

The Programme for International Student Assessment (PISA) is a triennial survey of 15-year-old students that assesses the extent to which they have acquired the key knowledge and skills essential for full participation in society. The assessment focuses on proficiency in reading, mathematics, science and an innovative domain. In 2018, the innovative domain was global competence.

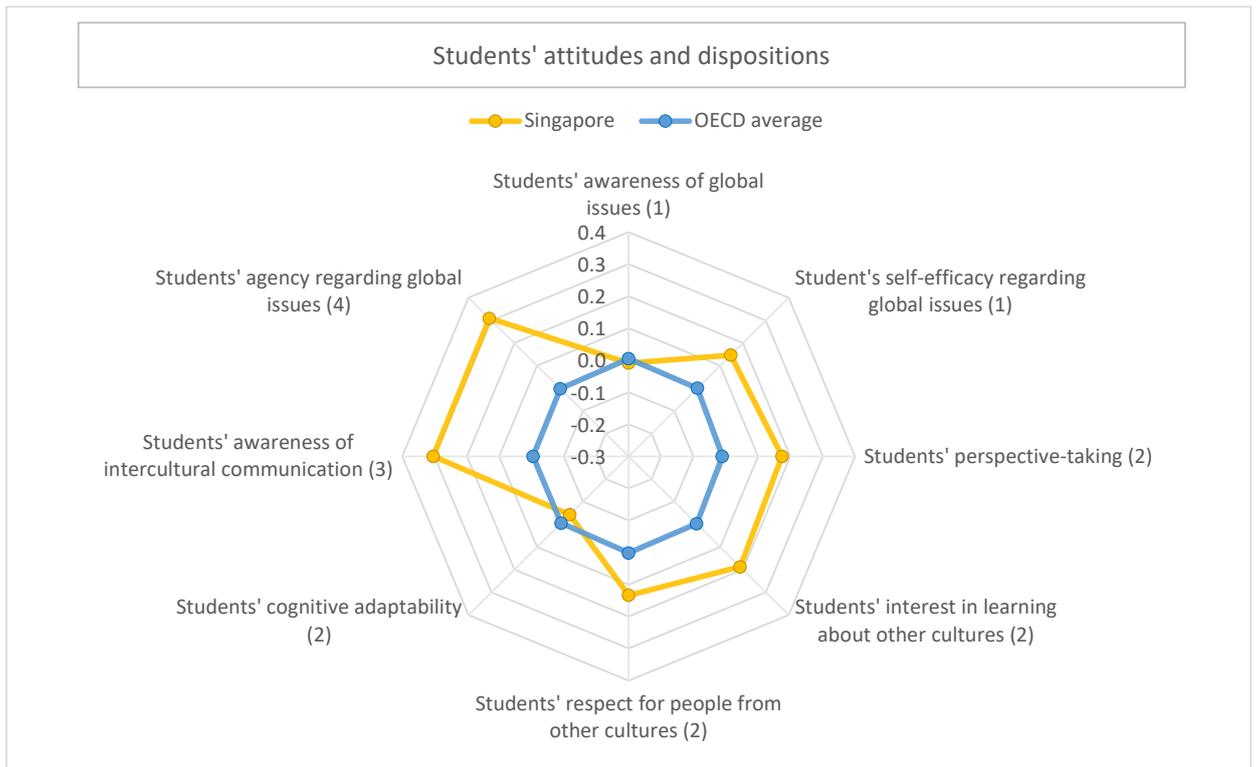
Singapore

In its 2018 cycle of data collection among 15-year-old students, PISA assessed the global competences needed to live in an interconnected and changing world. Global competence is defined as a multidimensional capacity that encompasses the ability to: 1) examine issues of local, global and cultural significance; 2) understand and appreciate the perspectives and worldviews of others; 3) engage in open, appropriate and effective interactions across cultures; and 4) take action for collective well-being and sustainable development. Students in 27 countries and economies both sat the global competence test and completed the global competence module in the student questionnaire. Students in a further 39 countries and economies completed the global competence module in the questionnaire only. Students in Singapore completed the questionnaire and sat the test.

Key Findings

- Students in Singapore reported positive attitudes and dispositions on self-efficacy regarding global issues, perspective taking, interest in learning about other cultures, respect for people from other cultures, awareness of intercultural communication and agency regarding global issues.
- On cognitive adaptability and awareness of global issues, students in Singapore reported values close to the OECD average.
- Students in Singapore scored above all 26 countries and economies taking the global competence cognitive test. When performance in reading, mathematics and science are accounted for in the computation of relative performance in global competence, Singapore scored among the six top performing countries, along with Canada, Colombia, Israel, Scotland (United Kingdom) and Spain.

Figure 1. Students' attitudes and dispositions



Note: (1) is for the first dimension of global competence, (2) is for the second dimension, (3) is for the third dimension and (4) is for the fourth dimension.

Source: OECD, PISA 2018 Database, Table V1.B1.6.6.

Examine issues of local, global and cultural significance

The first dimension of global competence focuses on students' ability to combine knowledge about the world and critical understanding when they form opinions about a local or global issue.

- Students in Singapore reported some of the highest levels of self-efficacy regarding global issues, scoring substantially higher than the OECD average, along with students in Canada, Colombia, Greece and Korea. In particular, they were the most confident on explaining how carbon-dioxide emissions affect global climate change, with 85% of them saying that they could do the task easily or with some effort (OECD average 63%). Students were also very confident on explaining why some countries suffer more from global climate change than others (81%, compared to the OECD average of 72%).
- On awareness of global issues, students in Singapore reported levels similar to those observed on average across all OECD countries and those observed in France, Slovenia and Spain. Students were most aware of climate change and global warming, with 89% reporting that they know about the topic or are very familiar with it (OECD average 78%). This was followed by awareness of migration (79%, equal to the OECD average of 79%), gender equality (77%, compared to the OECD average of 83%) and hunger and malnutrition in different parts of the world (76%, compared to the OECD average of 78%).

Understand and appreciate the perspectives and worldviews of others

The second dimension of global competence focuses on students' ability to understand and appreciate the perspectives and worldviews of others.

- When asked to describe their ability to understand the perspectives of others, 73% of students in Singapore reported that they try to understand their friends better by imagining how things look from their perspective (OECD average 64%). Some 71% reported that they believe that there are two sides to every question and they try to look at them both (OECD average 63%), while 66% reported that they try to look at everyone's side of a disagreement when they make a decision (OECD average 59%). About 56% reported that before criticising someone, they try to imagine how they would feel if they were in their place (OECD average 55%). On the scaled index of perspective taking, students in Singapore reported levels higher than those observed on average across OECD countries and similar to those observed in Chinese Taipei, Malta, Montenegro and the Russian Federation.
- Students in Singapore reported relatively high levels of interest in learning about other cultures. About 64% of students reported that they want to learn how people live in different countries (OECD average 59%), and about 63% reported that they are interested in how people from various cultures see the world (OECD average 55%). Fewer students reported that they want to learn about the religions of the world (51%, compared to the OECD average of 40%).
- Students in Singapore reported high levels of respect for people from other cultures. The Singapore average on this index was higher than the OECD average and similar to that observed in France, Kosovo and the United Arab Emirates. The proportion of Singapore students responding positively exceeded 80% on all questionnaire items used in constructing this index, with the largest proportion observed for respecting people from other cultures as equal human beings, with 89% of students reporting that the statement reflects their beliefs.
- Students in Singapore reported levels of cognitive adaptability that are slightly lower than the OECD average. Students were relatively confident on changing their behaviour to meet the needs of new situations and on overcoming difficulty interacting with people from other cultures. More than 60% of students gave positive answers on those two questionnaire items. Students were less confident on adapting easily to a new culture (50%, compared to the OECD average of 49%) and on dealing with unusual situations (50%, compared to the OECD average of 59%).

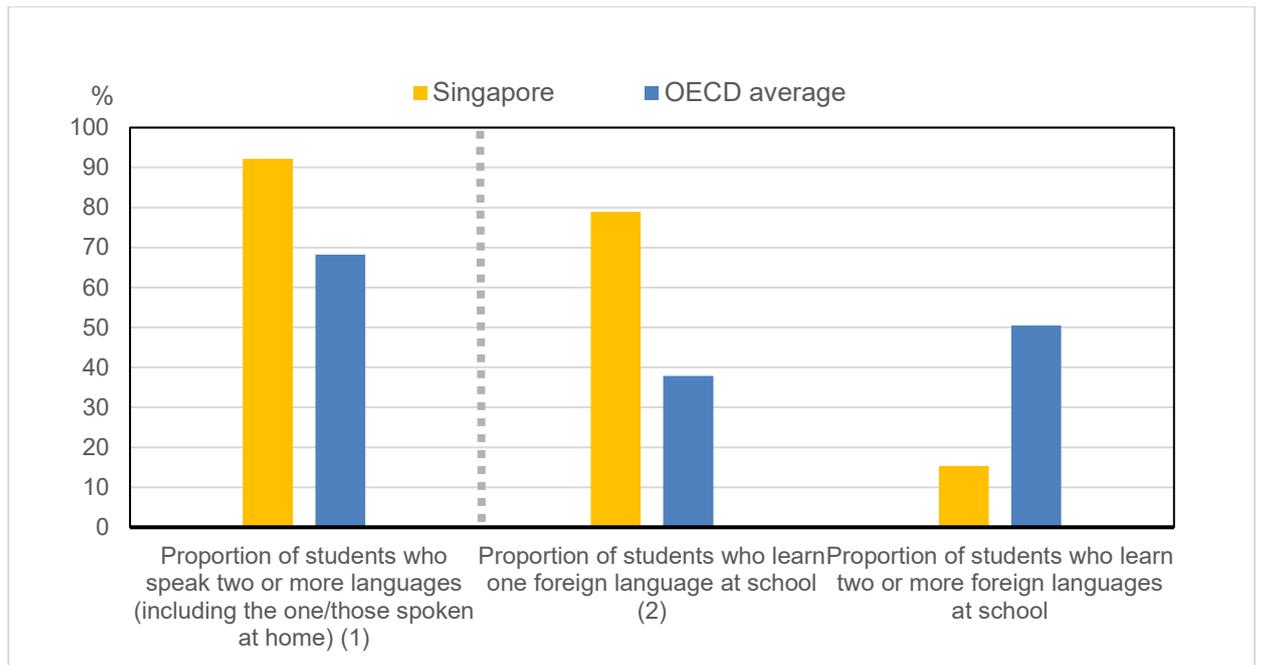
Engage in open, appropriate and effective interactions across cultures

The third dimension of global competence is the ability to engage in effective communication across cultures. Students who are proficient in this aspect of global competence are likely to be aware of the nuances of intercultural communication, to be multilingual and to have contact with people from different cultural backgrounds.

- Students in Singapore reported some of the highest levels of awareness of intercultural communication, significantly above the OECD average and just after students in Albania and Korea. Out of the seven questionnaire items used in the construction of this index, a majority of Singapore students (exceeding 90%) agreed or strongly agreed with the following four statements: "I carefully observe others' reactions"; "I frequently check that we are understanding each other correctly"; "I listen carefully to what others say"; and "If there is a problem with communication, I find ways around it". The proportions on these statements were significantly above the OECD averages, which varied around 80%.

- Most students in Singapore are multilingual, with 92% reporting that they speak two or more languages (OECD average 68%). About 79% reported that they learn one foreign language at school (OECD average 38%), and 15% reported that they learn two or more (OECD average 50%). Only 6% reported that they do not learn any foreign languages at school.
- Speaking multiple languages is positively associated with students' global and intercultural attitudes and dispositions, even after accounting for students' and schools' socio-economic profiles.

Figure 2. Language speaking and learning



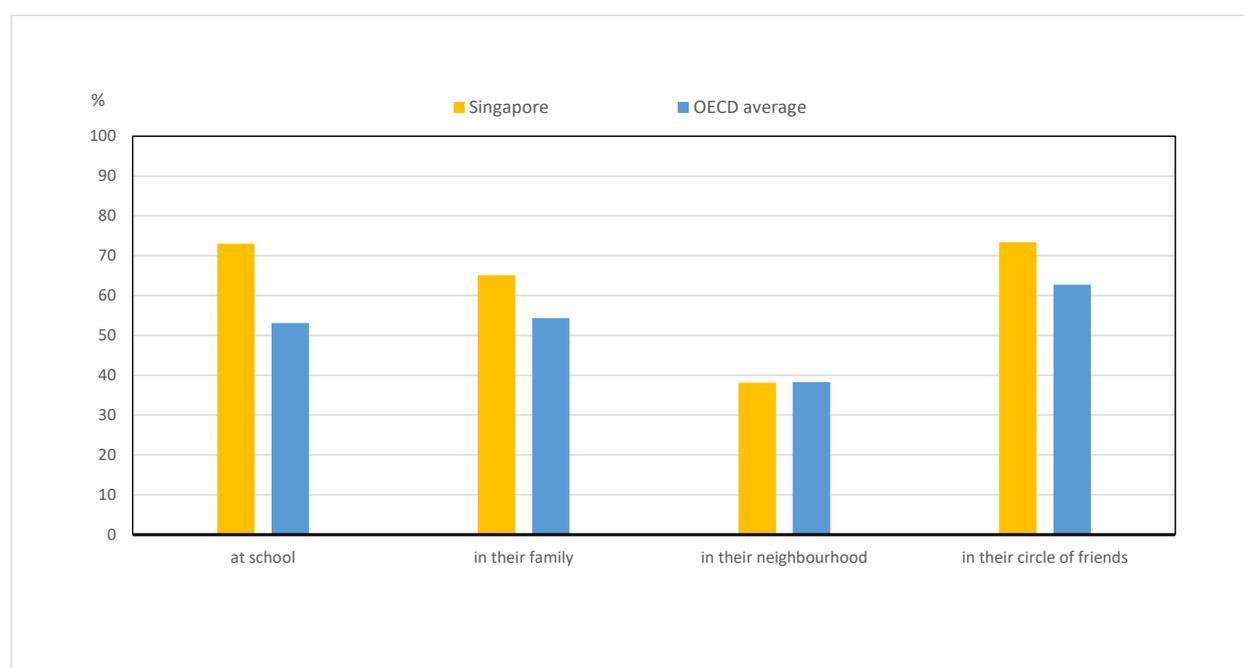
Notes: 1. Students were asked the following question: "How many languages, including the language(s) you speak at home, do you and your parents speak well enough to converse with others?"

2. Students reported on the number of foreign languages they learned at their school in the year they sat the PISA test.

Source: OECD, PISA 2018 Database, Table V1.B1.4.10.

- Most students in Singapore reported that they have contact with people from other countries at school (73%, compared to the OECD average of 53%), in their circle of friends (73%, compared to the OECD average of 63%), in their family (65%, compared to the OECD average of 54%) and in their neighbourhood (38%, equal to the OECD average of 38%).
- In Singapore, having contact with people from other countries at school is positively correlated with students' global and intercultural attitudes and dispositions, even after accounting for students' and schools' socio-economic profiles.

Figure 3. Contact with people from other countries



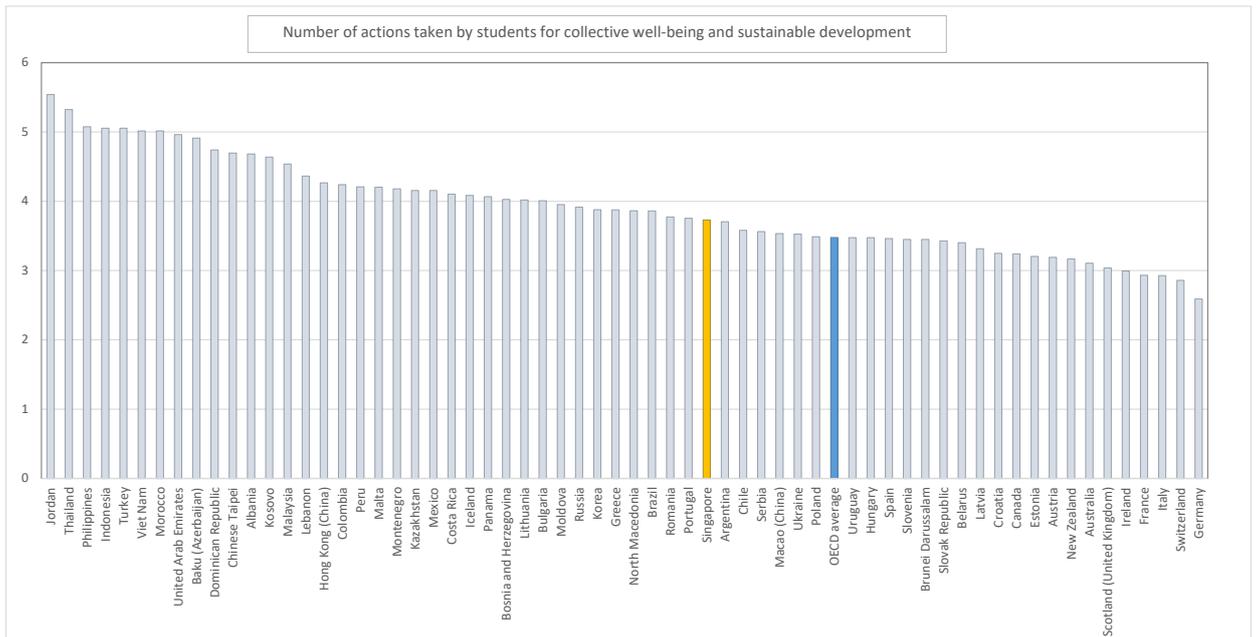
Source: OECD, PISA 2018 Database, Table V1.B1.4.4.

Take action for collective well-being and sustainable development

The fourth dimension of global competence is about taking action for sustainable development and collective well-being, which is the ultimate goal of the three dimensions explored previously.

- On agency regarding global issues, students in Singapore reported values significantly higher than the OECD average. More than 80% of students in Singapore agreed or strongly agreed with the following statements: “I think of myself as a citizen of the world”; “When I see the poor conditions that some people in the world live under, I feel a responsibility to do something about it”; and “Looking after the global environment is important to me”.
- Students were asked eight questions about actions they take for sustainability and collective well-being. In Singapore, students took on average about 3.7 actions, which is slightly higher than the average across all OECD countries (3.5 actions). The actions that were most common in Singapore were: reducing energy use at home, with 83% of students reporting that they do so (OECD average 71%); keeping oneself informed about world events using social media (74%, compared to the OECD average of 64%); reading websites on international social issues (53%, compared to the OECD average of 46%); and choosing certain products for ethical and environmental reasons (48%, compared to the OECD average of 45%). The least common actions taken by students were: participating in activities promoting gender equality (29% compared to the OECD average of 33%); boycotting companies for political, ethical or environmental reasons (25%, compared to the OECD average of 27%); and signing environmental or social petitions (21%, compared to the OECD average of 25%).
- The number of actions for sustainability and collective well-being was positively associated with students’ attitudes and dispositions. This association was not attenuated when students’ and schools’ socio-economic profiles were accounted for.

Figure 4. Taking action for sustainability and collective well-being



Note: The global competence sample from Israel does not include students in ultra-Orthodox schools and, thus, is not nationally representative. See PISA 2018 Technical Report (OECD, forthcoming) for details.

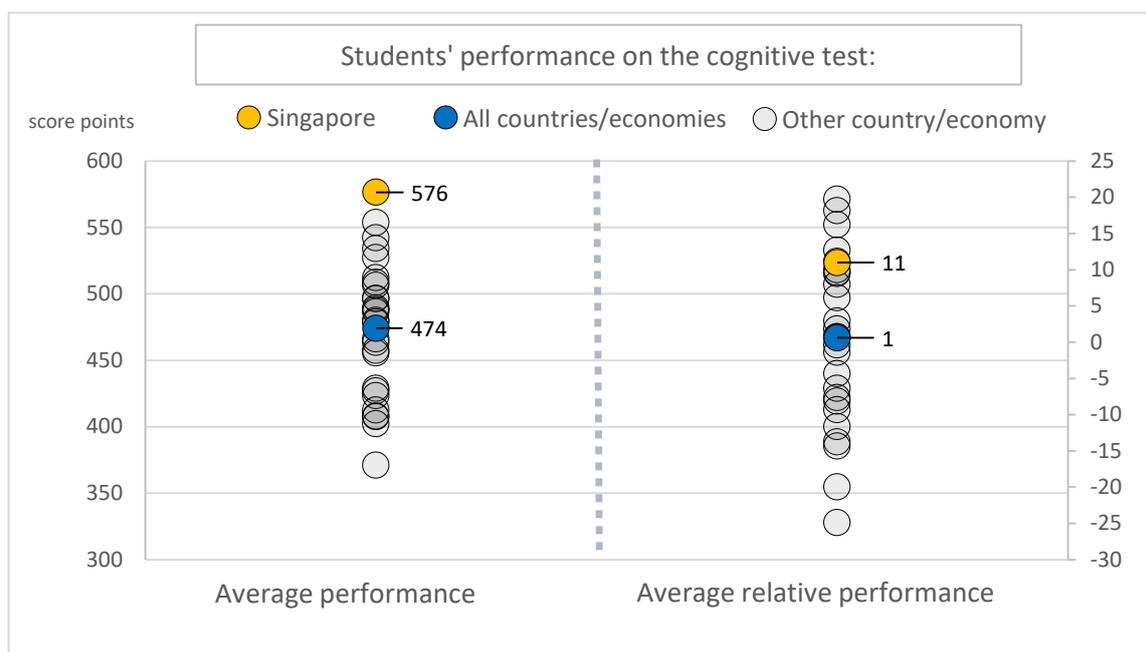
Countries and economies are ranked in descending order of the number of actions taken by students for collective well-being and sustainable development.

Source: OECD, PISA 2018 Database, Table V1.B1.5.18 and Table VI.B1.5.9.

Performance on the cognitive test

- Students in Singapore scored above the average of all countries/economies in global competence, with 576 score points. Singapore's average performance was statistically higher than the performance of all 26 countries and economies taking the cognitive test (the overall average was equal to 474 score points). However, when performance in reading, mathematics and science are accounted for in the computation of relative performance in global competence, Singapore scored among the six top performing countries, along with Canada, Colombia, Israel, Scotland (United Kingdom) and Spain.

Figure 5. Students' performance on the global competence cognitive test



Notes: Only the 27 countries and economies with available data are shown.

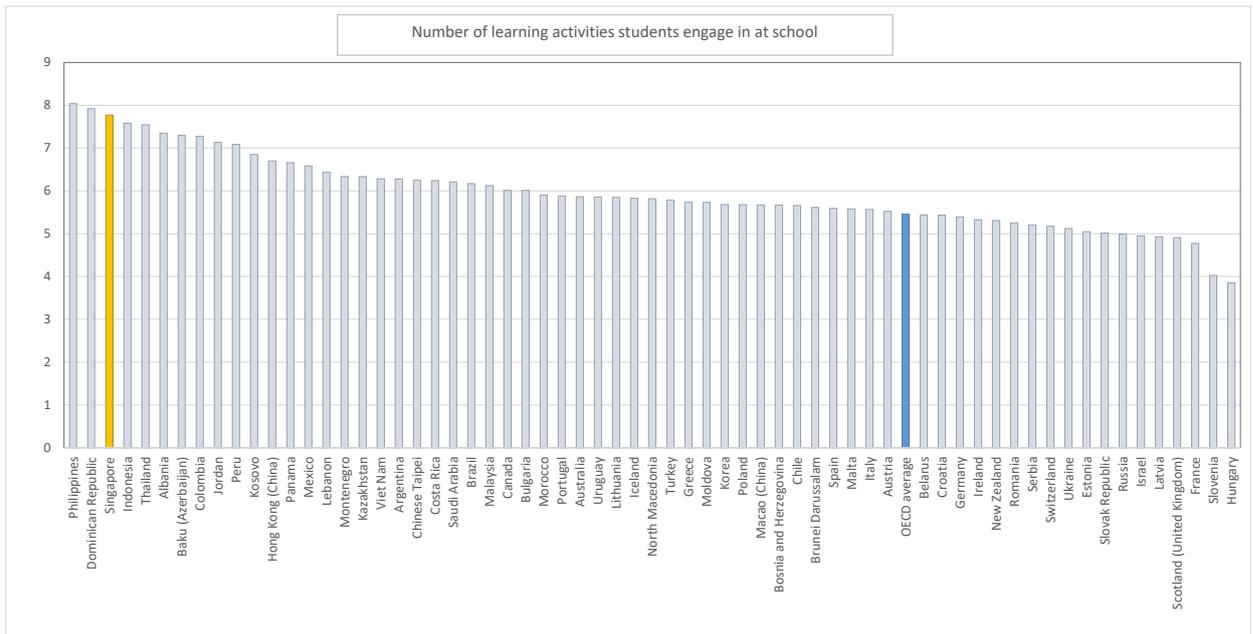
The global competence sample from Israel does not include students in ultra-Orthodox schools and, thus, is not nationally representative. See PISA 2018 Technical Report (OECD, forthcoming) for details.

Source: OECD, PISA 2018 Database, Table V1.B1.6.1.

Learning for global competence

- Students were asked ten questions about different global and intercultural learning activities they engage in at school. On average across OECD countries, students reported that they engage in about 5.5 activities. In Singapore, students engaged in 7.8 activities.
- The most common learning activity students in Singapore engaged in was learning about different cultures, with 93% of students reporting that they do so (OECD 76%). This was followed by learning how people from different cultures can have different perspectives on some issues (89%, compared to the OECD average of 62%); learning how to communicate with people from different backgrounds (86%, compared to the OECD average of 58%); and learning about the interconnectedness of countries' economies (82%, compared to the OECD average of 55%). The least common activities were participating in classroom discussions about world events as part of regular instruction (68%, compared to the OECD average of 56%) and being invited by the teacher to give their personal opinion about international news (60%, compared to the OECD average of 46%).
- In Singapore, as in other countries, participating in global and intercultural learning activities is positively associated with all students' attitudes and dispositions.

Figure 6. Engagement with global and intercultural learning activities



Note: The global competence sample from Israel does not include students in ultra-Orthodox schools and, thus, is not nationally representative. See PISA 2018 Technical Report (OECD, forthcoming) for details.

Countries and economies are listed in descending order of the number of learning activities students engage in at school.

Source: OECD, PISA 2018 Database, Table V1.B1.7.1.

- More than 80% of students in Singapore attended schools where school principals reported that global issues such as climate change, causes of poverty and migration are covered in the curriculum (OECD averages varied around 80%). The only topic that is not well covered in the curriculum is gender equality (61%, compared to the OECD average of 83%). Topics related to intercultural understanding, such as knowledge of different cultures, openness to intercultural experiences, respect for cultural diversity and critical thinking, are also commonly covered in the curriculum.

Key features of PISA 2018

The content

- The PISA 2018 survey focused on reading, with mathematics, science and global competence as minor areas of assessment; Singapore implemented both the global competence cognitive test and questionnaire. PISA 2018 also included an assessment of young people's financial literacy, which was optional for countries and economies. Results for reading, mathematics and science were released on 3 December 2019, results for financial literacy on 7 May 2020 and results for global competence on 22 October 2020. Singapore did not implement the financial literacy module.

The students

- Some 600 000 students completed the assessment in 2018, representing about 32 million 15-year-olds in the schools of the 79 participating countries and economies. In Singapore, 6 676 students, in 166 schools, completed the assessment, representing 44 058 15-year-old students (95% of the total population of 15-year-olds).

The assessment

- Computer-based tests were used in most countries, with assessments lasting a total of two hours. In reading, a multi-stage adaptive approach was applied in computer-based tests whereby students were assigned a block of test items based on their performance in preceding blocks.
- Test items were a mixture of multiple-choice questions and questions requiring students to construct their own responses. The items were organised into groups based on a passage of text describing a real-life situation. More than 15 hours of test items for reading, mathematics, science and global competence were covered, with different students taking different combinations of test items.
- Students also answered a background questionnaire, which took about 35 minutes to complete. The questionnaire sought information about the students themselves, their attitudes, dispositions and beliefs, their homes, and their school and learning experiences. School principals completed a questionnaire that covered school management and organisation, and the learning environment.
- Some countries/economies also distributed additional questionnaires to elicit more information. These included: in 19 countries/economies, a questionnaire for teachers asking about themselves and their teaching practices; and in 17 countries/economies, a questionnaire for parents asking them to provide information about their perceptions of and involvement in their child's school and learning. Singapore did not implement the teacher or parent questionnaires.
- Countries/economies could also chose to distribute three other optional questionnaires for students: 52 countries/economies distributed a questionnaire about students' familiarity with computers; 32 countries/economies distributed a questionnaire about students' expectations for further education; and 9 countries/economies distributed a questionnaire, developed for PISA 2018, about students' well-being. Singapore implemented the Information and Communications Technology (ICT) familiarity questionnaire only.

References

OECD (2020), *PISA 2018 Results (Volume VI): Are Students Ready to Thrive in an Interconnected World?* PISA, OECD Publishing, Paris, <https://doi.org/10.1787/d5f68679-en>

Map of PISA countries and economies



OECD member countries	Partner countries and economies in PISA 2018	Partner countries and economies in previous cycles
Australia	Albania	Algeria
Austria	Argentina	Azerbaijan
Belgium	Baku (Azerbaijan)	Guangdong (China)
Canada	Belarus	Himachal Pradesh (India)
Chile	Bosnia and Herzegovina	Kyrgyzstan
Colombia	Brazil	Liechtenstein
Czech Republic	Brunei Darussalam	Mauritius
Denmark	B-S-J-Z (China)**	Miranda (Venezuela)
Estonia	Bulgaria	Tamil Nadu (India)
Finland	Costa Rica	Trinidad and Tobago
France	Croatia	Tunisia
Germany	Cyprus ¹	
Greece	Dominican Republic	
Hungary	Georgia	
Iceland	Hong Kong (China)	
Ireland	Indonesia	
Israel	Jordan	
Italy	Kazakhstan	
Japan	Kosovo	
Korea	Lebanon	
Latvia	Macao (China)	
	Malaysia	
	Malta	
	Republic of Moldova	
	Montenegro	
	Morocco	
	Republic of North Macedonia	
	Panama	
	Peru	
	Philippines	
	Qatar	
	Romania	
	Russian Federation	
	Saudi Arabia	
	Serbia	
	Singapore	
	Chinese Taipei	
	Thailand	
	Ukraine	
	United Arab Emirates	
	Uruguay	
	Viet Nam	

* Puerto Rico participated in the PISA 2015 assessment (as an unincorporated territory of the United States).

** B-S-J-Z (China) refers to four PISA 2018 participating Chinese provinces/municipalities: Beijing, Shanghai, Jiangsu and Zhejiang. In PISA 2015, the four PISA participating Chinese provinces/municipalities were: Beijing, Shanghai, Jiangsu and Guangdong.

1. **Note by Turkey:** The information in this document with reference to "Cyprus" relates to the southern part of the Island. There is no single authority representing both Turkish and Greek Cypriot people on the Island. Turkey recognises the Turkish Republic of Northern Cyprus (TRNC). Until a lasting and equitable solution is found within the context of the United Nations, Turkey shall preserve its position concerning the "Cyprus issue".

Note by all the European Union Member States of the OECD and the European Union: The Republic of Cyprus is recognised by all members of the United Nations with the exception of Turkey. The information in this document relates to the area under the effective control of the Government of the Republic of Cyprus.

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Data can also be found on line by following the **StatLinks**  under the tables and charts in the publication.

Explore, compare and visualise more data and analysis using: <http://gpseducation.oecd.org/>.

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