

# What We Know About Developmental Education Outcomes

## What Is Developmental Education?

Many recent high school graduates who enter community college are required to take remedial or developmental education courses before enrolling in college-level courses. Developmental courses essentially reteach high school- and junior high school-level content in reading, writing, and math. In some cases, students are referred to two or even three courses of developmental education in a single subject area. The annual cost of providing remediation to community college students nationwide has been estimated at approximately \$7 billion.<sup>1</sup>

This overview is part of CCRC's practitioner packet on developmental education. For more information on the effectiveness of community college assessment and placement tests, accelerated approaches to developmental education, and overcoming challenges inherent in the developmental education reform process, please see our complete packet, [Designing Meaningful Developmental Reform](#).

## How Many Students Need Developmental Education?

While there is no way to gauge with perfect accuracy how many students actually *need* developmental education, recent federal data indicate that 68 percent of community college students and 40 percent of students at open-access four-year colleges *take* at least one remedial course.<sup>2</sup> Research suggests that many more students are referred to developmental courses but never enroll in them.<sup>3</sup>

**Federal data indicate that 68 percent of community college students and 40 percent of students at open-access four-year colleges take at least one remedial course.**

## What Do We Know About the Effects of Developmental Education?

Only 28 percent of community college students who take a developmental education course go on to earn a degree within eight years,<sup>4</sup> and many students assigned to developmental courses drop out before completing their sequence and enrolling in college-level courses.<sup>5</sup> A number of rigorous studies have been undertaken to assess the extent to which the traditional system of developmental education helps students into and through college-level coursework. These studies are discussed below.

# What the Research Tells Us

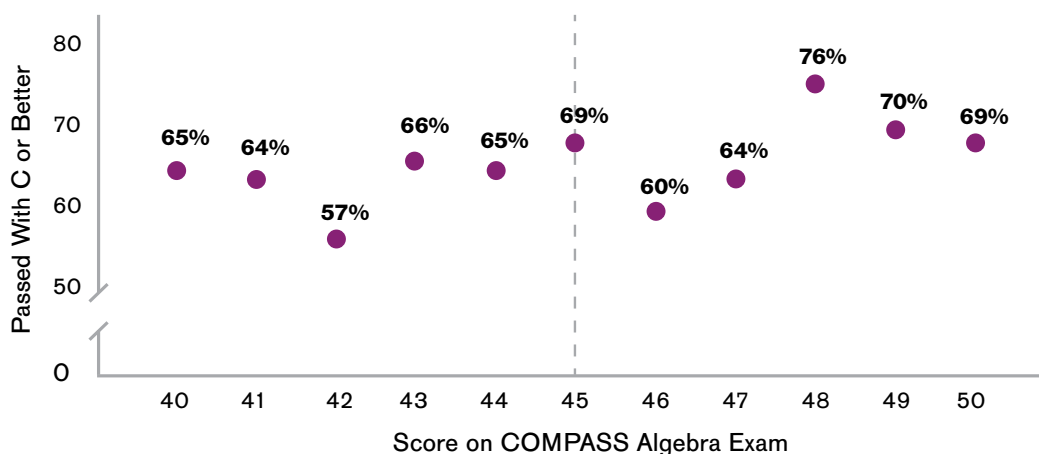
## About the Methodology

In order to understand the impact of developmental education, it is necessary to compare students who are academically similar, some of whom are assigned to remedial education and some of whom are not. An important methodological strategy that can accurately make this comparison is the regression discontinuity (RD) approach. This approach compares students who scored just below the cutoff for assignment to college-level courses with those who scored at or just above the cutoff. For example, if a cutoff score were 45, an RD analysis with a bandwidth of  $\pm 5$  points would compare students who scored from 40 to 44 (assigned to remediation) with students who scored from 45 to 49 (assigned to college-level courses).

Within such a narrow range, where differences in assessment scores are insignificant in terms of predicting success in college-level courses (as shown in the figure below), the assignment of students to remedial or college-level courses is effectively random. Thus, if remedial courses help students who scored near the cutoff succeed in college, then the just-below-the-cutoff students who were assigned to remediation should have better outcomes than the just-above-the-cutoff students, who are virtually identical but who were assigned to enroll directly in college-level courses.

**Within a narrow range around the cutoff score, assignment to remediation is effectively random.**

## Success Rates by Assessment Score Among Students Enrolling Directly in College-Level Math



Note. In the sample from which the above data are drawn, the actual cutoff score used was 30; thus, none of the students represented in the figure underwent remediation. The vertical line represents a hypothetical cutoff score of 45, which is a more typical college-level cutoff.<sup>6</sup>

## Findings on Developmental Education Student Outcomes

In the tables below, we summarize findings from eight studies, all but one of which used an RD approach<sup>7</sup> to evaluate the effectiveness of community college remedial courses across a large college system or state. It is important to note that the colleges examined in these studies used a wide range of cutoff scores to determine college readiness and that some of these studies compared students above and below the cutoff scores not just for developmental versus college-level courses but also for higher versus lower level remedial courses.<sup>8</sup>

## Overview of Findings on Outcomes for Developmental Students<sup>9</sup>

■ Positive ■ Negative □ Null

### DEVELOPMENTAL MATH STUDENTS

Short-Term Impacts					Medium- & Long-Term Impacts		
Study	Level	Persistence	Passed College-Level Math	Grade in College-Level Math	Persistence	College-Level Credits Earned	Credential and/or Transfer
TENNESSEE <sup>10</sup>	UPPER	NEG		NULL (conditional)	NULL	NULL (conditional)	NEG (credential)
TEXAS <sup>11</sup>	UPPER	NULL					NULL
OHIO <sup>12</sup>	UPPER				NULL		POS (transfer)
LUCCS <sup>13</sup>	UPPER		NEG	NEG	NULL	NULL	NULL
FLORIDA <sup>14</sup>	UPPER	NULL	NULL			NULL	NULL
VIRGINIA <sup>15</sup>	LOWER vs. MIDDLE		NULL				NEG (credential)
TENNESSEE	LOWER vs. MIDDLE	NULL		NULL (conditional)	NULL	NULL (conditional)	POS (credential)

### DEVELOPMENTAL READING STUDENTS

Short-Term Impacts					Medium- & Long-Term Impacts		
Study	Level	Persistence	Passed College-Level English	Grade in College-Level English	Persistence	College-Level Credits Earned	Credential and/or Transfer
TENNESSEE	UPPER	POS		NULL (conditional)	NULL	NULL (conditional)	NULL (credential)
TEXAS	UPPER	NULL					NULL
OHIO	UPPER				NULL		NULL
LUCCS	UPPER		NEG	NEG	NEG	NEG	NEG (credential)
FLORIDA	UPPER	NULL	NEG			NULL	NULL
VIRGINIA <sup>216</sup>	UPPER	NULL	NULL (conditional)			NULL	NEG
VIRGINIA 2	LOWER vs. UPPER	NEG	NULL (conditional)			NEG	NEG
TENNESSEE	LOWER vs. MIDDLE	NULL		NULL (conditional)	POS	POS (conditional)	NULL (credential)

### DEVELOPMENTAL WRITING STUDENTS

Short-Term Impacts					Medium- & Long-Term Impacts		
Study	Level	Persistence	Passed College-Level English	Grade in College-Level English	Persistence	College-Level Credits Earned	Credential and/or Transfer
TENNESSEE	UPPER	NEG		NULL (conditional)	NULL	NEG (conditional)	NEG (credential)
VIRGINIA 2	UPPER	NULL	NULL (conditional)			NULL	NULL
LUCCS	Writing & Reading vs. Reading Only		NULL	NULL	NULL	NULL	NULL
VIRGINIA 2	LOWER vs. UPPER	NEG	NULL (conditional)			NEG	NULL
TENNESSEE	LOWER vs. UPPER	POS		POS (conditional)	NULL	NULL (conditional)	NULL (credential)

Note. "Conditional" signifies that only outcomes for students who enrolled in college-level courses, or persisted in college, were compared. LUCCS stands for large urban community college system.

The RD analyses show that, with a few notable exceptions, developmental education has mostly null and sometimes negative effects on student outcomes for students near the cutoffs. A null result indicates that no statistically significant effect was found in the analysis, suggesting that students spent time and tuition on courses that may have made no discernable difference in their ability to succeed in college.<sup>17</sup>

## Differential Effects of Remediation on Subgroups

The research suggests that the impact of remediation may vary depending on student demographics and level of academic preparation. Combining the results from all the studies, students who scored near the college-level cutoffs and were placed in developmental courses appear to have experienced substantially more negative or null than positive effects (two positive vs. 15 negative and 32 null). On the other hand, students who scored near the cutoffs between upper- and lower-level (or middle- and lower-level) developmental courses and were placed into the lower course experienced a higher proportion of positive effects (five positive vs. six negative and 19 null).

One RD study that looked at the effects of remediation on particular subgroups of students found large differences in how student populations were impacted. For instance, assignment to remediation tended to have significant and large negative impacts on students who attended colleges with a high proportion of remedial students, on female students, on students who were younger than 25, and on Black students. Conversely, assignment to remediation had nonsignificant effects on students who attended colleges with a low proportion of remedial students, on male students, on students who were 25 or older, and on White students.<sup>18</sup>

Another study found positive effects on persistence and college-level credit accumulation for English language learners who were required to take both reading and writing developmental education instead of just reading remediation. Native English speakers, on the other hand, experienced no benefits from placement into both courses versus placement into just reading remediation.<sup>19</sup>

---

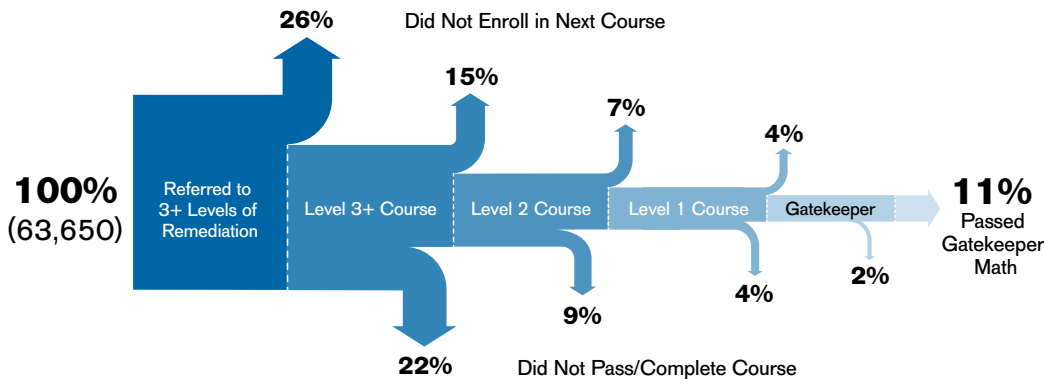
**Research suggests the impact of remediation varies depending on student demographics and level of academic preparation.**

## Student Progression Through the Remedial Sequence

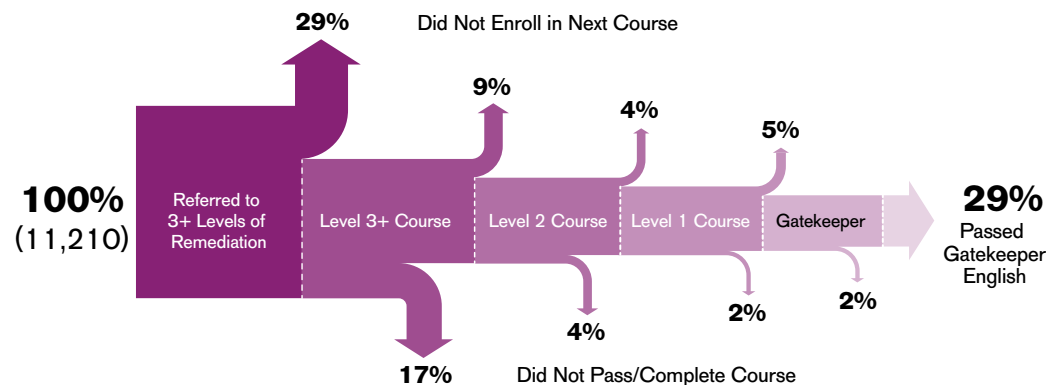
One reason why developmental education may not be very effective is because of high attrition from the remedial sequence. A CCRC analysis involving data from 57 community colleges found that lengthy remedial sequences are extremely “leaky.” The necessity of completing several courses before enrolling in college-level courses creates multiple points at which students can exit the sequence, thus forgoing any chance of completing the first college-level (or “gatekeeper”) course in the same subject area.<sup>20</sup>

For instance, among the 63,650 students in the study who were assigned to three levels of developmental math, only 11 percent ever successfully completed college-level introductory algebra. More than one fourth never enrolled in their first remedial course. And even among the students who had the tenacity to complete all three levels of remedial math, 2,500 (4 percent of the original cohort, or almost one fourth of those who completed all three developmental courses) failed to enroll in the gatekeeper math course.

### Student Progression Through the Developmental Math Sequence<sup>21</sup>



### Student Progression Through the Developmental Reading Sequence<sup>22</sup>



## Inaccurate Placement Into Developmental Courses

The negative and null effects of developmental education may also be explained in part by inaccurate placement into developmental courses. Research indicates that some students who do not need it are placed into developmental courses.<sup>23</sup> Underplaced students may experience negative effects from developmental courses that overshadow potential positive effects experienced by accurately placed students.<sup>24</sup>

## Conclusion

Research evidence suggests that, for the most part, the traditional system of developmental education is not achieving its intended purpose: to improve outcomes for underprepared students. These findings do not mean that developmental education should be discarded; large numbers of community college students need support to succeed academically. The findings do suggest, however, that the system could benefit from thoughtful reform. In part two of this practitioner packet, *Designing Meaningful Developmental Reform*, we lay out some of the challenges to reforming developmental education, review relevant reform research, and describe case studies of colleges that successfully resolved tensions that are often obstacles in the developmental reform process.

## Endnotes

1. Scott-Clayton, Crosta, & Belfield (2012).
2. Scott-Clayton, personal communication, NCES QuickStats (2013).
3. Bailey (2009).
4. Based on calculations using the National Educational Longitudinal Study (NELS:88). The comparison figure for nonremedial students is 43 percent (Attewell, Lavin, Domina, & Levey, 2006).
5. Bailey, Jeong, & Cho (2010).
6. Fields & Parsad (2012).
7. We include one study (Bettinger & Long, 2005) that is similar to the other seven studies in conceptual approach and rigor but which used an instrumental variable (IV) approach to compare outcomes of students in Ohio, where various colleges differed in how they assigned students to remediation. For further information as to why we include these studies and not others, see Bailey, Jaggars, and Scott-Clayton (2013).
8. Math cutoff scores range from 27–40 out of 100 on the COMPASS Algebra test and from 28–40 out of 100 on the COMPASS Pre-Algebra/Arithmetic tests. Cutoff scores on the COMPASS reading test range from 46–81 out of 100. Cutoff scores on the COMPASS writing test range from 28–59 out of 100.
9. In all tables, nonsignificant findings are shown as NULL; significant findings are significant at or below the 10-percent level.
10. RD IV analyses based on a sample limited to students under the age of 21 who began full-time at a Tennessee two-year public college in the fall of 2000 and whose assignment to remediation was based on a COMPASS math, reading, or writing exam. Students were tracked for eight years. Covariates include gender, race, age, high school GPA, college financial aid, and postsecondary institution attended. College credits completed are those for six years (Boatman & Long, 2013).
11. RD IV analyses based on sample of 255,878 degree-seeking freshman entering Texas public two-year colleges between 1991–1992 and 1999–2000 and tracked until 2004–2005; analysis limited to students who took the Texas Academic Skills Program (TASP) test used for remedial placement at Texas community colleges (Martorell & McFarlin, 2011).
12. IV analyses based on 13,000 first-time, degree-seeking, traditional-age students who took the ACT and enrolled in one of 19 public two-year Ohio colleges in 1998. Students were tracked for five years (Bettinger & Long, 2005).
13. RD analyses based on a sample of 100,250 first-time, degree-seeking students admitted to one of six community colleges in a large urban community college system (LUCCS) between fall 2001 and fall 2007. Students were tracked for at least three years. From 2001–2004, LUCCS used an in-house math exam; after 2004, it used the COMPASS pre-algebra and algebra tests. For reading, it used the COMPASS test, and for writing, it used a customized writing test. Main specification results are shown (Scott-Clayton & Rodriguez, 2012).
14. RD analyses based on a sample of 100,000 students who enrolled in one of 28 Florida community colleges in 1997 and took the Florida College Placement Test (CPT). Students were tracked through 2002. Math results are based on Regression 8: “RD IV full no-retesting sample.” Reading results are based on Regression 10: “RD IV, no retesting and narrow band sample” (Calcagno & Long, 2008).
15. Full sample consists of 24,664 first-time community college students who enrolled in one of 23 Virginia community colleges in summer or fall of 2004. RD IV analyses limited to 5,440 students who took the pre-algebra section of the COMPASS test. Covariates include gender, age, intent, and dual enrollment status. Results are from baseline model (Dadgar, 2012).

16. RD analyses based on sample of 46,000 students who enrolled at one of Virginia's 23 community colleges in 2004–2006 who took a COMPASS reading or writing exam. Students were tracked until 2011. Covariates include gender, race, cohort, financial aid, transfer program, and dual enrollment prior to college (Xu, 2013).
17. Among the 52 null results shown in the three tables, 32 trend in a negative direction, and 17 trend in a positive direction (and in three cases the direction of the null effect was not indicated in the original study). None of these results are statistically significant, so we cannot say with any certainty whether they indicate a real effect or are just due to chance.
18. Xu (2013).
19. Hodara (2012).
20. Bailey et al. (2010).
21. Analysis tracked for three years 63,650 first-time, credential-seeking students at 35 Achieving the Dream community colleges who began their enrollment from fall 2006 to fall 2008 and were referred to at least three levels of developmental education. The figure on student progression through the math developmental sequence is updated from analyses originally presented in Bailey et al. (2010).
22. Analysis tracked for three years 11,210 first-time, credential-seeking students at 16 Achieving the Dream community colleges who began their enrollment from fall 2006 to fall 2008 and were referred to at least three levels of developmental education. The figure on student progression through the reading developmental sequence is updated from analyses originally presented in Bailey et al. (2010).
23. See part two of this practitioner packet, [Designing Meaningful Developmental Reform](#).
24. Scott-Clayton & Rodriguez (2012).

## References

- Attewell, P. A., Lavin, D. E., Domina, T., & Levey, T. (2006). New evidence on college remediation. *Journal of Higher Education*, 77(5), 886–924.
- Bailey, T. (2009). Challenge and opportunity: Rethinking the role and function of developmental education in community college. *New Directions for Community Colleges*, 145, 11–30.
- Bailey, T., Jaggars, S. S., & Scott-Clayton, J. (2013). *Characterizing the effectiveness of developmental education: A response to recent criticism*. New York, NY: Columbia University, Teachers College, Community College Research Center.
- Bailey, T., Jeong, D. W., & Cho, S. W. (2010). Referral, enrollment, and completion in developmental education sequences in community colleges. *Economics of Education Review*, 29(2), 255–270.
- Bettinger, E., & Long, B. T. (2005). Remediation at the community college: Student participation and outcomes. *New Directions for Community Colleges*, Spring (129), 17–26.
- Boatman, A., & Long, B. T. (2013). *Does remediation work for all students? How the effects of postsecondary remedial and developmental courses vary by level of academic preparation: Additional data and updated analysis* (NCPR Working Paper). New York, NY: National Center for Postsecondary Research.
- Calcagno, J. C., & Long, B. T. (2008). The impact of postsecondary remediation using a regression discontinuity approach: Addressing endogenous sorting and noncompliance (NCPR Working Paper). New York, NY: National Center for Postsecondary Research.

Dadgar, M. (2012). *Essays on the economics of community college students' academic and labor market success* (Doctoral dissertation). Retrieved from ProQuest Dissertations and Theses database. (Order No. 1014168985)

Fields, R., & Parsad, B. (2012). *Tests and cut scores used for student placement in postsecondary education: Fall 2011*. Washington, DC: National Assessment Governing Board.

Hodara, M. (2012). *Language minority students at community college: How do developmental education and English as a second language affect their educational outcomes?* (Doctoral dissertation). Retrieved from ProQuest Dissertations and Theses database. (Order No. 1014026879)

Martorell, P., & McFarlin, I., Jr. (2011). Help or hindrance? The effects of college remediation on academic and labor market outcomes. *The Review of Economics and Statistics*, 93(2), 436–454.

Scott-Clayton, J., Crosta, P. M., & Belfield, C. R. (2012). *Improving the targeting of treatment: Evidence from college remediation* (NBER Working Paper No. 18457). Cambridge, MA: National Bureau of Economic Research.

Scott-Clayton, J., & Rodriguez, O. (2012). *Development, discouragement, or diversion? New evidence on the effects of college remediation* (NBER Working Paper No. 18328). Cambridge, MA: National Bureau of Economic Research.

Xu, D. (2013). *Assistance or obstacle? The impact of different levels of English remediation on underprepared students in community colleges* (Unpublished doctoral dissertation). Teachers College, Columbia University, New York, NY.

---

*This research overview was prepared by Shanna Smith Jaggars and Georgia West Stacey, Community College Research Center, Teachers College, Columbia University. Funding was provided by the Bill & Melinda Gates Foundation.*



# Designing Meaningful Developmental Reform

## The Problem

In the United States, 60 percent of recent high school graduates enter community college already behind.<sup>1</sup> These students are required to take remedial or developmental education courses before enrolling in college-level courses; in some cases, students are referred to two, three, or even four semesters of developmental education.

However, recent evidence suggests that this system is not as effective as colleges might hope. While the annual cost of providing remediation to community college students nationwide has been estimated at more than \$2 billion,<sup>2</sup> many developmental education students never successfully progress to and through college-level courses.

## The Opposing Forces

Despite the low success rates for remedial students, those who attempt to reform developmental education often feel their efforts are thwarted by administrators or faculty who seem dead set against change. These innovators tend to dismiss objections to developmental education reform as springing from shortsightedness or obstinacy. In fact, skeptics frequently have legitimate concerns that, if addressed, can lead to more successful reforms.

To delineate the conflicting motivations that shape developmental education reform efforts, CCRC researchers developed an “opposing forces” framework. This framework explicates three sets of tensions—system-wide consistency versus institutional autonomy, efficient versus effective assessment, and supporting student progression versus maintaining academic standards—that often work at cross-purposes and stymie efforts to create a more effective remedial system.<sup>3</sup>

## About This Practitioner Packet

*Designing Meaningful Developmental Reform* summarizes the issues and concerns underlying each pair of opposing forces, lays out relevant data, and presents a case study for each tension illustrating how a community college has worked to reconcile that particular tension.

By addressing each of these tensions, this review seeks to help colleges embark on a fruitful and effective process of reform. It can serve as a conversation starter and guide, allowing administrators and faculty to speak candidly with one another in a context that allows those involved to bring their concerns out into the open and work through them together.

Once these conversations happen, colleges can develop strategies for developmental reform that are embraced by stakeholders at all levels of the community college system.

**Skeptics frequently have legitimate concerns that, if addressed, can lead to more successful reforms.**

# Tension One: Institutional Autonomy Versus System-Wide Consistency

## Community Colleges Often Resist Centralized Assessment and Placement Policies

Community college districts and state systems often try to establish consistent, centralized remediation policies that will strongly support student success. However, when it comes to assessment and placement, there is little evidence to support any given policy over another. For example, there is no clear placement exam score above which students reliably perform well in college-level courses and below which students reliably fail: The association between test scores and performance increases in a gentle curve.

The absence of clear-cut answers as to the most effective policies, twinned with the fact that colleges tend to believe they have the best understanding of their own students' needs, often pushes individual community colleges to resist centralized remediation policies—such as centrally mandated cutoff scores—and to instead pursue their own approaches to assessment and placement.

### The Case for Autonomy

In decentralized community college systems, individual institutions typically retain the autonomy to choose their own placement exams and cutoff scores, to determine whether developmental education is required or merely recommended, and to design their own developmental education course sequences. Such flexibility may allow each institution to tailor a developmental system that works as effectively as possible for its particular mix of students.

---

**Decentralized systems can create confusion or even inequity through inconsistent standards.**

### The Case for System-Wide Consistency

However, decentralized systems can create confusion or even inequity through inconsistent standards. A study of one state, for example, found that because of variation in cutoff scores and remediation requirements among colleges, a given individual might have only a 20 percent chance of being placed into remedial classes at one community college but a 90 percent chance at another.<sup>4</sup>

Proponents of consistency argue that differing standards across colleges send a confusing message to high schools about what it means to be college ready. They also point out that a common standard makes it easier for systems to track student performance across colleges and facilitates the process of transfer between colleges.<sup>5</sup>

### The Tension

Regardless of how centralized a system is, CCRC research suggests that individual colleges often find ways to exert autonomy over their own developmental policies and programming. If the central policy were objectively correct, then such autonomy would be counterproductive. However, as it stands now—with no consensus or clear understanding of what the optimal policy might be—

enforced consistency across a system may guarantee nothing more than *uniform implementation* of an *ineffective policy*. Until an optimal policy can be established and validated, colleges may feel that resisting consistency and designing their own policies is the only rational strategy.

To overcome this tension and create a single policy that all member colleges feel comfortable enacting, consistency should be created through cross-college collaboration and discussion rather than through an externally imposed fiat. In the following section, we describe how one state, New Jersey, set about creating system-wide consistency.

## The Case of New Jersey: Reconciling Autonomy and Consistency<sup>6</sup>

### New Jersey's Community Colleges

New Jersey has 19 community colleges that serve about 250,000 credit students annually. The colleges are not part of a centralized system; instead, they work together through a system of “coordinated autonomy,” facilitated by the New Jersey Council of County Colleges. A variety of groups—the presidents’ council, academic affairs officers, and faculty associations—meet periodically to collaborate and make recommendations about policy and practice.

“If it was just the presidents who voted it in, they would go back and have a mutiny...You have to have grassroots buy-in. You have to give everyone time to digest. Then you have to give them opportunity to give feedback. It was the academic officers’ job to go back and make sure that this was showing up in department meetings...The final decision was made at the presidents’ council but not without the complete confidence of the academic officers and faculty.”

– New Jersey community college administrator

Prior to 2008, placement tests and cutoff scores in the state varied widely. The momentum to standardize policies came from two legislative developments in higher education. First, in 2004, a state scholarship program, the New Jersey Student Tuition Assistance Reward Scholarship (NJ STARS), was created to cover full community college tuition for students who met college readiness standards. Community college leaders immediately recognized that their divergent tests and cutoff scores would complicate the scholarship awards process.

Then, in 2007, legislation was passed guaranteeing junior status to community college students who earned an associate degree and were admitted to a public, four-year college. In anticipation of this legislation, the presidents’ council was asked to demarcate a set of transferable courses, and community colleges began a review process to ensure consistent statewide standards. This process further increased awareness of the wide variation in college-level entrance standards across the state.

### The Process of Change

The first step in the standardization process was to agree on a single testing instrument. The decision to use the ACCUPLACER assessment, made by the presidents’ council, was a relatively easy one; the College Board agreed to lower the price of ACCUPLACER, which was already widely used, if the test were adopted statewide.

---

**The first step in the standardization process was to agree on a single testing instrument.**

After choosing ACCUPLACER, the academic officers formed math and English faculty subcommittees to establish consistent statewide cutoff scores and test exemption policies. The committees consisted of math and English faculty members from each of the community colleges, as well as testing coordinators and institutional researchers who contributed recommendations about testing procedures and follow-up studies.

## Standardizing Math

The math faculty committee met twice over the course of one year to decide on the SAT exemption cutoff and the placement exam cutoff that would place students into Intermediate Algebra (the first college-level class at most colleges or the highest remedial course for STEM students at some) or Elementary Algebra (the highest level remedial class). The decisions were based largely on compromise: Faculty selected scores that fell between the lowest and highest SAT and placement exam cutoff scores used by colleges.

There was some discussion of curriculum in these meetings as well. The committee used the ACCUPLACER technical manual to understand how different placement exam cutoffs aligned with algebra competencies and to ensure that the cutoff score they chose represented the dividing line between Elementary and Intermediate Algebra.

In a series of faculty-initiated follow-up meetings, math faculty took a deeper look at their Elementary Algebra curriculum and agreed on 80 percent of the content. The remaining 20 percent was left for faculty at individual colleges to decide on. Math faculty from a majority of the colleges voted to adopt the policies.

## Standardizing English

The English committee met numerous times over two years. They first decided on the SAT exemption requirements but disagreed over which parts of the ACCUPLACER to use—the reading comprehension, sentence skills, and/or written essay portions—and whether the essay should be graded by human readers or a computer.

The group eventually agreed that colleges could use the ACCUPLACER essay or a local assessment essay, but that they had to use the ACCUPLACER rubric to grade the essay and had to use a uniform cutoff score.

The English committee attached a stipulation that each college's institutional research office would track students' grades in English Composition for three years in order to assess the score's reliability in predicting student performance in college-level courses. The new policies were approved by the presidents and were implemented by most colleges.

## Statewide Adoption and Support

Across the state, there was widespread support for the standardization process. This support stemmed from three factors. First, there was agreement on the need for consistent statewide policies even when there were challenging ramifications: Colleges that increased their cutoffs experienced larger enrollments in developmental coursework, while colleges that decreased their cutoffs saw an increase in introductory college course enrollment.

Second, the process was “bottom-up”: The decisions came straight from faculty on the subcommittees. Academic officers then brought these decisions to departmental meetings to ensure

---

**The process was “bottom-up”: the decisions came straight from faculty on the subcommittees.**

broad support from those not directly involved in the process.

Third, since the state is decentralized, institutions continued to exercise their flexibility to make the new policies work for their specific context. For example, although all colleges adopted the math policies, a few larger colleges have supplemented the statewide English assessment with additional assessment measures.

## Ongoing Reform

Perhaps the most important outcome of New Jersey's standardization process is that it has enabled administrators and faculty to think more critically about developmental assessment and placement at their colleges. As a result, New Jersey is experiencing a fruitful period of ongoing review and reform.

After the new policies were implemented, many administrators and faculty felt the reforms should have gone further. Some expressed a desire to incorporate multiple measures; others wanted more diagnostic assessments.

Consequently, more changes are on the horizon for the state. A number of New Jersey's community colleges have begun utilizing "decision zones"—a range of scores below the state-agreed-upon cutoff scores within which colleges can use additional measures to determine placement.

The state will track outcomes for the different measures and use their findings to further inform statewide policy improvements. Additionally, the New Jersey Department of Education plans to match high school graduation and college readiness standards. Under this system, students who meet proficiency levels on the state high school exit exam, SAT, ACT, or newly developed end-of-course assessments will be permitted to enroll directly in college coursework.

## Resolving the Tension

The new policy served to reconcile the tension between consistency and autonomy by creating a state policy framework that gives colleges autonomy to be responsive to their student body. New Jersey's experience also demonstrates that efforts to create consistent developmental policies can prompt deeper thinking, ongoing discussions, and further reform.

More broadly, it is important to note that consistency across colleges can still allow for flexibility in readiness standards across programs. For example, in the Wisconsin Technical College System, nursing admissions standards are consistent across the state but are different (typically higher) than those for other programs of study.

---

**New Jersey's experience demonstrates that efforts to create consistent developmental policies can prompt deeper thinking, ongoing discussions, and further reform.**

# Tension Two: Efficient Versus Effective Assessment

## The Need for Efficiency Often Results in Ineffective Placement Practices

Community colleges must evaluate the college readiness of thousands of incoming students every year. To do this quickly and inexpensively, almost all use standardized, computer-adaptive placement tests. These exams are extremely efficient in the short term: They can be administered quickly, scored by computer, and almost instantaneously applied to determine the placement for each student. Yet this short-term efficiency goes hand-in-hand with high rates of student misplacement,<sup>7</sup> calling into question the effectiveness of the exams, and ultimately, the long-term efficiency of the system.

Two recent CCRC studies<sup>8</sup>—one of a large urban community college system and one of a statewide community college system—confirm that the most commonly used standardized placement tests are not yielding placement accuracy rates that students and administrators might wish for. The two studies found that using test scores alone to make placement decisions resulted in large numbers of “severe placement errors.”

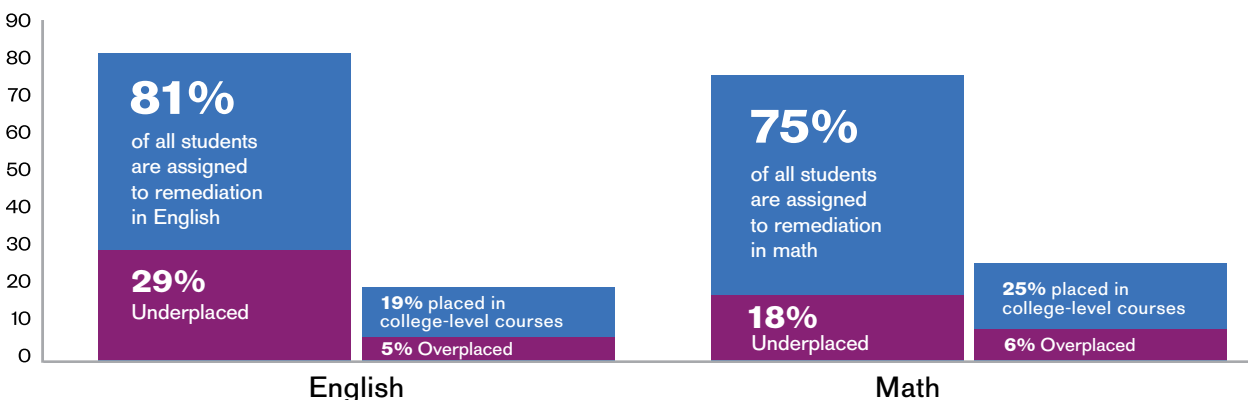
**Using test scores alone to make placement decisions resulted in large numbers of “severe placement errors.”**

WHAT IS A “SEVERE PLACEMENT ERROR”?	
SEVERE UNDERPLACEMENT	SEVERE OVERPLACEMENT
A severe underplacement signifies placing a student in developmental education who is predicted to get a B or better in a college-level course.	A severe overplacement signifies placing a student in a college-level course who is predicted to fail there.

### High Rates of Severe Underplacement Errors

The urban system uses the COMPASS placement test. During the period of study, 81 percent of tested students were assigned to English remediation and 75 percent of tested students were assigned to math remediation based on their COMPASS scores. CCRC’s analysis disaggregated percentages of students predicted to have been underplaced and overplaced. The analysis suggests that a far greater number of students were severely underplaced than overplaced.<sup>9</sup>

### Urban System: Tested Students Severely Underplaced and Overplaced<sup>10</sup>



## High School Grades May Improve Placement Accuracy

Because of the variation in school quality and grading standards, many are skeptical that high school grade point average (GPA) can be used as a standardized measure of college readiness. However, the analyses of both the state and urban system data suggest that including high school GPA as a measure of students' ability could improve placement accuracy.

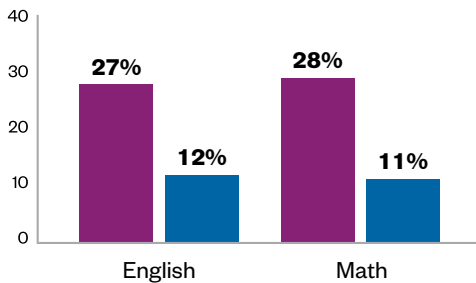
In the state system, where students can take either the ACCUPLACER or COMPASS for placement, up to one third of entering students were severely misplaced (both over- and underplaced) based on English test scores, and more than a quarter of students were severely misplaced based on math test scores. However, using students' high school GPA to make placement decisions was predicted to significantly reduce severe error rates.<sup>11</sup>

**Using students' high school GPA to make placement decisions was predicted to significantly reduce severe error rates.**

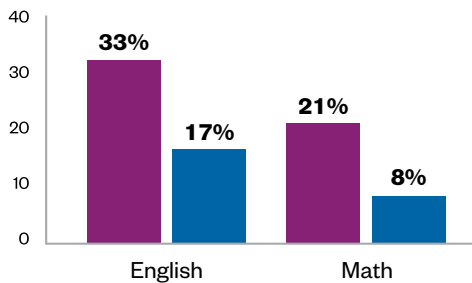
### State System: Severe Placement Error Rates Using Placement Test Versus High School GPA<sup>12</sup>

■ Placement Test ■ High School GPA

COMPASS Test vs. High School GPA



ACCUPLACER Test vs. High School GPA

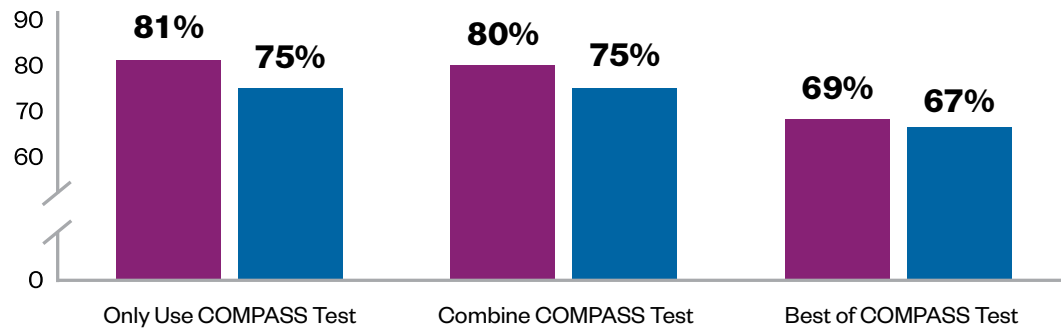


In the urban system, using high school transcript data (GPA and math/English units completed) alone did not dramatically alter placement errors. However, using high school data combined with test scores was predicted to lower severe placement errors by 3 to 4 percentage points. Using the *best of* either high school transcript information *or* assessment test scores was predicted to lower severe placement errors by up to 5 percentage points.

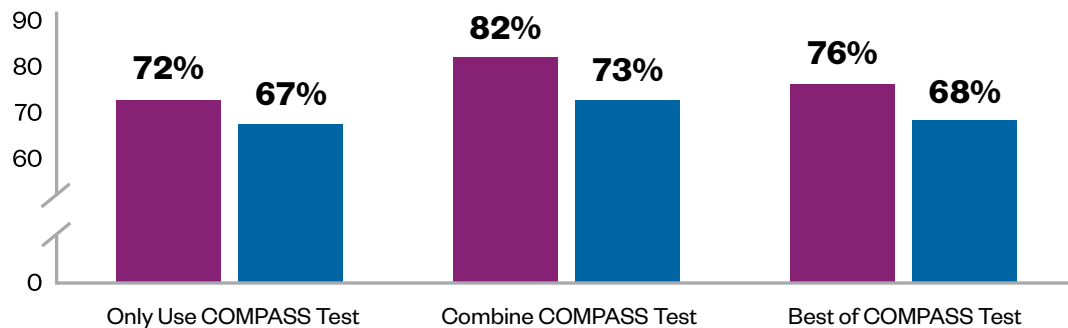
Using the best of either high school transcript data or test scores was also predicted to significantly lower the rate at which students would be assigned to remediation. Using the best of high school transcript data or test scores would not only send more students immediately into college-level classes, but it would also maintain or increase the success rates of students in those classes.<sup>13</sup>

## Urban System: Using Best of Test Scores or High School Transcript Data Reduces Remediation Rates While Maintaining or Improving College-Level Success Rates<sup>14</sup>

English Math  
Students Assigned to Remediation



Students Assigned Directly to College-Level Courses Who Receive a C or Better



### Why Are the Tests So Weakly Predictive?

Several factors may explain the weak predictive powers of commonly used placement tests. First, the exams are short and are intended to assess only a narrow set of academic skills; they cannot account for motivation, commitment, and other factors that contribute to success in college. High school GPA may be effective in this regard because it is a cumulative measure of student achievement and can signal competencies beyond English and math skills.

Second, students typically do not understand the consequences of scoring below the cutoff. As a result, many students do not prepare for the exam, and their performance may not be an accurate measure of their true level of academic readiness.

Third, the test content is often not aligned with what students need to know to succeed in their first college-level courses. For instance, math placement exams typically include topics that are beyond what students need to know to pass many math courses designed for liberal arts majors.

More broadly, placement tests are not designed to capture the mathematics, reading, and writing skills that students need to succeed in key introductory college-level courses in their area of study, such as history, sociology, and biology. Thus the tests are likely to be of little use in determining the likelihood of success in introductory-level courses overall.

**The placement exams are short and are intended to assess only a narrow set of academic skills; they cannot account for motivation, commitment, and other factors.**



## The Tension

Community colleges are aware that these standardized tests are imperfect, but the necessity of efficiently assessing and placing so many students at the start of each semester makes them reluctant to explore more effective alternatives. To understand how colleges might approach implementing a more effective exam while preserving short-term efficiency, we examine how the City University of New York (CUNY) community colleges developed and implemented a new writing assessment test.

## The Case of CUNY: Reconciling Efficiency and Effectiveness

### CUNY's Assessment System

CUNY's six community colleges are part of a larger, centralized system. All colleges use the same tests to assess and place students: the COMPASS for math and reading and, until recently, the CUNY/ACT for writing. Overall, the process is extremely efficient: Each year, about 30,000 students are assessed and placed; 75 percent of these students are assigned to one or more remedial courses.<sup>15</sup>

### CUNY's Old Writing Exam

Among English faculty, there had been widespread discontent with the writing exam. The exam required students to write a persuasive letter to a policymaker endorsing one of two policy options.

Faculty pointed out that the skills necessary for writing the persuasive letter did not align with the skills needed to succeed in introductory English in several ways: (1) The prompts typically had no connection to the students' lives or studies, whereas in a class, students would be asked to write about content they were studying; (2) a typical writing assignment in an English class would permit more rhetorical devices than the exam allowed; and (3) to score well, students had to follow a formulaic approach that did not reflect the approach one must take to write a successful essay in a typical English course.

At CUNY, students have to retake the assessment test and pass it before they can exit developmental education. As a result, instructors felt boxed in. They could "teach to the test" and risk having their students do poorly in college-level English, or they could prepare their students for college-level English and risk having some of them perform poorly on the exit exam.

Because of these problems, the CUNY faculty designed a new CUNY-wide writing exam, the CUNY Assessment Test in Writing, which was recently implemented.

**The necessity of efficiently assessing and placing so many students at the start of each semester makes colleges reluctant to explore more effective alternatives.**

"These students do just enough to pass that test. So when they get to college-level English and they have to write an expository essay that involves reading and responding to a reading, they are at a loss...But they mastered that little argumentative essay they needed to pass the ACT. So, the students are frustrated again because they say, well, I passed the ACT, so why am I not doing well in college-level English?"

– CUNY English faculty member

## The New CUNY Writing Exam

The new exam developed by CUNY’s English faculty addressed several drawbacks of the ACT writing test. First, the exam requires students to respond to a reading—an approach that is similar to the type of writing expected of students in college English. Second, students are allowed to use a wider array of rhetorical devices to respond to the prompt. For example, the previous exam strongly discouraged reflecting on the prompt using personal experience; as a result, this rhetorical tool was typically not taught in developmental writing.

Finally, rather than providing only one holistic score, readers rate several different aspects of writing quality, allowing for a more diagnostic set of results. The new writing exam now yields five separate scores: (1) critical response to writing task and the text; (2) development of writer’s ideas; (3) structure of the response; (4) language use: sentences and word choice; and (5) language use: grammar, usage, and mechanics.

Overall, faculty feel the new writing exam is more effective because it is aligned with the skills necessary to succeed in college-level English, and it provides important diagnostic information about students’ strengths and weaknesses. At the same time, the test has lost nothing in efficiency: Faculty report that it takes only marginally longer to grade than the old ACT writing exam.

## Resolving the Tension

CUNY’s new writing exam demonstrates that an exam can remain efficient while incorporating more diagnostic value. However, for these diagnostic exams to be worth the small tradeoff in efficiency, the additional information they provide must be leveraged to provide more effective treatment.

At CUNY, developmental English faculty members are beginning to use students’ scores on the exam to guide instruction. For example, an instructor who finds that a large portion of her class performed well on language use skills but poorly on their critical response to the reading may incorporate more intensive reading comprehension instruction into her course and de-emphasize grammar instruction. Because of its clear alignment with college-level English, faculty use the exam as both the midterm and the final—alternating the readings and questions but grading with the same rubric.

Further, colleges with a diagnostic writing exam could require a lab component for each developmental writing course, in which students receive additional support in identified areas of weakness. Modularized or diagnostic exams could also be leveraged to support differentiated readiness standards and developmental curricula across areas of study, a tactic that North Carolina and Virginia are currently pursuing.

---

**Because of its clear alignment with college-level English, faculty use the new exam as both the midterm and the final.**

# Tension Three: Supporting Student Progression Versus Maintaining Academic Standards

## Efforts to Uphold Standards Often Trump Supporting Progression

Nationwide, there is an ongoing push to improve college completion rates. Community college faculty and administrators support this effort to help more students graduate; they want their students to succeed. However, they are concerned that in order to meet institutional completion goals, they may be pressured to inflate student grades and “pass through” underachieving students.

Assessment and placement policies indicate that in practice, trying to maintain standards often trumps supporting progression. Research on placement exam accuracy finds that cutoffs are set such that many more students are underplaced than overplaced.<sup>16</sup>

This tendency to underplace students suggests that college administrators and practitioners would rather try to uphold standards by setting relatively high cutoff scores than risk overplacing students and have to maintain standards in a classroom of students with a wider range of skills.

## Supporting Student Progression: The Model of Acceleration

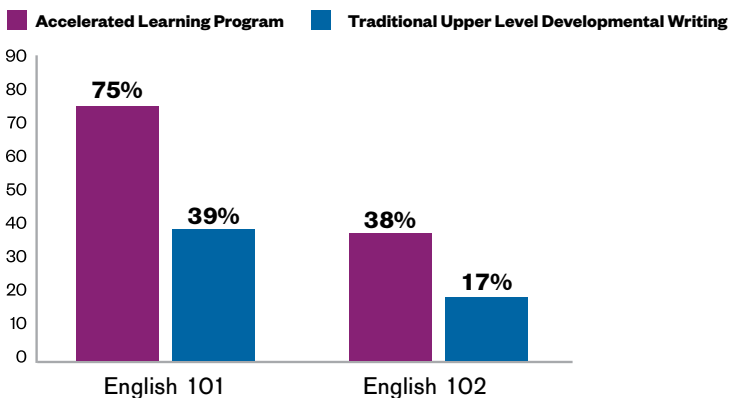
Colleges often feel ambivalent about implementing changes that might improve student progression but could possibly undermine academic quality. Mounting evidence suggests, however, that accelerated developmental models—such as shortening developmental sequences and mainstreaming upper level developmental students into college-level courses with mandatory supports—lead to improved outcomes for these students.

For example, a CCRC study of the Community College of Baltimore County’s (CCBC) Accelerated Learning Program (ALP)—which mainstreams upper level developmental writing students into college-level courses and simultaneously enrolls them in a mandatory support course taught by the same instructor—tracked ALP students for up to four years and found they were far more likely to complete English 101 (the first college-level composition course) and English 102 (the second college-level course) than similar students who enrolled in the traditional upper level developmental writing course.<sup>17</sup>

---

**Mounting evidence suggests that accelerated developmental models lead to improved outcomes for students.**

## College-Level Course Completion Rates at CCBC<sup>18</sup>



Other CCRC studies of acceleration strategies have found positive results across both math and English for students with a range of developmental needs.<sup>19</sup>

## The Tension

Community college faculty members are generally passionate about student success and willing to experiment with promising ways to improve it. However, some faculty members are wary of acceleration strategies because they are concerned that students will not learn as much in a shortened developmental sequence, or that students mainstreamed into college-level courses will struggle to keep up. Either approach, they fear, could force instructors to make an uncomfortable choice: Relax standards, or fail large numbers of students.

How can colleges reconcile these seemingly conflicting goals and concerns? In the next section, we review an accelerated English alternative at Chabot College in California to see how the college worked to implement a system that both supports student progression and upholds standards in college-level courses.

---

**Some faculty members are wary of acceleration strategies because they are concerned that students will not learn as much in a shortened developmental sequence.**

## The Case of Chabot College: Reconciling Standards and Progression

### Developmental English at Chabot

Chabot College, a suburban community college in northern California, is part of the California Community College System. It uses ACCUPLACER to assess incoming students for their remedial reading and writing needs. In fall 2011, 74 percent of tested students were assigned to remedial English.<sup>20</sup>

Chabot's English department offers two pathways to students who test below the cutoff required to enroll in the first college-level English course, English 1A. Students may choose either a two-semester remedial sequence or an accelerated alternative that teaches similar content compressed into one semester.

### Integrated Reading/Writing and Core Principles

The formation of Chabot College's current developmental English offerings began in the early 1990s, when a grant provided the opportunity and resources for the department to design a curriculum that integrated reading and writing in all English courses.

English faculty undertook the redesign of their curriculum by separating into working groups that investigated various approaches to reading and writing integration. The working groups met over two quarters and developed the new curriculum in the third quarter. Over the course of these meetings, faculty members identified a series of core principles—or “articulated assumptions”—to guide the curriculum across the department.

These principles state that remedial students should practice the same reading, writing, and thinking skills they encounter at the college-level. Consequently, students in remedial English read and write in response to complex, full-length texts, and instructors engage students in a whole language rather than a hierarchical sentence-to-paragraph approach for reading and composition.

**Faculty members developed clear goals for college-level English courses and worked backward to align remedial learning objectives with these goals.**

“Our thinking was the best way to prepare them for college-level English was to give them college-level English experiences. We wanted to give them lots of practice, and as much time as they needed. So we were focused on a top-down approach. We called it whole-language or holistic, but it wasn’t grammar versus immersion. It was about bringing in reading and writing, as well as all the communication skills.”

– Chabot English faculty member

## Aligned Learning Goals

To ensure continuity across English courses, faculty members developed clear goals for college-level English courses and worked backward to align remedial learning objectives with these goals. While instructors have flexibility in choosing reading and writing assignments, the common goals and core curricular and pedagogical principles drive the design and instruction of individual courses.

Critically, the department has continuously supported ongoing faculty review of the goals and core principles. These are subject to regular scrutiny and are updated and adjusted to improve instruction.

## Introduction of the Accelerated Pathway

The one-semester remedial English course was developed originally as part of a learning community. Remedial English students who were not in a learning community were still required to complete a two-semester sequence.

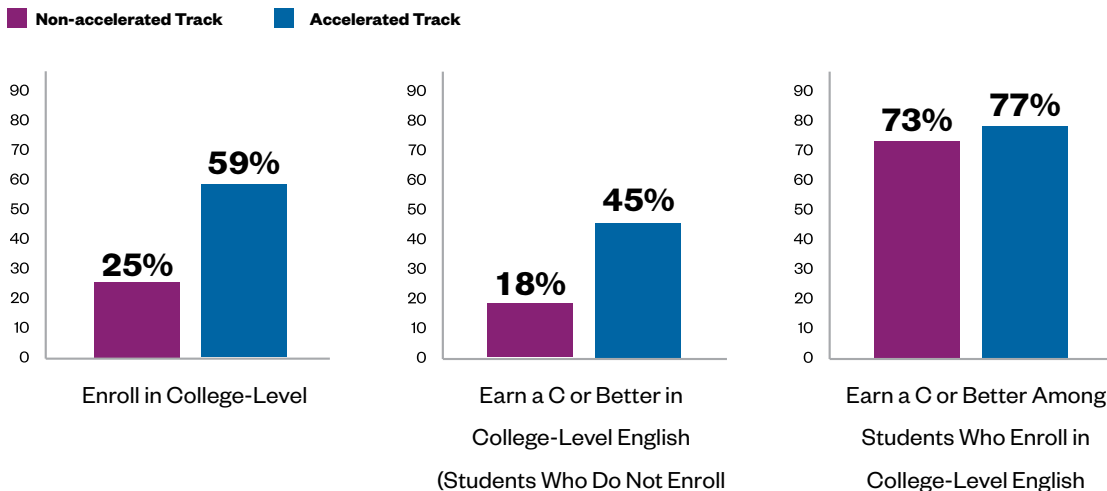
In 1996, faculty members proposed that the college offer an accelerated developmental reading and writing course to all students. Because of the college’s previous experience with a one-semester model, the proposal did not meet strong resistance. Many faculty members felt confident that the department’s established core principles would ensure that standards would be upheld for accelerated students.

However, some faculty believed that certain students would need more time to develop their reading, writing, and “college knowledge” skills, and that these students would benefit from the two-semester course. Accordingly, both options were made available to students.

The accelerated pathway officially appeared on Chabot’s course schedule in fall 1997. CCRC research indicates that those who chose the accelerated pathway were more likely to complete developmental English, enroll in college-level English (English 1A), and pass English 1A than students who chose the non-accelerated pathway.<sup>21</sup>

The higher success rates for accelerated students in college-level English were driven by two factors: Accelerated students were more than twice as likely to enroll in college-level English in the first place; and among students who enrolled in college-level English, they were more likely to earn a C or better.

### College-Level English (1A) Enrollment and Pass Rates for Accelerated and Non-accelerated Students One Year After End of Intervention<sup>22</sup>



Students at Chabot have the freedom to self-place into the one-semester course or the two-semester option. The accelerated pathway has demonstrated broad appeal to students, and the majority of Chabot’s developmental English students now enroll in the accelerated alternative.

### Resolving the Tension

The Chabot example demonstrates the importance of establishing clear learning goals and shared core principles when implementing accelerated remediation models. Because Chabot’s English department had explicitly discussed their assumptions about literacy learning and had studied the available research on best practices in both remedial and college-level courses, faculty members felt comfortable that standards would be maintained under the accelerated approach.

Acceleration may be even more effective when the curriculum of accelerated developmental classes is tailored to the skills students need to succeed in their program of study. For instance, in Washington State’s Integrated Basic Education and Skills Training (I-BEST) program, basic skills and career-technical instructors co-teach classes that integrate basic skills instruction into a particular program of study. Students participating in this program have demonstrated higher levels of persistence, college credit accrual, and degree attainment.<sup>23</sup>

**Acceleration may be even more effective when the curriculum of accelerated developmental classes is tailored to the skills students need to succeed in their program of study.**

## Endnotes

1. Bailey, T. (2009).
2. Strong American Schools. (2008).
3. Jaggars, S. S., & Hodara, M. (2011).
4. Bettinger, E., & Long, B. (2003).
5. Hughes, K. L., & Scott-Clayton, J. (2011).
6. Hodara, M., Jaggars, S. S., & Karp, M. M. (2012).
7. Hughes, K. L., & Scott-Clayton, J. (2011).
8. Belfield, C., & Crosta, P. M. (2012); Scott-Clayton, J. (2012).
9. Scott-Clayton, J. (2012).
10. Urban system math estimation sample represents 6,100 entrants from 2004–2007. English estimation represents 9,100 entrants from 2004–2007.
11. Belfield, C., & Crosta, P. M. (2012).
12. State system estimation sample represents student entrants from 2008 and 2009—3,461 students who took ACCUPLACER math, 2,431 who took COMPASS math, 3,333 who took ACCUPLACER English, and 4,780 who took COMPASS English.
13. Scott-Clayton, J. (2012).
14. Scott-Clayton, J. (2012).
15. Jaggars, S. S., & Hodara, M. (2011).
16. Scott-Clayton, J. (2012).
17. Cho, S. W., Kopko, E., & Jenkins, D. (2012).
18. CCBC data from a sample of 6,137 students who took ENGL052 (the highest level of developmental writing) for the first time from fall 2007 to fall 2010. Analysis controlled for student characteristics including race, gender, age, socioeconomic status, enrollment status in first term, and placement test scores.
19. Jaggars, S. S. (2012).
20. Data retrieved from Chabot College Office of Institution Research, “English and Math Assessment for New Students: Fall 2011.”
21. Edgecombe, N., Xu, D., Barragan, M., & Jaggars, S. S. (2012).
22. The Chabot sample consists of 9,824 first-time students who took developmental English during or after the summer of 1999 until fall 2010. The analysis controlled for student characteristics including race, gender, age, socioeconomic status, academic background, and intervention semester information (such as prior credits, GPA, and full- or part-time status).
23. Zeidenberg, M., Cho, S. W., & Jenkins, D. (2010).

## Sources

- Bailey, T. (2009). Challenge and opportunity: Rethinking the role and function of developmental education in community college. *New Directions for Community Colleges*, 145, 11–30.
- Belfield, C., & Crosta, P. M. (2012). *Predicting success in college: The importance of placement tests and high school transcripts* (CCRC Working Paper No. 42). New York, NY: Columbia University, Teachers College, Community College Research Center.
- Bettinger, E., & Long, B. (2003). *The effect of remediation on student outcomes: The plight of under-prepared students in higher education* (Working Paper, cited with authors' permission). Cleveland, OH: Case Western University.
- Cho, S. W., Kopko, E., & Jenkins, D. (2012). *New evidence of success for community college remedial English students: Tracking the outcomes of students in the Accelerated Learning Program (ALP)*. New York, NY: Columbia University, Teachers College, Community College Research Center.

Edgecombe, N., Xu, D., Barragan, M., & Jaggars, S. S. (2012). *Analysis of Chabot College's accelerated developmental English course*. New York, NY: Columbia University, Teachers College, Community College Research Center. Manuscript in preparation.

Hodara, M., Jaggars, S. S., & Karp, M. M. (2012). *Improving developmental education assessment and placement: Lessons from community colleges across the country*. New York, NY: Columbia University, Teachers College, Community College Research Center.

Hughes, K. L., & Scott-Clayton, J. (2011). *Assessing developmental assessment in community colleges* (CCRC Working Paper No. 19). New York, NY: Columbia University, Teachers College, Community College Research Center.

Jaggars, S. S. (2012). *Acceleration research (CCBC, CCD, and Chabot)* [PowerPoint slides]. Presentation given at the National Center for Postsecondary Research Conference on Developmental Education, New York, NY.

Jaggars, S. S., & Hodara, M. (2011). *The opposing forces that shape developmental education: Assessment, placement, and progression at CUNY community colleges* (CCRC Working Paper No. 36). New York, NY: Columbia University, Teachers College, Community College Research Center.

Scott-Clayton, J. (2012). *Do high-stakes placement exams predict college success?* (CCRC Working Paper No. 41). New York, NY: Columbia University, Teachers College, Community College Research Center.

Strong American Schools. (2008). *Diploma to nowhere*. Washington, DC: Author.

Zeidenberg, M., Cho, S. W., Jenkins, D. (2010). *Washington State's Integrated Basic Education and Skills Training Program (I-BEST): New evidence of effectiveness* (CCRC Working Paper No. 20). New York, NY: Columbia University, Teachers College, Community College Research Center.

---

*This research overview was prepared by Shanna Smith Jaggars, Michelle Hodara, and Georgia West Stacey, Community College Research Center, Teachers College, Columbia University. Funding was provided by the Bill & Melinda Gates Foundation.*



# Frequently Asked Questions About CCRC's Assessment Validity Studies

In March 2012, CCRC released two studies examining how well two widely used assessment tests—COMPASS and ACCUPLACER—predict the subsequent performance of entering students in their college-level courses. The studies, *Do High-Stakes Placement Exams Predict College Success?* and *Predicting Success in College: The Importance of Placement Tests and High School Transcripts*, can be found at <http://ccrc.tc.columbia.edu>.

Both studies found that assessment scores are not highly predictive of subsequent student performance and that many students are misplaced in college-level and developmental classes based on their scores on these tests. This document is intended to address some of the frequently asked questions about the studies.

## **1) What methods and data were used for the predictive validity studies?**

Both studies analyzed data from students who had high school grades, placement test scores, and demographic information available and who enrolled directly in college-level courses. The researchers linked students' grades in those courses with their background factors and were then able to make predictions about how entering students with scores below the college-ready cutoff might have performed if they had gone directly into college-level math and English.

## **2) Explain what the measure of success is in the predictive validity study.**

There are several different ways to measure success. For example, should we consider success in college-level math as earning a B or better? Or as merely passing the course with a D or better? Accordingly, the validity studies also use several different definitions of success and examine placement accuracy under each of these definitions. This method allows us to see that placement accuracy changes depending on how success is measured. The test's accuracy at predicting student success in college coursework is higher when the measure of success is higher (e.g., earning a B or better) but lower when the measure of success is lower (e.g., merely passing the course).

## **3) At my college, we use COMPASS/ACCUPLACER to assess students. Are we placing a large number of students in remediation who could have succeeded in college-level coursework?**

Our validity studies show that an assessment and placement process that relies solely on a test score from a computer adaptive exam results in some placement error in two different systems. The exact amount of error will be unique to each community college system. However, both

systems we studied had high rates of “severe underplacement.” In other words, many students who were placed into developmental classes were predicted to have earned a B or better in college-level classes—suggesting that other systems may also wish to examine whether they have issues with underplacement.

#### **4) Why was high school GPA used as an alternative predictor of success in college coursework? There is wide variation in standards across high schools and grade inflation, so why would this be a good measure of academic preparedness?**

In the systems we studied, high school GPA was readily available because it was routinely provided by state high schools and recorded in the college system’s administrative dataset. It is true that there may be grade inflation and differences across high schools in terms of standards. Despite these problems, however, high school GPA predicts college performance as well as or better than standardized placement exams. The value of high school GPA is that it signals far more than just math or writing skills; it also signals students’ academic motivation, persistence, and other non-cognitive characteristics. High school grades also measure learning over several years and thus may be more reliable than a relatively short test.

#### **5) Why not use students’ SAT scores or ACT scores instead of high school GPA as a predictor of success in college coursework?**

SAT/ACT scores are already used as a placement measure in many college systems (including the systems in the validity studies); typically they are used to determine whether a student is exempt from placement testing. However, because many students do not have SAT or ACT scores, our researchers did not analyze their validity in predicting college performance. The validity studies do make the case for using additional measures of academic preparation for placement, particularly measures that incoming community college students are more likely to have, such as high school GPA.

#### **6) Should we get rid of our placement tests?**

The CCRC studies do not, on their own, provide an answer to this question. Colleges may wish to examine the validity of their own assessments and consider whether other measures of academic skill (such as state high school exit exam scores, SAT/ACT scores, or high school performance information) could be used as an alternative. For one of the systems studied by CCRC, using a combination of high school information and placement exam scores resulted in more accurate placement decisions than using either source on its own. Finally, before changing their placement process, colleges may want to consider other factors that were not an explicit focus of these studies, such as the availability and accuracy of high school data for older students.

#### **7) What about older students with no high school GPA? Are they in the study?**

Students with no high school GPA are not included in the validity studies. For older students who graduated from high school many years ago, it is not clear how long GPA remains a valid signal of academic performance in college. To the extent that GPA captures academic-related characteristics (such as attending class regularly and completing assignments on time) that are stable within a person across time, it is likely to remain a good predictor of college success. However, its value as a signal of specific academic skills (such as mathematics skills) will likely erode over time.

**8) Could there be other explanations for overplacement and underplacement errors?****Perhaps students who scored poorly on the exam were successful in college-level courses because they encountered an excellent instructor who helped them succeed.**

Yes, grades in developmental and college-level coursework are the result of many different factors, including student motivation, out-of-school commitments and stressors, and the quality of instruction and nonacademic supports provided by the program. Given that placement tests and high school GPA together typically explain less than 15 percent of the variance in students' performance, obviously these factors are very important in explaining the remaining 85 percent. Ideally, then, all these factors should be taken into account as part of the placement process. Our studies merely point out that many students deemed by a standardized placement test to be underprepared can in fact succeed in college-level coursework.

**9) Aren't there better ways of determining whether students are placed accurately, such as teacher judgment or whether students change courses after placement?**

Student reassignment and instructor judgment may not provide a consistent and comprehensive understanding of assessment test accuracy. Many students do not realize that they can change courses, and many others are not permitted to. A particularly rigid system—in which students are never permitted to switch classes—would appear to have perfect placement under the self-reassignment criterion.

In terms of teacher judgment, it is difficult to collect this information across an entire system of colleges in order to conduct a comprehensive and rigorous evaluation of the tests. However, teachers' judgments about student readiness will ultimately be reflected in the grade they award the student; for example, regardless of how hard the teacher works, students who are overplaced will be more likely to fail the course than students who are correctly placed. CCRC was able to observe the grades that hundreds of thousands of students received in their courses and compare those to their test scores.

**10) How do we use high school GPA to place students? And what about placing our older students? What does it mean on a practical level to use multiple measures?**

This is an important question that needs to be explored further. Some colleges are considering using high school GPA as an exemption criterion, much as the SAT/ACT is currently used at many schools. GPA could also be used in addition to placement test scores. For example, if a student scores low on the placement exam but the student's GPA indicates he or she did reasonably well in high school (perhaps a B or better in math/English), then the student could be placed into an accelerated developmental course or into a college-level course that includes integrated academic support.

One limitation of using high school GPA to make placement decisions is that not all students have this information. But even knowing that an incoming student does not have a high school transcript raises questions about a student, and answering these questions could be helpful in making more informed placement decisions. For example, does the student not have a high school transcript because he or she is a recent immigrant? In such cases, meeting with the student to understand his or her educational background could help inform a much more accurate placement.



# Designing Meaningful Developmental Reform

**Presenter name, title - set in 20pt Arial Bold**

Based on material provided by the Community College Research  
Center, Teachers College, Columbia University

# Tension One: Institutional Autonomy vs. System-wide Consistency

# Autonomy Vs. Consistency

## THE CASE FOR SYSTEM-WIDE CONSISTENCY

- Reduces inequity and confusion for students.
- Communicates consistent, clear college-ready standards to students and high schools
- Common standards make it easy to track student performance across colleges & smooth the process of transfer between colleges.

## THE CASE FOR AUTONOMY

- No clear evidence on what developmental policy is most effective.
- Colleges have flexibility to implement policies that they believe best serve their students.
- Given absence of evidence on what the optimal policy is, system-wide consistency may guarantee little more than uniform implementation of ineffective policy.

# Tension Two: Efficient vs. **Effective** Assessment



# Efficient vs. Effective

## THE CASE FOR EFFICIENT ASSESSMENT

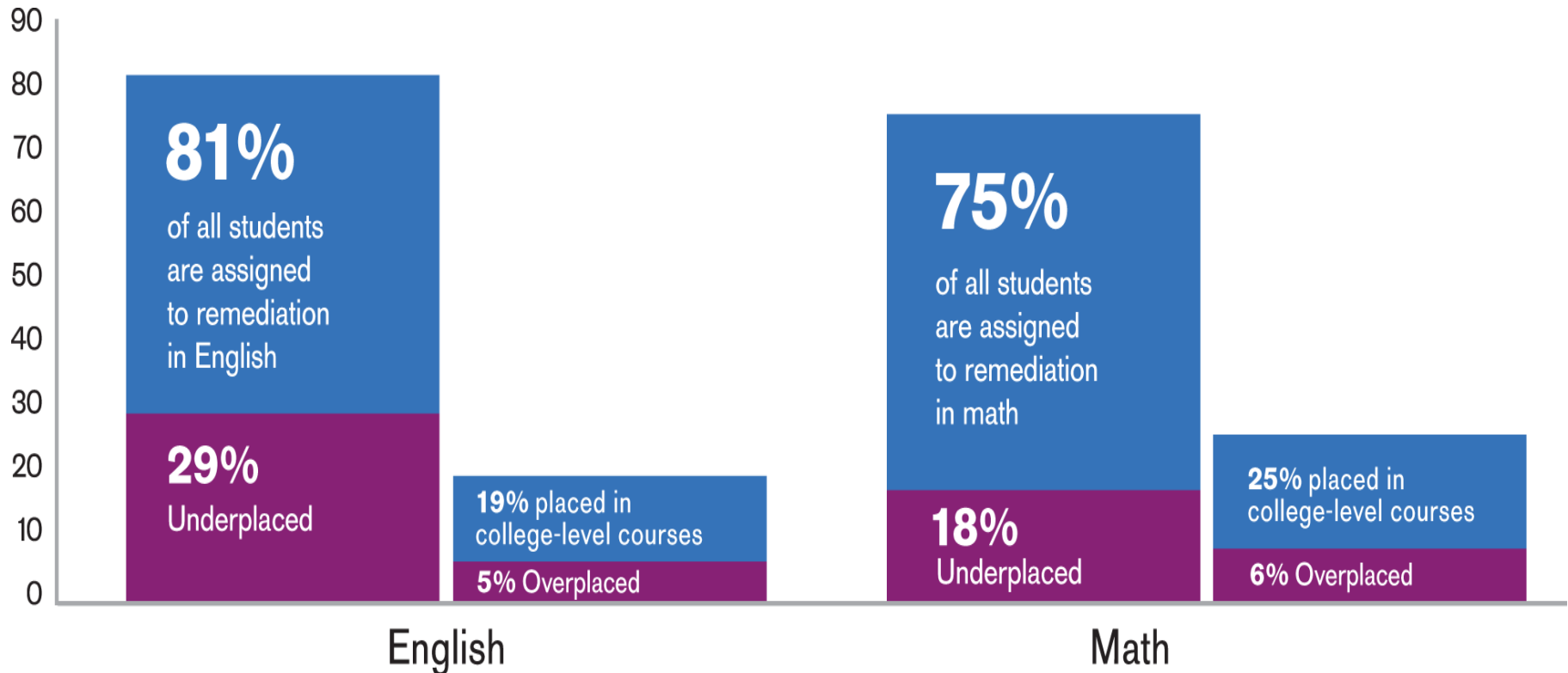
- CCs must evaluate thousands of incoming students every year.
- Computer adaptive placement tests can do this quickly and cheaply.
- Tests can be administered quickly, scored by computer, and can almost instantaneously determine placement for each student.

## THE CASE FOR EFFECTIVE ASSESSMENT

- Efficiency of computer adaptive tests goes hand in hand with high rates of failure and attrition.
- Current tests are not aligned with content students need to know to pass college-level classes.
- Tests are not diagnostic – do not provide information instructors can use in subsequent treatment.
- Tests don't assess non-academic competencies.

# Using a Single Test Score Results in High Rates of **Severe Placement Errors**

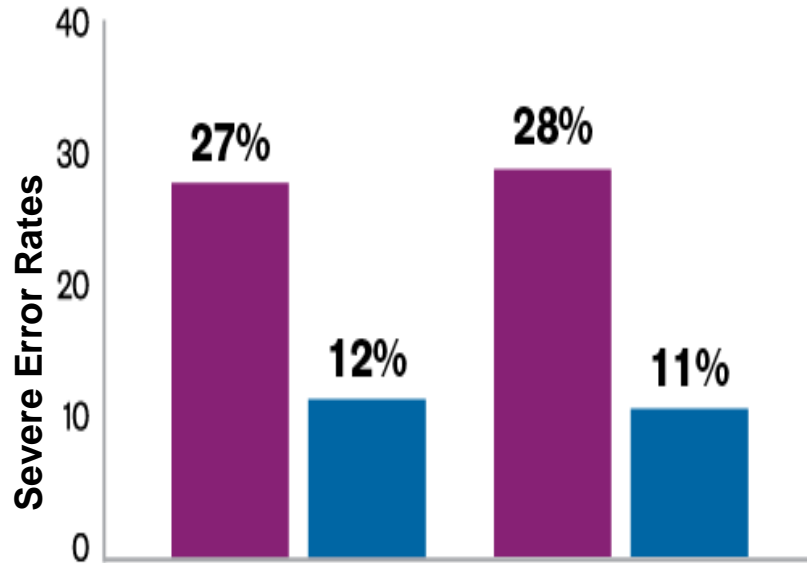
- Severe underplacement into developmental courses is more common than severe overplacement into college-level courses.



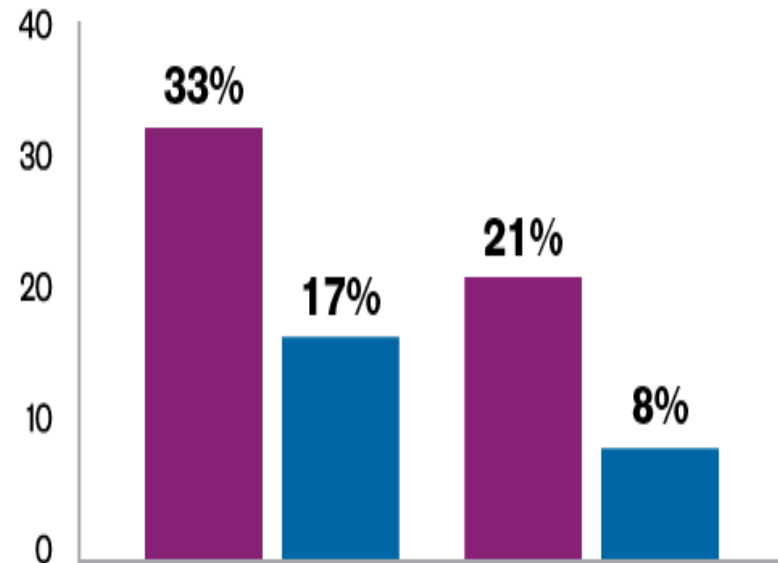
# State System: Using **High School GPA** Could Cut Severe Error Rates in Half

**Placement Test**      **High School GPA**

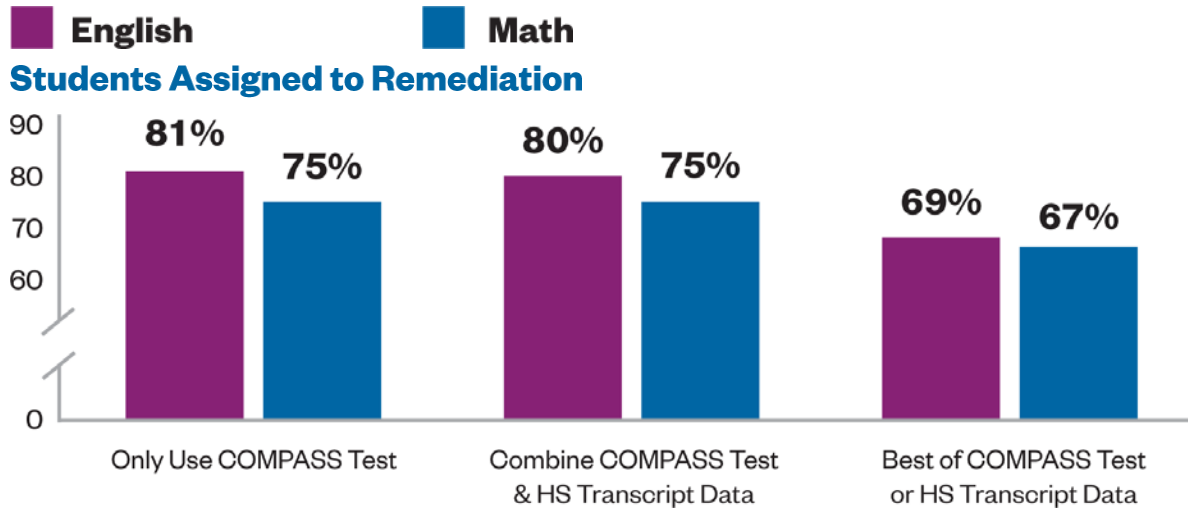
**COMPASS Test vs. High School GPA**



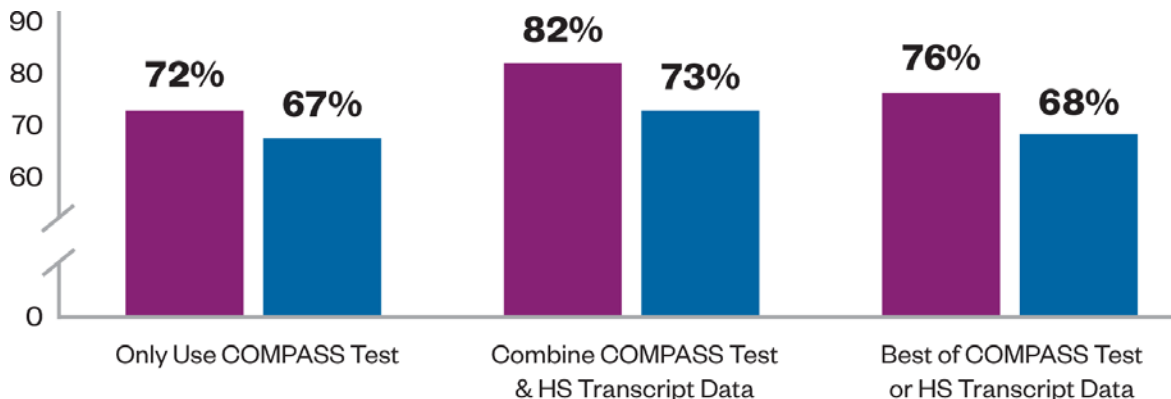
**ACCUPLACER Test vs. High School GPA**



# Urban System: Using High School Transcript Data Could Lower Remediation Rates While Increasing College-Level Success Rates



**Students Assigned Directly to College-Level Courses Who Receive a C or Better**



# Tension Three: Supporting Student **Progression** versus Upholding Academic Standards

# Progression vs. Standards

## THE CASE FOR SUPPORTING PROGRESSION

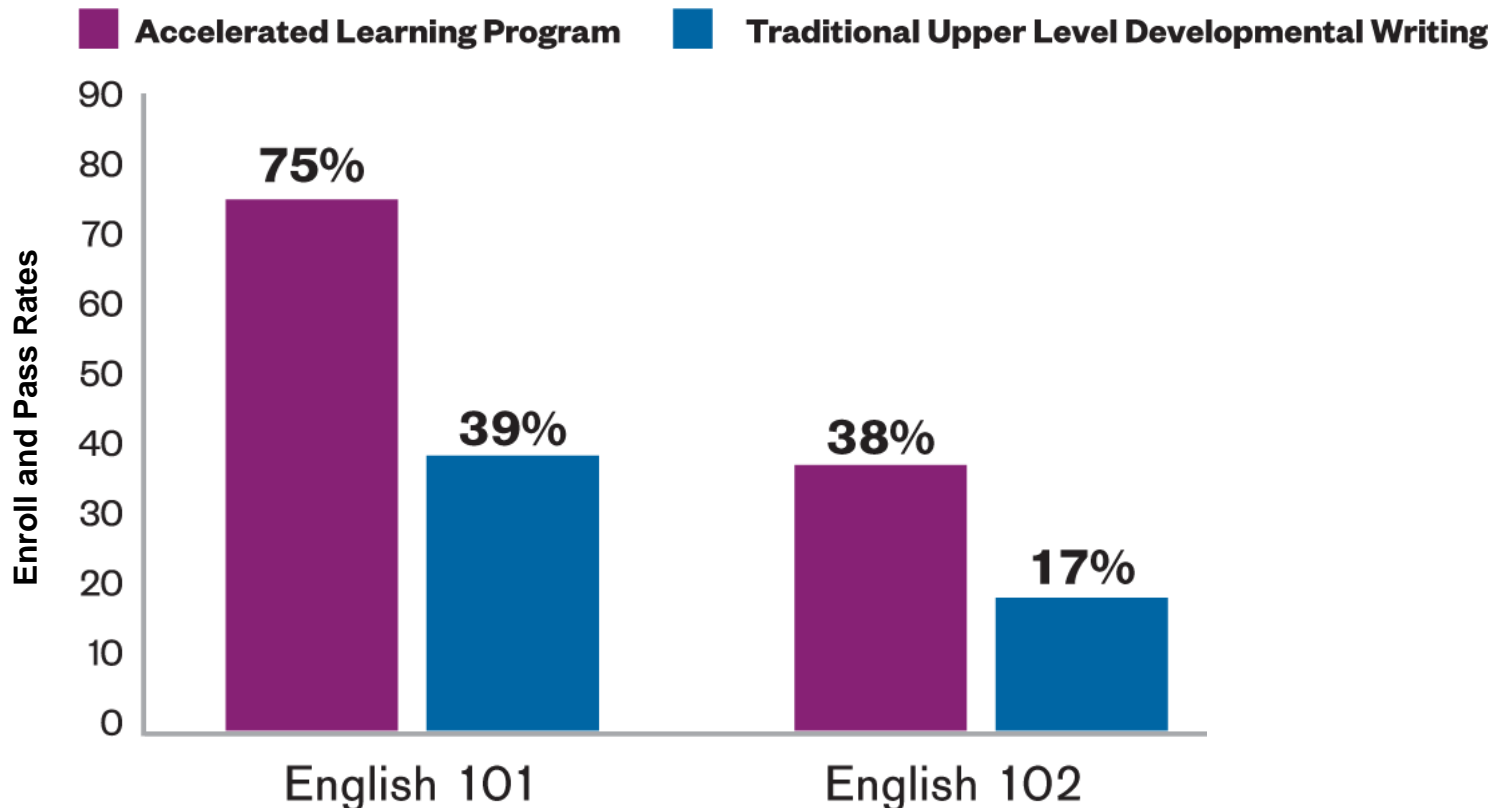
- National push to increase college completion hampered by high rates of remediation.
- Only 28% of developmental students go on to earn a credential.
- The longer the remedial sequence, the less likely students are to complete it, or enroll in and complete college-level classes.

## THE CASE FOR UPHOLDING STANDARDS

- Reforms designed to support progression may result in greater numbers of underprepared students in college-level classes.
- Students may fail in a more challenging environment and drop out.
- Faculty fear they will have to lower standards and/or fail large #s of students.
- Value of college degree could be degraded.

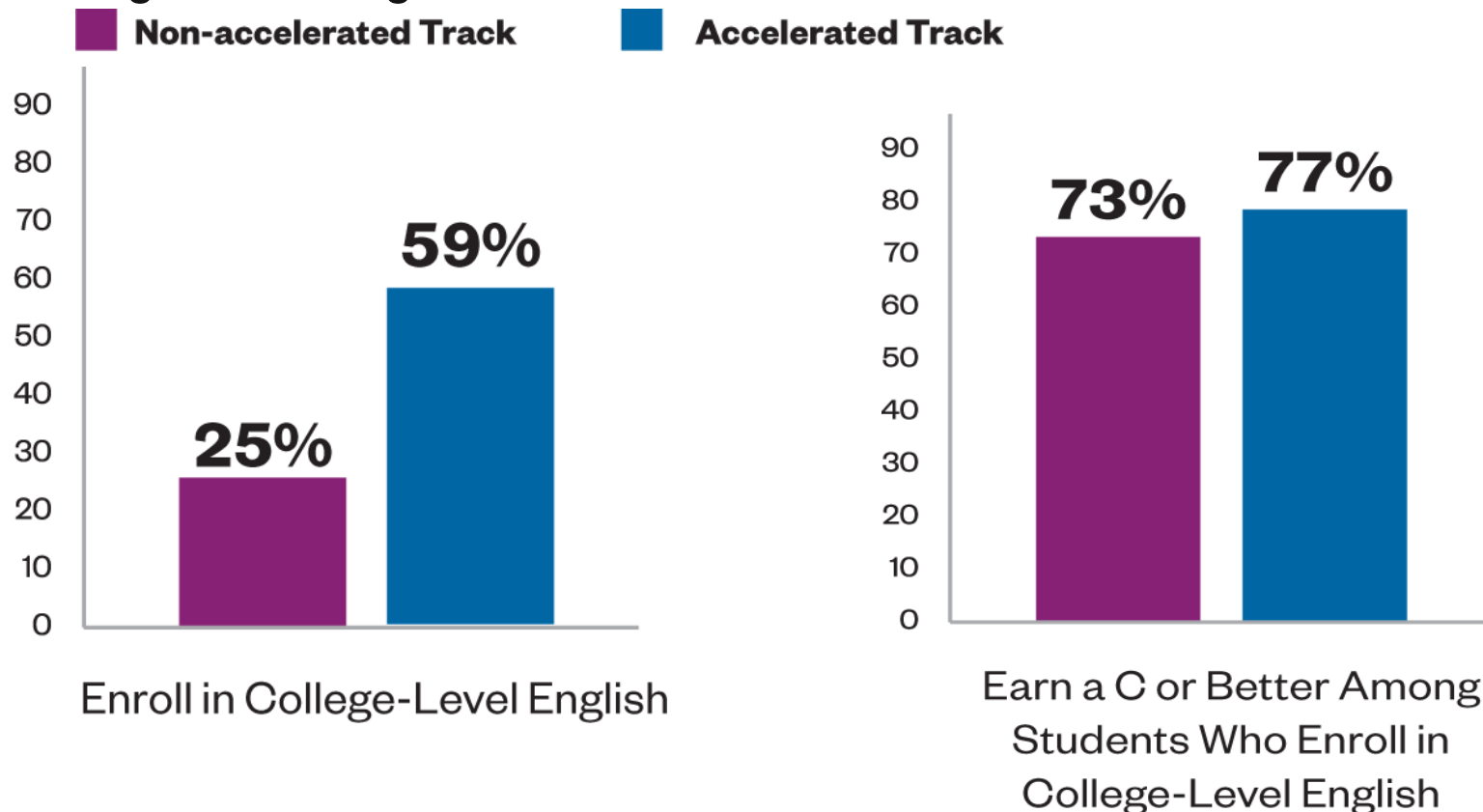
# Acceleration Models May Improve Developmental Student **Progression**

- CCBC-ALP 3-year outcomes demonstrate significantly higher rates of completion in first and second college-level composition classes.



# High-Quality Acceleration Maintains **Pass Rates** in College-Level Classes

- Chabot College's accelerated pathway raises English college-level enrollment AND accelerated students are equally likely to pass college-level English.





# References

Belfield, C., & Crosta, P. M. (2012). *Predicting success in college: The importance of placement tests and high school transcripts* (CCRC Working Paper No. 42). New York, NY: Columbia University, Teachers College, Community College Research Center.

Cho, S. W., Kopko, E., Jenkins, D., & Jaggars, S. S. (2012). *New evidence of success for community college remedial English students: Tracking the outcomes of students in the Accelerated Learning Program (ALP)*. New York, NY: Columbia University, Teachers College, Community College Research Center.

Edgecombe, N., Xu, D., Barragan, M., & Jaggars, S. S. (2012). *Analysis of Chabot College's accelerated developmental English course*. New York, NY: Columbia University, Teachers College, Community College Research Center. Manuscript in preparation.

Scott-Clayton, J. (2012). *Do high-stakes placement exams predict college success?* (CCRC Working Paper No. 41). New York, NY: Columbia University, Teachers College, Community College Research Center.

# For more information

**Please visit us on the web at**

<http://ccrc.tc.columbia.edu>

where you can download presentations, reports,  
and briefs, and sign-up for news announcements.

We're also on [Facebook](#) and [Twitter](#).

**Community College Research Center**  
**Teachers College, Columbia University**  
525 West 120th Street, Box 174, New York, NY 10027  
E-mail: [ccrc@columbia.edu](mailto:ccrc@columbia.edu) Telephone: 212.678.3091