

January 2005

Commentary: The Expectations Gap

The achievement gap separating American students from their international peers in math continues to plague us, particularly at the high school level. This was the message from two major international studies released last month — the [Trends in International Mathematics and Science Study](#) (TIMSS) and the [Program for International Student Assessment](#) (PISA).

Although there is some good news from these studies — 8th graders' scores have improved slightly over time — the data clearly show that American high school students are outperformed by students in most other countries, placing them at a severe competitive disadvantage.

Multiple factors contribute to this achievement gap, but Achieve's [state-by-state review of high school graduation requirements](#) highlights one that deserves particular attention: High school students in every state can graduate without taking a rigorous set of math courses.

Through our American Diploma Project research, we found that students need to take four years of math, including Algebra I, Geometry and Algebra II, as well as data analysis and statistics, to be prepared for college or high-skills jobs. In fact, the number of advanced math courses a high school student successfully completes is one of the best predictors of future accomplishment. Our new study shows that only five states require students to take four years of math to graduate, and only three states — Arkansas, Indiana and Texas — specify that students must take math through Algebra II.

The achievement gap does not begin in high school — earlier TIMSS studies suggest that the U.S. math curriculum in middle school is a year or more behind the curriculum in other countries — and it will not be solved by addressing high school standards alone. But

News Clips

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1. **Statewide standards in Iowa?** Graduation requirements at most **Iowa** high schools don't meet the minimum admissions standards at the state's universities, and as a result, too many students arrive at college unprepared, according to [The Des Moines Register](#). **Iowa** is the only state that has not set statewide academic standards — now could be the time for the state to take on a more aggressive role.
2. **Aiming higher. Michigan and Washington** are focusing on better preparing high school students to succeed in college and the workplace in an effort to enhance both states' economic edge. The [Michigan Commission on Higher Education and Economic Growth](#), spearheaded by Governor Jennifer Granholm, recently released a set of significant policy recommendations that would increase the number of students earning postsecondary degrees. Included in the recommendations is [replacing the current state high school graduation assessment](#) with one that can be used for college admissions — a recommendation that also is part of our American Diploma Project action agenda. (Download a PDF of the [report](#).) The Washington [Higher Education Coordinating Board](#) recommended raising requirements so that all students must take four years of math,

high school graduation requirements are a powerful lever for encouraging schools and students to aim higher, and most states have yet to take full advantage of them.

In the final analysis, our high school achievement gap may largely be a result of an expectations gap, and that is something that is fully within our control to change.

two years of lab-intensive science and three college-prep courses to be considered for admission to state four-year colleges.

3. **Tracking student progress.** To create a uniform system to get reliable graduation and dropout data from the states, a federal task force recommends a new [data-collection system](#) that includes tracking individual students through high school. Many states have discussed it, but to date fewer than 12 have tackled the challenge and actually implemented this type of system.

Related Resources

For more about Achieve's report on high school graduation requirements, download a PDF file of the [report](#) from Achieve's Web site. Or go to:

- ["Report Cites 'Expectations Gap' in High School Preparation,"](#) *Education Week*, Dec. 21, 2004.
- ["Graduates Lack Skills, Study Finds,"](#) *The Fresno Bee*, Dec. 21, 2004.

For more information about TIMSS and PISA, go to:

- ["'Good News, Bad News' About U.S. Students Released,"](#) *The Washington Post*, Dec. 15, 2004.
- ["Math + Test = Trouble for US Economy,"](#) *The Christian Science Monitor*, Dec. 7, 2004.

Did You Know?

State Course-Taking Requirements in Mathematics Vary Widely

