CIMA

Latin America and the Caribbean

COVID-19: ARE WE PREPARED FOR ONLINE LEARNING?

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With input from the COVID-19 SCL/EDU team *

Ensuring the continuity of learning during the COVID-19 emergency is the main challenge faced by the education systems of Latin America and the Caribbean (LAC) and the entire world. Unequal access to technology, connectivity and digital resources characterizes the countries of the region. It is essential to assist the most vulnerable groups of students and provide the necessary tools to families, teachers and school principals to enable learning at home.

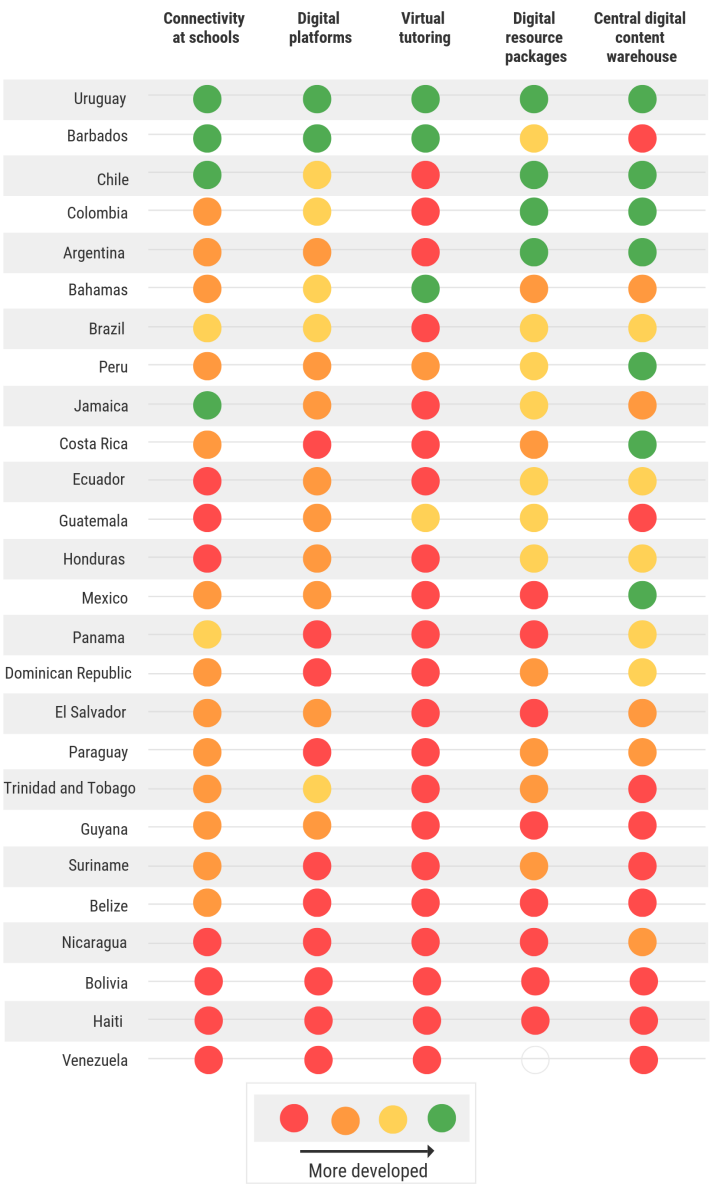
Almost all schools in Latin America and the Caribbean are closed due to the COVID-19 pandemic

- It is estimated that 95% of the students enrolled in school are no longer attending classes at any educational level[1].
- Many countries have established a series of solutions and alternatives to continue learning and teaching processes at home.
- The range of solutions is very diverse in the LAC region, including online learning and other digital media (social networks and platforms), combined with teaching via television, radio, printed materials and study guides.
- The largest management challenge facing countries during the COVID-19 emergency is to reach as many students as possible.

Uruguay is the only country in the LAC region that has the basic digital conditions according to an IDB EMIS study

- The IDB's Education Division has worked for more than two years with LAC countries on a review of Educational Management and Information Systems (EMIS) across the region.
- The study seeks to identify how daily management processes are carried out and to determine their level of automation and digital use, in order to improve the efficiency of educational management[2].
- Among the basic digital conditions established by the project are the availability of connectivity in schools, digital platforms, virtual tutoring, digital resource packages and a central repository of digital content.
- The review of systems carried out under the EMIS study has shown that most of the countries in the region do not have basic digital conditions, and therefore are not in a position to provide online education to all students.

BASIC DIGITAL CONDITIONS IN THE EDUCATION SYSTEMS OF LATIN AMERICA AND THE CARIBBEAN, EMIS 2020

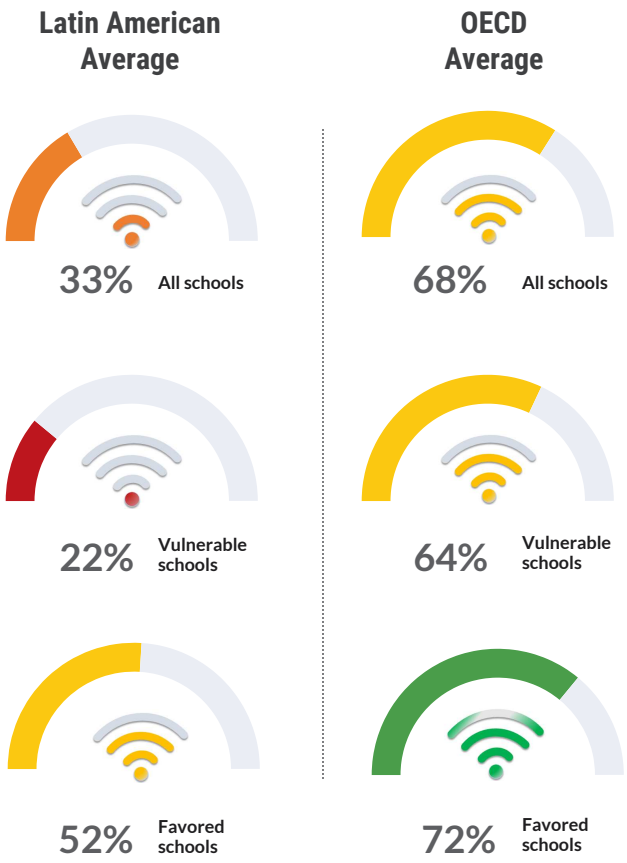


Source: Educational Management and Information Systems (EMIS) study, and updated with data collected by the IDB's Education Division.
Note: The graph summarizes the resources available to each of the education systems based on the review carried out under the EMIS study. In the case of Venezuela, no information was reported on the condition of digital resource packages.

In the region, two out of every three secondary schools do not have sufficient bandwidth or internet speed

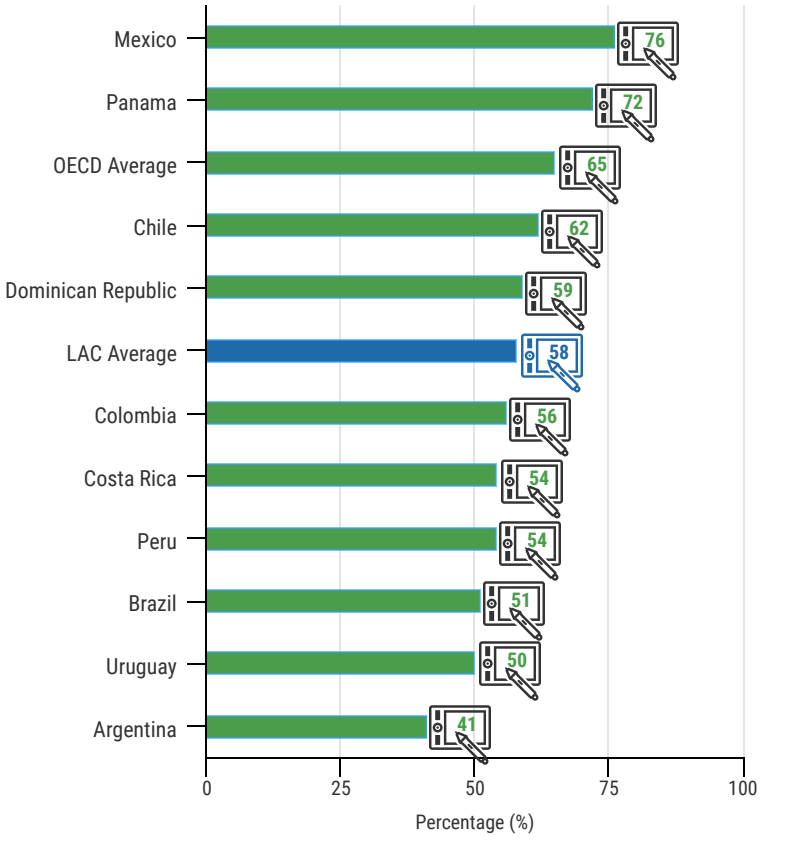
- In Latin America, some 84% of secondary schools have internet access, according to data available for the 10 countries that participated in PISA-2018[3].
- Internet access is as important as bandwidth or internet speed to ensure online learning[4].
- In Latin America, only 33% of schools have sufficient bandwidth, less than half of those reported on average in OECD countries (68%)[5].
- In Argentina, Colombia, Panama, Brazil, Peru and Mexico, less than 20% of schools in more vulnerable contexts have sufficient bandwidth or internet speed available.
- In 8 of the 10 Latin American countries, less than 15% of rural schools have access to sufficient bandwidth or internet speed.
- Furthermore, the availability of suitable software and the computing power of digital devices in schools are very limited. In the countries of the region, access is reported on average to be 36% and 38% respectively[6].

SUFFICIENT INTERNET BANDWIDTH OR SPEED IN SCHOOLS, PISA 2018



Fuente: Authors' own calculations based on PISA, OECD (2018)
Nota: This indicator is expressed as the percentage of students in schools whose school principal agreed or strongly agreed that the bandwidth or internet speed in the schools was sufficient. Vulnerable schools refer to those that group students from the lowest quintile (q1) of the socioeconomic level distribution, and the favored schools group students from the highest quintile (q5).

TECHNICAL AND PEDAGOGICAL SKILLS OF TEACHERS TO INTEGRATE DIGITAL DEVICES IN INSTRUCTION, PISA 2018

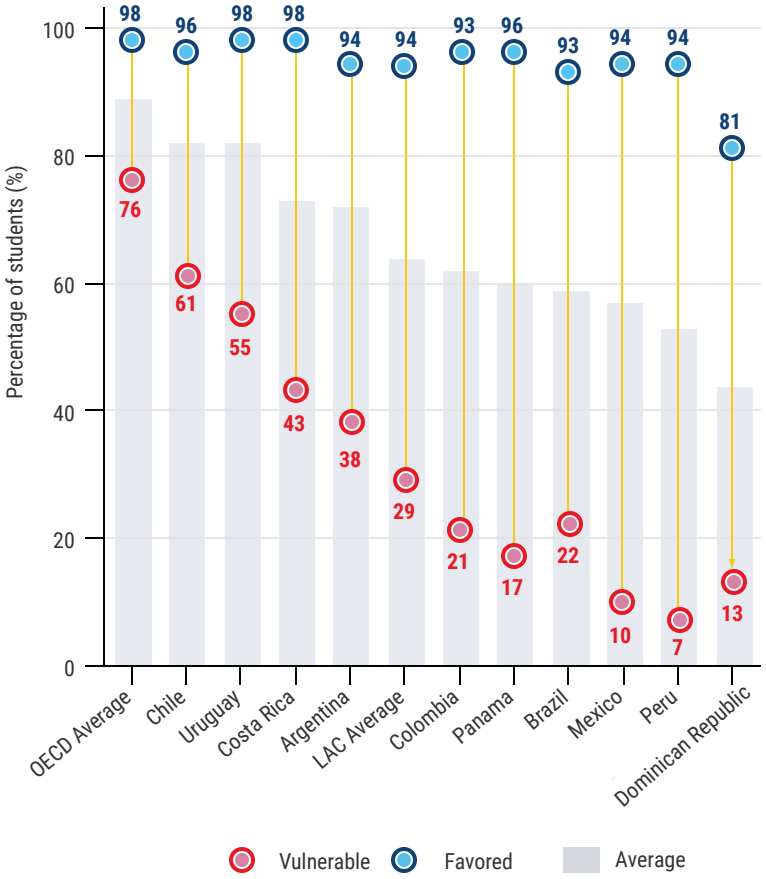


Fuente: Authors' own calculations based on PISA, OECD (2018)
Nota: This indicator is expressed as the percentage of students in schools whose principal agreed or strongly agreed that teachers have the technical and pedagogical skills necessary to integrate digital devices in instruction. Countries ordered from lowest to highest according to the percentage reported by the principal.

Fewer than 60% of secondary teachers have technical and pedagogical skills to integrate digital devices into instruction

- PISA 2018 asked school principals about teacher preparation, the availability and use of technology in high schools.
- There are disparities in teachers' abilities to integrate digital devices into instruction, and they vary between countries, school types, and socioeconomic settings.
- In schools in more vulnerable contexts, teachers are less prepared to integrate digital devices in instruction (55%), compared with 68% of schools with more favorable environments.
- Overall, the PISA data shows evidence of the educational technology training needs that schools require[7].
- Furthermore, the TALIS 2018 data shows that, on average, 61% of teachers in Brazil, Chile, Colombia and Mexico frequently use ICT in projects or class work[8].

STUDENTS WITH ACCESS TO A HOME COMPUTER FOR SCHOOLWORK BY SOCIO-ECONOMIC STATUS, PISA 2018



Fuente: Authors' own calculations based on PISA, OECD (2018)
Nota: Countries ordered from lowest to highest according to average access in the home. Vulnerable schools refer to those that group students from the lowest quintile (q1) of the socioeconomic level distribution, and the favored schools group students from the highest quintile (q5).

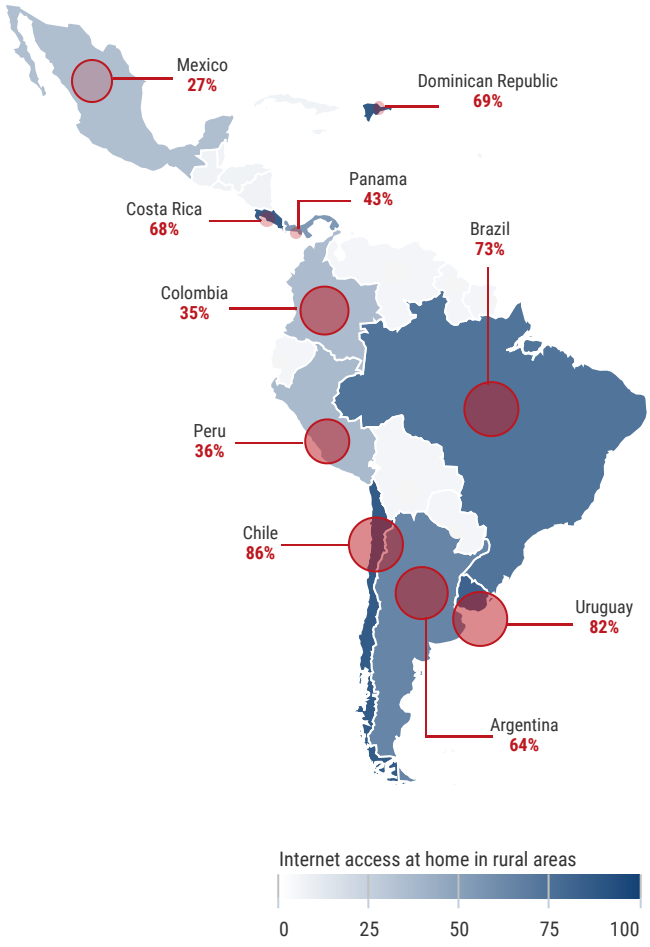
In Mexico, Colombia, Peru and Panama, less than half of the students in rural areas have internet access at home

- Internet is one of the requirements for online learning solutions. However, in Latin America 77% of households report access, while 96% is reported in OECD countries.
- In Mexico (27%), Colombia (35%), Peru (36%) and Panama (43%) internet access in rural households is much less than that reported in urban areas.
- In the other 6 Latin American countries of PISA-2018, the gaps in access by geographic area are smaller.
- In Latin America, 45% of the most vulnerable groups have internet access in the home, while 98% of the wealthiest households have access.
- Students from the most vulnerable households have almost no internet access at home, especially in: Peru (14%), Mexico (19%), Panama (24%) and Colombia (25%).
- Data from the TERCE in primary education also confirmed that interned access in households is influenced by socioeconomic context and geographic area[9].

In Latin America, less than 30% of the most vulnerable households have access to a computer at home to do schoolwork

- The data from the PISA 2018 study shows that the majority of students in the region do not have the digital resources to learn online from home.
- In Latin America, on average 64% of households have access to a computer for schoolwork.
- Uruguay and Chile (82%) show in-home computer access closest to that reported in OECD countries (89%).
- In Peru (7%), Mexico (10%) and the Dominican Republic (13%), access to computers by the most vulnerable groups is very limited.
- In Peru, access for the richest (94%) can be up to 14 times more than that reported for students from more vulnerable contexts (7%).

STUDENTS WITH INTERNET ACCESS IN THEIR HOMES IN RURAL AREAS, PISA 2018



Fuente: Authors' own calculations based on PISA, OECD (2018)
Nota: The same definition of urban and rural school is used in order to allow for comparability between countries. Schools located in villages, hamlets, or small towns (less than 3,000 people) are considered rural.

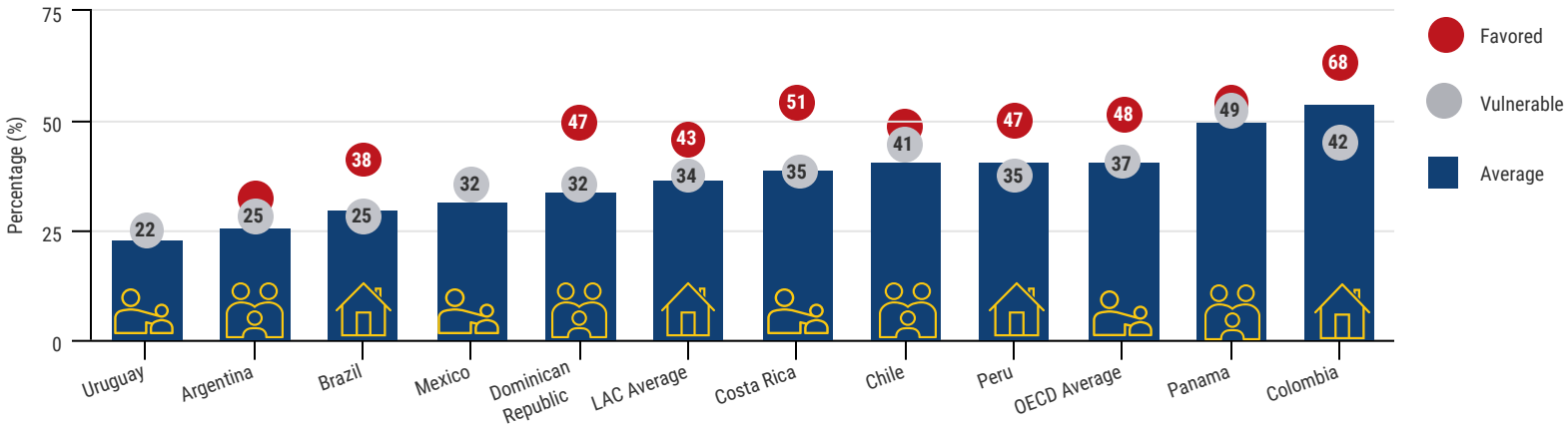
During the emergency, parents and caregivers play a key role in student learning

- Parental involvement is positively associated with academic performance; this has been shown in various studies[10].
- In PISA, the parents' educational level is one of the most important variables when estimating the socioeconomic status of the student's family.
- In most countries, parents from more privileged backgrounds (with higher socioeconomic status) are more involved with student learning and progress.
- In Brazil, Colombia, Costa Rica, Dominican Republic and Peru, differences in parental involvement by type of context vary by more than 10 percent.
- By getting involved in school, parents get first-hand information about their child's education. However, not all households have the conditions for parental involvement to have an effect on student learning.

Students from more vulnerable contexts should be a priority in times of crisis

- Education in the region has been characterized by inequity in access and in students' academic results. The gaps were already very wide even before the COVID-19 health crisis.
- According to PISA-2018, in Latin America 72% of students who come from vulnerable environments have low performance in reading, compared to only 27% of students from more privileged contexts.
- Furthermore, the educational level of parents in more vulnerable contexts is much lower compared to that of privileged environments. These families will have greater challenges in supporting the education of their children while schools remain closed.
- It is vital that the contents of distance education reach all students, especially those who come from more vulnerable contexts.
- The tools and learning resources that can be provided to families, teachers and principals will also be essential in guaranteeing student learning from home.

PARENTAL INVOLVEMENT IN SCHOOLWORK AND SOCIO-ECONOMIC STATUS, PISA 2018



Fuente: OECD, PISA 2018 Database, Tables III.B1.10.1. and III.B1.10.3.
Nota: Countries ranked from lowest to highest based on total parental involvement reported by students. Parent involvement is measured by school principals' responses on whether parents take the initiative to discuss student progress. Vulnerable contexts refer to those that group students from the lowest quintile (q1) of the PISA socioeconomic and cultural status index distribution, while privileged contexts group students from the highest quintile (q5) of the distribution of socioeconomic level.

The Information Center for Improvement in Learning (CIMA, for its acronym in Spanish) of the Education Division of the Inter-American Development Bank seeks to promote the use of data and indicators in evidence-based decision-making when developing education policy, with the goal of providing a quality education for all. With this objective, CIMA publishes a series of briefs that analyze indicators that contribute to the improvement of education quality in the region.

Web: www.iadb.org/cima | www.iadb.org/pisa | Twitter: @BIDEducacion
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References: (*) Elena Arias Ortiz, Andrea Bergamaschi, Horacio Álvarez Marinelli, Marcelo Pérez Alfaro y Madiery Vásquez. **1**. UNESCO Institute for Statistics, April,20, 2020. **2**. Arias Ortiz, E., Eusebio, J., Pérez Alfaro, M., Vásquez, M., & Zoido, P. (2019). From paper to the cloud: How to guide the digital transformation of Educational Information and Management Systems (SIGED). Inter-American Development Bank. https://doi.org/10.18235/0001749. **3**. The information from PISA-2018 was collected under normal conditions, not under the conditions of a health crisis such as that of COVID-19. However, it serves as a reference point for the challenges we have as a region. **4**. Reimers, F. M., & Schleicher, A. (2020). A framework to guide an education response to the COVID-19 Pandemic of 2020. Organisation for Economic Co-operation and Development. **5**. The OECD average reported in this note refers to the 36 countries. **6**. Authors' own calculations based on OECD, PISA 2018 Database. **7**. Reimers, F. M., & Schleicher, A. (2020) **8.** TALIS 2018 Results (Volume I). OECD Library. Pag.30. **9**. Arias Ortiz, E., & Viteri, A. (2019). Nota CIMA #14: ¿Cuentan las escuelas con la tecnología necesaria para la transformación digital? Inter-American Development Bank. https://doi.org/10.18235/0001629 **10**. Castro, M., Expósito-Casas, E., López-Martín, E., Lizasoain, L., Navarro-Asencio, E., & Gaviria, J. L. (2015). Parental involvement on student academic achievement: A meta-analysis. Educational Research Review, 14, 33–46. https://doi.org/10.1016/j.edurev.2015.01.002