An NCPR Working Paper

Case Studies of Three Community Colleges

The Policy and Practice of Assessing and Placing Students in Developmental Education Courses

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Abstract

Among educators and policymakers, there is a burgeoning awareness that vast numbers of community college students around the country are unprepared for college-level work and hence referred to developmental education courses. To increase public discussion about developmental education, the Ford Foundation has expressed particular interest in better understanding how community colleges assess students for placement in remedial or college-level courses. MDRC conducted case studies at three community colleges to learn about each college's placement policies and practices. Our case studies illustrate the routine policies and practices at each of the three colleges and highlight several issues and challenges, including a lack of consensus about the standard for college-level work, the high-stakes nature of the assessments, and the minimal relationship between assessment for placement and diagnosis for instruction.

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Introduction

With the support of the Ford Foundation, MDRC is conducting an impacts evaluation of learning communities at six community colleges across the nation. In addition to supporting the key inquiries of this study, the Foundation has expressed a particular interest in exploring the role of assessments in developmental education. This interest arises from previous research demonstrating that assessment and placement policies affect millions of community college students each year. The role of assessment and placement in developmental education is important because developmental education programs may serve both gateway and gatekeeper functions at community colleges — that is, they may support some students who might not otherwise successfully transition to college, and they may serve as a barrier to other students. The most recent data from the U.S. Department of Education indicate that 42 percent of freshmen at community colleges enroll in at least one remedial reading, writing, or mathematics course; this statistic no doubt underestimates the percentage referred to remedial courses because some students, deterred by their placements, never enroll in the remedial courses to which they are referred.[1]

One issue regarding placement policy and practice is a lack of consistency in defining and applying standards of readiness for college-level work across institutions. Some researchers cite evidence that participation in remediation is at least in part determined by students' racial and ethnic characteristics.[2] In addition, research at 15 community colleges showed that various types of assessments — including numerous subjective measures — played an important role in placement decisions and that a wide variety of practices were used to determine students' readiness for advancement or exit from remedial education.[3] Additionally, there is some evidence suggesting that public colleges have created higher hurdles than private colleges for equivalently prepared students.[4] Further, while four-year institutions rely on multiple measures of readiness, community colleges rely primarily on standardized achievement tests.

While such research does much to highlight the challenges and inconsistencies in policy and practice related to assessing students for developmental education programs, the Ford Foundation correctly identifies the need for further research into this topic, particularly on the organizational context in which such policies and practices are developed and carried out.

Building on our existing relationships with the colleges in the Learning Communities Demonstration, MDRC has conducted case studies to investigate these policies and practices at

[1]Parsad and Lewis (2003).
[2]Dowd (2007).
[3]Perin (2006).
[4]Attewell et al (2006).

three of the participating colleges: Community College of Baltimore County, Houston Community College, and Merced College. We selected these three colleges for their diversity in size and location. While we cannot generalize from just three sites, we have no reason to think *a priori* that the three colleges are atypical in their assessment practices.

The case studies were designed to provide an in-depth look at the role of assessment in developmental education policy and practice. They are based on qualitative data collected during site visits to the colleges in late summer and early fall 2008, as well as a review of relevant documents at each college. Site visits included interviews with an instructional dean, the director or dean of student services, staff who coordinate student testing, and one or two developmental education instructors.

Although it is beyond the scope of these case studies to investigate educational practices in developmental education classrooms, we examined the scope of assessment-related practices (that is, the use of assessment for determining entry into, movement through, and exit from developmental courses). We also looked at contextual factors that seem to inhibit or promote achieving the goal of assessment: placing students who are academically underprepared in classes that are intended to raise their skills to the level needed to succeed in college. We considered several key questions:

1. What assessment and placement procedures and practices are in place at three different community colleges?

2. What issues and concerns are identified by college faculty and staff regarding assessment and placement?

3. To what degree, if any, do placement test results inform instruction?

4. How are college policies and practices regarding assessment and placement formulated and revised?

This working paper presents our findings. It includes a brief profile of the standard assessment and placement practices at each college and a discussion of issues and challenges.

Assessment and Placement Practices at Three Community Colleges

The assessment and placement practices at a community college entail multiple components. At each college we studied, we investigated (1) the guidelines regarding which students should take placement tests, (2) which assessments are administered, (3) under what circumstances students may retest, and (4) the degree to which test scores determine placement.

In addition to understanding the colleges' routine practices, we tried to learn how each institution explains its procedures and policies to students and how students, in turn, respond.

Community College of Baltimore County

Community College of Baltimore County (CCBC) is a large, multicampus community college in suburban Baltimore, Maryland. Prospective students are asked if they have SAT or ACT scores, or if they've done previous college work, as meeting minimum requirements in these areas can exempt them from placement testing. Most prospective students at CCBC do not have qualifying scores or previous college work, however, and therefore, when they register, they take computer-adaptive placement tests called Accuplacer exams, which were developd by the College Board and which allow for assessment of students' skills in reading, math, and writing. Notably, CCBC uses only the sentence skills subtest to place students in English classes, not the writing sample subtest. (See Appendix A for a description of the subtests that make up the Accuplacer). This is a point of some tension for English faculty, as discussed further below.

Until recently, CCBC routinely provided prospective students with a 20-page "Guide to Assessment and Placement," which contained an explanation of the college's placement testing policies as well as sample questions from the Accuplacer. Students were invited to take the packet home and return another day to take the placement exams when they felt prepared, but, according to student services staff members, most students opted to complete the exams on the same day. Now the college's assessment policy and suggestions for review are available online, but it seems few students consult these before arriving to enroll.

After testing, students meet with an adviser for score interpretation and placement. At CCBC, stringent prerequisites prevent students from enrolling in most college-level courses until they have demonstrated college readiness via assessment scores or completion of developmental education courses. Though advisers can't force students to enroll in a developmental education course, students' enrollment options are limited.

When asked how students respond to the test, student services staff explained that some are surprised or annoyed that they must take a test before registering for college, but that as standardized testing has become more prevalent in public schools (under No Child Left Behind) students have seemed less fazed by the requirement. (However, many students are shocked to hear that they cannot use a calculator on the test).

Advisers said that many students who score below the cutoff for college courses are unsurprised; older students, especially, tend to admit that the test confirms their areas of weakness. However, advisers added that many students become frustrated once they understand the implications of their test scores and want to test again. Complaints are most common among

students who recently graduated from high school and received Cs, Bs, or even As in their high school courses, yet were classified as needing remediation based on their Accuplacer score.

Until recently, CCBC allowed and even encouraged students to retest if they felt they had not done their best. However, as part of a recent overhaul designed to streamline its registration process, the college implemented a more stringent retesting policy; now students may retest only if they fall within a few points of the cut score for a given course level. Students who wish to appeal for a retest or for further consideration after a retest may do so. On appeal, students are offered a different standardized reading test, a departmental math test, and/or a chance to provide a writing sample, which is then scored by English faculty. The appeal process, however, is time-consuming and requires significant student initiative.

Houston Community College

Houston Community College (HCC) is a very large, multicampus community college in Houston, Texas. Assessment policy and practice at HCC is greatly informed by the Texas Success Initiative, a state-legislated program aimed at increasing student success in college. The Texas Success Initiative requires that almost all prospective college students be assessed but allows students to choose from among a variety of assessments. (There are special provisions that exempt active-duty military and veterans from testing requirements.) Accordingly, prospective students at HCC may present qualifying scores on the SAT, ACT, Texas Assessment of Knowledge and Skills (TAKS), or Texas Higher Education Assessment (THEA) to demonstrate college readiness and be exempted from the college's placement test.[5] The state policy dictates that colleges must also accept qualifying scores on the Compass, Asset, or Accuplacer if students have them from another college. For students who do not already have test scores demonstrating their college readiness, HCC administers the Compass placement test, including the computer-scored writing sample. Just like at CCBC, students are required to demonstrate college readiness in a given discipline before they can enroll in college-level, credit-bearing, general education courses. The college's testing coordinator noted that the inclusive provisions of the state policy make interpretation somewhat complicated and cumbersome, requiring some skill to place students correctly.

Nonetheless, HCC faculty and administrators have a lot of confidence in their assessment and placement practices. They acknowledged that students are often surprised and upset by the outcome of the placement tests but argued that the tests often reveal real gaps in

[5]The TAKS is administered to all students in Texas public elementary and secondary schools; it includes tenth-grade and exit-level tests in English language arts, mathematics, science, and social studies. The THEA is a statewide college-readiness exam that tests student proficiency in reading, writing, and math. This test is not routinely offered in high schools; students register for it similarly to the SAT.

students' basic skills that must be filled if the students are to succeed in higher-level courses. Students who are unsatisfied with their placement test score face an additional hurdle, because college policy dictates that they must wait a semester to retest. The testing coordinator expressed concern about the impact of this policy on students, noting that students are sometimes forced to choose between enrolling in a course they think they don't need or postponing college entrance because of financial aid regulations requiring full-time attendance. Although retests are restricted, college administrators stated that they allow counselors some flexibility in interpreting scores for placement; for example, counselors are permitted to exercise discretion in placing students who miss qualifying for a college-level course by only one or two points.

Merced College

Merced College is a small, single-campus community college in Merced, California. Merced administers the Accuplacer to nearly all of its prospective students because only students who have an Associate of Arts degree or higher, or those who have successfully completed a transfer-level English or math course, are exempted from testing. Like CCBC, Merced administers the sentence skills test for placement in English. However, unlike at CCBC and HCC, at Merced the Accuplacer is intended to be just one criterion considered alongside several others on a checklist of multiple measures. The other criteria include high school transcripts, writing samples, and a counselor's assessment of student proficiency based on a guidance session. In fact, California's matriculation policy requires that counselors use the multiple-measures checklist, but some Merced counselors complained that time constraints force them to rely primarily on the Accuplacer. One college counselor said that the checklist is a great idea but impractical. Another said she wished researchers would develop a formal "weighting system" for the components of the checklist, based on the value of each component as a predictor of success in college.

Like HCC, Merced College has a fairly stringent retesting policy. According to the college catalogue, retesting is permitted only on appeal, and students must wait until the semester after they first tested to test again; in addition, a student may not retest once she or he has begun a course. However, unlike at HCC and CCBC, a Merced student technically does not need to retest to avoid enrolling in a developmental education course. According to state policy, community colleges cannot require students to complete developmental education courses as prerequisites to college-level courses. Developmental courses are referred to as "advisories" rather than prerequisites, and students may postpone taking them even if counselors advise them to take them earlier. Students who disagree with the counselor's recommended placement may register for the credit course and file a "Prerequisite Challenge." However, the final determination is made by departmental faculty, so students may in fact be denied entrance to the

credit class; more importantly, it is unclear how many Merced students are aware of their right to decline placement into developmental courses.

Issues and Challenges

There are several problems, most documented by previous research, inherent in the three colleges' policies and practices regarding the initial assessment of students for placement in college-credit courses or developmental courses. A look at the score requirements across the colleges revealed inconsistency in the standard of college readiness as well as in the boundaries defining various levels and types of skill deficiency. We also observed firsthand the high-stakes nature of the placement tests, which measure narrow sets of skills at a single (and potentially problematic) point in time. Further, we consistently heard from college faculty that the placement tests are regarded as irrelevant to instruction. Finally, we noted that the colleges tend to have inconsistent processes for developing and revising policies and practices related to assessment and instruction. Each of these issues is discussed in more depth below.

Lack of Uniform Standards

Our research illustrates that the colleges hold varying standards of academic preparedness, even when using the same standardized assessment to measure prospective students' skills. Appendix B shows the Accuplacer scores used to place students into college-level or developmental courses at each college. The score requirements vary greatly, not only for entry into college-credit courses but also for placement into various levels of developmental education. While the cut scores that determine entry into college-level courses are often set by state policy (or by state agreement, in the case of Maryland), the number of developmental courses in the sequence and the scores used to place students into each level are at the discretion of individual colleges. For example, a student scoring 50 on the Accuplacer reading test would be placed in the lower of two developmental reading courses at CCBC, but in the lowest of three developmental reading courses at HCC. While the courses might emphasize similar content, the HCC student would have to pass three developmental courses before enrolling in general education courses, while the CCBC student would have to pass only two developmental courses. Conversely, any student may be admitted to the lowest-level course in the developmental reading sequence at HCC, while CCBC students scoring below the "floor" on the reading subtest — a score of 36 in this case — are referred to basic skills classes in the college's Continuing Education division. Another difference in the way colleges use assessment data to place students is evident in the cut scores required to place into college-level courses at HCC, which considers a student's reading score for placement in college-level writing. Some might call this prudent while others might call it overly restrictive; regardless, it's a policy that some community colleges have but others do not. The table illustrates numerous such examples,

which are attributable only in part to the differences in state education policy. An important aspect of this issue is the dearth of research on the validity of the cut scores used as predictors of students' success.

High-Stakes Nature of the Tests

As administered at the three colleges we visited, the placement tests are a classic example of a high-stakes test: standardized assessments measuring discrete skills at a single point in time, used to make decisions with significant consequences. The primary consequence, as mentioned previously, is that students can be placed in course sequences that require years to complete without earning a single college credit. A recent study of colleges in the Achieving the Dream program found that fewer than half the students who were referred to a developmental reading or math course completed the relevant sequence of developmental courses within three years, and that barely half of those who persisted through the developmental sequence went on to pass the first credit-bearing course in the sequence.[6] Ultimately, only 16 percent of the students who were referred to developmental math passed a college-level math course.[7] The high-stakes nature of the placement tests is particularly problematic for two reasons: (1) Students are often unaware of the tests' implications and therefore may not perform their best and (2) the tests may be insufficient for measuring the skills and characteristics most likely to affect student outcomes.

At all three of the colleges we studied, students frequently take the placement test the day they come to register, without taking time to preview the test components and sample questions or to brush up their skills. Whether or not students should test the first time they come to campus is a point of contention at all three colleges, and as a result the colleges occasionally send mixed messages to students. As mentioned previously, CCBC has prepared a brochure that explains the placement testing procedures and advises students to review for the exams in advance. In reality, however, most students want to complete the registration process when they initially come to campus rather than return a different day, and most advisers do not discourage students from testing immediately. Therefore, the brochure ends up benefiting a slender minority of students, such as students who come with a high school guidance counselor to explore their options for dual enrollment and return at a later time to register.

The testing coordinator at HCC articulated her concern that students there do not perform as well as they could because of the testing conditions and that many students are

[6]Achieving the Dream is an initiative to increase student success rates at community colleges. The initiative provides technical support directly to community colleges in the form of data collection and analysis, on-site coaching, and networking. The initiative also partners directly with state and national policymakers to garner support for student success strategies. For more information, see www.achievingthedream.org.

[7]Bailey, Jeong, and Cho (2009).

unaware of the implications until it is too late. She has noted that many students do better early on during the test, which is untimed and can take several hours to complete. Hence, she hypothesized that students may be scoring lower than their actual abilities on the later sections due to impatience or fatigue. To address the problem, she said, "I think we need to do a better job as an institution explaining the importance of the test before they come in. If they are tired or sick or need to go to work they should schedule another time." One adviser even suggested charging a nominal fee for the placement test so that students would take it more seriously.

In addition to concerns about when the tests are administered, we heard mixed views on the appropriateness and sufficiency of the tests for placement purposes. At CCBC, the English placement test was mentioned as a weakness of the college's assessment and placement practices because the college uses only the Accuplacer sentence skills subtest, not a writing sample. An experienced English faculty member expressed his consternation that placement in English classes is based on a sentence-level test; he said, "[The Accuplacer] does not at all assess what we teach about how to write: coming up with ideas, developing them, supporting them, expressing them in language that is clearer, less awkward, and more powerful." However, it's interesting to note that when asked why the college does not administer the writing sample subtest, the Dean of Developmental Education explained that the decision was made by a statewide committee when they saw the electronic scoring system demonstrated years ago. Apparently, a well-composed but vastly off-topic essay received a very high score, and the committee members decided that they valued a prospective student's ability to respond to a prompt too highly to rely on an essay test that did not factor that skill into its scoring system. This anecdote demonstrates how colleges often are caught between the rock of less-than-ideal instruments and the hard place of insufficient information about prospective students.

The question of which subtests to administer begs a larger question about the value of single versus multiple measures to inform placement decisions. Numerous researchers have demonstrated that students' noncognitive, or affective, characteristics, such as their attitudes and beliefs, can play a significant role in determining academic success; in spite of these findings, fewer than 10 percent of community colleges currently assess students' affective characteristics.[8] CCBC's Dean of Developmental Education is familiar with the research literature and has included an affective assessment in CCBC's portfolio of support services for students who fail a developmental course.[9] The dean is increasingly perturbed that the college leaves out the affective side on the initial assessments that inform student placement. She thinks that maturity and motivation are, as she puts it, "just as important" as academic readiness. Thus

[8]Saxon et al. (2008).

[9]For example, as part of its intervention services, CCBC administers the Learning and Study Strategies Inventory (LASSI) to students.

far, however, time and financial constraints have made it unrealistic for CCBC to consider noncognitive assessments for every student.

At four-year colleges and universities, a more holistic picture of students' college readiness is developed not through administering noncognitive assessments but by reviewing student transcripts, work samples, and letters of recommendation. CCBC does not consider these data sources in its placement decisions but the dean wishes it did; she recently discovered that the SAT score used to exempt students from testing at CCBC is higher than at Towson State University (550 as opposed to 500 for the verbal portion of the test). She worries that without a system of multiple measures, some students who could succeed in college-level courses are being steered into developmental education — and vice versa.

Because Merced has a multiple-measures system in place, we asked whether counselors felt the system allowed for more accurate placement of students. We found that perceptions of the multiple-measures checklist varied greatly among counselors. Some find it useful in providing a check on the validity of a student's placement test score. Others, however, think the assessment scores should be the sole determinant of placement because they feel that consideration of other background indicators is too subjective and leads to less accurate course placements.

Minimal Relationship to Instruction

We asked college faculty and staff whether the assessment data collected for placement play any role in instruction, and we consistently heard that the assessments are used strictly for initial placement and play essentially no role in instruction. This is in sharp contrast to the K-12 system, where frequent assessments are increasingly used to inform instructional practice and teachers are trained in how to interpret and use assessment data toward that end. It may be that colleges do not think to share the placement test data with instructors; however, instructors familiar with the placement tests said the data would hold minimal value or relevance to instruction whether it were shared or not. In most cases, faculty who teach developmental-education courses administer an additional pretest to assess students' instructional needs at the start of their courses. When asked why they do not rely on the placement tests, they responded in a variety of ways. Some faculty commented that they had never seen the test results. A common response was that the tests had not been designed with the college's academic requirements or the course goals in mind. Another common response was that the faculty administered other assessments they thought had better diagnostic value. At CCBC, for example, English faculty said that the writing test used for placement lacks content validity because it is a sentence skills test; therefore all English instructors begin with small writing assignments to gauge students' writing skills. At HCC, most developmental reading instructors administer an assessment called the Nelson-Denny, a diagnostic test they feel offers a more

sensitive reading assessment than the Accuplacer.[10] HCC math instructors also tend to offer an alternate pretest, one developed by an instructor in the college's Learning Communities program.

Nor do the assessments play a significant role in determining readiness for college-credit courses once a student has entered the developmental education pipeline. We heard across the board that successful completion of the requirements of the developmental education course (usually earning a C or better) was the method for determining which students would move on and which would not. Few faculty or administrators acknowledged the imbalance between the standardized assessment that places students into developmental education and the more subjective measure used to promote or retain them. In fact, at HCC an academic dean said that formal post-testing was not required because the developmental education faculty "know what skills the students need for college-level courses and they teach those skills." At each college, some of the courses in some of the departments have instituted a common post-test or final exam, but none of the colleges had instituted common exit requirements across the board.[11] For example, at CCBC both the higher- and the lower-level developmental reading courses employ common final exams, but the developmental math courses do not. And it was clear from our interviews that even department-wide initiatives to promote the use of common assessments are not always successful.

The only example of a standardized assessment being used to inform placement once a student had entered the developmental education pipeline was at HCC. Students in the lowest level of developmental reading there are offered a standardized test at the end of the semester to see if they can skip the second level of developmental reading and go directly to the highest level. Instructors admitted that few students pass the test, but said that the opportunity motivates some students throughout the semester. While HCC is the only one of the three colleges to offer students this option in any developmental education sequence that we know of, it is also the only one with a three-semester sequence in developmental reading; the other colleges have two-semester sequences in reading.

Unsystematic Processes for Developing and Revising Assessment Policies and Practices

At the colleges we studied, policies and practices related to initial assessment and placement for developmental education are informed by a variety of factors and forces: state

[10]The Nelson-Denny, published by Houghton-Mifflin, is designed to assess high school and college students' reading rate, comprehension skills, and vocabulary.

[11]As far as we know, only the City University of New York system routinely retests students to determine if they can progress to college-level courses.

policy or guidelines, the preferences of academic departments, institutional research, and college advisory boards are just a few. While these myriad influences may imply that the issues related to assessment are under constant discussion and review, it appears that the silo-like organizational structure of most community colleges has inhibited a critical review of these issues.

There are differences in the structures the colleges have in place to manage assessment and placement for developmental education. For example, CCBC is the only one of the three colleges to have an administrative structure dedicated to developmental education. The Dean of Developmental Education convenes a cross-disciplinary Developmental Education Advisory Committee, which meets monthly to discuss issues relevant to developmental education, including assessment. And HCC is the only college to have a testing coordinator with a substantive role in decision-making; at Merced and CCBC the testing coordinator is essentially a technician. Discussions about the colleges' placement testing procedures and policies are therefore always taking place in the context of other issues (for example, registration, academic standards). And it seems that there is often no high-level administrator with placement testing as a priority area of concern and responsibility.

Of particular concern is the unsystematic approach to developing and revising cut scores that determine student placement in college-level or developmental courses. At all three colleges the minimum cut score delineating college readiness on the college's main assessment is set by state policy — or, in the case of CCBC, informed by a state agreement. However, at all three colleges the number of developmental education courses in a sequence and the cut scores for each course is a college decision. The number of developmental education courses in the sequence seems to be a matter of custom; the course sequence has not changed at any of the colleges in over 10 years.

At both CCBC and HCC, we were told that faculty have primary responsibility for determining the cut scores for the lower-level developmental courses. However, at CCBC these discussions now take place within the Advisory Committee, and one of the developmental education faculty at CCBC complained about the decision no longer being under departmental purview. When asked how the college has approached review and revision of placement testing policies, the dean of developmental education said that the college is active in the statewide consortium and keeps tabs on what other community colleges are doing. She admitted, however, that little formal research has been conducted in this area and hence cut scores are technically not validated. At HCC, the testing coordinator noted that the college's cut scores are higher than those at a nearby community college; she thinks that concern for the college's reputation keeps pushing the cut scores up. The academic dean at HCC said that the academic departments review their test scores and resulting placements every three years but acknowledged that they are "not doing a lot of study" of cut scores. She appeared unconcerned

about this, and said, "if the faculty saw problems [with placements resulting from the cut scores] they would discuss them."

Merced appears to take the most scientific approach to reviewing and revising cut scores but allows for the least input from faculty and advisers. For example, the assessment cut scores are validated through a periodic but ongoing review of longitudinal student data trends. The institutional research analyst collects and analyzes aggregate data of placement scores, course enrollment, and course success rates to review and establish cut scores approximately every three to four years. The analyst looks at an entering student cohort's placement scores from a given year, tracks its first math/English course selection, tracks its eventual passing rates in those courses, and determines if there were shifts in either course selection or success rates sufficient enough to justify a realignment of the current cut score ranges. Although the cut scores are infrequently adjusted, most recently they were adjusted down, permitting more students to enter more challenging courses. Administrators, faculty and student services staff appear to trust the institutional research analyst's recommendations.

In fact, we noted a remarkable degree of confidence in the standardized assessments used to place students at all three colleges. This attitude was most prevalent at HCC, where key leaders routinely expressed the sense that the placement tests serve to protect students from wasting their time and money on courses for which they are not academically prepared. A student services administrator said, "I tend to think the placement scores are right. It's probably my personal opinion from working hand in hand with students so many years as a counselor." An academic administrator concurred: "I don't know how many are misplaced but I don't think it's a lot." An instructor who teaches both developmental and college-level courses confirmed that instructors tend to presume that placement based on the standardized score is appropriate. She said, "I think most students are appropriately placed. There have been very few that I recommended be moved out. We give assessments at the beginning of the semester but even if [students] do well on that test we don't just move them. If they are enrolled in all developmental courses, even if they make a high score, they need to stay where they are."

Such comments indicate that many assessment and placement policies are determined by custom rather than by data. Our interviews indicated that assessment cut scores in particular are driven as much by politics, funding, and staffing as they are by hard data on what students need to know to succeed in college-level courses.

Summary of Issues and Findings

Our brief study of three colleges' assessment and placement procedures revealed a variety of issues and challenges inherent in common practices.

- Students often take placement tests without understanding their real purpose or import. Hence, students often test under less-than-ideal conditions and without having reviewed the skills to be tested. Student performance is likely adversely affected by these practices. In addition, college policy often allows students minimal recourse once they have tested.

- The colleges tend to rely solely on standardized, cognitive assessments to inform placement rather than including alternative measures such as high school transcripts, student work samples, or affective assessments.

- The assessments used for initial placement appear to provide little or no information relevant to faculty for instructional purposes, whether because of misaligned content, lack of specificity, or lack of availability.

- There appear to be few organizational structures or practices that encourage careful examination of and deliberation over these issues at the three colleges. While one college has an administrative position and a meeting structure dedicated to developmental education, and another college has a routine for examining some of these issues through its institutional research office, none of the colleges have both.

In defense of the colleges, however, we heard about significant constraints and barriers to change. Time seems to be the greatest constraint and is a particularly pressing concern — both from a customer service and a mission-fulfillment perspective. All three colleges in the study strive to streamline admissions and enrollment activities to maximize the open-door ethic of the college. Their goal is for students to be able to walk into the college and walk out with their semester course schedule on the same day. This goal is driven in part by the fear that prospective students sent home — to review for a test or to await the results of a test — will become discouraged or distracted and not return. It is also driven by the realities of the scheduling process; the art and science of staffing and filling sections of in-demand courses has ramifications for staff (who need to know what or if they are teaching in a given semester) and for students (who need to know if the course they need is available at the time they want to take it). The reality of the enrollment process is that caring and well-intentioned counselors work around the clock during enrollment periods to meet prospective students, glean relevant background information, explain assessment and enrollment policies, interpret assessment scores, and guide students in making sensible decisions about course selection. Cognizant that time constraints limit the sophistication and nuance of these conversations, all three colleges hire additional counselors as temporary staff during enrollment periods, in the hope of providing each student the attention he or she deserves. And all three colleges have tinkered at the margins

of the assessment and placement structure — changing cut scores and revising retest policies — in efforts to better balance the competing aims of accuracy and efficiency.

Questions for Future Research

These case studies provide few firm answers but much to ponder on the topic of assessing and placing community college students. For example, one main finding is that standards for placement in college-level courses vary greatly from one community college to another — and that these differences are not always the result of state policy, as one might at first assume. Inconsistent standards are considered by many to be highly inequitable, although some college faculty and leaders argue that community colleges, like private colleges, should have the right to exercise discretion in placing students. Others are concerned about the erosion of academic standards. To address the question of whether public community colleges should have a common standard for college-level work, we propose that investigating and comparing the effects of various standards on student outcomes is an important area for future research. Our case studies raise some additional questions, including:

- How should colleges balance the demand for efficient, accessible registration with the need for accurate placement information?
- Are multiple measures a route to more accurate and equitable placement decisions? Should more subjective information, such as high school transcripts or the results of affective assessments, be considered?
- How can community colleges strengthen the connections among assessment for placement, assessment for instruction, and assessment for promotion?
- What types of data should colleges routinely collect and review for decision-making about assessment and placement?

Appendix A

An Introduction to the Accuplacer

The Accuplacer is a computer-adaptive placement test developed by College Board.[12] In fact the Accuplacer is not one test but a set of subtests; individual colleges may administer one, several, or all of the subtests. The general subtests are Reading Comprehension, Sentence Skills, Arithmetic, Elementary Algebra, and College Math. In addition, the Accuplacer includes a computer-scored essay test called WritePlacer and a set of English as a Second Language assessments. The general tests range from 17 to 20 questions each. The Accuplacer is untimed, with the exception of the essay test, which may be either timed or untimed. Below is a brief explanation of the structure and one sample question from each of the general subtests.

Reading Comprehension

The reading comprehension subtest includes 20 questions of two main types. The first type consists of a reading passage followed by a question based on the text. The second type presents two sentences followed by a question about the relationship between the two sentences.

Sample Item

1. Serving on a jury is an important obligation of citizenship.
   Many companies allow their employees paid leaves of absence to serve on juries.

   What does the second sentence do?

   A. It reinforces what is stated in the first.
   B. It explains what is stated in the first.
   C. It expands on the first.
   D. It draws a conclusion about what is stated in the first.

Sentence Skills

[12]This Appendix is adapted from "Accuplacer Sample Questions for Students," a Web page located at http://www.professionals.collegeboard.com/profdownload/accuplacer-sample-questions-for-students.pdf

The sentence skills subtest includes 20 questions of two types. The first type is sentence correction and the second type is sentence construction. A variety of skills are tested, including recognition of complete sentences and the relationship between coordination and subordination.

Sample Item

Select the best version of the underlined part of the sentence. The first choice is the same as the original sentence. If you think the original sentence is best, choose the first answer.

1. When you cross the street in the middle of the block, this is an example of jaywalking.

   A. When you cross the street in the middle of the block, this
   B. You cross the street in the middle of the block, this
   C. Crossing the street in the middle of the block
   D. The fact that you cross the street in the middle of the block

Arithmetic

The arithmetic subtest includes 17 questions of three types. The first type consists of whole-number operations; the second type consists of operations with fractions, decimals, and percents; and the third type consists of applications and problem solving, including rates and measurement.

Sample Item

1. 32 is 40 percent of what number?

   A. 12.8
   B. 128
   C. 80
   D. 800

Elementary Algebra

The elementary algebra subtest contains 12 items of three types. The first type involves operations with integers and rationals, including negative rationals. The second type involves operations with algebraic expressions, including monomials, polynomials, roots, and exponents. The third type solving linear and quadratic equations, inequalities, and word problems.

Sample Item

1. $(3x - 2y)^2 =$
   A. $9x^2 - 4y^2$

B. $9x^2 + 4y^2$
C. $9x^2 + 4y^2 — 6xy$
D. $9x^2 + 4y^2 — 12xy$

College-Level Math

The college-level math subtest contains 20 items addressing six content areas: algebraic operations, solutions of equations and inequalities, coordinate geometry, applications and other algebra topics, functions, and trigonometry. Questions involve a range of concepts and skills, including factoring and expanding polynomials, plane geometry, and permutations and combinations.

Sample Item

1. If θ is an acute angle and $\sin \theta = ½$, then $\cos \theta =$

A. -1
B. 0
C. ½
D. $\sqrt{3}/2$
E. 2

Appendix B:

Accuplacer Scores Used to Determine Placement at Three Community Colleges

Course Level	Community College of Baltimore County	Houston Community College	Merced College
College-Level Reading/Other	RD ≥ 79	RD ≥ 78	RD ≥ 81
Highest Level of Developmental Reading	RD 61-78	RD 71-77	RD 51-80
Middle/Lower Level of Developmental Reading	RD 36-60	RD 55-70	RD 40-50
Lowest Level of Developmental Reading		RD ≤ 54	RD ≤ 39
College-Level English	SS ≥ 90	WS 6-8 and RD ≥ 78	SS ≥ 96
Highest Level of Developmental English	SS 58-89	SS ≥ 56 and WS 4-5	SS 70-95
Middle/Lower Level of Developmental English	SS ≤ 57	SS ≤ 55 and WS 4-5 or WS 1-3	SS 42-69
Lowest Level of Developmental English			SS 30-41
College-Level Math	CM ≥ 40 or EA ≥ 108	CM ≥ 43	CM ≥ 40 or EA ≥ 108
Highest Level of Developmental Math	CM ≤ 44 and EA ≥ 65	EA ≥ 54	CM 31-39 and EA 76-107
Middle Level of Developmental Math	EA 44-64	EA 35-53 and AR ≥ 75	EA 45-75 and AR ≥ 58
Lowest Level of Developmental Math	EA ≤ 43 and AR ≥ 32	EA ≤ 53 or AR ≥ 35	EA ≤ 44 or AR ≤ 57

Key

RD = Reading
SS = Sentence Skills
WS = Writing Sample
AR = Arithmetic
EA = Elementary Algebra
CM = College Level Math

About the Accuplacer Scores Table

Using placement documents provided by the three colleges in our study, we constructed the Accuplacer Scores table to illustrate the inconsistent standard for placement into college-level or remedial courses (including the various levels of remedial courses) among the colleges. The inconsistency is evident in various ways, including the combination of subtests required and the qualifying score ranges for subtest. For the sake of comparison, we made several assumptions and adjustments to the data, discussed below.

First, we selected the Accuplacer from among the various assessment instruments used by the colleges. The Accuplacer is not one test but a series of subtests, including reading, sentence skills, a writing sample, arithmetic, elementary algebra, and college level math. Not all colleges administer all subtests; for example only Houston Community College administers the writing sample. The Accuplacer is a computer-adaptive test; test-takers answer 12 questions in each subtest area and receive a scaled score between 0 and 120 for each subtest, with the exception of the writing sample, which is scored from 1-5. It is important to note that while the Accuplacer is the primary assessment instrument at Community College of Baltimore County (CCBC) and Merced College, it is not the primary assessment used to determine placement at Houston Community College (HCC). Texas state policy requires that the college accept a student's scores from any of a variety of assessments including SAT, ACT, THEA, TAKS, Accuplacer, and Compass. The college generally administers Compass to students who do not have qualifying scores from a previous exam. However, we have listed the Accuplacer cut scores used at HCC for the sake of comparison with CCBC and Merced.

To illustrate how assessment scores determine placement into college-level or remedial courses, we had to establish a definition for college-level courses. We defined a college-level course as the lowest-level course bearing credit and qualifying for transfer. This is important to note because both HCC and Merced offer a math course that is degree applicable but nontransferable; we counted those courses as the highest level of developmental coursework. In addition, we included the highest three developmental education courses in each discipline, although in some cases a college had as few as two or as many as five courses in the sequence.

A final interpretive note: In some cases a minimum score is required for placement even in the lowest course in a developmental sequence. For example, CCBC has a "floor" on its Reading sequence; students scoring below 36 on the Accuplacer are referred to Adult Basic Education. While this does not appear to be the case at HCC or Merced, the table can be somewhat misleading. In the case of MC, there are multiple levels of developmental reading, which in fact lead all the way down to a class equivalent to Adult Basic Education. And HCC technically has a third tier of developmental reading, but because the course is not always offered, some students qualifying for the course are in fact referred to Adult Basic Education as

well. This distinction is important because Adult Basic Education is governed by its own policies and practices, and students referred to Adult Basic Education are further distanced from their hopes of earning a college degree.

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