

## Access to Rigorous Mathematics is a Key to Student Success

Previous research demonstrates that access to and enrollment in challenging mathematics courses in high school has a greater impact on the completion of a bachelor's degree than any other factor, including income level and parents' level of education (Adelman, 2006). Building on that knowledge the new report *Supporting All Students to be College-Ready in Math* examines access to these courses and what schools can do to better prepare students.

Most four-year colleges require advanced high school mathematics for admission. Additionally research cited in the report indicates that almost two-thirds of future jobs will require college level math skills. Moreover, the report finds that passing a math sequence through Algebra 2 provides students with problem solving and reasoning skills – basic tools for success in the labor market. Knowing that access to rigorous courses is essential to student academic and career opportunities, schools need to monitor what offerings they provide and how students are being encouraged to participate in them.

Unfortunately, all students do not have equal access to these courses which are so important to their economic future. There is a correlation between a community's income level and the availability of higher level mathematics courses offered by its high school. Only 44% of high schools in high poverty communities offer calculus, compared to 72% in the wealthiest communities (Adelman, 2006). If access to advanced mathematics leads to greater access to colleges, better jobs, and increased income, then it is essential that schools focus on providing these courses to all students.

- Principals need to implement programs of study that offer higher level math courses, and provide the necessary support for students to be successful.
- Teachers must participate in continuous training to refine teaching skills and math content knowledge.
- Counselors must communicate to students the current mathematics requirements for college admission and the correlation between advanced math skills and career opportunities.

Access to rigorous mathematics is the key to a student's future success; schools need to provide it and promote it to their students. The full text of *Supporting All Students to be College-ready in Math*, can be found at <http://www.wested.org/cs/we/view/rs/871>.

### References

Adelman, C. (2006). *The toolbox revisited: Paths to degree completion from high school through college*. Washington, DC: U.S. Department of Education.

Huebner, T., & Corbett, G. C. (2008). *Supporting all students to be college-ready in math*. San Francisco, CA: WestEd. Seattle, WA: Bill & Melinda Gates Foundation.

**Access to challenging math courses has a greater impact on achievement than parent income or level of education.**

**Only 44% of schools in high poverty communities offer calculus, compared to 72% of schools in the wealthiest communities.**

**Rigorous mathematics for all students should include both access to higher level math courses as well as opportunities for teachers to refine teaching skills and math content knowledge.**