

## **To Improve Student Retention, Combination of Academic and Financial Support Seems Best, Study Finds**

By [DAVID GLENN](#)

Imagine that you are a fledgling college student with a decent but not stellar high-school background. You're struggling in a few of your first-semester courses, and in the back of your mind you're not sure that you'll still be enrolled a year from now. You're feeling the lure of jobs and friends and video games. What might provoke you to kick yourself into gear and pass your classes? A fancy set of tutoring and academic-support services? A large financial reward? Both?

The best answer appears to be "both," according to an ambitiously designed study by three economists that was released late last month as a [working paper](#) of the National Bureau of Economic Research.

At a large satellite campus of a major Canadian university, the scholars randomly assigned 650 first-year students into one of three conditions: One group was offered a suite of tutoring and support services. (These were generally of the type known as "supplemental instruction," a recently popular system that emphasizes critical-thinking skills that are relevant to particular courses.) Students in a second group were offered large merit scholarships -- ranging up to about \$4,300 (U.S.) -- in their sophomore year if they met certain grade-point-average targets. And the third group was offered both the academic-support and the financial-incentive packages.

The performance of all three groups was compared with that of a control group of roughly 1,000 students with similar high-school backgrounds, who were offered neither tutoring services nor scholarships.

When considered alone, the scholarship incentives, but not the academic support, appeared to reduce students' dropout rates. The students who were offered only tutoring and support services were no more likely to return for their sophomore year than were the students in the control group. But the students who were offered potential merit scholarships were more likely to remain enrolled in college for a second year -- and the students who were offered both the tutoring and the potential merit scholarships did better still.

There were also effects on grades: Among students who enrolled in at least four courses per semester, the students who got the full package -- both academic support and the financial-aid incentive -- had grade-point averages roughly 3 points higher (on a scale of 100) than did students in the control group.

There are two large caveats to add, however. First, the beneficial effects of the scholarship-incentive programs, while statistically significant, were relatively small. Second, the positive results were concentrated almost entirely among female students. Among men, neither the offer of tutoring nor the prospect of a scholarship, nor the combination of both, was enough to improve grades, course completion, or dropout rates.

This study is hardly the first to examine the effects of merit aid and support services. But it is likely to garner attention because it is among the first large-scale college-performance studies to be designed as a randomized controlled experiment, which allows researchers to talk more confidently about causality.

The paper's authors are Joshua D. Angrist, a professor of economics at the Massachusetts Institute of Technology; Daniel W. Lang, a professor of theory and policy studies at the University of Toronto's Ontario Institute for Studies in Education; and Philip Oreopoulos, an assistant professor of economics at Toronto.

"There's a lot of interest in financial incentives now," Mr. Angrist said in an interview on Tuesday. "It seems promising, but it's clearly not as simple as many people would have hoped. Even though we found some effects, and they seem worth pursuing, if you'd asked me two years ago, I would have expected more. I'm especially puzzled about why it seems to be so difficult to affect the behavior of boys."

As Mr. Angrist and his colleagues note in the paper, this is only the latest in a string of studies that have found that it is easier to improve the academic performance of girls and women. A 2005 paper by Susan M. Dynarski, of Harvard University, found that tuition aid improves women's college-completion rates more than it does men's ([\*The Chronicle\*](#), October 11, 2005). A 2006 study discovered the same phenomenon in Italy. In 2002, Mr. Angrist and Victor Lavy of the Hebrew University of Jerusalem found that a merit-aid system in Israel improved girls' high-school performance much more than it did boys'.

Mr. Angrist and his colleagues were especially interested in whether financial incentives would prompt students to make use of academic support services. On that question, the answer was a clear yes: The students in the "both" category -- those who were offered the support services and the scholarship incentives -- were much more likely to actually use the support services than were the students who were offered academic support but no scholarship incentives.

Mr. Angrist emphasized that this was only a single study, and said that he and his colleagues were far from making any public-policy recommendations based on their results. They will soon begin a similar experiment at a different Canadian campus.

Edward P. St. John, a professor of higher education at the University of Michigan, said in an interview on Tuesday that he was pleased to see that Mr. Angrist and his colleagues had looked at the interaction of supplemental services and financial incentives.

"What's often lacking is balance," Mr. St. John said. "People tend to make arguments about one area or the other." He said that the Canadian project -- together with recent studies of the Gates Millennium Scholars program and Indiana's 21st Century Scholars program -- should help policy makers understand how support services and financial aid operate in tandem.

In certain respects, the new Canadian study parallels a major continuing randomized experiment at two community colleges in Louisiana. In that study, which is being led by two scholars at MDRC, a private, nonprofit research organization, low-income single parents have been offered tutoring programs and scholarship incentives as high as \$2,000, which can be earned if a student maintains a 2.0 average or better. The Louisiana study has been seriously disrupted by the effects of Hurricane Katrina, but the researchers reported in a [paper](#) released in May 2006 that students who were offered the tutoring and scholarship incentives earned more credits and were less likely to drop out than were students in the control group.

At least a few scholars wonder whether academic-support services and financial-aid packages are always an effective use of public resources. In an interview on Tuesday, Richard K. Vedder, a professor of economics at Ohio University at Athens, praised the design of the Canadian study but added, "They didn't do a cost-benefit analysis here. If you have finite results to spend on higher ed, do you get better results by taking a lot of students in that are somewhat marginal in terms of their predictable success, or would you do better by taking fewer students in and using your resources on reducing their tuition fees?"

Mr. Angrist himself sounded a similar note. He said that in the Canadian study, the worst-off students -- that is, those with the weakest high-school grades -- didn't seem to be helped by either the academic services or by the scholarship incentives.

In their paper, however, Mr. Angrist and his colleagues offer a number of reasons why it might indeed be wise for the public to pour resources into improving college students' grades and graduation rates. Students often fail to understand, they write, how much higher their lifetime earnings will be if they can manage to stay in school and earn a diploma.

The new study was primarily financed by the Canada Millennium Scholarship Foundation.