

## UCSD study shows more homework gives big boost to math scores

**May 14, 1996**

Media Contact: Dolores Davies, (619) 534-5994

OK, kids. Quit grumbling about all that homework your teacher just assigned you. A new study just completed by an economist at the University of California, San Diego, has found that even just half an hour a day of homework can really do you some good. In fact, according to the study, this amount of homework can improve student performance on math test scores and accelerate learning by two grade levels.

"The cumulative effect of 30 more minutes of math homework a day throughout junior and senior high school boosts students' performance on standardized math tests two years ahead of their current grade levels," reports the study's author, Julian R. Betts.

"To put it another way, a student who received no homework at all would have to spend approximately two extra years in school before learning as much as an identical student who had received half an hour of homework a night during grades 7 through 11," he noted.

As for students' age-old gripe of already being overburdened by "too much" homework, Betts found that less than one percent are actually overworked.

These findings are the result of a university-funded statistical analysis of the annual performance of nearly 6,000 seventh and 10th graders on standardized math and science tests over five years. Data came from the national Longitudinal Study of American Youth (L.S.A.Y.), a random sampling of student test scores from 52 urban, suburban, and rural high schools and 52 "feeder" middle schools.

As part of the L.S.A.Y. project, students took standardized math and science tests each fall, and along with parents, principals, and math and science teachers, filled out detailed biannual surveys which recorded years of teaching experience and the amount of homework assigned each week.

Merging each student's information with the relevant data from the adult surveys, Betts tested the effect of variables on students' annual math test scores. Among the factors analyzed were the effects of class size reduction, years of full-time teaching experience, teachers' advanced degrees, parents' education, socioeconomic status and 30 minutes of additional math homework through junior and senior high school.

Extra homework came out as the key factor in improving test score performance, far outstripping the impact of other variables. "By assigning more math homework, teachers could improve all students' test scores," Betts said. "'A' students benefit as much as 'D' students.

The implication is clear; a national policy of heavier homework loads doesn't necessarily require a decrease in class size in order to prevent heavier teacher workloads."

These findings are good news for American schools, which have consistently lagged behind the standardized test performance achieved by youngsters in countries like Japan, China and Taiwan. Not only do American teens score lower, but they also spend considerably less time doing homework. Because studying at home appears

to be as effective as time spent in the classroom, catching up may be as easy as raising homework standards. Better learners can also expect better paying jobs.

"One reason I decided to study math achievement was the recent publication of two studies which established a positive correlation between math test scores and success in the job market," explains Betts. "Based on these studies, I estimate that students who received an extra half hour of homework nightly during junior and senior high school can expect to earn about 1.3 percent higher wages."

If more math homework increases math aptitude so dramatically, what's the implication for other academic subjects?

\par "Although I focused on math performance, it's reasonable to assume that more home study in other subjects will have a beneficial effect on learning without adding much to teacher workload or increasing education spending," he said.

(May 14, 1996)