



**POLICY  
MATTERS**

# Enhancing College Student Success Through Developmental Education

by Alene Russell  
Senior State Policy Consultant

*Both community colleges and four-year institutions have important roles to play in ensuring educational opportunity for all, and the availability of developmental education will always be a part of this effort. The nation must commit both to long-term, comprehensive solutions that reduce the need for remediation and to assurance that those who need help now will receive it in a manner that supports their educational goals.*

## Context

The need for developmental education is large and not going away. The nation's ability to compete in the global economy depends on having unprecedented numbers of workers with postsecondary credentials, most of whom enroll in colleges that are not highly selective, and many of whom are not prepared for college-level work at the time of enrollment. Without developmental education—also known as remedial or basic skills education<sup>1</sup>—these students have reduced chances of succeeding in regular college classes, of achieving their educational goals, and ultimately, of contributing fully to society and the nation's economy.

There are many reasons why students need developmental coursework, but a primary cause is the misalignment between high school and college expectations. Our K-12 system was never designed to prepare all students for college, and students may meet all high school requirements and be admitted to college, only to later discover that they cannot pass placement tests for entry into college-level courses. Some high school students do not have access to high-quality college-preparatory and advanced classes. Some deliberately choose easy courses, especially in their senior year, and miss opportunities for rigorous classes that better prepare them for college. Others may have teachers with low expectations who discourage them from taking challenging coursework. Still, others simply do poorly in high school. There are also academically strong students who have deficiencies in a single subject area such as mathematics.

---

<sup>1</sup>Though these terms are often used interchangeably, some entities and authors assign distinct meanings to each term that carry different nuances. In this paper, we use the terms “remedial education” and “developmental education” interchangeably, but when citing a specific source, always employ the terminology used in that source.

The need for developmental education also stems from the large numbers of adult workers who need additional education and upgraded skills to be successful in a competitive job market. In addition, recent immigrants and returning veterans may need basic skills development to be ready for college-level work.

Fortunately, the desire to overcome these challenges and earn a college degree is widespread and growing. In comparing cohorts of high school graduates from 1972 through 2004, the National Center for Education Statistics (NCES) found that the expectation of attaining a college degree has never been higher. In 2004, about 75 percent of high school graduates expected to earn a four-year college degree, up from 50 percent in 1972. The greatest growth in aspirations has been among those in the middle and bottom socioeconomic status quartiles.

These new generations of college-goers are increasingly being drawn from previously underrepresented groups who tend to be less academically prepared than college students of the past. This adds to the cost burden of remediation. Though it is difficult to estimate the total costs of remediation, the Alliance for Excellent Education estimates that remedial education for community college students who have recently completed high school costs taxpayers about \$1.4 billion annually, not including costs associated with older students or those incurred at four-year institutions.

This cost issue caught the attention of state policymakers in the 1990s as they reacted to the seeming waste of “paying twice” for what should have been taught in high school. States responded by attempting to reduce costs to taxpayers, most notably, by limiting developmental education at four-year institutions. Critics of remedial education cite statistics that remedial students are far less likely to persist in college and earn a degree, arguing that it is a waste of students’ time and money as well as taxpayer costs.

Others see developmental education in a more positive light—it opens the door to postsecondary

educational opportunity for those who need a second chance. Such proponents tend to oppose efforts to eliminate developmental education from four-year institutions, asserting that it forces many low-income, racial/ethnic minority, and first-generation students into community colleges where their chances of attaining a four-year degree are limited. Data from the Pell Institute for the Study of Opportunity in Higher Education, cited in *The Chronicle of Higher Education* (6/16/08), support this argument. Six years after starting college at a four-year public college, 34 percent of low-income, first-generation students have earned a bachelor’s degree. This compares to just five percent of similar students who began at a community college, despite the fact that nearly two-thirds of these students who began at a community college said they intended to earn at least a bachelor’s degree.

This paper provides an update on developmental education, addressing its prevalence, its effectiveness, state policy approaches, and institutional best practices. It argues that we need to reduce the need for remediation in the long term, while keeping our commitment to provide help for all students who need it now.

## Observations

**NCES data indicate that 28 percent of entering college students take at least one course in remedial reading, writing or mathematics. This number is an overall approximation that hides great variation across institutions, states and student characteristics.** This frequently-cited statistic comes from a 2003 study reporting on remedial enrollments in fall 2000, the most recently available national survey. The study found that 42 percent of community college students enrolled in at least one remedial course, compared to 20 percent of public four-year college students. Other studies confirm these differences by institutional type, but estimate the rates as even higher. Data from selected states shed additional light on how less selective four-year public institutions compare to flagship/doctoral institutions. For example, in 2005, 48 percent of students entering Minnesota’s community and technical colleges enrolled in

developmental courses, compared to 29 percent at four-year state colleges and universities, and seven percent at the University of Minnesota.

There is wide variation across states and within each postsecondary sector. A 2002 study by the Education Commission of the States (ECS) found that state-level remedial education rates at community colleges ranged from 10 percent to 72 percent. State-level remediation rates at public four-year colleges ranged from six percent to 50 percent. This should not be surprising, given that state policies vary widely, and there is no agreed-upon standard for college readiness.

Researchers have identified several characteristics that correlate with under-preparedness, and for recent high school graduates, level of high school coursework is a primary factor. Students who take the minimum graduation requirements are most often in need of remediation, while those who take more challenging coursework are less likely to need it. For example, data from the 2007 ACT High School Profile Report show that just 21 percent of students who took three years of math in high school were college-ready in math, compared to 69 percent of students who had taken four or more years of math.

NCES longitudinal studies show that students in the lowest socioeconomic status quintile are far more likely to enroll in remedial education than those in the highest quintile, 63 percent compared to 25 percent. Other studies have found differences by race/ethnicity, with African Americans and Hispanics having higher rates of remedial enrollment than whites and Asians. NCES longitudinal studies also find that delayed entry into postsecondary education leads to greater likelihood of remediation, and state data have echoed this result.

It is unclear whether remediation rates have changed over time. Data from three NCES studies show fairly consistent levels of remedial education in 1989, 1995 and 2000, with no more recent data available. Data from the Florida Community College System indicate that the remediation rate has

remained relatively constant in that system since 1997. In Minnesota, enrollment in developmental education courses rose about five percent between 1999 and 2005.

It is also not clear what trend data can really tell us. Analysts in Minnesota, for example, believe that the increased developmental education rates may be due to a more thorough identification of under-preparation, along with better enforcement of required enrollment. In sum, when states are making progress in facilitating students' postsecondary success, enrollment rates in developmental courses may increase prior to decreasing.

**College students who enroll in developmental courses, on average, have less favorable educational outcomes than students who enter ready for college-level work. Successful completion of developmental coursework, however, reduces the gap and provides a stepping-stone to degree attainment.** Numerous national and state studies inevitably lead to the same conclusion: students who take remedial coursework are less likely to achieve educational success than those who do not. Furthermore, among those who take remedial classes, the more remedial coursework taken and the need for remedial reading are associated with the least likelihood of educational success. As an example, just 30 percent of 1992 12<sup>th</sup> graders in an NCES longitudinal study who enrolled in remedial reading in college had earned a degree or certificate by 2000, compared to 69 percent of students who had not enrolled in any remedial classes.

Such analyses often ignore the fact that many students enroll in, but do not complete their developmental studies; this means that the more positive outcomes of students who complete needed developmental work may be masked by the more negative outcomes of students who fail to do so. Researchers in Florida, for example, found that only about half of remedial students who enrolled from 2000–2001 through 2003–2004 completed their needed remediation by the end of 2004–2005; these students were nearly four times as likely (56 percent) to remain enrolled in college

or to have earned a degree or certificate by 2004–2005, compared to those who did not complete remediation (15 percent).

Even taking this into account, it is difficult to assess the effectiveness of remedial education because students who take these courses are, in general, less prepared for college than those who do not. Though it would be unethical to design a controlled experiment in which students were provided with—or denied—needed help, researchers are beginning to develop study designs that help untangle these relationships. As one example, given that the state of Ohio does not have a statewide uniform remediation policy, researchers were able to compare similar groups of students who did and who did not enroll in remedial courses to isolate the effects of taking these courses. They conclude that “students in remediation are more likely to persist in college in comparison to students with similar test scores and backgrounds who were not required to take the courses. They are also less likely to transfer to a lower-level college and more likely to complete a bachelor’s degree.” Research conducted in Indiana also found a positive impact of remedial coursework in terms of better grades in college-level courses and greater persistence in college.

Research from the U.S. Department of Education adds to this growing body of evidence of the positive effects of remediation. In his 2006 longitudinal analysis, Clifford Adelman notes: “Sufficient numbers of students who took remedial classes moved through them so that remediation did not make a strategic difference in degree completion.” He further asserts “The evidence that students who successfully pass through remedial course work gain momentum toward degrees is beginning to build.”

But the jury is still out as to the impact of remedial education on students’ postsecondary success, and not all studies show similar findings. Recent research in Texas and in Florida, reported in *The Chronicle of Higher Education* (6/23/08 and 7/4/08), were unable to document the positive results of remedial education enrollment found in Ohio.

**Amid heated debate in the 1990s about the high cost of remediation, state policymakers took action to limit remedial coursework and reduce taxpayer burden. Such simplistic measures may produce more harm than good.** A 2002 ECS study reported that at least 10 states (Arizona, Colorado, Florida, Georgia, Indiana, Kansas, New Mexico, South Carolina, Utah and Virginia) prevent or discourage public four-year institutions from offering remedial coursework. A more recent ASHE/Lumina Policy Brief (2007) notes that approximately 22 states or higher education systems have reduced or eliminated remedial coursework, particularly in four-year colleges (this latter study includes university systems such as the City University of New York [CUNY] and the California State University [CSU] system). Strategies include such actions as raising admissions standards at selected institutions; restricting funding of remedial courses at four-year institutions; limiting the number of remedial courses a student may take or the length of time allowed for remedial coursework; shifting more of the costs on to the student; and other methods designed to reduce taxpayer costs.

In Nevada, New Mexico and Utah, four-year institutions do not receive funding for remedial instruction, and in Colorado, just two of the state’s four-year institutions receive state funding. Massachusetts policy allows up to 10 percent of students in four-year colleges to enroll in remedial coursework, but above that, students must be referred to community colleges. Florida law allows only community colleges and one four-year university to offer remedial coursework; the remaining universities may contract with community colleges to provide needed remediation. Also in Florida, institutions may charge different rates for remedial coursework, up to 15 percent above the standard per credit hour fee for regular classes. It is estimated that students in Florida’s community colleges pay an average of \$500 additional per year for remedial coursework.

In California, the CSU system implemented a policy in 1999 that gave students one year to complete needed remedial coursework, with failure to do so

resulting in “dis-enrollment” from the institution and referral to a community college. In New York, the CUNY system made headlines in 2000 by raising admission standards at the system’s four-year institutions and beginning a phase-out of remedial coursework at these schools. The policy required admitted students who scored too low on placement exams to enter one of the system’s two-year colleges.

The shifting of developmental coursework to community colleges has limited potential to be effective and may result in unintended negative consequences. If the purpose is cost savings, policymakers need to be aware of the actual costs of remediation to the state and how much the shift will save. A 1998 study from the Institute for Higher Education Policy (IHEP) notes that remediation costs less than one percent of total higher education expenditures, varying considerably among states. More recent data from Ohio found that remedial coursework accounts for less than four percent of undergraduate instructional costs. States need to weigh the savings attained by moving remedial coursework to less expensive institutions against the costs to the state if fewer students actually earn bachelor’s degrees—in terms of decreased tax revenues, reduced productivity, and so on. A second issue is the tremendous burden placed on community colleges, which may not have the resources and capability to handle substantial increases in remedial coursework. Third, there are many non-selective four-year institutions whose mission requires them to admit students who may need developmental coursework; overly restrictive state policies may make it difficult for these colleges to carry out their mission. In some cases where remediation has been “abolished,” these institutions have been able to offer workshops and tutoring on a limited basis; however, such services tend to have low priority and may be the first to be reduced when budgets are tight. Finally, and most importantly to students, being turned away from a four-year institution may permanently limit the student’s chances of earning a bachelor’s degree, effectively widening the already substantial earnings gap in the U.S. For example, a 2007 ASHE/Lumina Policy Brief notes that after CUNY’s 2000 policy was adopted,

at least 5,000 students were “de-admitted” from CUNY four-year colleges between 2001 and 2003 and did not enroll elsewhere.

**State policymakers in the 1990s also became directly involved in setting state-level policies pertaining to mandatory assessment and placement of students into developmental coursework. This represents a solid step forward toward addressing underlying problems.**

Historically, there have been no consistent standards for what constitutes college-level work and placement into developmental coursework. Institutions could select their own placement tests, determine cutoff scores, and set policies as to whether developmental coursework was mandatory or voluntary. But according to ECS, by 2002, policies pertaining to placement in remedial courses were determined at the state level in 20 states, either by statute, board policy or both. Seven states reported a state-mandated college placement exam (Florida, Georgia, North Carolina, South Dakota, Tennessee, Texas and Wyoming), while the remaining states mandated that a placement test be given, but left the choice of assessment up to the institution. The same survey found that 21 states required students who did not meet the cutoff score on a placement exam to take remedial coursework.

Since that time, additional states have adopted or revised their developmental education policies. For example, since 2006, all institutions in the Minnesota State College and University System (MNSCU) use the College Board ACCUPLACER to assess the reading, writing and math skills of entering students. Beginning fall 2008, a consistent minimum cutoff score will be in effect, below which students must be placed into developmental courses. A 2007 Illinois law provides that if a state university determines that a student needs remedial coursework, then the university must require the student to complete the remedial coursework before pursuing his or her major.

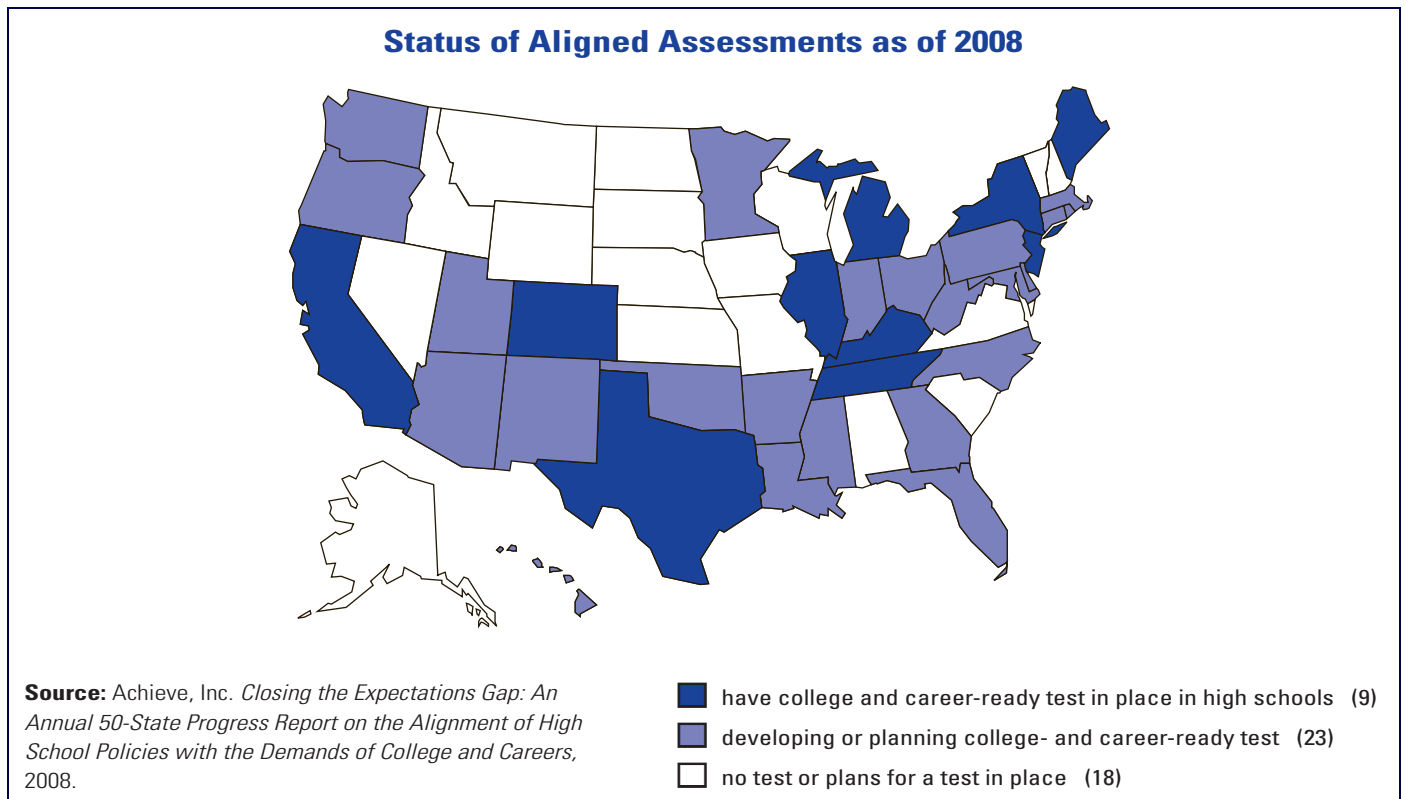
Such policies may produce short-term increases in rates of developmental course enrollment, while simultaneously moving us forward in terms of consistency of expectations and closing the

gap between secondary and postsecondary expectations. Policymakers must keep in mind that policies that address underlying problems and improve educational outcomes are preferable to those that simply reduce remediation.

**Over the past decade, there has been a proliferation of more comprehensive efforts to increase college preparedness. By focusing on improving alignment between secondary and postsecondary education, these efforts offer great long-term promise in terms of reducing the need for remedial education.** In 1996, the state of Georgia initiated the first P-16 council to promote a seamless system of education from pre-school through college, and since then, the majority of states have followed. ECS reports that 38 states currently have a P-16 or P-20 council, and four additional states have some form of consolidated governance of public education that covers the K-12 and postsecondary sectors. Though no automatic guarantee of success, such structures have been shown to be effective to the extent that they focus on concrete goals.

Since 2005, Achieve, Inc. has been tracking the progress of states along several dimensions of alignment. Achieve has found that:

- Nineteen states report that their high school standards in math and English language arts are aligned with postsecondary expectations, and 26 more states are in process or plan to do so.
- Eighteen states require all students to complete a college- and career-ready curriculum to earn a high school diploma, and 12 more states plan to adopt such requirements.
- Nine states have aligned assessments. That is, a college readiness test has been added as part of the statewide assessments administered to all high school students, and this is also used by postsecondary institutions to make admissions and/or placement decisions. Twenty-three more states plan to do so. [See map.]



- Eight states have P-20 data systems that track students from kindergarten through college. Thirty-nine states are developing such systems.
- Seventeen states publicly release the percentage of high school graduates who take remedial courses upon college entry, and nine more plan to do so. Georgia and Oklahoma are the only states that include college remediation rates in their accountability systems.

There are many examples of promising policies, of which just a few are offered here. CSU's Early Assessment Program stands as a national model. While taking the required California Standards Test, part of the K-12 accountability program, the state's high school juniors have the option of answering additional math and English questions, and writing an essay, to provide assessment of their college readiness. During the following summer, they receive the results indicating whether or not they meet CSU expectations for college-level work. If they do not, they still have time during their senior year to receive additional instruction; if they do meet expectations, they will not need to take another test upon college entry.

For more than a decade, Indiana has had a voluntary Core 40 high school curriculum, designed for college- and work-readiness. Beginning in 2011, the Core 40 will be both the high school curriculum for all students as well as the minimum course requirement for entry into the state's public universities.

In 2007, Arkansas enacted the Voluntary Universal ACT Assessment Program Act that requires the Department of Education to provide each student with the opportunity to take the ACT in grade 11 without any charge. This program, set to begin in the 2008–2009 year, aims to improve the college readiness of all 11<sup>th</sup> graders, prevent or minimize postsecondary remediation, and increase college-going rates among all racial and ethnic groups.

In 2006, the Florida legislature passed legislation aimed at increasing the college readiness of the state's high school graduates, including

strengthening requirements for promotion from middle to high school, strengthening professional development for teachers, and authorizing school boards to require low-performing students to attend remediation programs before or after school or during the summer before they enroll in college.

As part of the effort to bridge the gap between secondary and postsecondary education, the Minnesota legislature requires the University of Minnesota and MNSCU to report to the state Department of Education—as well as superintendents of all districts—data on recent public high school graduates who take remedial courses.

**Promising practices in the delivery of developmental education have begun to emerge, replacing one-size-fits-all approaches.** Traditional remediation has largely consisted of regular semester-length courses with fixed times of entry and exit, often characterized by a lecture format and repetitive drilling. Today, there are a number of emerging best practices that offer more options and services to meet the differing needs of students. These include using a variety of teaching strategies; offering tutoring and academic advising in addition to classroom experiences; offering alternative delivery modes including self-paced, modular and online approaches; and more extensive learning communities.

Mathematics development is the area of greatest need at four-year institutions, and improved delivery of basic skills courses can have a big impact. Last year, the American Association of State Colleges and Universities (AASCU) hosted two conferences on remedial mathematics that provided training for faculty and administrators in how to think about and organize remedial work on campuses.

In Florida, community colleges are implementing new strategies for developmental education, including strong academic advising, specialized training for faculty who work with remedial students, using a variety of instructional techniques, providing supplemental services and resources, and increased program accountability. California

has launched an initiative that provides community colleges with additional funding to improve basic skills instruction. Funding can be used for different purposes, including curriculum development, faculty training, and student tutorial services. In return, colleges must assess the extent to which their practices align with evidence-based best practices. A Tennessee initiative is running a pilot program at five community colleges to redesign developmental programs and abandon one-size-fits-all lecture-style courses. Students complete an assessment to identify the specific areas they need to improve, and they can concentrate on the areas they need, rather than starting from the beginning.

Basic skills “learning communities” are emerging around the country, and studies of these programs in both two- and four-year institutions are documenting progress in achieving student learning and retention. In this scenario, a cohort of students takes—as a group—at least two courses that reinforce one another. Cooperative learning enhances the experience, as does tutoring and additional support services, along with, in some cases, the residential experience.

## Conclusion

Though opponents will continue to assert that remediation is ineffective and a waste of resources, such simplistic arguments fail to acknowledge that remediation itself is not the problem. Rather, the underlying causes of remediation need to be addressed so that increasing numbers of students enter postsecondary education ready for college-level work. We must continue the commitment to achieve better alignment between high school and college expectations, but we cannot wait for this problem to be solved. Nor can we expect the need for remediation to disappear even with a substantially improved and seamless educational system. There will always be students who have delayed college entry—returning adult workers, immigrants, veterans, and others who are motivated to attain college degrees, but

who are underprepared to begin the journey. These individuals deserve the same educational opportunities as everyone else.

Widely available, well-designed developmental education is part of the solution to assuring educational opportunity for all, and both community colleges and four-year institutions have important roles to play. Policies that shift students around in the system are not the answer, and only serve to decrease real opportunities for many who hope to attain baccalaureate degrees. State policymakers need to play a positive role in this effort by developing flexible and supportive policies, providing adequate funding, and not punishing students for their academic deficiencies. Institutions must take a positive approach to the situation and work to develop more effective policies and practices, rather than blame others. Researchers need to continue their work to better understand which policy approaches and institutional practices are most effective. And all stakeholders need to work together to promote the best interests of students.

## Resources

### National

**Achieve, Inc.** *Closing the Expectations Gap: An Annual 50-State Progress Report on the Alignment of High School Policies with the Demands of College and Career*, 2008

<http://www.achieve.org/files/50-state-2008-final02-25-08.pdf>

**Alliance for Excellent Education.** *Paying Double: Inadequate High Schools and Community College Remediation*, 2006.

<http://www.all4ed.org/files/archive/publications/remediation.pdf>

**Association for the Study of Higher Education/Lumina Foundation for Education.** “Ending College Remediation: Consequences for Access and Opportunity,” ASHE/Lumina Policy Briefs and Critical Essays No. 2, 2007.

<http://www.elps.hs.iastate.edu/ASHE-Lumina/document/Parker%20Brief-Web.pdf>



**Education Commission of the States.** *State Policies on Community College Remedial Education: Findings from a National Survey, 2002.*  
<http://ecs.org/clearinghouse/40/81/4081.pdf>

**Institute for Higher Education Policy.** *College Remediation: What it is, What it costs, What's at Stake, 1998.*  
<http://www.ihep.org/assets/files/publications/a-f/CollegeRemediation.pdf>

**Jobs for the Future.** *Accelerating Remedial Math Education: How Institutional Innovation and State Policy Interact, 2007.*  
<http://www.jff.org/Documents/RemedialMath.pdf>

**National Center for Education Statistics.** *Remedial Education at Degree-Granting Postsecondary Institutions in Fall 2000, 2003.*  
<http://nces.ed.gov/pubs2004/2004010.pdf>

*The Condition of Education.* See "Remediation and Degree Completion" at [http://nces.ed.gov/programs/coe/2004/pdf/18\\_2004.pdf](http://nces.ed.gov/programs/coe/2004/pdf/18_2004.pdf) and "Remedial Coursetaking" at [http://nces.ed.gov/programs/coe/2004/pdf/31\\_2004.pdf](http://nces.ed.gov/programs/coe/2004/pdf/31_2004.pdf)

*Trends Among High School Seniors: 1972-2004, 2008.*  
<http://nces.ed.gov/pubs2008/2008320.pdf>

**U.S. Department of Education.** *The Toolbox Revisited: Paths to Degree Completion from High School Through College, 2006.*  
<http://www.ed.gov/rschstat/research/pubs/toolboxrevisit/toolbox.pdf>

## State

### Colorado

**Colorado Commission on Higher Education.** *2007 Legislative Report on Remedial Education, 2008.*  
[http://highered.colorado.gov/Publications/Reports/Remedial/FY2007/2007\\_Remedial\\_reljan08.pdf](http://highered.colorado.gov/Publications/Reports/Remedial/FY2007/2007_Remedial_reljan08.pdf)

### Florida

#### **Office of Program Policy Analysis & Government**

**Accountability.** *Half of College Students Needing Remediation Drop Out; Remediation Completers Do Almost as Well as Other Students, 2007*  
<http://www.oppaga.state.fl.us/reports/pdf/0731rpt.pdf>

*Steps Can Be Taken to Reduce Remediation Rates; 78 percent of Community College Students, 10 percent of University Students Need Remediation, 2006.*  
<http://www.oppaga.state.fl.us/reports/pdf/0640rpt.pdf>

### Indiana

**Center for Evaluation & Education Policy.** *Examining College Remediation Trends in Indiana, 2006.*  
[http://ceep.indiana.edu/projects/PDF/PB\\_V4N5\\_Spring\\_2006\\_college\\_remediation.pdf](http://ceep.indiana.edu/projects/PDF/PB_V4N5_Spring_2006_college_remediation.pdf)

### Minnesota

**Minnesota State Colleges and Universities and the University of Minnesota.** *Getting Prepared: A 2008 Report on Recent High School Graduates Who Took Developmental/Remedial Courses, 2008*  
<http://www.mnscu.edu/media/publications/pdf/gettingprepared08.pdf>

### Ohio

**Bettinger, Eric and Bridget Terry Long.** "Addressing the Needs of Under-Prepared Students in Higher Education: Does College Remediation Work?" (draft, 2005; also available as National Bureau of Economic Research Working Paper No. 11325)  
[http://www.ous.edu/state\\_board/workgroups/edp/files/AddressingNeedsUnderPreparedStudents9-5.pdf](http://www.ous.edu/state_board/workgroups/edp/files/AddressingNeedsUnderPreparedStudents9-5.pdf)

**Ohio Board of Regents.** *Costs and Consequences of Remedial Course Enrollment in Ohio Public Higher Education: Six-Year Outcomes for Fall 1998 Cohort, 2006.*  
[http://regents.ohio.gov/perfrpt/special\\_reports/Remediation\\_Consequences\\_2006.pdf](http://regents.ohio.gov/perfrpt/special_reports/Remediation_Consequences_2006.pdf)