



# Using State Policies to Ensure Effective Assessment and Placement in Remedial Education

### **Getting Past Go Project**

Education Commission of the States (ECS)

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The staggering number of college students who require at least one remedial course—40% overall and 58% at community colleges<sup>1</sup>—coupled with low college success rates for remedial students threaten to undermine national and state efforts to significantly increase postsecondary attainment rates. These realities have prompted a wave of innovation in remedial instruction that is focused on accelerating the entry of unprepared students into college-level coursework and their programs of study, and onto earning a credential.

While improvements in instruction are needed, recent research has revealed that the problems in developmental education can largely be attributed to weak assessment and placement policies and practices that often result in many students being placed in remedial instruction they don't need. Consequently, these policies and practices must be rethought and revised to complement advancements in instructional delivery, resulting in a necessary systemic overhaul of remedial education systems in states.

The following brief will examine current state and postsecondary system policies that regulate assessment and placement in light of the new research revealing the current failings of these practices on many college campuses.

### **Assessment and Placement 101**

At the beginning of every term, thousands of students across the nation enroll in colleges with the hope of earning a postsecondary credential. Before taking their first class, however, most students are asked to take a test that could determine their postsecondary fate. The test, known as a placement exam, assesses student skills in reading, writing, and mathematics. Depending on their performance, students can either be given the go-ahead to enroll in college-level courses or may be placed in one, two, three, or more semesters worth of developmental courses that don't accumulate credit toward a degree. Under this system, somewhere between 40% and 60%<sup>2</sup> of all students at an institution are placed into developmental instruction.

Given the high-stakes nature of placement decisions, one would expect that state and postsecondary system policies would require institutions to take steps to ensure that tests are valid measures of student skills, that students are fully aware of the implications of the exam, and that campuses provide resources that will help them prepare for the assessment. In most cases, however, the policies are largely silent on these matters. Instead, the policies do little more than identify the exams and cut scores that campuses can use to sort students into remedial or college-level courses.

New research is demonstrating that the common approach for assessment and placement often fails to effectively distinguish between students who would benefit from remediation and those who could succeed in college-level classes with additional support. At a time when there is tremendous innovation happening with instructional delivery in developmental education, it may be time for a Manhattan Project to redesign assessment and placement practices across the nation.

## **Evaluating the Effectiveness of Assessments**

Nearly every postsecondary institution uses standardized tests to determine students' readiness for college-level work, and typically requires those who do not meet specified cut scores to enroll in one or more semesters of remedial courses.

Several states maintain standardized policies to oversee this process by approving particular assessments and setting cut scores for course placement. Some states leave most—if not all—of these decisions to postsecondary systems or institutions. Still, other states try to strike a balance between these two approaches.

A preliminary review conducted by the Education Commission of the States found that 13 states and 17 postsecondary systems—typically for community colleges—have policies that establish guidelines for placement assessments (See Appendix A). For the most part, these policies articulate which assessments and cut scores institutions can use to assign students to college-level or remedial courses.

In several cases, institutions can select among a list of approved assessments or accept another exam in lieu of the primary one, but the cut scores are usually set by the state or system. Some states allow institutions to set higher standards beyond the established minimum cut score. A handful of community or technical college systems allow their campuses to choose cut scores within a designated range on approved assessments, typically to direct students into different developmental course levels. While states and systems articulate the cut scores, few explain in their policies how these cut scores were derived or the academic competencies that student performance on the assessments represent. Regardless of whether states, postsecondary systems, or individual institutions select the assessments or cut scores, course placement decisions are primarily driven by a single exam and standard.

With few exceptions, states and postsecondary systems select among the most commonly used, standardized assessments to determine the courses in which students should be placed. The ACT and SAT, which are administered by ACT, Inc. and the College Board, respectively, are typically used by four-year institutions for admissions and course placement. Community colleges often accept scores from these tests, but most often use two computer-based exams: College Board's ACCUPLACER and the COMPASS, developed by ACT, Inc. The ASSET assessment also is administered by several two-year institutions, especially if computer access is not available.

Recent research, however, is raising questions as to whether commonly used assessments are the most effective—and only—means to determine which courses are most appropriate for students.

A couple of studies from the Community College Research Center (CCRC), Assessing Developmental Assessment in Community Colleges<sup>3</sup> and Do High-Stakes Placement Exams Predict College Success?<sup>4</sup> found that the most commonly used placement exams at two-year institutions are not particularly good predictors of which students should be referred to remedial education. In addition, the working papers note that the assessments often resulted in misplacements of students who are unprepared for college courses and those who are over-prepared for remediation.

The findings are based, to a great degree, on an analysis of the predictive validity of the ACCUPLACER and COMPASS assessments. While the authors found the exams to be reasonably good predictors of how well students will perform in college-level courses, they found significant error rates in terms of placement into college-level vs. developmental education courses. Yet, at most institutions, scores on the assessments are the only measure used to assign students to remedial courses.

While it might be easy to conclude from the recent studies that institutions are using flawed assessments, the researchers assert that it is not the instruments that are the problem, but how they are being used. Specifically, institutions do not conduct the necessary validity testing to ensure that the assessments measure student knowledge of the academic skills the institution requires to be ready for college-level work. While such reviews can be time consuming and costly, the research suggests that if institutions insist on using the assessments to make high-stakes decisions based on the results, then they should regularly test their validity against college-level skills and expectations.

Despite the research showing limits on the predictive validity of existing exams, we found only three states with policies requiring regular reviews of the sanctioned assessments either by examining the cut scores and/or the exams themselves. None of the policies explicitly indicate that the evaluations should include a validity test to determine if the assessments accurately measure student readiness for college-level work. We also indentified examples of states or postsecondary systems conducting one-time reviews of placement exams or cut scores, typically when they have undergone changes to their assessment systems or explored the need to do so.

A Minnesota State Colleges and Universities system policy requires an established committee to periodically review testing instruments and provide recommendations regarding the assessments, cut scores, policies and procedures, and other items needed to address consistency of assessment and placement practices. Our review uncovered only two state policies that call for a regular evaluation of the cut scores, but not of the actual assessment instruments. The Oklahoma State Regents annually review their ACT minimum cut scores and the Tennessee Board of Regents will conduct biannual evaluations of college readiness benchmarks based, in part, on ACT recommended scores. Neither policy, however, spells out how the agencies should conduct the reviews.<sup>5</sup>

Given the research on the validity of placement exams and the dearth of policies articulating the need to review placement exams, it appears that setting expectations for validity testing could be an area of policy development in most states.

## **Moving Toward More Precise and Multiple Measures**

With recent research confirming that single assessments are not effective at placing students in appropriate coursework, there is a growing recognition that institutions should use multiple measures to determine college readiness and placement. Those measures might include: high school grade point average (GPA), high school transcripts, more precise diagnostic tools that identify specific student deficiencies, or tools that measure non-cognitive variables like student motivation and effort.

In the report Assessing Developmental Assessment in Community College<sup>6</sup>, the authors suggest that the use of multiple measures could result in course placement and interventions that better meet students' individual needs. The additional research done by CCRC in two studies, Do High-Stakes Placement Exams Predict College Success?<sup>7</sup> and Predicting Success in College: The Importance of Placement Tests and High School Transcripts<sup>8</sup>, confirms this finding by concluding that multiple measures are far more effective at placing students into the appropriate developmental or college-level course. The working papers found that a student's high school GPA turns out to be a more accurate and consistent measure for course placement and a better indicator of performance in college-level classes than scores on the common placement assessments.

An examination of state and system policies, however, reveals that few require measures beyond the traditional college placement tool. These policies fall into two basic categories: multiple measures and diagnostic assessments.

#### **Multiple Measures**

California is one state that has required multiple measures be used for course placement. In an effort to create a common system of assessments and cut scores, Assembly Bill 743 enacted in 2011 expands the current requirements for multiple measures and directs the California Community College system to use the following information for course placement and advising: the common placement exam, all available K-12 assessment data, and other data or student transcript information. Students and advisors will have access to this information through a central data warehouse, which should lead to more efficient and informed placement decisions.

The Minnesota State Colleges and Universities system policy for assessment and course placement indicates that institutions may require additional measures (e.g., computer literacy, study skills inventories, or occupational-related tests) for advising and placement purposes. In Mississippi, institutions can consider high school performance, ACT scores (if available), placement testing, special interests and skills, as well as other non-cognitive factors for course placement of students who do not meet the full admissions standards. Oklahoma's entry-level assessment and placement policy directs institutions to conduct additional testing for students who score below the minimum ACT standards to determine their appropriate course placement. The institutional assessment programs should include an evaluation of past academic performance, educational readiness (such as mental, physical, and emotional), educational goals, study skills, values, self-concept, and motivation.<sup>9</sup> Colorado is expected to enact legislation this session that will direct institutions to consider multiple measures for course placement and admission decisions.

#### **Diagnostic Assessments**

While less than a handful of states or postsecondary systems appear to incorporate multiple measures for course placement, the movement toward diagnostic assessments is beginning to pick up steam. Both ACT and the College Board developed—and are continuing to refine—diagnostics that are designed to pinpoint students' strengths and weaknesses in content areas and even for specific skills, such as sentence structure and linear equations. The assessments, which can be coupled with the COMPASS and ACCUPLACER placement exams, are intended to more precisely identify students' deficiencies and the remedial instructional approaches that would be most appropriate to get them up to speed as quickly as possible.

Florida, with the assistance of McCann and Associates, launched the Postsecondary Education Readiness Test (PERT), a state-specific, customized assessment that will be used to place most students into remedial or college-level courses. The PERT is tied to the Florida Postsecondary Readiness Competencies that faculty members identified as necessary for entry-level, credit-bearing classes. The competencies also have been aligned with the Common Core State Standards in English/language arts and mathematics. Florida has set placement ranges for math, reading, and writing, as well as a statewide cut score for placement into college-level courses.

Florida faculty also developed common competencies for developmental education that were divided into higher and lower levels of instruction. Cut score ranges have been set for both levels. The upper-level courses are the basis for postsecondary preparation classes in high schools, which are designed to reduce the need for remediation before students arrive on campus. The PERT system also includes a diagnostic

exam for students who do not meet the college-level cut score. Faculty can use the test results to tailor student's instruction and the remedial education competencies to gauge their readiness for progressing into college-level coursework.

Virginia's community college system also has contracted with McCann and Associates to develop diagnostic exams that support redesigned remedial math and English courses. The courses are based on competencies and the curriculum is broken into modules that students complete in a self-paced manner. The diagnostics will help identify the students' academic deficits and the appropriate module in which students should begin their coursework. North Carolina community colleges have a similar redesign initiative underway and are in the process of adopting diagnostic exams. Community colleges in Colorado and Indiana are heading in the same direction as part of their efforts to reform developmental education instruction.

Tennessee is pursuing a statewide redesign strategy that incorporates curriculum modules, college-level competencies, and diagnostic exams. Institutions are expected to employ a self-selected diagnostic assessment as part of the assessment and placement process. At this point, however, the state has not developed or required campuses to use a specific diagnostic. The initiative is designed to give students the opportunity to complete remediation in one semester and will offer developmental education exit points based on the academic requirements of students' chosen program of study.

In 2011, Texas enacted Senate Bill 162 that directs the Higher Education Coordinating Board to develop a statewide developmental education plan. Among the provisions is a requirement to include diagnostic assessments to determine students' specific educational needs and to drive appropriate instruction. The legislation also requires the board to assess various developmental education delivery methods, including through the use of technology and modular course materials.<sup>10</sup>

Lastly, the final report by the California Student Success Task Force<sup>11</sup>, which was endorsed by the Board of Governors and will be presented to the legislature, calls for the community colleges to develop and implement a common, centralized assessment system—which is in line with Assembly Bill 743, mentioned previously. The task force, however, was more specific and recommends that the colleges should adopt an assessment that can provide diagnostic information for course placement and to inform curriculum. Over time, the task force envisions that the assessment system will be aligned with the Common Core standards and assessments.

Diagnostic assessments hold the promise to more precisely identify students' academic skill deficits and help identify the most appropriate instructional delivery approach or intervention. But the exams are relatively new and not widely administered, and therefore have not been evaluated on a large scale. State and system policy should ensure that diagnostic exams are tightly aligned to the curriculum and that they facilitate more effective placement of students, ideally to either eliminate or significantly reduce the time students spend in developmental courses.

## A Confusing and Poorly Communicated Student Assessment Intake Process

Even if states and postsecondary systems base course placement and intervention decisions on more precise and multiple measures, students still could get tripped up by an assessment intake process that is confusing, inconsistent, and poorly-communicated. Not only are the procedures frustrating for students, they—along with the inappropriate use of the placement assessments—could be contributing to higher than necessary remediation rates.

The problems are of particular concern at community colleges—where the vast majority of remediation takes place—since many students enroll soon before classes begin and often aren't required to take the placement assessments until they register.

Two reports highlight the short comings of assessment and placement intake practices and the realities that students encounter when they arrive on campus. *One-Shot Deal? Students' Perceptions of Assessment and Course Placement in California's Community Colleges*<sup>12</sup> and *Case Studies of Three Community Colleges*<sup>13</sup> describe a far too common situation whereby students are unaware of and unprepared for placement exams; rarely are given opportunities to refresh their skills; don't fully understand the consequences of the assessments; and don't pursue possible options for challenging their scores or retaking tests. As a result, the assessments become a one-day event, but with long-term implications. The authors of *One Shot Deal* also point out that many students don't view the placement exams as part of the "college preparation process" that begins in high school—or before—and continues through their postsecondary career.

Most institutions post requirements for placement assessments on their websites, and some offer online practice tests or mention that students can retake the tests a second time. The notices typically indicate, however, that students "can't fail" the exams and that the results will be used for placing students in appropriate courses. But the consequences of the tests and placements are far from clear.

Despite—or maybe because of—the findings in *One Shot Deal*, community college students in California may soon become more informed consumers. The central data warehouse required under Assembly Bill 743, enacted in 2011, will eventually be part of a web portal that provides: a complete student assessment and placement data profile; an online practice test for students; and an advisement tool that indicates the importance of the placement assessment results and the success rates of remedial education students. While the data warehouse and web portal have yet to be implemented and evaluated, California at least recognizes and is attempting to remedy the counterproductive intake policies and practices that can set up barriers to students' success before their postsecondary career gets underway. Based on our policy reviews, we are unaware of any other state or postsecondary system that is trying to address the intake process in such an explicit or comprehensive manner.

## Assessment and Placement Policies that States and Postsecondary Systems Should Consider

The research highlighted in this policy brief challenges the traditional view that high participation rates in remedial education are due solely to students being poorly prepared for college in high school. It is increasingly clear that the high-stakes nature of placement exams, combined with assessments that have not been validity tested, results in a higher percentage of students being placed in remedial courses than is necessary.

While institutions push forward with innovative and promising instructional delivery methods—many of which are supported by a growing body of evidence—they must contend with out-dated and inadequate assessment models. In general, it has been easier to identify the problems with assessment and placement than the solutions. Still, based on the research findings and anecdotal examples, the following policies related to developing stronger assessment and placement systems might make sense.

#### **Require Regular Validity Evaluations of Assessments**

Postsecondary systems or institutions should be required to regularly test the validity of their placement assessments to ensure that they are effective measures for student placement and, as a result, facilitate student success in college-level courses. Examples of policies might include:

- Articulate criteria for systems or institutions to regularly evaluate vendor contracts with assessment companies, which would include validity testing.
- Require institutions that choose to change assessment providers to establish a clear system and process for testing the validity of the new exams.
- Require systems or institutions to articulate the content required for enrollment in credit-bearing courses and ensure that placement exams effectively assess student knowledge in those content areas.
- Make public the results of validity testing or the methodology used to set cut scores for placement into remedial education courses.

#### **Incorporate More Precise and Multiple Assessments**

States and systems should require the use of multiple and more precise measures when making placement decisions. Measures, whenever possible, should be based on available evidence of their effectiveness at placing students in appropriate courses or other academic interventions. Examples of policies might include:

- For recent high school graduates, use a combination of high school GPA and placement exam results to refer students to courses and interventions.
- For returning adults, add questions to placement exams that measure student motivation and efficacy to perform in college-level courses. Questions might address comfort level with their math, reading, and writing skills; academic goals; timeline for completion of a degree, etc.

- Require that institutions use a diagnostic exam that is aligned with institutionally defined collegeready competencies to more accurately pinpoint students' skill levels.
- Require that postsecondary systems and institutions periodically evaluate the effectiveness of the multiple measures and diagnostics to adequately serve students and increase their success in remedial interventions, college-level courses, and in completing a credential.

#### **Develop More Effective Systems for Transitioning Students into Postsecondary Programs**

For students to effectively transition into postsecondary programs and ultimately earn a credential, they must be fully aware of assessment and placement processes, have opportunities to adequately prepare for required exams, and receive proper advising on their postsecondary options based on the results. Examples of policies that institutions or systems could employ to meet these objectives include:

- Require that information about the assessment and placement process, including the possible implications the outcomes may have on students' degree completion prospects, is accessible either online, in the course catalogue, or as part of student orientation.
- Ask students to complete a disclosure statement indicating that they fully understand the assessment and placement process and its consequences.
- Communicate the availability of resources for students to prepare for the assessment process, including: tutoring, test prep programs offered by the institution or outside providers, practice exams, and other self-instructive tools.
- Require all students to attend short "refresher courses" before taking the placement exam.
- Advise all students on their options based on the assessment results, including required developmental coursework that is aligned to their desired program of study. Students also should be provided data on the success rates of students in various academic programs based on their assessment results.
- Track data on the impact of various intake practices on the placement process and overall student success, especially for those referred to remediation.
- Articulate the intake process in policy, regularly evaluate institutional practices, and build institutional accountability systems around the effective implementation of these policies and practices.

## **Concluding Comments**

States and postsecondary systems will not be able to successfully move more students toward degree completion without more effective and reasonable assessment and placement policies and practices. To be sure, there are examples of progress across the country. Most policies and practices, however, are falling short and students often pay the price through time, money, and results. The incremental and isolated improvements that have emerged will not suffice. ECS, through the Getting Past Go initiative, will be promoting the policies proposed in this paper and other strategies with states in the coming months. It is our belief that thoughtful implementation of a comprehensive range of evidence-based strategies will result in higher success rates for all students who are not optimally prepared for postsecondary education.

## Appendix A

#### State and Postsecondary System Assessment and Placement Policies

The following chart indicates the states and/or postsecondary systems that have policies for any of the categories that were highlighted in the paper:

- *Common Assessment* and *Common Cut Scores*: policies through which states or systems select assessments and/or cut scores (See the Notes section below the table).
- Assessment and/or Cut Score Reviews: policies that require states and/or systems to regularly evaluate the current assessments and/or cut scores
- *Multiple Measures*: states or postsecondary systems that incorporate measures in addition to assessments for placement
- Intake Process Advising/Review: Our preliminary review identified California as the only state that has a comprehensive and explicit policy to address the student intake process for assessment and placement.

**Note**: For the first two columns, we have indicated whether the policy is at the state and/or postsecondary system level. Our preliminary review found that 13 states and 17 systems— typically for community colleges— have policies that establish guidelines for placement assessments and/or cut scores.

X (S) = state policy; X (PS) = postsecondary system policy

Getting Past Go has created state profiles that include summaries of and links to remedial education policies. The profiles can be accessed directly from the links below or from the GPG website and the State Sites drop down list on the right side bar. <u>http://gettingpastgo.org/</u>

State	Common Assessment	Common Cut Scores	Assessment/Cut Score Reviews	Multiple Measures	Intake Process Advising/Review
Alabama	X(PS)	X (PS)	Score Reviews	INICASULES	Advising/ Neview
Alaska					
Arizona					
Arkansas	X(S)	X (S)			
<u>California</u>	X (PS)*			Х	Х
<u>Colorado</u>	X (S)	X (S)			
<u>Connecticut</u>	X (PS)	X (PS)			
<b>Delaware</b>	X (PS)	X (PS)			
District of	X (PS)	X (PS)			
<u>Columbia</u>					
<u>Florida</u>	X (S)	X (S)			
<u>Georgia</u>	X (PS)*	X (PS)			
<u>Hawaii</u>	X (PS)	X (PS)			
<u>Idaho</u>					

Illinois					
Indiana	X (PS)	X (PS)			
lowa	7 (13)	Χ (1 3)			
Kansas					
Kentucky	X (S)*	X (S)(PS)			
Louisiana	X (S)	X (S)			
Maine	, (3)	(3)			
Maryland	X (PS)	X (PS)			
Massachusetts	X (S)	X (S)			
Michigan					
Minnesota	X (PS)	X (PS)	X	X	
Mississippi	X (S)*	X (S) (PS)		X	
Missouri		(-7( -7			
Montana	X (PS)*	X (PS)			
Nebraska					
<u>Nevada</u>	X (S)	X (S)			
New Hampshire					
New Jersey	X (PS)	X (PS)			
New Mexico					
New York	X (PS)*	X (PS)			
North Carolina	X (PS)	X (PS)			
North Dakota	X (S)	X (S)			
<u>Ohio</u>					
<u>Oklahoma</u>	X (S)*	X (S)	Х	Х	
<u>Oregon</u>					
<u>Pennsylvania</u>					
Rhode Island					
South Carolina	X (PS)*				
<u>South Dakota</u>	X (S)	X (S)			
<u>Tennessee</u>	X (PS)	X (PS)	Х		
<u>Texas</u>	X (S)	X (S)			
<u>Utah</u>					
<u>Vermont</u>					
<u>Virginia</u>	X (PS)	X (PS)			
<u>Washington</u>					
<u>West Virginia</u>	X (S)	X (S)			
<u>Wisconsin</u>					
<u>Wyoming</u>					

#### \*Notes for Common Assessments and Cut Score Policies

**California**: California State University (CSU) system uses a common, system-developed assessment, but allows campuses to select cut scores.

**Georgia**: The university system selects assessments and minimum cut scores for its institutions. The technical college system selects assessments, but test scores are set by individual programs of study.

**Kentucky**: State sets ACT scores for all institutions, but allows community colleges to set scores on additional, approved tests.

**Mississippi and Montana**: State sets ACT scores for all institutions, but allows community colleges to select other tests and set scores if ACT scores are unavailable.

**New York**: City University of New York (CUNY) selects assessments and cut scores for its campuses.

**Oklahoma**: State selects the primary test (ACT) and sets cut scores, but allows institutions to select secondary assessments and cut scores.

South Carolina: Community college system selects exams, but allows campuses to select cut scores.

## Endnotes

<sup>1</sup>Paul Attewell, et al., "New Evidence on College Remediation," *The Journal of Higher Education*, vol. 77, no. 5, (September/October 2006): 897-898.

<sup>2</sup>Ibid.

<sup>3</sup>Katherine L. Hughes and Judith Scott-Clayton, *Assessing Developmental Assessment in Community Colleges* (CCRC Working Paper No. 19) (New York: Community College Research Center, Teachers College, Columbia University, 2011),

http://ccrc.tc.columbia.edu/Publication.asp?UID=856, (accessed on February 21, 2012).

<sup>4</sup>Judith Scott-Clayton, *Do High-Stakes Placement Exams Predict College Success*? (CCRC Working Paper No. 41) (New York: Community College Research Center, Teachers College, Columbia University, 2012). http://ccrc.tc.columbia.edu/Publication.asp?UID=1026, (accessed on February 21, 2012).

<sup>5</sup>For the complete list of policies, with summaries and links, please visit the <u>Getting Past Go Policy Database</u>. <sup>6</sup>Hughes, p. 20-25.

<sup>7</sup>Judith Scott-Clayton, *Do High-Stakes Placement Exams Predict College Success?* (CCRC Working Paper No. 41) (New York: Community College Research Center, Teachers College, Columbia University, 2012). http://ccrc.tc.columbia.edu/Publication.asp?UID=1026, (accessed on February 21, 2012).

<sup>8</sup>Clive Belfield and Peter M. Crosta, *Predicting Success in College: The Importance of Placement Tests and High School Transcripts* (CCRC Working Paper No. 42) (New York: Community College Research Center, Teachers College, Columbia University, 2012)., <u>http://ccrc.tc.columbia.edu/Publication.asp?UID=1030</u>, (accessed on February 21, 2012).

<sup>9</sup>For the complete list of policies, with summaries and links, please visit the <u>Getting Past Go Policy Database</u>. <sup>10</sup>Ibid.

<sup>11</sup>Advancing Student Success in California Community Colleges, Recommendations of the California Community Colleges Student Success Task Force, Final Report (California Community Colleges Student Success Task Force, 2012),

http://californiacommunitycolleges.cccco.edu/Portals/0/Executive/StudentSuccessTaskForce/SSTF\_Final\_R eport\_1-17-12\_Print.pdf, (accessed on February 21, 2012).

<sup>12</sup>Andrea Venezia, Kathy Reeves Bracco and Thad Nodine, *One-shot Deal? Students' Perceptions of Assessment and Course Placement in California's Community Colleges* (San Francisco: WestEd, 2010), <u>http://www.wested.org/online\_pubs/OneShotDeal.pdf</u>, (accessed on February 21, 2012).

<sup>13</sup>Stephanie Safran and Mary G. Visher, *Case Studies of Three Community Colleges: The Policy and Practice of Assessing and Placing Students in Developmental Education Courses* (New York: National Center for Postsecondary Research, 2010),

http://www.mdrc.org/publications/548/full.pdf, (accessed on February 21, 2012).