

Too much homework can be counterproductive

May 31 2005

Instead of improving educational achievement in countries around the world, increases in homework may actually undercut teaching effectiveness and worsen disparities in student learning, according to two Penn State researchers.

Most teachers worldwide are not making efficient use of homework, said David P. Baker, professor of education and sociology. They assign homework mostly as drill, to improve memorization of material either in math, science or the humanities. While drills and repetitive exercises have their place in schooling, homework may not be that place.

"Assigning textbook or worksheet questions as a drill assumes that the child has the kind of home environment conducive to supporting drill and memorization practice," noted Gerald K. LeTendre, associate professor of education.

Upper-income parents, who tend to have closer communication with the school and with teachers, are better able to assist their children with homework. But in poorer households -- often headed by single parents, parents with comparatively little education or, in some nations, parents held back by language barriers -- homework may not be cordially received, especially by parents of small children.

"An unintended consequence may be that those children who need extra work and drill the most are the ones least likely to get it. Increasing homework loads is likely to aggravate tensions within the family, thereby generating more inequality and eroding the quality of overall education,"

Baker said.

LeTendre and Baker are co-authors of the book, "National Differences, Global Similarities: World Culture and the Future of Schooling," recently published by Stanford University Press. Chapter Eight, "Schoolwork at Home? Low-Quality Schooling and Homework," was written in collaboration with Motoko Akiba, assistant professor of educational leadership and policy analysis at the University of Missouri-Columbia.

The researchers analyzed data from the Third International Study of Mathematics and Sciences (TIMSS), which in 1994 collected a large amount of data from schools in 41 nations across the fourth, eighth and 12th grades. For some analyses, they employed figures from the TIMSS 99, an identical study carried out in 1999 with 50 nations.

Their findings indicated a frequent lack of positive correlation between the average amount of homework assigned in a nation and corresponding level of academic achievement. For example, many countries with the highest scoring students, such as Japan, the Czech Republic and Denmark, have teachers who give little homework. "At the other end of the spectrum, countries with very low average scores -- Thailand, Greece, Iran -- have teachers who assign a great deal of homework," Baker noted.

"The United States is among the most homework-intensive countries in the world for seventh- and eighth-grade math classes. U.S. math teachers on average assigned more than two hours of mathematics homework per week in 1994-95," said LeTendre. "Contrary to our expectations, one of the lowest levels was recorded in Japan -- about one hour a week. These figures challenge previous stereotypes about the lackadaisical American teenager and his diligent peer in Japan."

During the early 1980s, many U.S. schools and teachers ramped up their homework assignments, at least to younger children, in reaction to intense media focus on studies comparing the mediocre performance of American students to the industriousness of their Japanese counterparts. At the same time, ironically, Japanese educators were attempting to reduce the amount of homework given to their students and allow them more leisure from the rigors of schooling. Neither the American nor the Japanese educational reform of the 1980s seems to have affected general achievement levels in either country, according to the book.

"American students appear to do as much homework as their peers overseas -- if not more -- but still only score around the international average," LeTendre said. "Undue focus on homework as a national quick-fix, rather than a focus on issues of instructional quality and equity of access to opportunity to learn, may lead a country into wasted expenditures of time and energy."

If schools expect every family to reinforce the child's learning process at home, they need to realize that, when families are unequal to the task, students will not receive the same quality of education. The addition of homework will only exacerbate existing inequities within a nation's student population and pull down overall scores, said Baker.

"Those families that are better able to marshal resources to support outside school learning will likely gain disproportionate advantage," he added.

"However, even in affluent nations, parents are extremely busy with work and household chores, not to mention chauffeuring young people to various extracurricular activities, athletic and otherwise," LeTendre said. "Parents might sometimes see exercises in drill and memorization as intrusions into family time."

Source: Penn State

Citation: Too much homework can be counterproductive (2005, May 31) retrieved 19 September 2024 from <https://phys.org/news/2005-05-homework-counterproductive.html>

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