

Technology, Reading, and Access: A Look at PISA 2009 Data for 15-Year-Olds in Mexico

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Seguimos Creando Enlaces
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The Programme for International Student Assessment is an international test administered to 15-year-olds around the world. PISA 2009 results focus on technology and reading. We will look at state-level results in Mexico and regional results for the U.S. and discuss what libraries and schools can do to enhance access for teenagers in Mexico. We will also discuss general results as far as digital reading and performance, although this portion of the PISA exam was not administered in either Mexico or the U.S.



The Programme for International Student Assessment

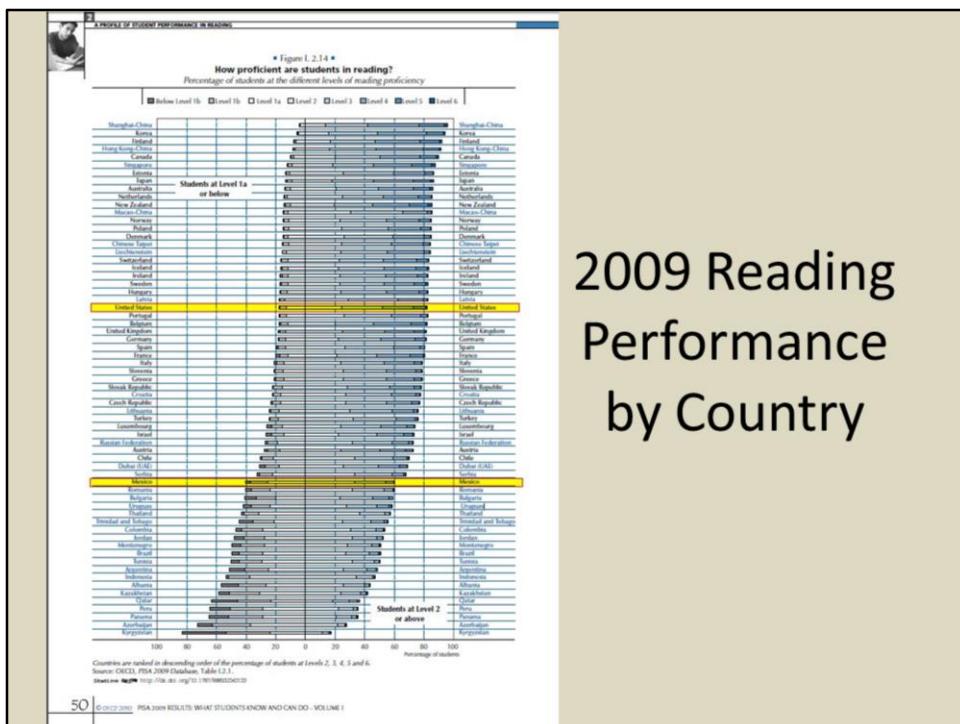
- *Administered by the Organization for Economic Cooperation and Development
- *Every 3 years since 2000
- *Rotating focus: Reading, Math, Science
- *Results from 72 countries and partner economies, 470,000 students
- *Administered to 15-year-olds

Measuring Reading Performance

- In print and online
- Continuous, non-continuous, mixed, and multiple
- Personal, educational, occupational, public
- Descriptive, narration, exposition, argumentation, direction, and transaction

PISA 2009 Volume 1, p. 23, 38

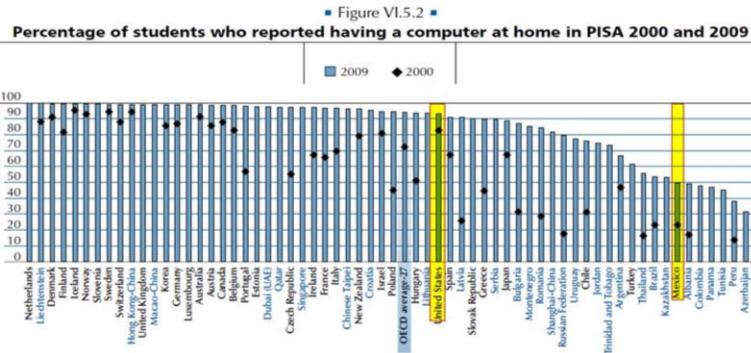
- Reading defined as decoding and literal comprehension of text, plus interpretation of that text, reflection about that text, and use of that text to meet goals
- Texts used several rhetorical structures: descriptive texts to answer “what” questions; narrative texts to answer “when” questions; expository texts to answer “how” questions; argumentation, to answer “why” questions, direction texts that provide instructions, and transactional texts where information is exchanged.
- Reading was assessed using print-based text for most respondents, and online texts for respondents in 20 countries
- Texts could be continuous (sentences), non-continuous (lists, graphs), mixed texts combining continuous and non-continuous texts, and multiple texts that students would have to bring together.
- Texts were given “situational” usage: personal use to satisfy individual interests; public texts that relate to wider society; educational texts used for instruction; occupational texts related to work



2009 Reading Performance by Country

You can't see this very well, but this gives you a glimpse of where United States and Mexico fall in the entire world reading assessment.

2009 Computer Ownership by Country



Notes: All differences between 2000 and 2009 are statistically significant.

OECD averages in 2000 and 2009 for 27 countries. OECD average in 2009 for 34 countries is 93.8%.

Countries are ranked in descending order of percentage of students who reported having a computer at home in PISA 2009.

Source: OECD, *PISA 2009 Database*, Tables VI.5.2 and VI.5.3.

StatLink <http://dx.doi.org/10.1787/888932435435>

In 2000, only about 18 percent of Mexican 15-year-olds had a computer at home. In 2009, that number increased to almost 50%.

In 2000, about 82% of American 15-year-olds had a computer at home, and in 2009, that number increased to 92%.

Who reads well?

Who enjoys reading?



Average state scores ranged from 382 to 475 on the reading exam. The highest scores came from the Distrito Federal, while the lowest were found in Guerrero and Chiapas.



Here, though, we see a different scenario. Students in states that don't perform well in reading are nonetheless more likely to enjoy reading. Students in the Distrito Federal score high in liking reading, but so do children in Oaxaca and Chiapas. Students in the north, who did relatively well at reading, are not likely to enjoy it.





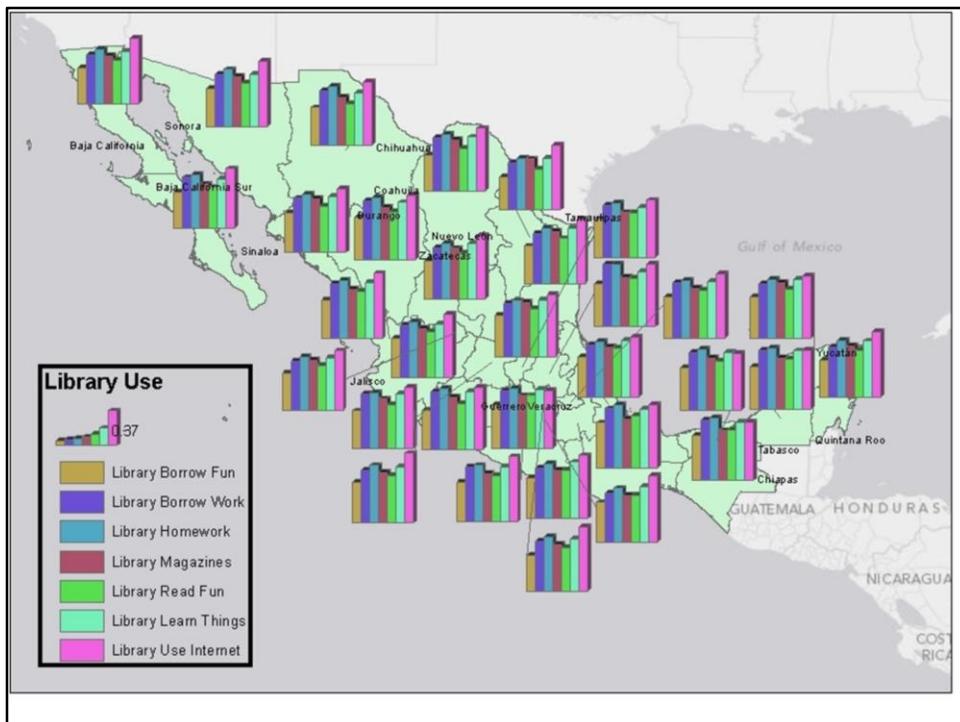
Library Access







What do 15-year-olds
do at the library?



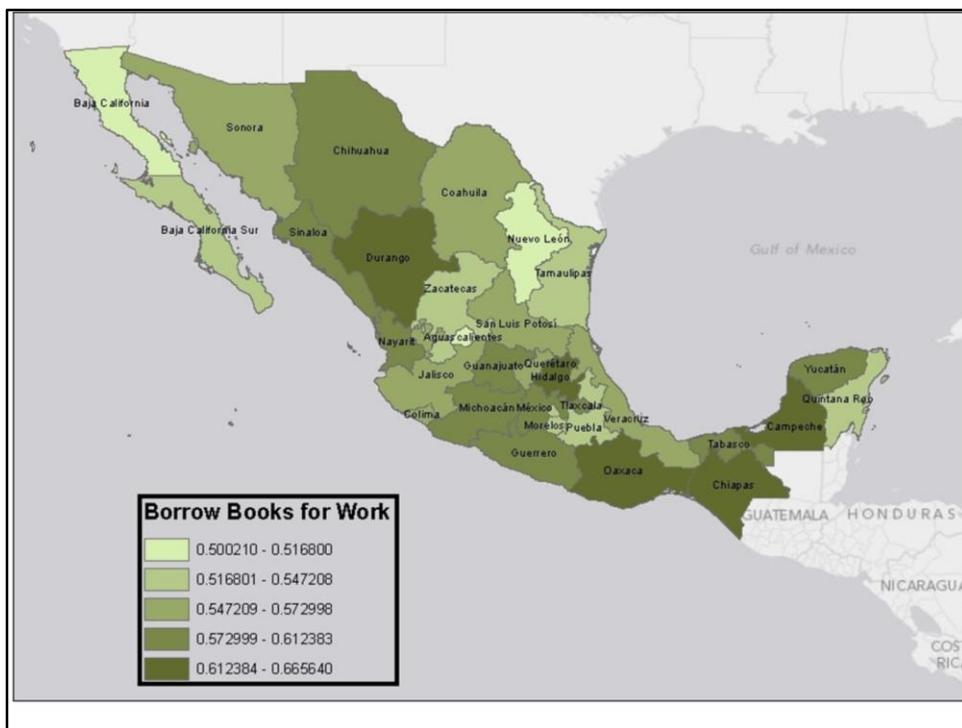
The 2009 PISA Survey also asked 15-year-olds why they use the library – for fun, to read, to use the internet, and so forth. The big winner in this category was “using the internet.”



Students in the north and in the Distrito Federal are very likely to visit libraries to use the Internet.



However, students in the South were more likely to use the library for homework.



Students were also fairly likely to use the library to borrow books for work or schoolwork.



Students in the South say they go to the library to learn things, so they're using the library for educational purposes.



And students in the South are also more likely to say they go to the library to read for fun.

What do 15-year-olds
enjoy reading?



Students in the north read magazines more than students in the south. Magazine reading was most popular in Coahuila and Nuevo Leon.



Reading newspapers was also popular in the northeastern states.



Meanwhile, reading fiction was more popular in the Southern states.



Nonfiction was also more popular in the southern states.



Comics were relatively popular across the country, but more heavily read in the south and particularly the southeastern states.



PISA 2009 asked students whether they had literature at home, and the results are mixed across the country. Those in the DF, Chihuahua, and Quintana Roo do tend to have books at home, whereas those in Sonora, Guerrero, and Chiapas do not.



But when they asked about students who had poetry at home, the answer very closely reflects the results about reading enjoyment. Fifteen year olds in the southern states are more likely to have poetry at home than those in the northern states.

What about
technology?



Students in the north and the DF are more likely to have access to technology, including computers....



...and Internet connections.



Most students were familiar with online chatting.



In fact, even in 2009 we see that more students used online chat services than used email.



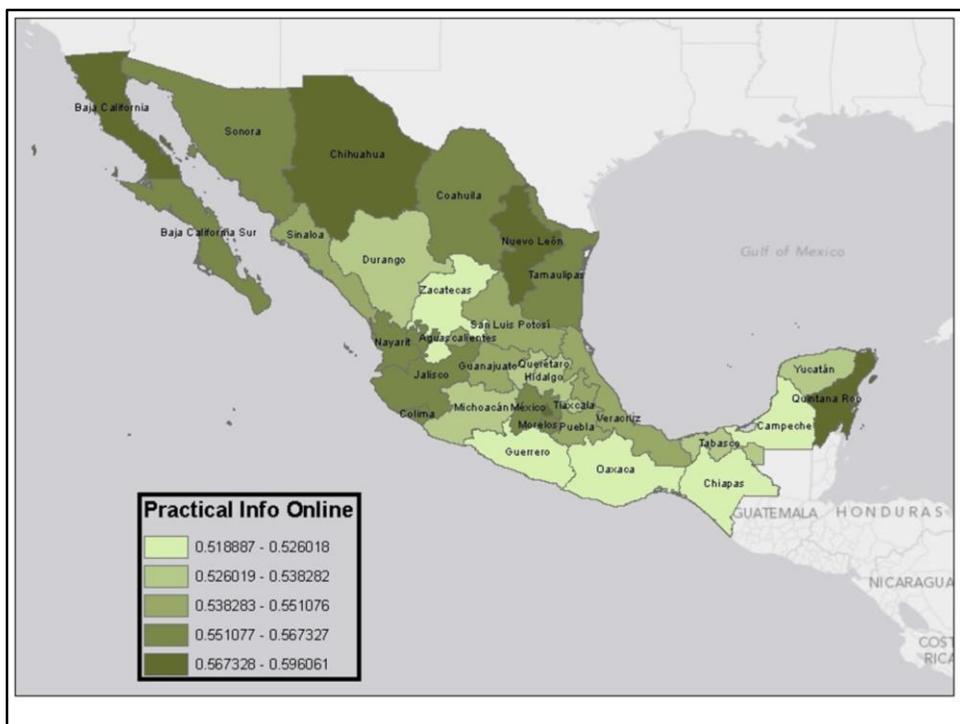
Many students had used online dictionaries.



Students were less inclined to use the Internet to read news online.



Students tended to go online to look up specific topics, and this was more prevalent in the north than the south.



Fewer students used the Internet for practical information.



And students were not very likely to participate in online group discussions.

Promoting Reading & Technology with Teenagers

- More technology use in Northern Mexico, combined with more reading and less enjoyment of that reading.
- More poetry in the South, along with more enjoyment of reading.
- More “non-traditional” formats in North (newspapers, magazines).

Questions for discussion:

How can we use technology to promote reading?

How can we use reading to promote technology competence?

What should school and public libraries in Mexico consider doing to promote reading and technology?