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Center for Benefit-Cost Studies of Education at Teachers College, Columbia University

Boosting High School Graduation Rates Would Save U.S. \$127,000 Per New Graduate, Researchers Find

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Teachers College Report Says Nation Could Save \$45 Billion Each Year By Investing in School Interventions Aimed at Reducing Dropouts

Biggest savings would come in minority student populations

NEW YORK February 7, 2006 – The U.S. taxpayer could reap \$45 billion annually if the number of high school dropouts were cut in half, according to a new study conducted by a group of the nation's leading researchers in education and economics.

The savings would be achieved via extra tax revenues, reduced costs of public health, crime and justice, and decreased welfare payments. Even a one-fifth reduction would result in an annual \$18 billion public savings, according to the study, whose figures do not even include the private benefits of improved economic wellbeing that would accrue to the new graduates themselves.

The study identifies five cost-effective educational strategies already shown to boost high school graduation rates and estimates that the country could save a net of \$127,000 per each new graduate added through "successful implementation of the median" of the five interventions.

"Educational investments to raise the high school graduation rate appear to be doubly beneficial," the study's authors write. "The quest for greater equity for all young adults would also produce greater efficiency in the use of public resources."

The study – titled "The Costs and Benefits of an Excellent Education for America's Children" – was conducted by Henry Levin, William Heard Kilpatrick Professor of Economics and Education at Teachers College; Clive Belfield, Assistant Professor of Economics and Education at Queens College, City University of New York; Peter Muennig, M.D., Assistant Professor at Columbia University's Mailman School of Public Health; and Cecilia Rouse, Theodore A. Wells '29 Professor of Economics at Princeton University. Support for the study was provided by Teachers College by Lilo and Gerry Leeds .

To arrive at their estimates, the researchers calculated the public benefit generated by each intervention and subtracted the investment required to implement them. The \$127,000 figure reflects the mean for both genders and all ethnic groups. The net public savings for each new graduate added among black males – the group most at risk for dropping out – is estimated at \$186,500.

The new findings build on data presented in October 2005 by the same team and other researchers that estimated that the U.S. loses hundreds of billions of dollars each year when young people fail to graduate from high school.

"What makes this study so powerful is that it has been conducted by economists of the first rank, using sophisticated approaches that, if

anything, understate the potential value of investing up front in education,” said former West Virginia Governor Bob Wise, who heads the Alliance for Excellent Education, based in Washington, D.C. “At a time when Congress is reevaluating the effectiveness of the federal No Child Left Behind Act, it provides lawmakers with a valuable tool to make the case that schools must be given more capacity to improve the achievement of their students.”

The conservative approach used by the researchers does not include some of the benefits of graduation such as reductions in juvenile crime and teenage pregnancy that cannot be accurately quantified. In addition, national data tends to underestimate the numbers of high school dropouts, suggesting that the actual savings from increasing dropouts might be higher than those presented in the study. Among the study’s other findings:

- The average lifetime benefit in terms of additional taxes paid per expected high school graduate is \$139,100.
- The average lifetime public health savings per expected high school graduate (achieved through reduction in Medicare and Medicaid costs) is \$40,500. For black females, the highest users of these programs, the figure is \$62,700.
- The average lifetime crime-related cost reduction per expected high school graduate is \$26,600.
- Being a high school graduate is associated with a 40 percent lower probability of Temporary Assistance for Needy Families (TANF); a 1 percent lower probability of receiving housing assistance; and a 19 percent lower probability of receiving food stamps. For college graduates, the probability reductions are 62 percent, 35 percent and 54 percent.

Of the five successful interventions identified by the researchers, two take place in preschool, one in elementary school, one in high school and one throughout the K-12 years. In general, the study’s authors identify several features that characterize effective school interventions: small-size schools; personalization; high academic expectations; strong counseling; parental engagement; extended time; and competent and appropriate personnel. They note that one of the interventions, First Things First, has the largest economic benefits relative to costs and combines all these features. Other interventions (described in the attached summary) include Perry Preschool Project, Chicago Parent-Center Program, class size reduction, and increasing teacher salaries.

The Center for Benefit-Cost Studies of Education (CBCSE) conducts research on the benefits and costs of alternative educational policies and interventions. The CBCSE brings together scholarship on both benefits and costs so that the full value of investments in education can be evaluated, and the most productive use of resources can be chosen.

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Teachers College is the largest graduate school of education in the nation. Teachers College is affiliated with Columbia University , but it is legally and financially independent. The editors of U.S. News and World Report have ranked Teachers College as one of the leading graduate schools of education in the country.

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SCHOOL INTERVENTIONS PROVEN TO RAISE HIGH SCHOOL GRADUATION RATES

- **Perry Pre-School** , the oft-chronicled pre-K program in Ypsilanti, Michigan . Perry provides children with 1.8 years of a center-based program for 2.5 hours per weekday, offering a child-to-teacher ratio of 5:1; home visits; and group meetings of parents. The

researchers estimate that, implemented on a broad scale, Perry's benefit-to-cost ratio would be 2.31 to 1, and that it would create an additional 19 new high school graduates per 100 students.

- **Class-size reduction.** This approach – based on the parameters of Project Star, a four-year, randomized field trial in Tennessee – would include four years of schooling (from kindergarten through third grade) with class size reduced from 25 to 15. The researchers estimate that, implemented on a broad scale, class-size reduction along these lines would achieve a benefit-to-cost ratio of 1.46 to 1, and that it would create an additional 11 new high school graduates per 100 students.
- **First Things First,** a comprehensive school reform of small learning communities that includes dedicated teachers, family advocates and instructional improvement. FTF would achieve an estimated benefit-to-cost ratio of 3.54 to 1 and create an additional 16 high school graduates per 100 students.
- **Chicago Child-Parent Center Program.** A center-based preschool program with parental involvement, outreach and health/nutrition services, based in public schools. This approach would achieve an estimated benefit-to-cost ratio of 3.09 to 1 and create an additional 11 high school graduates per 100 students.
- **Teacher salary increase of 10 percent for all years K-12.** This approach would achieve an estimated benefit-to-cost ratio of 2.55 to 1 and create an additional five high school graduates per 100 students.

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