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World test flawed, researcher says

Diverse cultures and curriculum differences can't be accounted for.

L.A. Times-Washington Post News Service

WASHINGTON — U.S. students didn't fare so well in a study that tested many of the world's children, but some researchers aren't too sure about the validity of the results.

Previous international comparisons have been criticized for including too few countries, not accounting for curriculum differences — such as what year students in different countries learn geometry — and because only a small percentage of students attend school in some countries, effectively comparing a cross-section of American students with the elite of another country.

Iris C. Rotberg, a senior social scientist at Rand Corp. on a leave of absence from the National Science Foundation, said she believes some of those flaws remain in the new study.

"The practicality of making comparisons across diverse societies and educational systems, make it difficult to interpret the findings." She noted that "most elite schools and regions were sampled" in some countries.

"There are different curriculum emphases in different countries and the test results could reflect those," she said. "We make policy based on these findings and the findings could be misleading because of technical glitches on these tests."

Korea, which along with Taiwan scored at the top, had 49 students in an average class, the largest of any country. Hungarian students scored in the top half in math and science, but only go to school 177 days, about the same as Americans and near the bottom of those surveyed. The United States is at or near the top on dollars spent per student.

The study did suggest, however, a correlation between achievement and time spent watching television, doing homework and reading.

In the United States, 22 percent of the 13-year-olds tested in science watched at least five hours of television a day. In Korea, the top performer, 10 percent watched at least five hours a day; in Taiwan and Switzerland, also at the top, 7 percent watched that much TV.

"This suggests that within all of those countries, the more time students spend watching television, the less well they do in science," said Archie E. Lapointe, one of the study's authors.

On the average, American 13year-olds spend, at most, an hour a week on math homework and the same on science.

Chinese students spend at least four times that on math and Russians study science at home for at least four hours a week.