

Students, Computers and Learning: Making the Connection

Country note Mexico

Mexico did not participate in the PISA 2012 computer-based assessments of digital reading and mathematics. Because of missing data, some figures in the report do not include Mexico.

- **Only 58% of students in Mexico had a home computer** in 2012 – the lowest percentage among OECD countries, but 9% more than in 2009. Among advantaged students (those among the top 25% in socio-economic status), however, 86% had an Internet connection at home. Advantaged students spend more than two hours per day using the Internet, as much as their peers in other OECD countries.
- About **61% of students in Mexico reported using computers at school**. More than half (53%) of all disadvantaged students in Mexico (those among the bottom 25% in socio-economic status) have access to computers at school, but not at home; and among all students in Mexico, about one in three (30.4%) only has access to the Internet at school.
- **Computers are used more in mathematics instruction in Mexico than on average across OECD countries**. However, students who reported using computers frequently in their maths class performed less well, on average, in the PISA assessment of mathematics than those who reported that computers are not used in mathematics lessons.
- In 2012, only about one third (32%) of the school computers in rural schools in Mexico were connected to the Internet, compared to more than 90% for schools located in urban areas. About 15% of Mexican 15-year-old students attend a rural school, and only 11% of them had access to the Internet at home in 2012.

Key international findings

Over the past 10 years, there has been no appreciable improvement in student achievement in reading, mathematics or science, on average, in countries that have invested heavily in information and communication technologies for education. In 2012, in the vast majority of countries, students who used computers moderately at school had somewhat better learning outcomes than students who used computers rarely; but students who used computers very frequently at school did a lot worse, even after accounting for the students' socio-economic status.

The top-performing country in the PISA 2012 assessment of digital reading was Singapore, followed by Korea, Hong Kong-China, Japan, Canada and Shanghai-China. Students in Australia, Canada, Ireland, Korea, Singapore and the United States showed the most advanced web-browsing skills. More often than students elsewhere, they carefully selected links to follow before clicking on them, and followed relevant links for as long as was needed to answer the question. To use and understand online sources of information, students need such web-browsing skills in addition to the reading skills required for printed texts.

In most countries, differences between advantaged and disadvantaged students in access to computers and the Internet at home shrank between 2009 and 2012. In all but five OECD countries with available data, in 2012 disadvantaged students – those from the bottom 25% in socio-economic status – typically spent at least as much time on line, outside of school, as advantaged students did. But traditional socio-economic differences persist when looking at how students use their time on line, and they continue to have a strong impact on performance in reading. Indeed in all countries, advantaged students are significantly more likely to use their time on line to read news or obtain practical information. To benefit from online information about education, health or financial services and improve one's personal situation, having sufficient basic skills in reading is perhaps more important than easy access to the Internet.

Contacts:

Andreas Schleicher
Advisor to the Secretary-General on Education
Policy, Director for Education and Skills
Andreas.SCHLEICHER@oecd.org
Telephone: +33 1 45 24 93 66

Francesco Awwisati
Analyst
Directorate for Education and Skills
Francesco.AVVISATI@oecd.org
Telephone: +33 1 45 24 17 61



Students' exposure to computers at school varies significantly across countries and schools. While the availability of devices and of an Internet connection at school explains much of this variation, teachers' readiness to integrate technology into instruction also depends on other factors, such as whether the devices can be accessed in the classroom or only in separate rooms, whether the school has a digital skills curriculum, and whether teachers in the school have learned how to use these devices to enhance student learning. Among all teachers, those who are more inclined to use and better prepared for practices such as group work, individualised learning and project work are more likely to use digital resources.

To learn more...

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