportion of New Zealand students agreed that the statements were very much or mostly like themselves than students on average across OECD countries. Only about 3% of students said the statements were ‘not at all like me’.
Figure 13. Higher proportions of New Zealand students agreed with statements about respect for people from other cultures than the OECD average

Proportion of New Zealand students who responded that the statements below were ‘very much like me’ or ‘mostly like me’ and the average proportion across participating countries

<table>
<thead>
<tr>
<th>Statement</th>
<th>New Zealand</th>
<th>OECD Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>I respect people from other cultures as equal human beings</td>
<td>89</td>
<td>82</td>
</tr>
<tr>
<td>I treat all people with respect regardless of their cultural background</td>
<td>88</td>
<td>81</td>
</tr>
<tr>
<td>I respect the values of people from different cultures</td>
<td>86</td>
<td>79</td>
</tr>
<tr>
<td>I value the opinions of people from different cultures</td>
<td>85</td>
<td>78</td>
</tr>
<tr>
<td>I give space to people from other cultures to express themselves</td>
<td>84</td>
<td>78</td>
</tr>
</tbody>
</table>

Similar to the index of self-efficacy regarding global issues, a statistical check to ensure comparability between countries showed that New Zealand’s index was below the required threshold of invariance, and thus it is not shown compared to other participating countries and economies.

New Zealand students reported higher levels of respect for people from other cultures than the OECD average.

Girls, immigrant and advantaged students reported significantly higher respect for people from other cultures compared to boys, non-immigrant and disadvantaged students, respectively. Still, almost all groups had similar or higher respect than the OECD average, and only boys (-0.07) reported lower respect than the average OECD student. The large gender gap can be seen across all ethnic groups, but there were no significant differences for each ethnicity comparison after accounting for gender, immigrant and socio-economic background.

Figure 14. Girls, immigrant and advantaged students reported significantly higher respect for people from other cultures

Mean index of respect for other cultures of English-language countries with comparable data

<table>
<thead>
<tr>
<th>Category</th>
<th>New Zealand</th>
<th>Greater respect of other cultures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Girls</td>
<td>0.40</td>
<td></td>
</tr>
<tr>
<td>Boys</td>
<td>-0.07</td>
<td></td>
</tr>
<tr>
<td>Immigrant status</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Immigrant</td>
<td>0.23</td>
<td></td>
</tr>
<tr>
<td>Non-immigrant</td>
<td>0.15</td>
<td></td>
</tr>
<tr>
<td>Socio-economic status</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Disadvantaged</td>
<td>0.01</td>
<td></td>
</tr>
<tr>
<td>Advantaged</td>
<td>0.34</td>
<td></td>
</tr>
</tbody>
</table>

Note: Solid bars indicate values were statistically different from the comparison group. Empty bars indicate values that were not statistically different from the comparison group.
Cognitive adaptability

Cognitive adaptability is the ability to adapt one’s thinking and behaviour to new environments or situations which may be challenging. To measure cognitive adaptability, students were asked about their ability to adapt to new situations. They were asked to respond to six statements with response options: ‘very much like me’, ‘mostly like me’, ‘somewhat like me’, ‘not much like me’, and ‘not at all like me’.

More than seven in ten students reported being able to adapt to new situations.

Almost three-quarters of students said that changing their behaviour in new situations was very much or mostly like them. Less commonly agreed among students, although over half still agreed (54%), was that they were like a person who ‘can adapt easily to a new culture’.

Figure 15. New Zealand students were slightly more likely than the OECD average to report being adaptable to new situations and cultures

Proportion of New Zealand students who responded that the statements below were ‘very much like me’ or ‘mostly like me’ and the average proportion across participating OECD countries

Students’ responses were used to create an index of cognitive adaptability. Positive values in the index indicate that students have a greater ability to adapt than the average for all students in OECD countries. Figure 16 displays the mean indices of all participating countries. New Zealand students reported higher than OECD average cognitive adaptability (0.09) and were higher than the UK (-0.06) and Singapore (-0.04), but lower than Canada (0.20) and Australia (0.13).
Students from most backgrounds reported high cognitive adaptability.

Most students reported very similar levels of cognitive adaptability above the OECD average; there were no differences between girls and boys or immigrants and non-immigrant students. When comparing students of similar gender, immigrant and socio-economic background, Māori students reported higher adaptability than non-Māori students, and all other ethnic groups had similar levels of adaptability. There were still differences between socio-economically advantaged students (0.35) relative to disadvantaged students (-0.11). The question this information brings to light is how can schools, teachers and whānau foster the adaptability of disadvantaged students, so that they feel more resilient when faced with challenges or new situations?

Figure 17. Socio-economically advantaged students reported much higher cognitive adaptability than socio-economically disadvantaged students

Mean index of cognitive adaptability

<table>
<thead>
<tr>
<th>Socio-economic status</th>
<th>Greater Cognitive Adaptability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Disadvantaged</td>
<td>-0.11</td>
</tr>
<tr>
<td>Advantage</td>
<td>0.35</td>
</tr>
</tbody>
</table>

**Note.** Solid bars indicate values were statistically different from the comparison group. Empty bars indicate values that were not statistically different from the comparison group.
Positive attitudes towards immigrants

PISA 2018 measured students’ attitudes towards immigrants by asking them how much they agreed with four statements referencing the rights and opportunities of immigrants, with response options: ‘strongly disagree’, ‘disagree’, ‘agree’, and ‘strongly agree’.

Over 85% of students agreed that immigrants should be able to vote, continue their customs, access education, and have the same rights as everyone else.

Most students agreed or strongly agreed with the four statements about attitudes towards immigrants (Figure 18). Most common, with 92% agreeing, was for students to believe that immigrant children should be able to access education just like other children in the country. Least common, though still with 85% of students agreeing, was the belief that immigrants should have the opportunity to vote after living in the country for several years. Positive attitudes towards immigrants were more common for New Zealand students than for the OECD average.

Figure 18. New Zealand students had more positive attitudes towards immigrants compared to the average across OECD countries

<table>
<thead>
<tr>
<th>Statement</th>
<th>New Zealand, 92%</th>
<th>OECD average, 85%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Immigrant children should have the same opportunities for education that other children in the country have</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Immigrants should have all the same rights that everyone else in the country has</td>
<td>88</td>
<td>80</td>
</tr>
<tr>
<td>Immigrants should have the opportunity to continue their own customs and lifestyle</td>
<td>88</td>
<td>76</td>
</tr>
<tr>
<td>Immigrants who live in a country for several years should have the opportunity to vote in elections</td>
<td>85</td>
<td>72</td>
</tr>
</tbody>
</table>

An index of positive attitudes towards immigrants was derived from students’ responses to these four statements. More positive values on this index indicate that students have more positive attitudes towards immigrants. Figure 19 displays the mean indices of all participating countries. New Zealand’s index (0.32) was substantially higher than the OECD average (0.02) and Malta (-0.06), and similar to other English-speaking countries. Canadian students’ attitudes towards immigrants (0.46) were second highest out of all countries.
Attitudes towards immigrants were more positive than the OECD average for all demographic groups in New Zealand.

Mean values on the index of attitudes towards immigrants are presented in Figure 20 by demographic groups within New Zealand. The most prominent differences were between girls and boys (which was true across all ethnic groups), and between socio-economically advantaged and disadvantaged students. Immigrant students were also more positive in their attitudes compared to non-immigrant students. Nevertheless, despite these differences, all groups showed more positive attitudes towards immigrants compared to the OECD average, in line with the high value on the index for New Zealand overall.

There was no difference between students who attended schools with prominent proportions (10% or more) of immigrants and those attending schools with few immigrants. After accounting for socio-economic and immigrant background and gender, there were no differences in attitudes towards immigrants for each ethnicity comparison.

Figure 20. Girls and socio-economically advantaged students had more positive attitudes towards immigrants than their peers

<table>
<thead>
<tr>
<th>Mean index of attitudes towards immigrants</th>
<th>More positive attitudes towards immigrants</th>
</tr>
</thead>
<tbody>
<tr>
<td>New Zealand</td>
<td>0.32</td>
</tr>
<tr>
<td>Gender</td>
<td></td>
</tr>
<tr>
<td>Girls</td>
<td>0.54</td>
</tr>
<tr>
<td>Boys</td>
<td>0.10</td>
</tr>
<tr>
<td>Immigrant status</td>
<td></td>
</tr>
<tr>
<td>Immigrant students</td>
<td>0.46</td>
</tr>
<tr>
<td>Non-immigrant</td>
<td>0.28</td>
</tr>
<tr>
<td>Socio-economic status</td>
<td></td>
</tr>
<tr>
<td>Disadvantaged</td>
<td>0.18</td>
</tr>
<tr>
<td>Advantaged</td>
<td>0.47</td>
</tr>
</tbody>
</table>

Note: Solid bars indicate values were statistically different from the comparison group. Empty bars indicate values that were not statistically different from the comparison group.
Ability to engage in cross-cultural communication

The third dimension of global competence is the ability to communicate effectively with people from different cultural and linguistic backgrounds. Students who do this well can express themselves clearly and strive to understand others.

Awareness of intercultural communication

PISA measured students’ awareness of intercultural communication by asking how much they agreed with the seven statements shown in Figure 21 related to the hypothetical scenario: ‘Imagine you are talking in your native language to people whose native language is different from yours’. The response options were: ‘strongly disagree’, ‘disagree’, ‘agree’, and ‘strongly agree’.

Nine in ten students reported that they listen carefully to what their conversation partner says when talking to people whose native language is different from their own.

Figure 21 displays the proportion of students in New Zealand, and on average across OECD countries, that either agreed or strongly agreed with the statements about their intercultural communication ability. At least four in five students agreed with any single statement; and 80% agreed that they would give concrete examples to explain their ideas when communicating with someone whose native language is different from their own, while most common (92% agreed) was for students to say that they would listen carefully to what this conversation partner had to say.

Responses to the statements were combined into an index of awareness of intercultural communication (Figure 22). A positive value in this index indicates that students have a greater awareness of intercultural communication than the average student in OECD countries. The mean index for New Zealand (0.05) was slightly higher than for the OECD average and the UK, similar to Ireland and Australia, and lower than Canada. Based on this index, awareness of intercultural communication amongst English-speaking countries was highest in Singapore (0.30).
New Zealand students were similar to Ireland and Australia in their awareness of intercultural communication.

Girls reported higher awareness of intercultural communication than boys while immigrant students reported similar levels to non-immigrant students.

Comparisons between demographic groups for intercultural communication ability are presented in Figure 23. The largest difference noted was when socio-economically advantaged students (0.33) were contrasted with disadvantaged students (-0.19), followed by a gender difference in favour of girls (0.17) over boys (-0.08). There were no differences between immigrant and non-immigrant students which is interesting given immigrant students are more likely to be multilingual.

After holding immigrant status, socio-economic background and gender equal, Māori, Pacific and Asian students reported higher intercultural communication awareness than non-Māori, non-Pacific and non-Asian students, respectively.

Figure 23. Awareness of intercultural communication varied between demographic groups, though there was no difference between immigrant and non-immigrant students.

<table>
<thead>
<tr>
<th>Gender</th>
<th>New Zealand</th>
</tr>
</thead>
<tbody>
<tr>
<td>Girls</td>
<td>0.05</td>
</tr>
<tr>
<td>Boys</td>
<td>-0.08</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Immigrant status</th>
<th>New Zealand</th>
</tr>
</thead>
<tbody>
<tr>
<td>Immigrant</td>
<td>0.07</td>
</tr>
<tr>
<td>Non-immigrant</td>
<td>0.04</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Socio-economic</th>
<th>New Zealand</th>
</tr>
</thead>
<tbody>
<tr>
<td>Disadvantaged</td>
<td>-0.19</td>
</tr>
<tr>
<td>Advantaged</td>
<td>0.33</td>
</tr>
</tbody>
</table>

Note: Solid bars indicate values were statistically different from the comparison group. Empty bars indicate values that were not statistically different from the comparison group.
Taking action for global issues

The last dimension of global competence is about students’ ability and willingness to take action for sustainability and social wellbeing. Ultimately, the first three dimensions serve as a foundation to this fourth skill in that it requires knowledge of global issues, others’ worldviews and cross-cultural communication. Taking action relates to how much of a role a student is willing to take as a global citizen in improving quality of life for others and creating a just and sustainable society. The School Strike 4 Climate movement is an example of how the concept of global citizenship is implemented in New Zealand around the world.

Agency towards global issues

To measure how much a student feels he or she is a global citizen, PISA measured their sense of agency towards global issues. Global agency means they have concern for people around the world and feel responsible for making the world a better place. Students were asked the extent to which they agreed (‘strongly disagree’, ‘disagree’, ‘agree’, ‘strongly agree’) with the six statements presented in Figure 24.

Six in ten students held the belief that they could do something about the problems of the world, similar to the OECD average.

Between 60% and 80% of New Zealand students agreed with each of the statements about their sense of agency regarding global issues. Least common, though with still 61% agreeing, was for students to believe that they could do something about the problems of the world. Eighty percent of students said that looking after the global environment was important to them, while 84% thought of themselves as citizens of the world. The latter belief was more commonly held by New Zealand students than by students in OECD countries, on average, as were all other beliefs, but to a lesser extent.

Figure 24. The majority of students thought positively about their agency toward global issues

Proportion of New Zealand students who agreed or strongly agreed with the statements, and the average proportion across participating OECD countries

<table>
<thead>
<tr>
<th>Statement</th>
<th>New Zealand</th>
<th>OECD average</th>
</tr>
</thead>
<tbody>
<tr>
<td>I think of myself as a citizen of the world</td>
<td>84</td>
<td>76</td>
</tr>
<tr>
<td>Looking after the global environment is important to me</td>
<td>80</td>
<td>78</td>
</tr>
<tr>
<td>It is right to boycott companies that are known to provide poor workplace conditions for their employees</td>
<td>70</td>
<td>66</td>
</tr>
<tr>
<td>When I see the poor conditions that some people in the world live under, I feel a responsibility to do something about it</td>
<td>69</td>
<td>67</td>
</tr>
<tr>
<td>I think my behaviour can impact people in other countries</td>
<td>61</td>
<td>56</td>
</tr>
<tr>
<td>I can do something about the problems of the world</td>
<td>61</td>
<td>58</td>
</tr>
</tbody>
</table>

Responses to the statements were combined to create the index of agency regarding global issues (Figure 25). Positive values in this index indicate that students have a greater sense of agency than the average student across participating OECD countries; negative values do not mean that students necessarily disagreed with the statements, but rather that their mean index score was lower than the OECD average. New Zealand’s index (0.09) was moderately higher than the OECD average and comparable to Australia. Singapore students (0.31) showed the greatest perceived agency towards global issues amongst English-speaking countries, while UK students showed the least (-0.05).
Girls, immigrants and advantaged students had a greater sense of agency regarding global issues relative to their peers.

As with many of the measures reported thus far, the index for agency towards global issues was higher for girls (0.24) than for boys (-0.09), for immigrants (0.16) than for non-immigrants (0.05), and for socio-economically advantaged students (0.31) than for disadvantaged students (-0.08) (Figure 26). Pākehā/European students reported lower agency than non-Pākehā/European students, after accounting for gender, immigrant and socio-economic background.

The socio-economic differences may not be surprising given that the statements come from an advantaged perspective in that students from low socio-economic backgrounds may not prioritise thinking about global issues in the face of other more immediate and personal needs, such as housing and food. This information should encourage others to think about what barriers would need to be lifted for all students to be able to feel greater agency in the world.
Capacity to take action

Students that feel that they have agency over global issues, that they can make a difference, might therefore engage in activities for global wellbeing and sustainability. Capacity to take action is about students’ willingness to turn their knowledge of global issues into meaningful activities which benefit others. PISA measured students’ capacity to take action with a series of eight ‘yes’ or ‘no’ statements (Figure 27).

Nearly 70% of students said they take action for the environment by reducing their energy use at home.

Most reported, by about seven in ten New Zealand students, was that they reduced the energy they used at home to protect the environment, slightly lower than the OECD average. Fewer students, six in ten, said they kept themselves informed about world events using social media channels Twitter® and Facebook®, while less than half said they engaged in each of the remaining actions. Least prevalent amongst these were boycotting of products or companies for political, ethical or environmental reasons and signing environmental or social petitions on-line (22%). Furthermore, New Zealand was slightly lower than the OECD average for seven of the eight statements.

Figure 27. New Zealand students were slightly less likely than the average student in the OECD to take actions regarding global issues

Proportion of New Zealand students who responded ‘Yes’ that they engaged in the below actions, and the average proportion across participating OECD countries

<table>
<thead>
<tr>
<th>Action</th>
<th>New Zealand</th>
<th>Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>I reduce the energy I use at home (e.g. by turning the heating the air conditioning down or by turning off the lights when leaving a room) to protect the environment</td>
<td>68</td>
<td>71</td>
</tr>
<tr>
<td>I keep myself informed about world events via Twitter® or Facebook®</td>
<td>60</td>
<td>64</td>
</tr>
<tr>
<td>I choose certain products for ethical or environmental reasons, even if they are a bit more expensive</td>
<td>44</td>
<td>45</td>
</tr>
<tr>
<td>I regularly read websites on international social issues (e.g. poverty, human rights)</td>
<td>43</td>
<td>46</td>
</tr>
<tr>
<td>I participate in activities in favour of environmental protection</td>
<td>32</td>
<td>38</td>
</tr>
<tr>
<td>I participate in activities promoting equality between men and women</td>
<td>28</td>
<td>33</td>
</tr>
<tr>
<td>I sign environmental or social petitions online</td>
<td>22</td>
<td>25</td>
</tr>
<tr>
<td>I boycott products or companies for political, ethical or environmental reasons</td>
<td>22</td>
<td>27</td>
</tr>
</tbody>
</table>

Unlike the previous measures of global competence, capacity to take action was not turned into an index for comparison across countries and groups within countries, but instead the ‘Yes’ responses were summed to give a total number of actions that students reported taking, on average (Figure 28). New Zealand students’ average number of actions out of 8 was just over 3 (3.17) and was similar to Canada, Australia, the UK and Ireland, though slightly under the OECD average (3.48), and one action less than students in Malta.
Figure 28. New Zealand was similar to other English-speaking countries, with students, engaging in, on average, about three actions in response to global issues.

Average number of actions taken about global issues reported by students across English-language countries with comparable data.

Girls and socio-economically advantaged students reported taking almost one action more, on average, than boys and disadvantaged students, respectively.

Figure 29 shows the number of reported actions taken for demographic groups in New Zealand. There were only very small differences when comparing across demographic groups, with the lowest number of reported actions at 2.8 (for boys), and the highest at 3.6 (for socio-economically advantaged students). The largest differences were between girls and boys, and between advantaged and disadvantaged students, though in both cases the size of the difference did not reach a whole action. The socio-economic differences are more likely to reflect students’ access to resources, such as time or money that enables them to participate in such actions. After accounting for gender, immigration and socio-economic background, Māori and Pacific students reported engaging in roughly a third of an activity more than non-Māori and non-Pacific students, respectively.

Figure 29. Girls and advantaged students reported engaging in the greatest number of activities about global issues, on average.

Average number of actions taken about global issues

<table>
<thead>
<tr>
<th></th>
<th>New Zealand</th>
<th>Girls</th>
<th>Boys</th>
<th>Immigrant students</th>
<th>Non-immigrant</th>
<th>Disadvantaged</th>
<th>Advantaged</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td></td>
<td></td>
<td></td>
<td>Immigrant students</td>
<td>Non-immigrant</td>
<td>Disadvantaged</td>
<td>Advantaged</td>
</tr>
<tr>
<td>Immigrant status</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>New Zealand</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3.2</td>
</tr>
<tr>
<td>Girls</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3.5</td>
</tr>
<tr>
<td>Boys</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2.8</td>
</tr>
<tr>
<td>Advantaged</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3.6</td>
</tr>
</tbody>
</table>

Note: Solid bars indicate values were statistically different from the comparison group. Empty bars indicate values that were not statistically different from the comparison group.
III. Learning opportunities and environment for global competence

The New Zealand National Commission for UNESCO states that “Global Citizenship Education aims to empower learners to assume active roles to face and resolve global challenges and to become proactive contributors to a more peaceful, tolerant, inclusive and secure world”\(^{11}\).

In New Zealand, global citizenship education may look a little different from other countries in that sustainability and global citizenship themes are often blended with local culture. Underpinning Pūtātara, the school-based resource for teaching sustainability and global citizenship, are the concepts of Tūrangawaewae (understanding where I stand), Kaitaikitanga (caring for people and place) and Whakapuāwai (flourishing ever forward)\(^{12}\). Learning opportunities are presented in an integrated curriculum and in ways that allow students to draw upon their identity, culture and language.

This section describes students’ opportunities to learn, and their environment for learning, as outlined by PISA 2018. While the activities and curriculum described do not fully encapsulate the vision of global citizenship education in New Zealand, they do provide a glimpse into some internationally comparable ones.

**Key results**

» New Zealand students reported participating in various learning activities aimed at promoting global competence at similar rates to the average across OECD countries, most commonly focused on learning about different cultures. Socio-economically disadvantaged students reported participating in fewer learning activities than advantaged students.

» Global issues were widely covered in the formal curriculum, though intercultural understanding topics were less prevalent. Many multicultural learning practices were very common, often more so than for the OECD average.

» New Zealand students were more likely to be in contact with people from other countries compared to the OECD average, and contact was associated with increased interest and respect for other cultures, cognitive adaptability, and awareness of global issues. Multilingual students also tended to have higher global competence, across all indices.

» Multicultural and egalitarian beliefs were considered by principals to be widespread among teachers at their schools, higher than most countries. However, some English-speaking comparison countries such as Ireland and the UK appeared to be meaningfully higher on this measure.

» Student perceptions of discrimination based on cultural background amongst teachers at their school were lower than most countries, but higher than in Australia, the UK, and Ireland. Disparities between demographic groups were also evident: Māori and Pacific students perceived particularly high discriminatory school climates relative to those from other ethnicities.


\(^{12}\) https://putatara.education.govt.nz
Learning opportunities

Creating opportunities for global and civic education in the classroom is one way that global competence might be fostered. This could involve formally integrating specific topics into the curriculum, such as climate change, global health or gender equality, having students read about and discuss global news, or promoting opportunities for students to learn about, celebrate and have contact with other cultures.

Moreover, opportunities exist both in and outside of school to develop global competence through exposure to people from countries different to one’s own, as well as through learning multiple languages. Learning opportunities for global competence were measured by asking students about the learning activities that they engaged in at school, their contact with people from different countries, their spoken languages, and by asking principals about teachers’ practices regarding multicultural learning and whether global and intercultural topics formed part of the formal curriculum.

Learning activities that promote global competence

Participation in learning activities was estimated by asking students to respond either ‘Yes’ or ‘No’ when asked whether they were exposed to 10 learning activities at school. Figure 30 displays the proportion of students who said that they engaged in each learning activity.

At least two-thirds of students reported learning about different cultures and cultural perspectives, while fewer than four in ten reported learning about global economies and being asked to discuss international news.

Global competence learning activities were somewhat common in New Zealand, with the proportion of students engaging in each activity ranging between 37% and 75% across activities. Learning about cultures and considering cultural perspectives were most common, while between 50% and 60% of students participated in classroom-based discussions or analysis of global or intercultural issues. Participation in celebrations of cultural diversity were less common, as were reports of learning about the interconnectedness of countries’ economies and being invited to give an opinion on global news, with the latter two being more common for the OECD average, than for New Zealand.
Figure 30. New Zealand students engaged in learning activities at a similar rate to the average across participating OECD countries, but were less likely to learn about interconnected economies.

Proportion of students who responded ‘Yes’ to the statements below, and the average proportion across participating OECD countries.

- I learn about different cultures (New Zealand: 75, OECD average: 76)
- I learn how people from different cultures can have different perspectives on some issues (New Zealand: 66, OECD average: 62)
- I learn how to solve conflicts with other people in our classrooms (New Zealand: 61, OECD average: 64)
- I learn how to communicate with people from different backgrounds (New Zealand: 61, OECD average: 58)
- I participate in classroom discussions about world events as part of the regular instruction (New Zealand: 56, OECD average: 56)
- I analyse global issues together with my classmates in small groups during class (New Zealand: 47, OECD average: 48)
- I participate in events celebrating cultural diversity throughout the school year (New Zealand: 45, OECD average: 41)
- We read newspapers, look for news on the internet or watch the news together during classes (New Zealand: 43, OECD average: 41)
- I learn about the interconnectedness of countries’ economies (New Zealand: 40, OECD average: 55)
- I am often invited by my teachers to give my personal opinion about international news (New Zealand: 37, OECD average: 46)

The total number of learning activities that students reported engaging in was calculated by summing the ‘Yes’ responses above. Figure 31 displays the average number of activities by participating country. The New Zealand average was just over five activities out of the possible ten, and this was similar to the UK (4.9), Ireland (5.3), Malta (5.6) and the average across participating OECD countries (5.5). Note, however, that there was relatively little variation across countries, with most reporting about five or six activities, with exception of Singapore, another English-speaking country, whose students reported engaging almost in eight activities.
Figure 31. Students in Singapore reported engaging in the greatest number of learning activities among English-language countries, more than two activities higher than New Zealand students.

Most New Zealand students reported engaging in fewer than five out of ten learning activities, on average, though there were small differences between demographic groups.

Figure 32 displays the average number of learning activities reported by demographic groups in New Zealand. Reports were mostly similar across groups, with students engaging in between five and six of the ten activities that PISA asked about.

While there were statistically significant differences between boys and girls and between immigrant and non-immigrant students, the differences were not meaningfully large (less than half an activity on average). On average across the OECD, boys reported engaging in more learning activities than girls, while the opposite was true in New Zealand. New Zealand boys reported learning about the economy more often than girls, while girls reported participating in activities related to intercultural understanding and communication more.

While Māori and Asian students reported similar opportunities to non-Māori and non-Asian students, Pacific students reported almost a full activity more than non-Pacific students, and Pākehā/European students reported less.

Disadvantaged students reported participating in almost a full activity less (4.9), on average, than advantaged students (5.7). This finding holds true in about half of the participating countries, with New Zealand having one of the largest differences, similar to Australia, Canada and the UK. The largest disparities were for discussions on world events, giving personal opinions on international news, and analysing global issues in small groups. There were no differences in learning opportunities between socio-economically advantaged and disadvantaged schools, meaning this disparity is driven by students within the same school having different opportunities to learn and foster global competence.
Participation in more learning activities in the classroom was associated with higher global competence across all indices.

For every additional learning activity that students reported engaging in, there was a small increase in every global competence index, even after accounting for gender and socio-economic and immigrant background. Positive attitudes towards immigrants increased by the smallest amount per additional learning activity of all the indices (an increase of 0.03), while interest in other cultures increased by the greatest amount (an increase of 0.09).

Several activities - learning about other cultures and cultural perspectives, analysing global issues with classmates, and participating in discussions and celebrating cultural diversity - stand out as activities positively associated with all attitudes. That is, students who reported participating in these activities tended to have higher values across global competence indices relative to those that did not report these learning activities. For two measures, however, there were only weak associations with individual learning activities - respect for people from other cultures and attitudes towards immigrants - suggesting that classroom activities might have little impact on these aspects of global competence.

Global competence curriculum

Principals were asked whether a range of topics on global issues (seven questions) and intercultural understanding (five questions) were taught within their school’s formal curriculum, responding either “Yes” or “No”. Figures 33 and 34 show the proportion of students attending schools whose principals responded positively, for each set of questions.
Topics on global health, including epidemics, were reported by principals as being in the curriculum for 85% of students, while critical thinking skills were included for 65% of students.

The majority of New Zealand students’ principals reported that global issues were part of their schools’ curriculum, slightly higher overall than the OECD average. Nearly all students (97%) were in schools where international conflicts were covered, similar to topics on migration (95%) and climate change (91%). Causes of poverty (87%) and global health (85%) were also widely covered, and about four in five students attended schools that included curricula on global hunger or malnutrition, and gender equality. Whether a student attended or did not attend a school where each of the global issues were covered in the curriculum did not influence students’ reported awareness of that topic. For example, covering climate change in the curriculum was not associated with students having higher awareness of climate change.

Figure 33. Most New Zealand students attended schools where there was a formal curriculum focusing on global issues, similar to the OECD average

Topics pertaining to intercultural understanding were, on average, included in school curricula less often than global issues, and each topic was less common than for the average participating OECD country (see Figure 34). At least six in ten students had a formal school curriculum on knowledge of different cultures, critical thinking skills, and respect for cultural diversity, five in ten had curricula on openness to intercultural experiences, and only three in ten had a curriculum for communicating with people across cultures or countries.

It may seem surprising that only two thirds of students’ principals said critical thinking skills were part of their formal curriculum, given that critical thinking is a key competency in the NZC. Principals might have interpreted this question as asking if critical thinking was a separate and discrete learning area or activity, rather than being embedded in the instruction across learning areas.

There was no relationship between a school having an intercultural understanding topic in its formal curriculum and its students’ level of global competence, after taking into account gender, immigrant background, and socio-economic profile. For example, students’ interest in learning about other cultures was not associated with knowledge of different cultures being included in the curriculum, nor was students’ respect for people from other cultures associated with respect for cultural diversity being included in the curriculum.
The lack of associations between principal-reported curricula and students’ global competence may be due to the measure not being precise enough. Principals may report that a topic is included in the curriculum in general, but individual teachers may focus on particular issues and less on others, allowing students within the same school to have different learning experiences. Student reports of learning activities are a better gauge of exposure to learning opportunities, which were associated with global competence.

**Figure 34.** Respect for cultural diversity and critical thinking were included in the curriculum for about two-thirds of New Zealand students, whereas a focus on communicating with those from other cultures were present for one-third

Proportion of New Zealand students whose school principals reported that there was a formal curriculum for the following topics in Year 11, and the average proportion across participating OECD countries

<table>
<thead>
<tr>
<th>Learning Opportunity</th>
<th>New Zealand</th>
<th>OECD Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>Respect for cultural diversity</td>
<td>66%</td>
<td>87%</td>
</tr>
<tr>
<td>Critical thinking skills</td>
<td>65%</td>
<td>85%</td>
</tr>
<tr>
<td>Knowledge of different cultures</td>
<td>60%</td>
<td>81%</td>
</tr>
<tr>
<td>Openness to intercultural experiences</td>
<td>52%</td>
<td>70%</td>
</tr>
<tr>
<td>Communicating with people from different cultures or</td>
<td>31%</td>
<td>50%</td>
</tr>
<tr>
<td>countries</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Multicultural learning opportunities at school**

Students’ intercultural understanding might benefit from classroom activities. Principals were asked to indicate ‘Yes’ or ‘No’ for whether ten multicultural learning activities reflect teachers’ practices for multicultural learning at their school (Figure 35).

**New Zealand students were more than twice as likely as the average OECD student to attend a school that celebrates festivities from other cultures.**

Multicultural teaching practices were reported very commonly by principals in New Zealand, and each learning opportunity was more likely to occur in New Zealand than for the OECD average. Most prominently, the proportion of New Zealand 15-year-olds was at least 30 percentage points higher than the OECD average for attending a school that organises multicultural events, offers an exchange programme, and celebrates festivities from other cultures, indicating that these experiences are a unique quality of, and are more valued in, New Zealand schools. More than nine in ten students attended a school that taught histories of cultural groups living in other countries and in New Zealand, as well as different cultural perspectives on historical and social events.

Within New Zealand, least common was for students to attend schools where they were encouraged to communicate with people from other cultures online (63%), but three-quarters attended schools with an exchange programme. However, both activities require a certain level of resources for participation, such as a digital device and internet access, so not all students may be able to access these opportunities even if their school offered it.

The number of multicultural activities that principals reported offering at school was not associated with a change in any global competence index for their students, indicating again that school-level or principal-reported learning opportunities may not accurately reflect individual student experiences, or that even if a school offers an activity, not all students participate in these opportunities.
Figure 35. New Zealand students were more likely than the average student in participating OECD countries to have a teacher that fosters multicultural learning, though communicating online with people from other cultures occurred less often than other teaching practices.

Proportion of students whose school principal said ‘Yes’ that the following statements reflected teaching practices for multicultural learning in their school, and the average proportion across participating OECD countries:

- Students learn about different cultural perspectives on historical and social events: New Zealand, 99% compared to the OECD average, 90%.
- Students learn about the cultures (e.g., beliefs, norms, values, customs, or arts) of diverse groups that live in New Zealand: New Zealand, 99% compared to the OECD average, 89%.
- Students learn about the histories of diverse cultural groups that live in New Zealand: New Zealand, 96% compared to the OECD average, 85%.
- We support activities that encourage students’ expression of diverse identities (e.g., national, religious, ethnic or social identities): New Zealand, 96% compared to the OECD average, 85%.
- Students learn about the histories of diverse cultural groups that live in other countries: New Zealand, 95% compared to the OECD average, 83%.
- We organise multicultural events (e.g., cultural diversity day): New Zealand, 89% compared to the OECD average, 57%.
- We adopt different approaches to educate students about cultural differences (e.g., teamwork, peer to peer learning, simulations, problem-based learning, music, art, etc): New Zealand, 83% compared to the OECD average, 78%.
- We offer an exchange programme with schools in other countries: New Zealand, 74% compared to the OECD average, 46%.
- We celebrate festivities from other cultures: New Zealand, 72% compared to the OECD average, 35%.
- Students are encouraged to communicate with people from other cultures via web/internet/social media: New Zealand, 63% compared to the OECD average, 54%.
Contact with people from other countries

Experience with people from other countries can expand understanding and interest in other cultures. PISA asked students if they had contact with people from other countries in various settings; such contact may be an important learning opportunity for students to develop global competence both inside and outside the classroom.

About three-quarters of New Zealand students had contact with people from other countries at school, within their families and amongst their friends.

Figure 36 shows the proportion of students reporting having exposure to people who were originally from outside of New Zealand (or the respective countries of students who, themselves, are from other countries). While on average across the OECD the most common form of contact was through students’ circles of friends, in New Zealand it was through students’ families. Except for contact via neighbourhood, a greater proportion of New Zealand students reported knowing a person from another country than the OECD average. The least common form of contact was through a student’s neighbourhood. These results are unsurprising given that 27% of the respondents to the 2018 census were born outside of New Zealand, an increase from 201313.

Figure 36. Students having contact with people from other countries was more common in New Zealand than on average across OECD countries

A slightly higher proportion of girls reported having contact with people from other countries at their school and within their families, compared to boys, while boys were slightly more likely to report their contact occurring through their circle of friends. Pākehā/European students were less likely to have contact with people from other countries in their families, circle of friends and neighbourhoods compared to non-Pākehā/European students. In contrast, Pacific students were more likely to have contact through their families, friends and neighbourhood than non-Pacific students. A lower proportion of Māori reported contact through their school than non-Māori. Socio-economically advantaged, Asian and immigrant students reported greater exposure to people from other countries across all forms of contact.

Students who knew people from other countries at school and within friend groups generally had higher global competence indices than those who did not have those same contacts.

Figure 37 displays the difference on the global competence indices associated with contact with someone from another country. The strongest associations were with interest in learning about other cultures, cognitive adaptability and awareness of global issues. The weakest association was with positive attitudes towards immigrants.

13 Stats NZ (2019).
Figure 37. Having peers from other countries was associated with increased interest in and respect for other cultures, cognitive adaptability and awareness of global issues.

Difference in mean global competence indices between students who had contact with people from other countries at school and in their circle of friends, and those who did not have such contact.

Languages learned and spoken

Besides cognitive and academic benefits, speaking and learning multiple languages can improve intercultural communication, and relationships with others and oneself\(^\text{14}\), as expressed in the whakataukī below:

\textit{Ko taku reo taku ohooho, ko taku reo taku mapihi mauria}

\textit{My language is my awakening, my language is the window to my soul}

This sentiment is also expressed in the New Zealand Curriculum: “Languages are inseparably linked to the social and cultural contexts in which they are used. Languages and cultures play a key role in developing our personal, group, national, and human identities. Every language has its own ways of expressing meanings; each has intrinsic value and special significance for its users” (p.24).

In addition, multilingualism allows individuals to access a broad and diverse range of culture, media, literature and arts not otherwise accessible to monolinguists. For these reasons, PISA measured multilingualism\(^\text{15}\) by asking students about the languages they and their families speak at home, and languages they learned at school during the school year of the PISA assessment. It is important to keep in mind that students in Māori-medium education are not included in these findings.

\textit{Around four in ten students reported speaking more than one language, having parents who speak more than one language, and learning a language other than English.}

Compared to the OECD average, a smaller proportion of New Zealand students and their parents were multilingual (Figure 38). Additionally, learning a language other than English was far less prevalent among New Zealand students (38%) than on average across OECD countries (88%). The proportion of multilingual students was also lower than in Canada and Ireland, but slightly higher than in the UK and Australia. The UK and Australia also had similar proportions of students learning a non-English language whereas Canada and Ireland had higher.

\(^{15}\) For the sake of brevity, multilingualism will be used to refer to both bilingualism and multilingualism.
In general, learning a language other than English at the time of the PISA assessment had little or no association with the global competence indices, apart from interest in learning about other cultures (Figure 39). However, students who were multilingual had significantly higher global competence indices across the board, even after accounting for gender, and students’ and schools’ socio-economic background.

On average across OECD countries, socio-economically advantaged students were more likely to be multilingual, while in New Zealand disadvantaged students reported greater rates of multilingualism (Figure 40). Similarly, disadvantaged students reported learning a language other than English more than advantaged students. There were no gender differences.
A significantly smaller proportion of Pākehā/European students were multilingual or were learning a non-English language at school compared to non-Pākehā/European students. Pacific and Māori students were more likely to be multilingual and learning a language than their peers, which is a positive indication that initiatives which have sought to lift te reo Māori and Pacific languages, while not universal, are making a difference.

In terms of the language usually spoken at home, a little over 4% of Māori students said they spoke te reo Māori most of the time and around 13% said they spoke another language with their mother and father as often as English. Around 10% of Pacific students spoke Samoan at home, while an additional 10% spoke another language, leaving around 80% of Pacific students speaking English at home most of the time. Around a third of Pacific students said they spoke another language as often as they spoke English with their mother and father.

New Zealand has one of the largest ‘home-language gaps’ amongst OECD countries, meaning one of the largest achievement gaps between students whose first language is the language of the school and those for whom it is not. This may in part explain why bilingual students, including Pacific and Māori students, are over-represented amongst students with lower PISA literacy levels. Research shows that effective bilingual education, which values and includes all the languages students know (additive bilingual instruction), contributes to wider academic achievement in addition to bilingualism and biliteracy. Coupled with the fact that PISA shows strong relationships between multilingualism and global competence for all students, this suggests that educational equity and global citizenship could be advanced through valuing and increasing multilingualism.

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Note: Solid bars indicate values were statistically different than their comparison group. Empty bars indicate values that were not statistically different than their comparison group.

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16 PISA doesn’t assess students who are studying in high Māori-immersion settings, so the data slightly underestimates the proportion of 15-year-olds who speak te reo Māori at home.
17 May (2020).
18 May (2020).
Learning environment

A positive and inclusive school climate is an important counterpart to having opportunities to develop intercultural competence at school; teaching practices relating to cultural diversity are unlikely to affect students’ attitudes if teachers are perceived, themselves, to lack respect for other cultures. PISA 2018 aimed to take stock of school climate by asking principals their views on teachers’ multicultural beliefs, and students their views on teachers’ attitudes towards people from other cultural groups.

Principals’ views on teachers’ multicultural beliefs

Principals were asked four questions on teachers’ multicultural beliefs and were required to estimate how many teachers at their school shared these beliefs by responding: ‘none or almost none’, ‘some’, ‘many’, or ‘all or almost all’ (Figure 41).

Practically all students attended schools where many or all teachers were considered by principals to believe that respecting other cultures should be taught to students as early as possible.

In New Zealand, and across participating OECD countries, nearly all students attended schools whose principal said that many or all teachers at their school shared multicultural and egalitarian beliefs. Of the queried beliefs, students were least likely to be in a school climate where teachers believed that students should be encouraged to resolve conflicts with those from other origins by finding common ground, though still nine in ten students attended such schools.

Figure 41. Principals of nearly all New Zealand students reported that multicultural and egalitarian beliefs were widespread among teachers at their school

The responses to these statements were used to construct an index of principals’ views on teachers’ multicultural beliefs. Higher values mean that principals thought that more teachers at their school had multicultural and egalitarian beliefs and this may be taken as an indicator of school climate. Figure 42 displays the average on this index for each country. New Zealand’s index (0.06) was slightly higher than the OECD average, similar to Australia and Canada, but substantially lower than Singapore and Ireland. A one-unit increase on this index was not linked with a change on any of the global competence indices: principals’ perceptions of school climate did not predict students’ global competence.
**Figure 42.** Teacher egalitarian and multicultural beliefs were most common in Singapore and Ireland, and more moderate in New Zealand, which was similar to Canada and Australia

Mean index of teacher multicultural and egalitarian beliefs of English-language countries with comparable data

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**Student perceptions of discrimination at school**

School climate was further examined in PISA 2018 by asking students about their perception of teachers’ attitudes towards people from cultural groups (Figure 43). There were four statements and students estimated how many teachers they thought the statements applied to: ‘none or almost none of them’, ‘some of them’, ‘most of them’, and ‘all or almost all of them’.

One in ten students reported that most or all their teachers said negative things about some cultural groups; an additional four in ten said some teachers did.

New Zealand was similar to the OECD average regarding the proportion of students who said that each of the statements applied to most or all their teachers. Most common was for students to say that most or all their teachers have lower expectations for students of some cultural groups (15%), with slightly fewer reporting a climate in which teachers had misconceptions about some cultural groups’ histories (13%). About one in ten students reported that most or all their teachers say negative things about some cultural groups or blame them for the problems faced by New Zealand.

These results are somewhat in contrast to principal reports of the learning environment. A very small proportion of students’ principals (3%) said that none or only some of their teachers believed that respecting other cultures is something that students should learn as early as possible, indicating that very few principals viewed their school culture as not being egalitarian and inclusive. However, a higher proportion of students (10-15% or more) said their school culture is just that – that most or almost all their teachers held negative beliefs about some cultural groups. The gap in perceptions of school climate between students and adults indicates that there is work to be done in raising critical awareness of racism amongst school staff.
Figure 43. Ten percent of students said that teachers at their school said negative things about people from some cultural groups, fifteen percent said that teachers had lower academic expectations for those people.

Proportion of students who said that the following statements about teachers at their school applied ‘to some of them’, ‘to most of them’ or ‘to all or almost all of them’, and the average proportion across participating OECD countries

Answers to the individual items were combined to create an index of perceived discrimination at school, with higher values representing greater discrimination (Figure 44). The index for New Zealand students (-0.01) was the same as the index for the OECD average, but lower than more than two-thirds of all participating countries. However, the average student from Australia (-0.11), and especially the UK (-0.29) and Ireland (-0.30), reported a less discriminatory climate than the average New Zealand student.

Interestingly, while principals’ perceptions of the school climate were not associated with students’ global competence, students’ own perceptions were. Greater perceived discrimination was associated with having greater awareness of global issues, but also lower perspective-taking, less positive attitudes towards immigrants, and lower respect for people from other cultures, even after controlling for gender, immigrant background, and socio-economic profile. Other than the relation with global awareness, these findings were also consistent across participating countries, showing that students across the globe who perceive discrimination by their teachers towards people from particular cultural backgrounds also tended to exhibit similar negative attitudes.
Figure 44. New Zealand students perceived a similarly discriminatory environment to the average, but this was greater than Australia, the UK and Ireland

Mean index of perceived discriminatory environment at school of English-language countries with comparable data

Female and socio-economically advantaged students perceived the least discriminatory school climate, Pacific and Māori students the most.

The data presented in Figure 45 demonstrate clear differences between demographic groups in perceptions of discrimination at school. Boys (0.10) in New Zealand schools perceived higher discrimination than girls (-0.11). Immigrant students did not differ from non-immigrant students in their perceptions of discrimination at school, and both were similar to the New Zealand average (-0.01). Disadvantaged students perceived their school climate to be more discriminatory than advantaged students, and amongst ethnic groups, Māori (0.23) and especially Pacific students (0.32) perceived high discrimination at school, but this was not the case for Asian and Pākehā/European students. Even after holding gender, socio-economic and immigrant background constant, Māori and Pacific students reported significantly higher discrimination at school, and Pākehā students reported significantly less. Girls consistently reported less discrimination than boys amongst Māori, Asian and Pākehā/European students, but there were no gender differences amongst Pacific students.

These findings align with other national research that racism and discrimination are present in schools, and that specific groups of students experience this more than others19. What these data add to our current understanding is that our level of discrimination in schools is higher than most of the countries that we typically compare ourselves to.

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Figure 45. Māori and Pacific students perceived the greatest discriminatory environments, whereas girls, advantaged and Pākehā/European students perceived the lowest.

Mean index of perceived discriminatory school environment

Note: Solid bars indicate values were statistically different than their comparison group. Empty bars indicate values that were not statistically different than their comparison group.
IV. Summary of global competence index relationships

Figure 46 shows the mean index values for New Zealand and the average across participating OECD countries for all global competence measures. New Zealand students’ attitudes towards immigrants and respect for people from other cultures stand out as being particularly high in comparison to the OECD average. The only measures lower than the OECD average were for self-efficacy regarding and awareness of global issues, though the differences were small.

Figure 46. New Zealand students reported significantly more positive attitudes towards immigrants, and greater respect for people from other cultures than students in the OECD on average

Mean index values of each global competence index for New Zealand and the OECD average

Note: Index values given refer to New Zealand only; the OECD average is approximately 0. The indices are listed in order of highest to lowest values.
Figures 47 and 48 summarise the mean index values for girls and boys, and for socio-economically advantaged and disadvantaged students. Girls reported higher agency regarding global issues, awareness of intercultural communication, perspective-taking, and respect for and interest in people from other cultures, and more positive attitudes towards immigrants. Socio-economically advantaged students had higher global index values for all measures except for discriminatory climate. Gender and socio-economic differences are discussed in the conclusion.

**Figure 47.** Girls’ reports of their global competence were generally higher than those of boys, but they had lower self-efficacy and perceptions of discrimination

Mean index values of each global competence index for girls and boys

**Figure 48.** Socio-economically advantaged students reported greater global competence, and lower perceived discrimination amongst their teachers

Mean index values of each global competence index for socio-economically advantaged and disadvantaged students
Comparisons of immigrant and non-immigrant students mean index values for the global competence measures are in Figure 49. Immigrant students tended to report higher global competence, except for intercultural communication, adaptability and perceived discrimination, which were all at similar levels to non-immigrant students.

Figure 49. Immigrant students reported greater perspective-taking, interest in learning about other cultures, and awareness of and self-efficacy regarding global issues.

Figure 50 shows, for each ethnicity grouping, the global competence measures for which there was a statistically significant difference, accounting for students’ socio-economic background, immigrant status and gender. These three factors were accounted for because they typically had the greatest impact on the global competence indices.

For instance, when comparing Pākehā/European and non-Pākehā/European students of similar gender and immigrant and socioeconomic backgrounds, Pākehā/European students reported lower agency towards global issues, interest in learning about other cultures, and discrimination at school than non-Pākehā students. Māori, Asian and Pacific students’ interest in learning about other cultures and intercultural communication skills were higher than non-Māori, non-Asian and non-Pacific students, respectively, accounting for gender, immigrant and socio-economic backgrounds.
Figure 50. Māori, Asian and Pacific students all reported significantly higher interest in learning about other cultures than their peers, while Pākehā/European students’ reports were lower.

Differences in mean index values between ethnic groups, before and after adjusting for students’ socio-economic profile (SES), immigrant status, and gender

| Mean index differences between Pākehā/European and non-Pākehā/European students |
|---|---|
| Agency towards global issues | -0.10 |
| Interest in learning about other cultures | -0.22 |
| Discriminating school climate | -0.30 |

| Mean index differences between Māori and non-Māori students |
|---|---|
| Discriminating school climate | 0.30 |
| Awareness of intercultural communication | 0.22 |
| Interest in learning about other cultures | 0.22 |
| Cognitive flexibility/adaptability | 0.12 |

| Mean index differences between Asian and non-Asian students |
|---|---|
| Self-efficacy regarding global issues | 0.09 |
| Perspective-taking | 0.09 |
| Awareness of intercultural communication | 0.09 |
| Interest in learning about other cultures | 0.09 |

| Mean index differences between Pacific and non-Pacific students |
|---|---|
| Discriminating school climate | 0.13 |
| Awareness of intercultural communication | 0.27 |
| Interest in learning about other cultures | 0.27 |
| Agency regarding global issues | 0.16 |
| Self-efficacy regarding global issues | 0.08 |

**Note:** Adjusted mean index differences were calculated using multiple variable linear regression analysis. Mean index differences were shown only if they were statistically significant. For all regression models, including those not shown, the gender, immigrant and socio-economic coefficients were statistically significant and meaningfully large. Ethnicity groupings are shown in order of proportion of 15-year-olds surveyed, from largest to smallest.
This report has looked at several global competence measures in isolation. It is also important to look at how they relate to each other. The correlation matrix below summarises the strengths of those relationships. Red illustrates positive correlations while blue illustrates negative ones. The darker the colour, the stronger the relationship. Where no statistically significant relationship exists, there is white. All global competence indices are positively correlated with each other. Reading, science and maths performance are also correlated with almost all measures, with particularly strong relationships with self-efficacy.

Figure 51. Intercultural communication, cognitive adaptability and respect for other cultures were highly correlated with other global competence indices

Correlations between students’ global competence, reading performance, index of economic, social and cultural status (ESCS), and learning opportunities and environment

20 All correlations in this section are Pearson correlations at the student level. Correlations (r) are between -1 and 1. The strength of a correlation is shown by its coefficient, not the sign of that coefficient. That is, correlations of -0.5 and 0.5 are the same strength but one is negative, and one is positive. Only correlations with a p value of less than .01 is included. Correlations provide an indication of the strength of a linear relationship but may not always be the nature of the relationship described.
The relationships between students’ global competence index values and measures of learning opportunities and environment are summarised in Figure 52, with principal-reported measures labelled in white and student-reported measures labelled in gray. The existence of a global competence curriculum, multicultural opportunities at school and teachers’ multi-cultural beliefs, as reported by the principal, was not correlated with any of the global competence indices. When students reported they were involved in various learning activities that fostered global competence, they had greater global competence across all measures, in particular greater interest in other cultures and capacity to take action. Contact with people from other countries was also moderately positively associated with all global competence indices. Being multilingual was positively correlated with all but two global index measures.

Students who perceived their teachers to be discriminatory tended to report similar attitudes: they had lower perspective-taking, lower respect for people from other cultures and less positive attitudes towards immigrants.

Figure 52. Student reports of participating in learning activities which foster global competence were most consistently correlated with student’s global competence, principal reports of learning opportunities were not.

<table>
<thead>
<tr>
<th>Correlations between students’ global competence and their learning environment and opportunities</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Self-efficacy</strong></td>
</tr>
<tr>
<td>Awareness of global issues</td>
</tr>
<tr>
<td>Perspective-taking</td>
</tr>
<tr>
<td>Interest in learning about other cultures</td>
</tr>
<tr>
<td>Respect for people from other cultures</td>
</tr>
<tr>
<td>Positive attitudes towards immigrants</td>
</tr>
<tr>
<td>Cognitive adaptability</td>
</tr>
<tr>
<td>Intercultural communication</td>
</tr>
<tr>
<td>Agency regarding global issues</td>
</tr>
<tr>
<td>Capacity to take action (# of actions)</td>
</tr>
</tbody>
</table>

![Correlation Chart](image-url)
Conclusion

There is immense opportunity for New Zealand to lead the world in its approach to global citizenship education by considering the diversity of the country’s citizens and the relationship between the Crown and Māori as tangata whenua. Te Tiriti o Waitangi can be used as a powerful lens to learn sustainability and global citizenship education, underpinned by the three principles of partnership, protection and participation. The New Zealand student population is increasingly diverse and global, with Māori, Asian, Pacific, and Middle Eastern/Latin American/African ethnic groups growing since 2013. With one quarter of New Zealand students being first- or second-generation immigrants, and with higher self-reported global competence across the PISA measures, there is great opportunity to leverage immigrant experiences and perspectives to lift all students’ sense of global citizenship.

For learners to be able to make these connections, they must first be secure and confident in their own cultural, ethnic and national identities. Thus, an essential component for developing global competence is a learning environment in which cultural diversity is valued and where students are free from experiences of racism and discrimination. This is a key goal in the Child and Youth Wellbeing Strategy, Ka Hikitia – Ka Hāpaitia (the Māori education strategy), and the Action Plan for Pacific Education 2020-2030. Global citizenship education can provide opportunities for learners to explore how systemic privilege and structures of power have affected their lives and those of others, in New Zealand and around the world, in the past, present and future.

In terms of New Zealand 15-year-olds’ global competence relative to the average student in OECD countries, there are many aspects in which they excel, particularly in ‘soft-skill’ areas relating to empathy, respect and problem solving. In 2018, students had above OECD average respect for people from other cultures, positive attitudes towards immigrants, adaptability in the face of new situations, a sense of agency when facing global issues, and confidence when communicating cross-culturally. The area where students were below the OECD average was in awareness and knowledge of global issues. This may reflect New Zealand’s emphasis on localised curriculum where students learn to engage in local solutions for worldwide impact. If one learning area were to be prioritised for improvement, it should be global economic issues, which around half of students said they could not discuss or would struggle to do so.

Another area of improvement in New Zealand’s global citizenship education would be to close the opportunity-to-learn gap that exists between students of socio-economically advantaged and disadvantaged backgrounds. For all measures of global competence, disadvantaged students reported lower on the index than advantaged students. Participating in more global citizenship learning activities in the classroom was associated with higher global competence across all indices but disadvantaged students had exposure to fewer learning activities than their advantaged peers. While this was a trend seen across half of participating countries, New Zealand had one of the largest socio-economic disparities in exposure to learning activities. Even more telling is that there were no differences between schools who were low and high on the socio-economic scale, indicating that students who were within the same schools, but of different socio-economic backgrounds, were provided different learning opportunities.

21 https://putatara.education.govt.nz/#/te-Tiriti
22 Stats NZ (2019).
23 Perreau (2019).
24 DPMC (2019).
It is not a new phenomenon that students from different backgrounds have varying opportunities to learn, having been well documented in New Zealand and internationally. Opportunities to learn are also affected by practices such as grouping and tracking within and between classes. These practices shape pathways of learning and access across the curriculum, as well as instructional quality, by impacting the rigour and cultural relevance of tasks and teachers' attitudes and preparedness. New Zealand has one of the highest country-level opportunity-to-learn gaps between advantaged and disadvantaged students, and these disparities have a strong relationship with achievement in general. Schools can reduce inequality by providing disadvantaged students additional opportunities to learn for and ending practices that limit their exposure to the breadth of the curriculum.

There is also a noticeable gender gap along many measures of global competence, generally ones related to empathy and communication. Girls reported greater respect for and interest in other cultures, perspective-taking, and awareness of intercultural communication, and expressed more positive attitudes towards immigrants than boys. Boys, on the other hand, expressed greater confidence in discussing global issues and higher perceived discrimination. In terms of learning opportunities, girls were more likely to report participating in activities related to intercultural understanding and communication, which might reflect how their teachers encourage their engagement in the different activities. New Zealand boys reported participating in learning about the economy more so than girls. These differences provide evidence in favour of empowering boys to engage in activities focusing on intercultural understanding and communication while girls could gain more confidence given their awareness of global topics were similar to boys.

Besides measures of global competence, these findings also provide additional insight into the value of language and multilingualism. Pacific, Māori and Asian students all reported being able to speak more than one language well enough to converse more than their peers. Students’ multilingualism should be seen as a strength and resource as it was positively related to all global competence measures and has well-known cognitive and academic benefits. Given New Zealand's large achievement gaps between students whose first language is the language of the school and those for whom it is not, providing effective bilingual education could be a vehicle for educational equity and global citizenship, instead of multilingualism being viewed as detrimental to achievement. Both Ka Hikitia and the Action Plan for Pacific Education 2020-2030 highlight the need to grow te reo Māori and Pacific bilingual education.

Returning to the notion that students should be secure and confident in their identity, language and culture at school, these PISA findings also confirm the results of the other research - that Māori and Pacific learners face discrimination from teachers at school and can perceive that their teachers have lower academic expectations for these students based on their cultural background. Students’ relationships with their teachers, teachers’ attitudes and beliefs, and teacher expectations of students strongly influence their own experiences, attitudes and overall resilience. Addressing negative teacher attitudes will play an important role in eliminating similarly negative beliefs among students. PISA data show that students who perceive discrimination by their teachers towards particular groups such as immigrants and people from other cultural backgrounds exhibited similar negative intercultural attitudes towards people from other backgrounds. Eliminating discrimination amongst adults in schools would help eliminate discrimination amongst students.

Overall, New Zealand’s education system is in a strong position in terms of its capacity to empower learner to assume active roles to resolve global challenges and to become proactive contributors to a more peaceful, tolerant, inclusive and secure world. The next step will be to ensure all learners are equally empowered and are able to express their cultural and linguistic identities with confidence. New Zealand has the potential to provide a global citizenship that is transformative through connecting each learners’ culture, language, identity and experiences with global contexts.

27 Wilson et al. (2016).
28 McNaughton (2020).
29 May (2020).
References


Further information from PISA 2018

This report and further information from PISA 2018 are available from the Ministry of Education, Education Counts website at www.educationcounts.govt.nz/goto/pisa.

Seven national reports accompany this release

» PISA 2018 New Zealand Summary Report: System Performance & Equity
» PISA 2018 New Zealand Students’ Wellbeing: School climate & student mindsets of 15-year-olds
» PISA 2018 Reading in New Zealand: Reading achievement and experiences of 15-year-olds
» PISA 2018 Selecting and Sorting Students
» PISA 2018 Resources for Learning: access, quality and capacity
» PISA 2018 Learning Time and School Support with Study
» PISA 2018 Purpose of assessment, school accountability and quality assurance

As part of the global release of initial findings from PISA 2018, the OECD has produced six international volumes:

» PISA 2018 Results (volume I): What students know and can do (OECD, 2019)
» PISA 2018 Results (volume II): Where all students can succeed (OECD, 2019)
» PISA 2018 Results (volume III): What school life means for students’ lives (OECD, 2019)
» PISA 2018 Results (volume IV): Are students smart about money? (OECD, 2020)
» PISA 2018 Results (volume V): Effective policies, successful schools (OECD, 2020)
» PISA 2018 Results (volume VI): Are students ready to thrive in global societies? (OECD, 2020)

These international reports and further information on PISA in an international context can be found on the OECD PISA webpage www.oecd.org/pisa. Future international reports, including the PISA 2018 Technical Report, will also be available from this website.

Data in this report are sourced from either the OECD volumes VI or the PISA 2018 database.
Participants in PISA 2018

**OECD countries**
- Australia
- Austria
- Belgium
- Canada
- Chile
- Colombia
- Czech Republic
- Denmark
- Estonia
- Finland
- France
- Germany
- Greece
- Hungary
- Iceland
- Ireland
- Israel
- Italy
- Japan
- Korea
- Latvia
- Lithuania
- Luxembourg
- Mexico
- Netherlands
- New Zealand
- Norway
- Poland
- Portugal
- Slovak Republic
- Slovenia
- Spain
- Sweden
- Switzerland
- Turkey
- United Kingdom
- United States

**Partner countries and economies**
- Albania
- Argentina
- Baku (Azerbaijan)
- Belarus
- Bosnia and Herzegovina
- Brazil
- Brunei Darussalam
- B-S-J-Z* (China)
- Bulgaria
- Chinese Taipei
- Costa Rica
- Croatia
- Cyprus
- Dominican Republic
- Georgia
- Hong Kong (China)
- Indonesia
- Jordan
- Kazakhstan
- Kosovo
- Lebanon
- Macao (China)
- Malaysia
- Malta
- Moldova
- Montenegro
- Morocco
- North Macedonia
- Panama
- Peru
- Philippines
- Qatar
- Romania
- Russian Federation
- Saudi Arabia
- Serbia
- Singapore
- Thailand
- Ukraine
- United Arab Emirates
- Uruguay
- Viet Nam

* B-S-J-Z (China) refers to the four participating Chinese provinces: Beijing, Shanghai, Jiangsu, Zhejiang.
We shape an education system that delivers equitable and excellent outcomes

He mea tārai e mātou te mātauranga kia rangatira ai, kia mana taurite ai ōna huanga