



Improving Outcomes with Incentives for Rigorous Coursework

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Minnesota Private College Research Foundation

Several policy initiatives introduced during the 2007 Minnesota Legislative session tie the creation of new incentives to taking and passing rigorous courses in order to improve outcomes. Lawmakers, community groups and other organizations have all wrestled with the idea of how to structure a program aimed at all four years of high school that would provide an effective incentive to increase students' college preparation and provide a financial boost to lower-income students. The discussions have at times generated more questions than solutions, but it is important to keep in mind that Minnesota's future relies on crafting the right solution or combination.

Several studies and sources support the underlying assertion that increasing rigor and providing financial incentives for "first-generation" college students increases the likelihood that they graduate from high school, enroll in college and successfully complete their degree. Here are some of the established sources.

For more than 25 years, the U.S. Department of Education's National Center for Education Statistics has tracked and documented the activities of high school students from eighth grade to workforce. This body of research allows policymakers insight into activities that increase the likelihood of postsecondary enrollment and success as well as workforce success. In all studies, the Department's research finds that high school curriculum and achievement are two of the most critical variables in college enrollment and success. The findings have been supported and reinforced by research from external agencies such as the American Council on Education, Education Trust, The College Board, and ACT, Inc.

High school curriculum is a significant predictor of bachelor's degree completion.

- The highest level of math taken in high school is the most powerful predictor of bachelor's degree attainment. Students who completed Algebra II in high school more than double their chances of earning a four-year degree. This is true regardless of student ethnicity, family income or parents' education levels.
 - Of students who completed the highest level curriculum of academic intensity in high school measured by the study, 95% earned a bachelor's degree. Forty-one percent went on to complete graduate level degrees.¹

¹ Adelman, C. U.S. Department of Education, National Center for Education Statistics. The Toolbox Revisited: Paths to degree completion from high school through college, 2006.

- Academic rigor of students' high school curricula is strongly associated with college performance and success – college GPA, the need for remedial coursework in college, and rates of persistence and attainment.²

A rigorous high school curriculum can lessen disadvantages related to student background.

- Rigorous preparation in high school narrows the achievement gap in terms of postsecondary completion and performance between first generation students and students whose parents went to college.³
- African American, American Indian and Hispanic students, even those who take the ACT, are less likely to be enrolled in rigorous courses including high-level high school math, than their non-minority counterparts. This leaves them less well-prepared for college-level work.⁴ Taking challenging math courses such as Algebra II in high school reduces by half the college achievement gap between African American and Latino students and their white peers.¹

High school dropouts begin to fall behind academically in terms of course completion and rigor as early as 9th grade.

- The cumulative credit gap between on-time graduates and 12th grade dropouts was 10.6 credits. Differences were also observed in course credit accruals by subject – English, math and science.⁵

Incentives have been proven to be successful.

- Indiana's 21st Century Scholars program couples a low-income student's grade point average in high school and college, pre-college mentoring and support and the student's pledge to enroll in college with a supplemental grant up to 100% of approved tuition. In 2002, 21st Century Scholars received an average yearly grant of \$2,228.⁶ Program evaluations conducted in 2002 and 2005 determined that the 21st Century Scholars were more likely to enroll in postsecondary education as compared to their low-income non-scholar peers. The program also reduced student debt. Twenty-first Century Scholars required less loan assistance to pay for college than other financial aid recipients.⁷ The Indiana Department of Education also implemented a Core 40 curriculum that will be required of all high school graduates beginning with the class of 2011.

² Horn, L., L. Kojaku and C.D. Carroll. U.S. Department of Education, National Center for Education Statistics. (2001). High School Academic Curriculum and the Persistence Path through College.

³ Warburton, E.C., R. Bugarin, A.M. Nunez and C.D. Carroll. U.S. Department of Education, National Center for Education Statistics. (2001). Bridging the Gap: Academic Preparation and Postsecondary Success of First-Generation Students.

⁴ Minnesota Minority Education Partnership, Inc. (2006). The State of Students of Color.

⁵ Institute for Education Statistics, National Center for Education Statistics, U.S. Department of Education. (2007). "Course credit accrual and dropping out of high school." Issue Brief NCES 2007-018.

⁶ State Student Assistance Commission of Indiana. (2006) Activity and Program Report for Academic Year 2005-2006.

⁷ St. John, E., G. Musoba, A. Simmons, and C. Chung. (2002). Meeting the Access Challenge: Indiana's Twenty-First Century Scholars Program. Indianapolis, IN: Lumina Foundation for Education.

ADDITIONAL CONTEXT

A few additional points for consideration as incentives for rigorous coursework are considered.

It is critical to define academic rigor.

- It is not enough to count course units in a broad subject area. It is necessary to know what is actually taught in particular courses and how coursework matches the demands of entry-level courses in postsecondary education as well as skill needs of the workforce.

It is critical that standards of rigor be the same for all students.

- It is not enough to set standards that will only be met by students who indicate early that they are college bound. Improving Minnesota's postsecondary participation means making sure all students are on the college enrollment path. The skills needed for college success are the same skills needed for workforce success – critical thinking, problem solving, reading and writing. As such, all high schools should be rigorous high schools and all students should have access to postsecondary enrollment options and advanced placement courses.

State efforts to develop and promote more rigorous coursework for high school students and offer incentives to those students accepting the challenge are critical to ensuring Minnesota's future.

Recently, researchers were startled by new demographic data showing worrisome trends for our state — a dwindling number of high school graduates... a greater proportion of graduates from low-income families and communities of color who traditionally are less likely to pursue post-high school options... Baby Boomers who are retiring... inadequate numbers of college-educated people to meet state job needs.

- The racial/ethnic make-up of our high schools is changing: By 2013, non-white racial/ethnic groups will constitute 21 percent of Minnesota's high school graduates—a 52 percent increase in minority students and a 19 percent decrease in white students compared with 2003 levels.⁸
- The majority of high school students will also be first generation students. Thirty-seven percent of Minnesotans aged 25 or older never enrolled in college, and an additional 32 percent had not completed a bachelor's degree by 2005 – a combined total of 69 percent of Minnesota residents.⁹

For high school students who are least likely to attend college — the first-generation students who now make up a majority of our state's children — this is an important proposal. But given demographic changes that will otherwise reduce the numbers of college graduates, this policy proposal is vital to all of us. To preserve the health of the state's economy, we need to take new steps to increase the number of students moving into and graduating from college.

⁸ Minnesota Private College Research Foundation (2004) *Projections of High School Graduates: Implications for Baccalaureate Degree Production and Workforce Growth*

⁹ American Community Survey, U.S. Census Bureau, 2005.