Singapore

Modern life requires people to collaborate with one another. Many human activities involve groups of people, where individuals rely on each other for things that they cannot do themselves. More and more jobs require a high level of social skills, while the proportion of jobs that require minimal social skills is shrinking. PISA's first assessment of collaborative problem-solving skills shows how well-prepared 15-year-old students are to work together productively. The items in this assessment require students to establish a shared understanding with other group members, take appropriate action to solve the problem, and maintain team organisation – as students would do in real-world situations.

- Singapore is the top-performing country in collaborative problem solving (561 points) and performs significantly above all other education systems. Singapore's students perform even better in collaborative problem solving than their already strong performance in science, reading and mathematics would suggest.
- More than one in five students (21%) in Singapore achieve Level 4, the top level of proficiency in collaborative problem solving. These students can carry out advanced problem-solving tasks with high collaboration complexity, maintain an awareness of group dynamics, and take the initiative to perform actions or make requests to overcome obstacles and resolve disagreements. On average across OECD countries, only 8% of students can perform at this level.
- Just over one in ten students (11%) in Singapore perform below Level 2. On average across OECD countries, 28% of students perform below Level 2. These students are at best able to complete tasks with low problem complexity and limited collaboration complexity. They tend to focus on their individual role within the group, and might be able to enact plans when prompted to do so.
- There is a gap of 20 score points between girls' performance (572 points) and boys' performance (552 points) in Singapore. Across OECD countries, this gap is 29 score points.
- Students in Singapore have positive attitudes towards collaboration. Over 90% of students state that they are good listeners, that they enjoy seeing their classmates be successful, that they take into account what others are interested in, that they enjoy considering different perspectives and that they enjoy co-operating with their peers. These figures are above the OECD average.
- In most countries, girls value their relationships with others more than boys do. However, no significant gender gap in valuing relationships is observed in Singapore.
- Students who state that they are never or almost never threatened by other students score 10 points higher in the distinctively collaborative aspects of the assessment, once performance in science, reading and mathematics is accounted for. Students who state that teachers never or almost never discipline them more harshly than they do other students, and students who state that teachers never or almost never say something insulting to them in front of others, also score 10 points higher in the distinctively collaborative aspects of the assessment.

PISA 2015 defines collaborative problem-solving competence as "*the capacity of an individual to effectively engage in a process whereby two or more agents attempt to solve a problem by sharing the understanding and effort required to come to a solution and pooling their knowledge, skills and efforts to reach that solution*".

What is PISA?

The Programme for International Student Assessment (PISA) is a triennial survey that assesses the extent to which 15-year-old students near the end of compulsory education have acquired the knowledge and skills that are essential for full participation in modern societies. The assessment does not just ascertain whether students can reproduce knowledge; it also examines how well students can extrapolate from what they have learned and apply that knowledge in unfamiliar settings, both in and outside of school.

PISA offers insights for education policy and practice, and helps monitor trends in students' acquisition of knowledge and skills across countries and in different demographic subgroups within each country. The findings allow policy makers to gauge the knowledge and skills of students in their own countries in comparison with those in other countries, set policy targets against measurable goals achieved by other education systems, and learn from policies and practices applied elsewhere.

Key features of the PISA 2015 assessment of collaborative problem solving

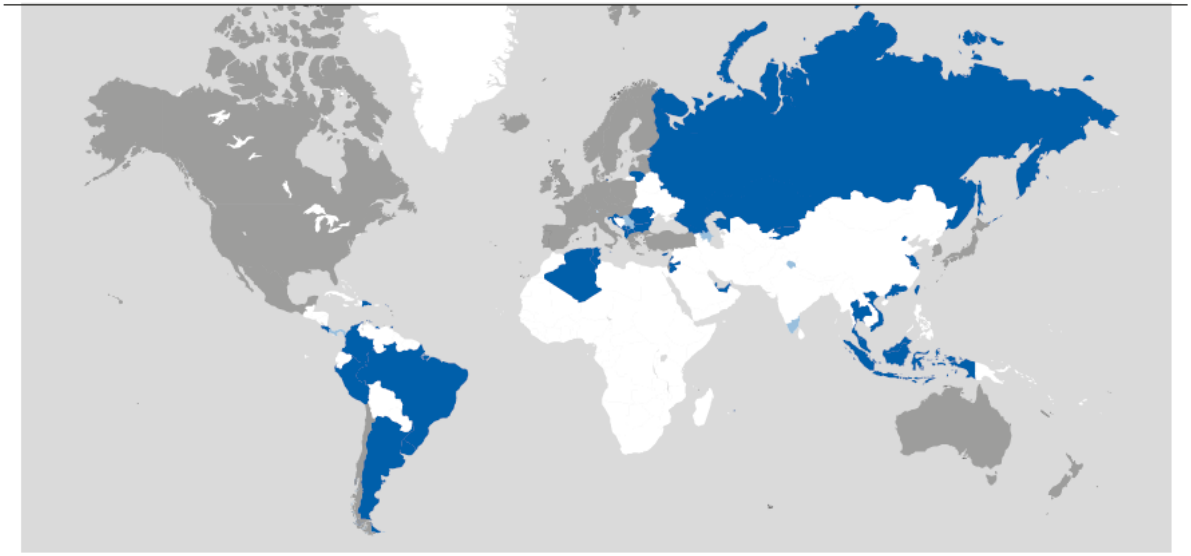
The assessment

- Collaborative problem solving was assessed on computers. The assessment lasted 30 minutes, with different students taking different combinations of test items. A total of 90 minutes of collaborative problem-solving items were created.
- The assessment was interactive. Students interacted with computer agents in order to advance towards a solution to a given problem. Test items were a mixture of multiple-choice items requiring students to select the best response to their computer partners, and items requiring students to solve the problem, generally by clicking on a region in the central display area. Sample items can be explored online at: www.oecd.org/pisa/test.
- Students assessed in collaborative problem solving also completed assessments in science and, depending on the test form, may have completed an assessment in reading or mathematics. They also answered a background questionnaire, which took 30 minutes to complete, that sought information about themselves, their homes and their school and learning experiences.

The students

- Only a subsample of all students assessed in science in 2015 also participated in the collaborative problem-solving assessment. Around 125 000 students were assessed in collaborative problem solving, representing about 6 million 15-year-olds in the schools of the 52 participating countries and economies.
- In Singapore, 1 819 students in 177 schools completed the assessment of collaborative problem solving.

Map of PISA countries and economies



OECD countries

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

Partner countries and economies in PISA 2015

Albania	**Lithuania**
Algeria	**Macao (China)**
Argentina	**Malaysia**
Brazil	Malta
B-S-J-G (China)*	Moldova
Bulgaria	**Montenegro**
Colombia	**Peru**
Costa Rica	Qatar
Croatia	Romania
Cyprus[1]	**Russian Federation**
Dominican Republic	**Singapore**
Former Yugoslav Republic of Macedonia	**Chinese Taipei**
Georgia	**Thailand**
Hong Kong (China)	Trinidad and Tobago
Indonesia	**Tunisia**
Jordan	**United Arab Emirates**
Kazakhstan	**Uruguay**
Kosovo	Viet Nam
Lebanon	

Partner countries and economies in previous cycles

Azerbaijan
Himachal Pradesh-India
Kyrgyzstan
Liechtenstein
Mauritius
Miranda-Venezuela
Panama
Serbia
Tamil Nadu-India

Note: Countries and economies marked in bold participated in the PISA 2015 collaborative problem-solving assessment.

* B-S-J-G (China) refers to the four PISA participating Chinese provinces: Beijing, Shanghai, Jiangsu, 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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For more information on the Programme for International Student Assessment and to access the full set of PISA 2015 results, visit:

www.oecd.org.edu/pisa