

*What Does It Really Mean to Be College and Work Ready?
The Mathematics and English Literacy Required
of First Year Community College Students*



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High Schools Fail to Teach What Graduates Need to Succeed in Community Colleges, Instead Teaching What They Don't Need

New report from the National Center on Education and the Economy is first to look at the literacy levels actually required for success in nation's community colleges

WASHINGTON, DC—Students are failing to learn the basic math and English skills and concepts needed for success in community colleges, according to a new report from the National Center on Education and the Economy (NCEE) entitled, *What Does It Really Mean to Be College and Work Ready: The English and Mathematics Required by First Year Community College Students*.

That's the surprising – and discouraging – central conclusion of a groundbreaking two-year study, which examined the skills and knowledge in mathematics and English literacy that high school graduates need to succeed in the first year of their community college programs.

“We were surprised how little math is used in first-year community college courses, and what is used is mostly middle school math,” said Phil Daro, co-chair of the study's Mathematics Panel and co-director in the development of the Common Core State Standards for mathematics. “Our system makes no sense for these students: even though so many students have a shaky understanding of the middle school mathematics they really need, high school courses spend most of these students' time on topics not needed for their college programs.”

“The reading skills of our high school graduates are so low that most community college instructors do not expect their students to be able to read at the level of their textbooks,” said Catherine Snow, co-chair of the study's English Panel and Patricia Albjerg Graham Professor of Education at the Harvard Graduate School of Education. “Their writing skills are so low that instructors rarely ask their students to write very much outside of their English composition classes, and, when they do, the writing they are asked to do is not very demanding.”

These are just a few of the [key findings](#) from the first study ever done that actually examines the level of mathematics and English literacy needed to succeed in the first year of study at our nation's community colleges.

Roughly 45 percent of our nation's undergraduates are attending community colleges, according to the American Association of Community Colleges (AACC). About half of those students are training to go directly into the workforce and enter popular fields such as nursing, law-enforcement, auto-mechanics or education, while others are working to complete the first two-years of a four-year degree program. The report concludes that students who cannot succeed in

the first year of a community college program are surely not ready for success in college or the workplace.

Most studies of course requirements in our colleges simply ask instructors what students need to know to be successful in their institutions, but that method is notoriously unreliable, because instructors typically respond to such surveys by telling the interviewer what they would like students to know, not what they actually need to know. This study was conducted by NCEE in collaboration with a team of leading scholars and community college leaders. It analyzed the textbooks, papers and projects students are assigned; the tests they are given; and the grades they get on both. These materials were gathered from a set of nine popular and diverse career-oriented programs in randomly selected community colleges across seven diverse states.

AACC urged educators at the secondary and post-secondary levels to read carefully the specific [findings of the report](#) and reevaluate their courses and materials to ensure they are meeting students' needs at every stage of their educational paths. "This study emphasizes the critical importance of better aligning the entire P-20 pipeline to ensure all students are adequately prepared for college and careers in the 21st century," said Walter Bumphus, president and CEO of AACC.

Achieve President Michael Cohen pointed out that this report's findings constitute a powerful argument for implementing the new Common Core State Standards for literacy in mathematics and English. "This very important report underscores the urgent need for states to implement the Common Core State Standards. If the CCSS were properly implemented, students would have the kind of mastery of middle school mathematics skills identified in this report as the most important math skills needed in the first year of community college. Similarly, the report makes it crystal clear why the CCSS English literacy standards stressed the need for great improvements in students' ability to do non-fiction reading and writing. "

The reports' authors concentrate their recommendations on the steps schools must take to enable more of their graduates to succeed in our community colleges, but also touch on what community colleges can do. Among the recommendations are the following:

- Make Algebra II a key course on just one of several mathematics paths to a high school diploma, eliminating the mandatory status it has in some states.
- Have most students spend more time on middle school mathematics rather than rushing toward Algebra I.
- Reconceive community college placement tests to align them with the mathematics students actually need to succeed in their first credit-bearing, programmatic courses.
- Increase writing assignments across all high school courses, especially those that require the presentation of a logical argument and evidence to support claims.
- Have high school students read texts of greater complexity.

Marc Tucker, president of the National Center on Education and the Economy said, "This report shows that our community colleges have shockingly low expectations of the students entering their institutions, because many—perhaps most—of our future nurses, EMT's and auto mechanics haven't mastered middle school mathematics and cannot read much of the material in their first year college textbooks—even though they are only written at the 11th and 12th grade levels—and a large fraction of our future four-year college students have a very hard time

writing a simple report that requires students to make an argument and support it with facts. If the United States does not fix this fast, its citizens will face a bleak economic future.”

To read the full report, visit: <http://www.ncee.org/college-and-work-ready/>.

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The National Center on Education and the Economy was created in 1988 to analyze the implications of changes in the international economy for American education, formulate an agenda for American education based on that analysis and seek wherever possible to accomplish that agenda through policy change and development of the resources educators would need to carry it out. Follow NCEE on Twitter [@CtrEdEcon](#) and on [Facebook](#).