



PISA

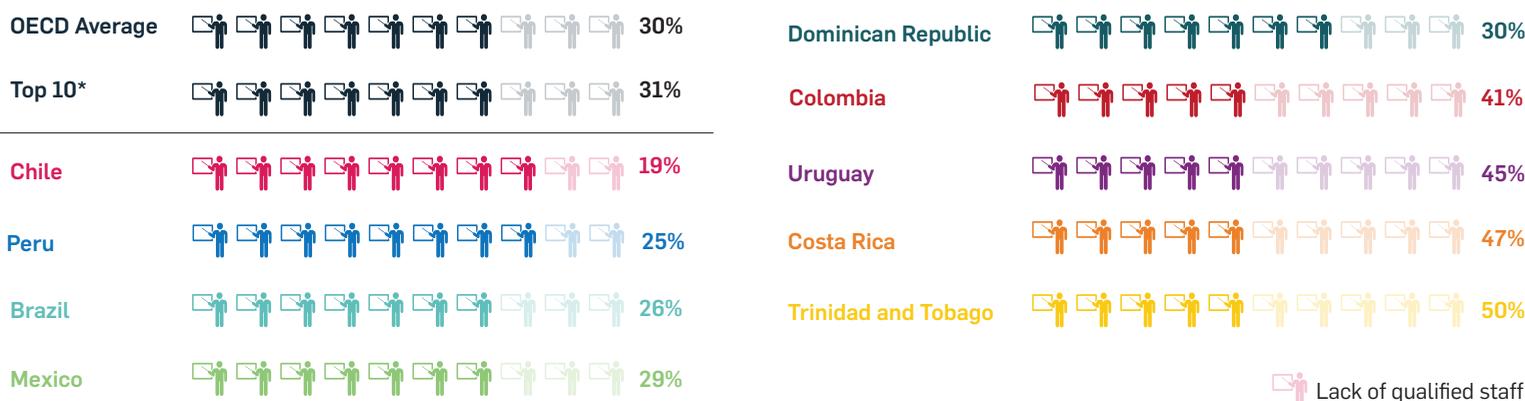
Latin America and the Caribbean

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WHAT IS THE RELATIONSHIP BETWEEN STUDENT PERFORMANCE AND TEACHING RESOURCES?

The lack of high-quality professional training and development and the unequal distribution of human resources suggests there is a need for a greater focus on how to better recruit, train, and retain excellent teachers.

LACK OF QUALIFIED TEACHING STAFF, PISA 2015



Source: Table II.6.14, PISA 2015

Notes: (1) The percentage for each country was calculated by adding the sets of columns (F+H and N+P) and using the highest number for each country. (2) The top 10 countries were chosen based on their average score in science; they are Singapore, Japan, Estonia, Chinese Taipei, Finland, Macao (China), Canada, Vietnam, Hong Kong (China), and B S J G China. (3) The figures were rounded to the nearest

The region needs more teaching staff to improve teaching and learning

- Through its lack of teaching staff index, PISA reported on principals' perceptions of whether having insufficient or underqualified teaching staff harmed teaching in their schools.
- In Chile, 19% of students attend a school where the principal reports that a lack of qualified teachers negatively impacts teaching, a better result than in the average OECD country (30%).
- At the other extreme, Trinidad and Tobago (50%), Costa Rica (47%), and Uruguay (45%) are the countries in the region which suffer most from a lack of qualified teachers.
- The lack of qualified staff correlates with lower performance in all countries in the region except Costa Rica and Trinidad and Tobago.

High-income schools have better human resources than low-income schools

- When controlling for the socioeconomic status of students and schools, the correlation between the lack of qualified staff and lower performance disappears. This implies that the lack of qualified teaching staff is related to the socioeconomic status of students and schools.
- In all countries in the region except Trinidad and Tobago and Costa Rica, principals of schools with low-income students are more concerned about the lack of qualified staff than their peers at higher-income schools. This indicates a high level of inequality in the distribution of human resources.
- In all countries in the region, the unequal distribution of human resources is higher than in the average OECD country.
- Peru, Uruguay and Colombia are among the 10 participating countries with the highest levels of inequality

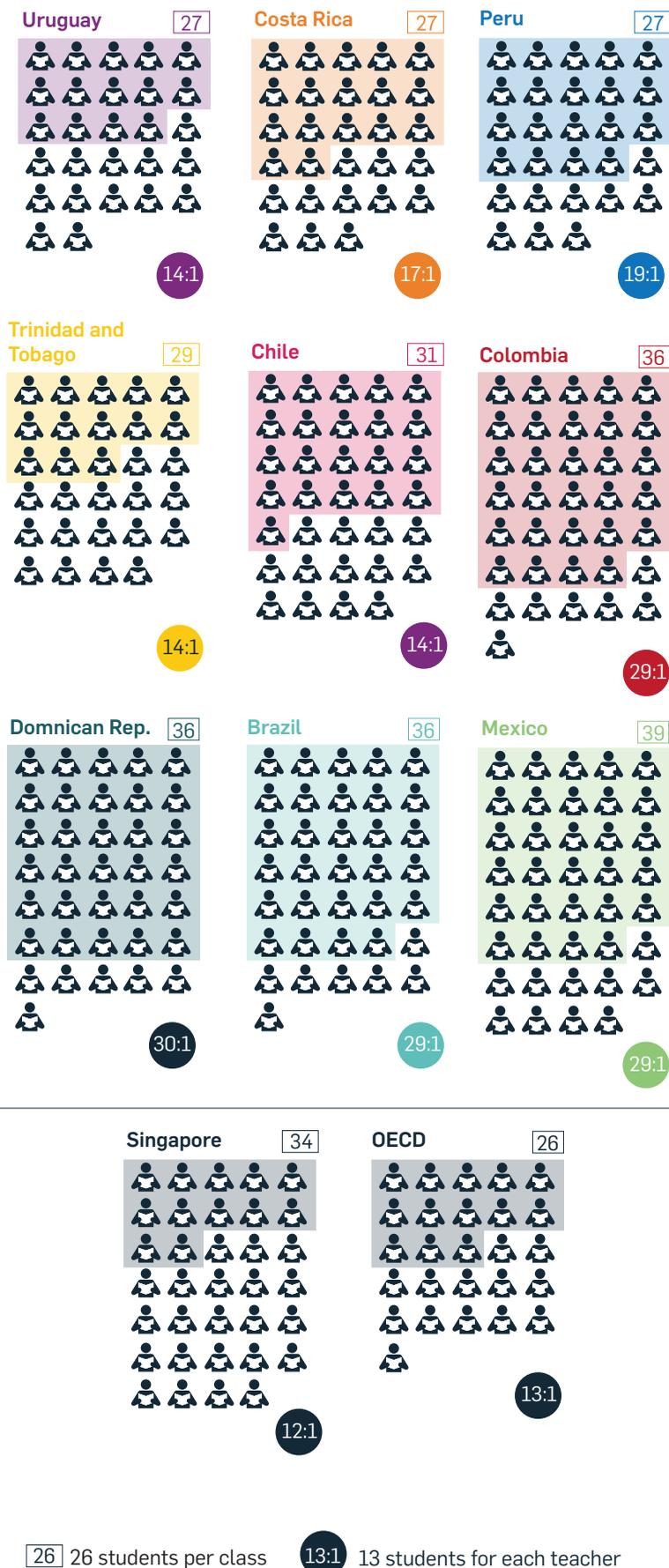
The number of students per teacher and class size vary widely within the region

- PISA 2015 asked school principals about the average class size for 15-year-old students. It also asked principals about the number of teachers and students in their schools in order to calculate the number of students per teacher.
- In Latin America and the Caribbean, the average class size is 33 students. Uruguay has the smallest average class size in the region, with 27 students per class, while Mexico has the largest, with 39 students per class. The average class size in the OECD is 26 students.
- The number of students per teacher in the Dominican Republic (30:1), Brazil (29:1), Colombia (29:1), and Mexico (29:1) are the highest among all participating countries. Latin American countries have more students per teacher than the average OECD country, which has a ratio of 13:1.

There is no positive correlation between teacher certification and improved results in the region

- PISA 2015 asked school principals how many of their teachers were certified by a relevant authority.
- In all countries in the region except Chile, Mexico, and Colombia, half of students attend a school with a certified teacher.
- Costa Rica, Brazil, and Peru all reach the OECD average (84%) for the percentage of students in schools with certified teachers.
- No country in the region reaches the average percentage of students in schools with certified teachers observed among the highest-performing countries (93%).
- In Trinidad and Tobago, Uruguay, and the average OECD country, there are more certified teachers in high-income schools than in low-income schools; the opposite is true in Mexico, Brazil, and Peru.
- In the average OECD country, there is a positive correlation between certification and performance. However, this correlation is not observed in Latin America and the Caribbean, which implies that certification is not necessarily an indicator of quality in the region.

TAMAÑO DE CLASE Y RATIO ALUMNO-DOCENTE, PISA 2015



26 26 students per class 13:1 13 students for each teacher

The requirements to enter and graduate from teacher training programs vary widely

- Only Brazil and Peru require competitive examinations for applicants to teacher training programs.
- Among the countries for which data is available, only Peru and Chile have teacher training programs that last five years or more (depending on the level). The remaining countries in the region have four-year training programs at all levels.
- Chile does not require a practical component as part of its training for primary school teachers. In Mexico, student teachers can decide whether or not to include a practical component in their teacher training for upper secondary education.
- In Mexico, Brazil, the Dominican Republic, Peru, and Uruguay (only for preschool and primary education), those who wish to enter the teaching profession are required to take competitive exams.

The correlation between professional development and learning is weak

- PISA asked principals what percentage of teachers at their schools attended teacher training programs in the three months prior to the test. PISA defines professional development as having attended at least one day of training.
- In Brazil, 53% of teachers received professional development, the highest percentage in the region and similar to the OECD average (52%). Teachers in Trinidad and Tobago (33%) and Mexico (31%) received the least professional development in the region.
- There is no difference between the professional development of teachers in high- and low-income schools in the countries of the region or in the average OECD country. The only exceptions are Mexico and Trinidad and Tobago, where higher-income schools have better-trained teachers.

SCIENCE TEACHERS WHO RECEIVED PROFESSIONAL DEVELOPMENT TRAINING, PISA 2015

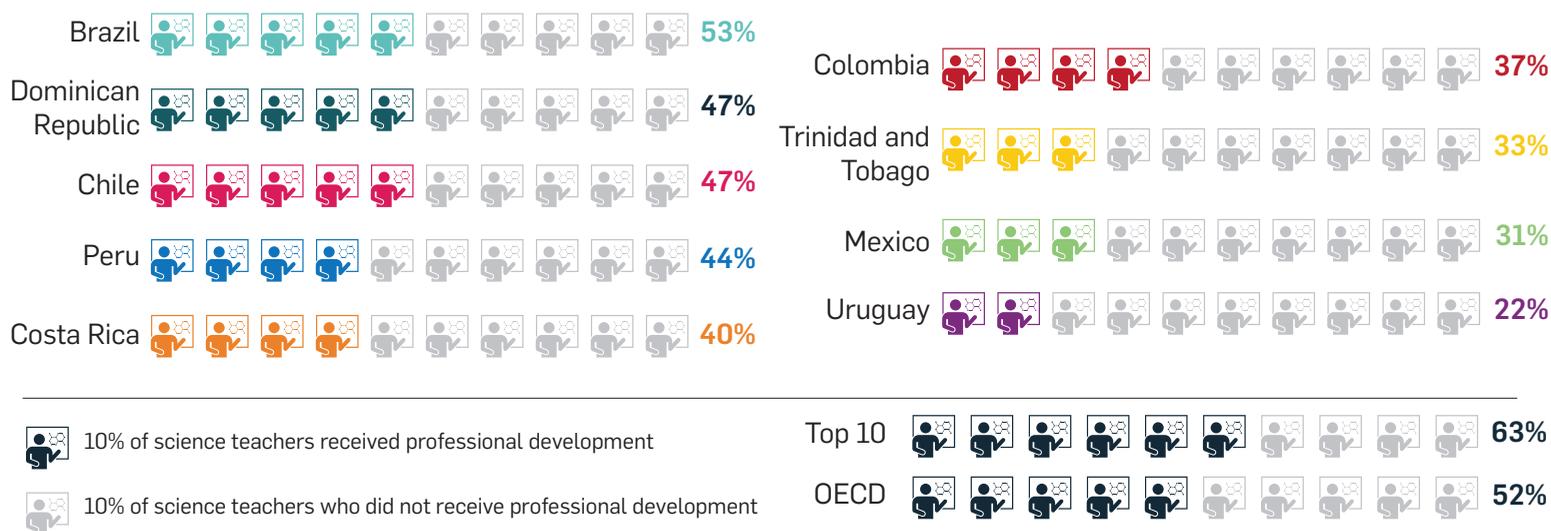


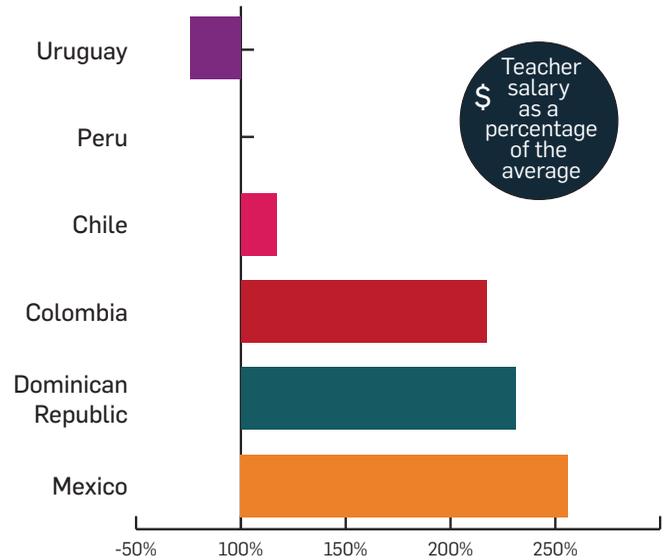
Table II.6.19, PISA 2015

Notes: (1) The figures were rounded to the nearest whole number. (2) The top 10 countries were chosen based on their average score in science; they are Singapore, Japan, Estonia, Chinese Taipei, Finland, Macao (China), Canada, Vietnam, Hong Kong (China), and BSJG China.

Teacher salaries in the region are low, but increasing them would not automatically improve learning outcomes

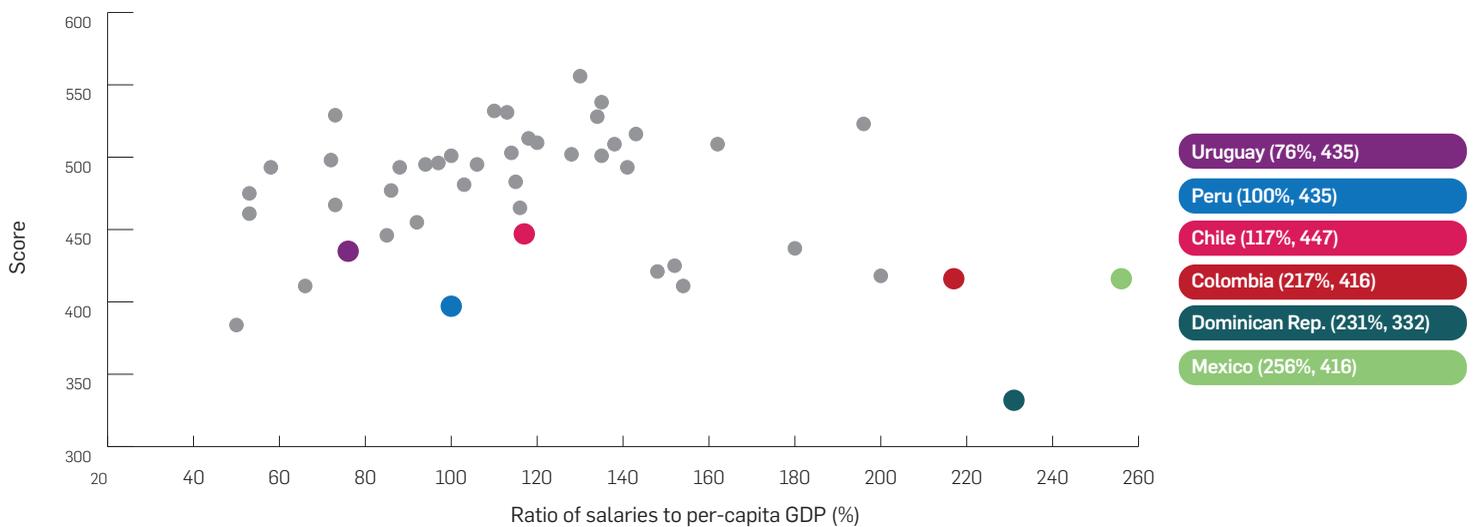
- Teacher salaries in all Latin American and Caribbean countries are lower than in the average OECD country, and much lower than teacher salaries in the highest-performing countries.
- Teachers in Colombia, the Dominican Republic, and Mexico are among those who receive the highest salaries. Uruguay and Peru offer the lowest salaries in the region. This information was not reported for Brazil, Costa Rica, and Trinidad and Tobago.
- The salary structure throughout the teaching career varies in the region. In Peru, salaries at the upper level of the scale are 2.5 times higher than starting salaries. In other countries in the region, teachers are unable to double their salaries during their careers.
- There is not a clear relationship between salaries and learning outcomes in the countries of the region or in the countries that participated in PISA.

SALARY RATIO AFTER WORKING 15 YEARS AS A PERCENTAGE OF PER-CAPITA GDP, PISA 2015



Source: Table II.6.54, PISA 2015
 Notes: (1) The percentage is the ratio between salaries earned in upper secondary education by teachers with minimum training after 15 years of work experience, and per-capita GDP. (2) This information was not reported for Brazil, Costa Rica, and Trinidad and Tobago.

TEACHER SALARIES AND SCIENCE SCORES, PISA 2015



Source: OECD, PISA 2015, Vol I, Chart I.6.14
 Notes: (1) The percentage is the ratio between salaries earned in upper secondary education by teachers with minimum training after 15 years of work experience and per-capita GDP. (2) This information was not reported for Brazil, Costa Rica, and Trinidad and Tobago.

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References: OECD (2016). PISA 2015 Results Excellence and Equity in Education (Volume I).



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