

LINDSAY DAUGHERTY, TREY MILLER, DIANA GEHLHAUS CAREW

Supporting College Enrollees Who Test at the Lowest Levels of Readiness

Lessons from Texas Community Colleges

KEY FINDINGS

- Among students first enrolling in credit-bearing coursework at Texas community colleges in the fall of 2015, 7 percent were assessed at the lowest levels (i.e., possibly indicating readiness below ninth-grade level) on the state's placement exam.
- Resources and guidance from state policymakers rolled out between 2011 and 2015 spurred many colleges to develop and refer students testing at the lowest levels to specialized academic supports.
- Texas community colleges encountered some challenges in developing programs and ensuring that students testing at the lowest levels received targeted academic support.
- Experiences of Texas policymakers and community colleges suggest that reforms aiming to increase support for students testing at the lowest levels require several elements, including support around the appropriate use of placement test scores, state funding and guidance for developing academic supports, clear state and institutional policies and consistent communication of these policies, strong cross-departmental collaboration and communication, integration of academic supports into both academic and technical pathways, and the coupling of targeted supports with other broader initiatives (e.g., developmental education reform).

Community colleges are typically *open access institutions*, meaning that they offer educational opportunities for individuals regardless of their prior levels of academic achievement. Many of these colleges are strongly committed to their mission of providing all individuals with an opportunity to earn postsecondary credentials. However, data indicate that fewer than one in three students who enters a community college will ever earn a degree or certificate (National Center for Education Statistics, 2017). Although students drop out for many reasons that have little to do with academics—such as financial difficulties or other life challenges—a lack of academic readiness among incoming students also has been a major concern (Lotkowski, Robbins, and Noeth, 2004; Robbins et al., 2004; and Stratton, O'Toole, and Wetzel, 2008). According to national data, only one-third of high school seniors were assessed as being college-ready in both math and reading (National Center for Education Statistics, 2015). Community colleges also serve large adult student populations that might need to build or refresh their skills.

Colleges commonly assess the incoming academic readiness of students using placement exams. When students have been assessed as “not college

ready” according to the results of these exams, colleges have traditionally placed students into developmental (remedial) education. Until recently, developmental education programs at most community colleges were structured as a series of semester-long math, reading, and writing courses that students were required to take prior to entering college-level credit bearing coursework. As of 2015, more than half of entering community college students had enrolled in developmental education coursework (National Center for Education Statistics, 2018).

In recent years, states and colleges have begun to rethink their approaches to serving the academic needs of students. A 2010 study found that among students referred to three or more developmental education courses, only 11 percent ever made it through a credit-bearing math course and only 29 percent made it through a credit-bearing reading course (Jaggars and Stacey, 2014). To address concerns about developmental education, reforms have targeted the assessments used to determine college readiness, the way students were advised and placed into courses, the structure of developmental education programs, and the delivery of instruction. Evidence suggests that many of these reforms have been effective in improving student outcomes (Bahr et al., 2019; Bailey et al., 2016; Cho et al., 2012; Douglas, 2016; Edgecombe et al., 2013; Logue, Watanabe-Rose, and Schak et al., 2017; and Rodriguez, Mejia, and Johnson, 2018), and evidence also indicates

that they are being scaled across the country (Zachry Rutschow and Mayer, 2018).

The Texas state legislature and Texas Higher Education Coordinating Board (THECB) have been leaders in the reform movement, strongly encouraging public Texas institutions to adopt many of these new approaches to supporting students academically.¹ In 2011, the state passed several developmental education reform bills—House Bill 1244 and Senate Bill 162 (Texas Legislature Online, 2011a; and Texas Legislature Online, 2011c)—and policymakers at THECB developed rules and guidance to communicate the requirements and recommendations for institutions on how to enact these reforms. Reforms consisted of a new state assessment with common cut scores and a broader range of scores for determining student needs (i.e., diagnostic scores), requirements to use multiple measures (e.g., high school grades) alongside placement exam scores to place students into developmental education, combining separate reading and writing courses into an integrated sequence, experimentation with innovative approaches to instruction outside the traditional classroom structure, and recommendations that colleges pursue accelerated models of developmental education.

As part of this set of reforms rolled out between 2011 and 2015, Texas policymakers enacted several initiatives that explicitly targeted students who tested at the lowest levels on the state’s assessment (Box A). The state was concerned that a small portion of community college students might be entering at particularly low levels of academic readiness (i.e., below the ninth-grade level). Evidence from Texas data suggested that traditional developmental education coursework was not supporting success for students testing at the lowest levels on the states exam; data on fall 2015 community college enrollees indicated that only 33 percent of students testing at the lowest levels were still enrolled or had completed a degree or certificate after three years, a rate of success much lower than higher-scoring peers (see the online technical appendix to this report). Although the state believed that broader developmental education reforms—such as accelerating students into college-level coursework and moving away from the placement test as the sole measure of readiness—could benefit all students testing below college-readiness levels, there was a

Abbreviations

ABE	adult basic education
ACGM	Academic Course Guide Manual
CTE	career and technical education
CUNY	City University of New York
DE	developmental education
ESOL	English as Speakers of Other Languages
NCBO	non-course competency-based option
THECB	Texas Higher Education Coordinating Board
TSIA	Texas Success Initiative Assessment

Box A. Efforts of Texas Policymakers to Better Support Students Testing at the Lowest Levels

To improve the support provided by Texas colleges to college enrollees testing below college readiness, Texas policymakers provided resources and guidance in three areas:

1. additional scores on the new statewide placement exam that identified students testing below ninth-grade equivalency and provided additional information on readiness in specific sub-areas of knowledge
2. funding and guidance to support the development of academic supports that could be attached to lower level developmental education and career and technical education (CTE) courses to provide more-intensive, differentiated support to students testing at the lowest levels
3. guidance that colleges consider referring students testing at the lowest levels into adult education and continuing education programs and resources to support adoption of evidence-based practices in these programs and their integration with postsecondary coursework.

The new assessment scores were available beginning in 2013, and the state recommended that institutions begin offering targeted academic support to students testing at the lowest levels by fall 2015.

concern that additional support and new approaches might be needed for the students whose test scores fell at the lowest levels. Guidance from state policymakers suggested that college should make efforts to identify students at the lowest incoming levels of readiness and ensure that these students receive intensive and specialized academic supports.

In this report, we describe the reforms that aimed to support students who tested at the lowest levels of readiness, and we provide an overview of the efforts of community colleges to use the resources and respond to the recommendations offered by policymakers. We also highlight some important takeaways from these efforts that might inform future endeavors to support this population of students. Our perspectives in

this report are based on a four-year study conducted by the RAND Corporation, THECB, and American Institutes for Research. Our work focused exclusively on reflecting on the implementation of the state's policy and did not aim to determine whether the state policy should have been introduced or assess the effects of the reforms on student outcomes. Study activities that contributed to the findings in this report consist of technical assistance work and case studies in three community colleges, interviews with staff at nine additional community colleges, and descriptive analysis of statewide survey and administrative data. A detailed description of the study, the data sources used to determine findings, and the limitations of the study are provided in a technical appendix to this report.

We start by describing each of the three areas of targeted reform for students testing at the lowest levels, with a detailed explanation of how the new resources and guidance offered by the state aimed to improve on the existing practices of Texas colleges. We then describe how community colleges responded to the recommendations, the barriers that they faced in following the state guidance, and some of the strategies used to overcome these barriers. We conclude with several important lessons learned from Texas regarding how states and colleges might best serve students who enroll in college with low levels of academic readiness.

Three Areas of Targeted Reform for Students Testing at the Lowest Levels

In this section, we provide a detailed description of the three areas in which Texas policymakers offered resources and guidance (Box A). We also discuss the background and context in which these reforms were enacted and the factors that contributed to the need for such efforts.

Reform 1: New Assessment Scores to Identify Students in Need of Targeted Academic Support

For students planning to enroll in degree programs in Texas (and other states), standardized assessments

have been the primary way that colleges determined levels of academic readiness. Until 2013, Texas colleges varied in which assessments they would allow students to use and typically set their own cut scores for college readiness and placement into various courses (commonly detailed in institution-specific placement charts). In some cases, the choices of cut scores for placement might have been arbitrary and not necessarily determined according to considerations around reliability and validity. These institution-specific policies and testing requirements created a confusing landscape for students entering college (Schak et al., 2017). Research raised concerns about the role of placement testing in assigning students non-credit-bearing coursework and indicated that many students placed in developmental education would have performed well if they had been placed directly in credit-bearing coursework (Scott-Clayton, 2012).

States and colleges have pursued several reforms to address the limitations of placement testing for incoming college students. One popular reform has been “multiple measures,” whereby colleges have incorporated other measures of academic achievement (e.g., high school grades) to more accurately assess a student’s academic readiness and needs for support (Zachry Rutschow and Mayer, 2018). In some cases, states and/or colleges have eliminated the use of placement tests altogether, using other indicators of readiness to connect students to academic support (e.g., student self-identification).² Among states and institutions that have continued to rely on placement tests as a primary indicator of academic need, many have enacted reforms to improve the information provided to students about placement testing, encourage students to retake, and help students prepare for the test with refreshers and boot camps (Schak et al., 2017).

To address some of the concerns about a confusing landscape of different assessments and cut scores, Texas developed a common statewide assessment that all institutions were required to use beginning in 2013, the Texas Success Initiative Assessment (TSIA).³ State policymakers established common college-ready cut scores, and colleges were required to refer students falling below these levels to developmental education courses or some other type of

academic intervention. State policymakers also mandated that all colleges in Texas provide additional guidance and support to prepare students for the assessment (i.e., a mandatory preassessment activity or module), and required that colleges consider multiple measures in their decisions regarding student placement into academic interventions (Texas Higher Education Coordinating Board, 2012; and Texas Higher Education Coordinating Board, 2014).

Texas policymakers also were interested in expanding the ability of colleges to identify students who might be in the greatest need of academic support. There were concerns that traditional placement tests had been designed primarily to determine whether a student was college ready and therefore did not have the capabilities to accurately assess the readiness and support needs of students who tested significantly below college-readiness levels. In designing the new assessment, the state worked with test developers to ensure more-accurate assessment of skills at these lower levels and a broader range of diagnostic scores in each subject area for the purposes of informing advising and instruction.

On the TSIA, students who performed poorly on an initial set of college-readiness assessment items were given an additional set of items targeted toward students at lower levels of readiness, referred to as the adult basic education (ABE) diagnostic. Using a student’s performance on the ABE diagnostic questions, two types of scores were generated: ABE level scores and ABE strand scores. *ABE level scores* ranged from 1 to 6 and provided an overall level of readiness for students in a subject area that aligned with the National Reporting System, the system used to classify skill levels among adult education students.⁴ ABE level scores of 1 through 4 indicated readiness levels that fell below the ninth-grade level, and the state recommended that these students be referred to more-intensive and more-specialized academic supports (see Table 1), but the state left it to colleges to decide what those supports would look like and how students testing at these levels would be referred to them. Students with ABE level scores of 5 and 6 and students who tested at levels that did not trigger the ABE diagnostic (but were not assessed as college ready) were designated as “developmental education level” (i.e., indicating readiness between the ninth- and 12th-grade level).

TABLE 1

Overview of the State Resources and Guidance Targeted to Students Testing at the Lowest Levels

Reform	Justification	Resources and Guidance
New assessment scores to identify and target supports to students with readiness levels below high school	Insufficient information from placement tests on students with lower incoming levels of knowledge and skills	<ul style="list-style-type: none"> • New ABE diagnostic on the new statewide exam that provided level scores and strand scores • Guidance on differentiated placement or referrals for students testing at levels 1–4 on the diagnostic
New concurrent academic supports attached to entry-level courses	Insufficient academic support for students in traditional college pathways	<ul style="list-style-type: none"> • Guidance on placing students with ABE level scores of 3–4 into concurrent academic support • Funding for non–course-based options • Instructional requirements set by statewide academic course guide
Referrals to adult education programs	Insufficient academic support for students in traditional college pathways	<ul style="list-style-type: none"> • Guidance on referring level 1–2 students into adult and continuing education programs • Grant funding for the Accelerate Texas program (described later in this report) • Funding and professional development from the Texas Workforce Commission

ABE strand scores provided more-detailed information on student readiness in specific domains within the subject area (e.g., sentence structure, grammar). The state suggested that this information might be used to support differentiated and individualized instruction within traditional developmental education courses and targeted academic supports, though this guidance was not stated explicitly in policy documents and was communicated only through less formal professional development efforts. The study thus focused to a greater degree on the more-formal recommendations that the state made related to placement and use of ABE level scores.

Reform 2: Concurrent Academic Supports Attached to Entry-Level Courses

Until recently, Texas colleges required students testing at the lowest levels on the state’s placement exam to enroll in a series of two to three developmental education courses in math, reading, or writing. Data suggested that students testing at the lowest levels were not performing well in entry-level developmental education courses. Among newly entering students in fall 2015 who received ABE level scores of 1 through 4 and enrolled in a developmental education course, only 45 percent passed their first math course, and only 56 percent passed their first reading course, compared with first-semester developmental

education pass rates for higher-scoring students of 56 percent for math and 70 percent for reading. (For more information, see the online technical appendix to this report.)

As we described in the introduction, the series of new reforms that Texas introduced to improve developmental education between 2011 and 2015 featured several changes to the ways that colleges provided instruction and support to students who tested below college-ready levels. For example, one of the new models of instruction was corequisite remediation, where students were placed directly into the college-level course and provided with concurrent (i.e., taken in the same semester) and aligned academic support to address any issues with readiness. In 2017, the state of Texas moved to scale corequisite remediation rapidly, requiring it as the primary approach to supporting academic readiness among most students testing below college-ready levels.⁵ In math, another common reform called for colleges to develop and enroll students into math pathways other than algebra that better aligned with their fields of study (e.g., statistics, applied math). Colleges also were experimenting with other types of reforms to instruction, such as the use of instructional technology to build skills and the integration of separate reading and writing courses into a single sequence. And although Texas policymakers believed that these broad developmental education reforms could potentially benefit all students—including those testing at the lowest levels—they were

concerned that students entering at the lower levels of readiness might need additional targeted support.

The second area of reform called for the adaptation of these broader instructional changes to explicitly target students who tested at the lowest levels on the placement exam. Specifically, Texas policymakers recommended that colleges attach additional academic support to entry-level developmental education and CTE courses. Students enrolled in these academic supports would receive up to three hours each week of additional assistance offered during the same semester (i.e., concurrent) and aligned with a lower-level developmental education or CTE course. This idea was modeled after corequisite remediation, where additional concurrent academic support is built to align closely with the content of a course (although in this case attached to a developmental education course rather than a college-level course). Concurrent academic support models with aligned content had shown promise in supporting college course success among higher ability students (Cho et al., 2012; and Logue, Watanabe-Rose, and Douglas, 2016), so the hope was that these models would be similarly effective for students testing at lower levels.

The state required that the concurrent academic supports be designed as *non-course competency-based options* (NCBOs), alternatives to courses that allow for more-flexible methods of instruction and support and encourage shorter, differentiated interventions.

Texas policymakers recommended that colleges attach additional academic support to entry-level developmental education and CTE courses.

The state's 2014 *Texas Success Initiative Operational Plan for Serving Low-Skilled Learners* specified that:

Faculty content experts will identify and develop non-course competency-based options (NCBOs) for inclusion in the Lower-Division Academic Course Guide Manual (ACGM). These options will be designed to address the needs of students assessing at Levels 3-4.

The state allowed for four types of NCBOs for students testing at these lower levels: reading, writing, integrated reading and writing, and mathematics. The ACGM set the statewide learning outcomes for all developmental education courses and NCBOs, along with minimums and maximums for the number of allowable state-funded hours of instruction. Beyond these requirements, institutions had considerable flexibility in the design of these academic supports, with the option to develop tutoring models, technology-based instruction, workshops, and traditional classroom-based supports. State policymakers recommended that these NCBOs incorporate evidence-based practices from the developmental and adult education literature that emphasized student-centered instructional strategies, contextualized instruction (i.e., presenting academic content in real-world contexts), collaborative learning, structured and modularized learning (i.e., breaking content out into small, manageable chunks), and technology-based instruction (Boroch, 2007; Boylan, 2002; Goldrick-Rab, 2007; Grubb, 2001; Levin and Calcagno, 2008; Massachusetts Community College Executive Office, 2006; and Schwartz and Jenkins, 2007).

Institutions began to receive state funding for NCBOs in fall 2010, and Senate Bill 162 required that all colleges offer at least one NCBO by fall 2015 to incentivize new approaches to developmental education that provided more individualized, differentiated, and potentially accelerated support. It was not a requirement that colleges develop NCBOs for those students testing at the lowest levels (i.e., the required NCBO could be designed for higher-scoring developmental education students). However, THECB strongly encouraged that colleges have a plan in place for delivering targeted academic support to students testing at the lowest levels, and concurrent enrollment in a NCBO and lower-level developmental

education or CTE course was recommended as a primary approach to serving students with ABE level scores of 3 and 4 on the state assessment.

Reform 3: Referrals into Adult and Continuing Education Programs

Although colleges have traditionally relied on developmental education as the primary means of academic support for underprepared students, adult education programs—also referred to as adult basic education, adult secondary education, adult education and literacy, and English as a second language programs—serve as another potential onramp to college coursework for students in need of academic support. Adult education programs aim to support individuals who would like to develop skills in order to earn the equivalent of a high school diploma if they lack one, retrain for new jobs or promotion opportunities, and improve reading, writing, math, and/or English language skills. There are approximately 4,000 adult education programs across the United States, and federally funded adult education programs served roughly 1.4 million students in 2017 (Jenkins, Zeidenberg, and Kienzl, 2009; McLendon, 2011; and Office of Policy Development and Research, 2018).

School districts have traditionally been the largest providers of adult education programs, but some programs are offered directly by community colleges. A 2007 study of federally funded adult education programs (the most recent available) found that 17 percent of adult education providers were community colleges, and these programs accounted for 27 percent of all adult education participants (Tamassia et al., 2007). However, until recently, many adult education programs focused on recruiting individuals without high school diplomas and individuals who had not planned to enroll in credit-bearing postsecondary coursework. These programs recruited students through marketing campaigns, community outreach, and referrals from one-stop workforce delivery system offices. Adult education programs in community colleges were often housed in their own departments or in workforce and continuing education departments rather than in the academic and developmental education departments that oversaw instruction for students enrolling in credit-bearing

programs. These programs typically had distinct policies and staff overseeing recruiting, assessment, placement, and instruction, functioning as a “school within a school” rather than being tightly integrated with other college instructional departments.

However, in recent years adult education providers have expanded their efforts to align their programs more tightly with postsecondary education programs. These initiatives offer basic skills instruction that is aligned with a CTE or academic program and create pathways for students to move directly into postsecondary programs after completing adult education coursework. This allows students to address basic skill needs (e.g., earning a high school equivalency) while making progress toward a postsecondary degree or certificate through college coursework (Jenkins, Zeidenberg, and Kienzl, 2009). Pathways that align adult and postsecondary education programs have often incorporated some innovations that have proven effective in supporting success among adult learners, such as contextualization—instruction that embeds basic skills content into academic or technical content through concrete applications that are relevant to students (e.g., nursing students practice math using medication dosage)—and “stackable” certificates that provide a more gradual ramp-up in skill requirements and more flexible pathways (Wilson, 2016). The most recent version of the Workforce Innovation and Opportunity Act strongly encourages the use of evidence-based strategies, such as pre-apprenticeships, contextualization, and career pathways with stackable credentials (29 U.S.C. § 3101).

The iBEST program in Washington state—originally piloted in 2004 and now offered at all of the state’s community colleges—is perhaps the most well-known of these programs (Wachen et al., 2012). Evidence from an experimental study of iBEST suggests that the program led to an increase of 22 percentage points in college enrollment and an increase of 41 percentage points in occupational training program participation. Furthermore, participants in iBest earned more college credits and were 32 percentage points more likely to earn a credential (Glosser et al., 2018). With the success of such early programs as iBEST, adult education programs across the country are integrating career pathways that

allowed for easier transitions into postsecondary education programs (Bergson-Shilcock, 2016).

Noncredit continuing education programs are another potential option for serving students who enter with substantial needs for academic (and non-academic) support. For example, the City University of New York (CUNY) offered a noncredit program through its continuing education department that provided students with intensive math, reading, and writing support (12 to 26.5 hours weekly) along with enhanced advising (Scrivener et al., 2018). Students in the CUNY Start program were more likely to stay enrolled in coursework and accumulated more credits in early semesters than students who enrolled in developmental education (Scrivener et al., 2018). The intervention cost students approximately \$75 and allowed them to hold off on using financial aid resources on coursework that did not offer any credits.

To expand the use of adult and continuing education resources among traditional college enrollees and to encourage the development of integrated pathways and intensive supports, such as CUNY Start, the third set of reforms recommended that colleges consider referring students testing at the lowest levels on the TSIA to adult education programs. In its *2012–2017 Statewide Developmental Education Plan*, the THECB recommended that:

Institutions will ensure that lower-skilled students identified by the TSIA as pre-developmental education are served by appropriate adult education programs either within the institution or by adult education providers in the community.

Specifically, the state suggested that students receiving ABE level scores of 1 and 2 on the TSIA (equivalent to readiness at elementary grade levels) should be directed to these programs because of concerns about limited prospects for success in developmental education coursework (Texas Higher Education Coordinating Board, 2012; and Texas Higher Education Coordinating Board, 2014). Other guidance provided by the state suggested that continuing education departments also might be used to serve the academic needs of students testing at the lowest levels.

In addition to recommending that some students testing at the lowest levels on the TSIA be referred to

adult or continuing education programs, the Texas Workforce Commission and THECB worked collaboratively to encourage programs to adopt evidence-based practices highlighted in the literature, such as integration with CTE pathways, contextualization of the basic skills content, dedicated staff for providing outreach, establishing partnerships, and breaking down siloes (e.g., providing adult education students with school identification cards and access to support services) (Texas Higher Education Coordinating Board, 2012; and Texas Higher Education Coordinating Board, 2014). The two state agencies offered resources and professional development opportunities for adult education providers to support these efforts. The state also developed the Accelerate Texas grant program to fund the development of integrated adult education programs and credit-bearing postsecondary programs that incorporated evidence-based practices. THECB provided grants to 28 community college systems across Texas and enrolled 6,224 students between 2010 and 2016 (Public Policy Research Institute, 2016). In 2018, oversight of the Accelerate Texas program was handed over to the TWC as the state agency responsible for overseeing adult education. Although state policymakers encouraged colleges to use Accelerate Texas funding for both traditional adult education populations and the group of students testing at the lowest levels of the TSIA, most of the participants in the program came from traditional adult education populations.⁶

Students Supported by the New Reforms

The new resources and guidance offered by Texas policymakers were targeted to students who took the TSIA, most of whom planned to enroll in a program that required demonstration of college readiness. In Texas colleges, students who applied directly to adult education programs or were pursuing continuing education (noncredit) programs and short-certificate programs (i.e., less than 30 credit hours) were exempt from TSIA testing and developmental education.⁷ Texas also grants waivers and exemptions from placement testing requirements for several groups of students, such as military and veteran students, students who received an English as Speakers of Other

Languages (ESOL) waiver, and students who had otherwise demonstrated college readiness through alternative assessments (i.e., SAT, ACT, high school exams) or successful completion of college coursework.

Among first-time fall 2015 students who enrolled in credit-bearing courses at Texas community colleges, 72 percent took the TSIA. Seven percent tested at the lowest levels (ABE level scores of 1–4) in math, reading, and/or writing. (A data table is provided in the online technical appendix.) It was more common for students to test at the lowest levels in math (6 percent of all enrollees) than in reading or writing (2 percent of all enrollees). Of students testing at the lowest levels, the majority of these students (79 percent) received an ABE level score of 4, signifying levels of readiness that are roughly equivalent to what might be expected of students in middle school grades.

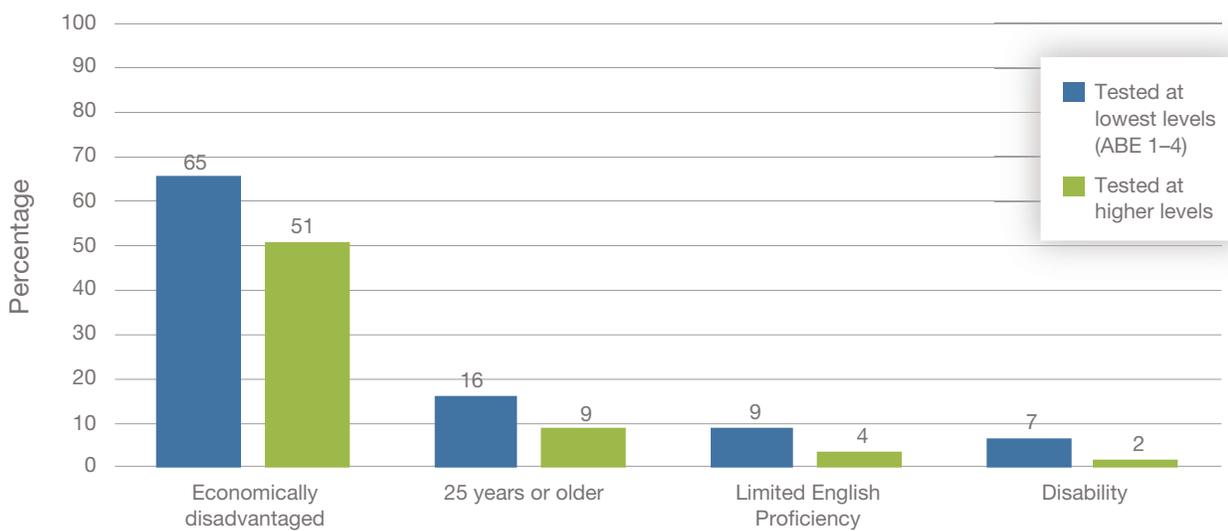
The incoming students who tested at the lowest levels on the state’s assessment were different from their peers who scored at higher levels (Figure 1). Nearly two-thirds of students assessed at the lowest levels were economically disadvantaged, compared with just one-half of higher-scoring students. Lower-scoring students were more likely to be adult learners (25 or older). Students assessed at the lowest levels were also at least twice as likely to have identified as Limited English Proficient or as having a disability. These

results mirror what was found in another ongoing study (Visser et al., 2017), and suggest that students assessed at the lowest levels on the assessment might have faced additional barriers and might have required a broader variety of resources to ensure success. These differences in background could have contributed to the lower test scores these students received (i.e., scores might understate actual levels of academic readiness).

Use of State-Recommended Reforms in Texas Community Colleges

Over the four years of the study, we conducted both extensive technical assistance work with three case study community colleges and broader analysis of statewide administrative, survey, and interview data. A more detailed description of this study is provided in the online appendix. Evidence from this work provided us with a view of how community colleges in Texas were using the resources and guidance offered by state policymakers and of some of the challenges faced on the ground. In this section we first describe what colleges did to adopt the changes recommended by state policymakers in each of the three areas of reform: (1) use of new diagnostic scores, (2) development of concurrent academic supports;

FIGURE 1
Characteristics of Students Testing at the Lowest Levels Versus All Other Students



NOTES: Bars represent the percentage of first-time college students in fall 2015 who enrolled in postsecondary coursework at Texas community colleges and had the noted characteristics, comparing students who tested at ABE level scores of 1–4 on the TSIA with students testing at higher levels. All differences are statistically significant at the $p < 0.01$ level.

and (3) referral of students into adult and continuing education programs. We also discuss some of the barriers that colleges encountered, and strategies that some colleges used to overcome barriers. We then describe how the broader variety of postsecondary reforms were used to support students testing at the lowest levels. Findings are summarized in Table 2.

Efforts to Use New Assessment Scores for Placement into Targeted Academic Support

Under its first reform, the new state recommendations called for colleges to use the new ABE level scores from the TSIA to offer differentiated placement and referrals into targeted academic support. THECB staff provided regular training on the assessment and new scores to all test administrators and to other college staff participating in ongoing professional development. Institutions were responsible for ensuring that this information was passed down to advisers and other college staff, and often did these through recurring departmental meetings.

State policy provided colleges in Texas with latitude to develop their own policies regarding which courses and interventions were available to students and how students would be placed into them (i.e., cut scores, use of multiple measures). The most direct way that colleges used the new ABE diagnostic scores was to build them directly into placement charts—charts commonly used by advisers to assign students to different developmental education course levels and/or supports. Institutions also could comply with the state recommendations by incorporating ABE diagnostic scores into advising in a less structured way—for example, suggesting that advisers have different types of conversations with students who had these lower score levels.

Updates to the placement chart and advising policies were instituted by most colleges on a semester-by-semester basis, with instructional departments typically playing a strong role in setting cut scores and determining placement options. At two of the case study colleges, these policies were determined solely by instructional departments; at the third, they were developed by a cross-departmental leadership group that included advising and faculty representatives.

Colleges varied in the ways that they informed advisers about changes to course offerings and placement policies, with such efforts as updates to advising guides, in-person training, and informal information-sharing. However, the placement chart often served as a primary document used to ensure adviser knowledge of placement changes.

According to statewide survey data, approximately 79 percent of the state's community colleges (among 69 institutions surveyed) reported using specialized practices, rubrics, or guidelines in the fall of 2016 when advising students who tested at the lowest levels. This suggests that most community colleges made efforts to use the new assessment scores provided by the state. Evidence from the case study and interview data suggests that the ways in which the new diagnostic scores were used by colleges varied widely. One case study college explicitly built the scores into placement charts and required differentiated placement or support for all students testing at these lower levels; the two other case study colleges did not build diagnostic scores into placement charts and relied on informal use of scores by advisers in meetings with students and holistic discussions about student needs. Although many colleges in the state were using multiple measures (under state policy), multiple-measure placement was limited in most colleges to students testing at the top end of the “not college ready” range (those qualifying for placement into corequisite remediation).

We identified three barriers that community colleges faced limiting their ability to use the new diagnostic scores to identify students with low levels of incoming readiness (Table 2). First, colleges faced **challenges in accessing scores**. According to the statewide survey, as of 2016, 8 percent of colleges reported issues accessing the level scores from the diagnostic for the purposes of placement, and 18 percent reported issues accessing strand scores. In the initial years of implementation, institutions faced challenges downloading scores from the College Board and getting them to integrate seamlessly into student information systems for adviser use in placement. Even when scores were integrated into student information systems, advisers and faculty often reported having to click through many

TABLE 2

Findings on the Take-Up of Reforms Recommended by Texas Policymakers

Reform	Evidence of Take-Up	Barriers to Take-Up	Examples of Strategies That Colleges Used to Overcome Barriers
New assessment scores to identify and target supports to students	<ul style="list-style-type: none"> 79 percent of community colleges reported using specialized practices, rubrics, or guidelines for students with ABE level scores of 1–4 	<ul style="list-style-type: none"> Challenges accessing scores Misunderstanding of scores and how to use them Limited information on other student needs (e.g., language ability, disabilities) 	<ul style="list-style-type: none"> Information technology workarounds with support from College Board and THECB State and institutional training for advisers and other school staff on the assessment Enhanced screening procedures and training for school staff on language supports and disabilities services
New concurrent academic supports attached to entry-level courses	<ul style="list-style-type: none"> 66 percent of community colleges reported offering concurrent academic support with developmental education (25 percent with CTE) 51 percent of community colleges reported continuing to allow students with ABE level scores of 1–4 directly into developmental education without concurrent support 	<ul style="list-style-type: none"> Limited evidence that lower-scoring students needed additional support Small populations of lower-scoring students in each college Competing priorities Voluntary enrollment policies for academic supports Limited information among advisers on supports for lower-scoring students 	<ul style="list-style-type: none"> Clear evidence on lower rates of success among the target population of students Using existing academic supports (e.g., tutoring, corequisite models) rather than designing new ones Focus on broader reforms that served larger student populations Mandatory placement policies Simple placement charts Additional informational guides, marketing, and training to ensure understanding of the supports offered
Referrals to adult education programs	<ul style="list-style-type: none"> 52 percent of community colleges reported offering adult and/or continuing education programs 6 percent of community colleges reported using these options as the primary referral option for students with ABE level scores of 1–4 	<ul style="list-style-type: none"> Siloing and limited communication and collaboration between departments Lack of student interest and hesitancy of advisers to steer students away from areas of interest Limited intake processes and time to incorporate holistic advising, discussion of career options 	<ul style="list-style-type: none"> Dedicated time and attention to facilitating cross-departmental collaboration Reorganization of departments to eliminate siloes A single door for advising across college programs Strong career guidance as a part of the advising process Initiatives requiring more holistic, frequent, and intrusive advising

screens to get to scores, and faculty reported frustration with having to pull scores one by one rather than being able to access all scores for students in a section. In some cases, colleges restricted access to scores so that faculty were unable to access them. To address these access challenges, institutions worked with information technology departments to develop workarounds for downloading and displaying scores in student information systems, and they engaged with the College Board and THECB to resolve issues. Our discussions with college staff suggested that many of the issues regarding the downloading and accessing of scores for placement were resolved within the first few years after reforms were rolled out, although faculty at many colleges continued to face barriers in this area.

In addition to challenges with access, colleges ran into issues of **misunderstandings about the scores and how to use them**. Many college practitioners struggled to understand and combine the many different scores for the purposes of placement. For example, in writing, advisers received an essay score, a multiple-choice score, the ABE level score, and several ABE strand scores. College administrators reported challenges with overly complex placement charts as they tried to integrate multiple scores. When the additional scores were viewed as too complex and confusing, practitioners defaulted to relying on the main subject scores for placement rather than the diagnostic scores that were better-suited for this purpose. In addition, some college staff misunderstood which scores classified students for additional support under the state's recommendations, believing that all students receiving an ABE level score (including students with ABE level scores of 5 and 6) should be referred to targeted academic supports.

Advisers, faculty, and administrators we spoke with also suggested that the information and training provided around assessment and advising policies at the state and institutional levels was insufficient. With regard to training on state policies, colleges reported that information provided to one group of individuals or representatives at state trainings was not always well disseminated throughout departments in the college. In addition,

some reported that the information provided by THECB was confusing and/or inconsistent across different trainings. At the institutional level, we heard about many inconsistencies in adviser knowledge and advising experiences, and uneven training and information-sharing was described as a challenge. For example, we heard from some advisers that updates to placement charts would sometimes be provided midway through the advising window, leading to inconsistent policies across students enrolling in the same semester. In addition, some colleges disseminated information on new courses and initiatives in a diffuse way, with each instructional department responsible for initiating outreach to advisers rather than having new information on placement options and policies streamlined into regular, structured trainings. High turnover rates among advisers and time limitations resulting from large student caseloads also made it difficult for colleges to ensure that advisers were consistently trained on the full complement of program and course options and advising policies.

Another major barrier that colleges faced in using assessment information to target supports to the lowest-scoring students was **incomplete information on student needs and abilities, such as underidentified language support needs and disabilities**. As Figure 1 indicated, two groups of students who were particularly likely to test at the lowest levels were students classified as Limited English Proficient and students with disabilities. Administrators and faculty expressed concerns that these students required a different set of services than those provided for students who faced challenges only with academic readiness. Most of the colleges we interviewed reported that their colleges offered robust ESOL programs and services for students with disabilities, but colleges relied on student self-identification to determine whether services were needed and so were concerned that many students were not reaching out to self-identify and get access to the supports they needed. To overcome these barriers, colleges developed more-standardized screening processes to identify students who might be in need of specialized support, and they provided resources and training to advisers and faculty to help with referrals.

Efforts to Develop and Enroll Students in Concurrent Academic Supports

Efforts to Develop Concurrent Academic Supports

The second reform called for institutions to develop new concurrent academic supports attached to entry-level developmental education and CTE courses to provide targeted academic support to students testing at the lowest levels, and state policy provided a funding mechanism for this support through NCBOs. Data from a state survey suggested that as of fall 2016, nearly 66 percent of community colleges in the state had developed concurrent supports attached to a developmental education course, and another 24 percent had developed concurrent supports attached to a CTE course (Figure 2).

We heard about several different types of concurrent academic supports offered to students by our three case study colleges and nine interview colleges. One model was offered as a mandatory four-week “boot camp” course with face-to-face instruction from one instructor at the start of the semester, after which the students transitioned into a 12-week section of the lowest level developmental education course with another instructor. Several colleges developed the concurrent support as lab time with computer-adaptive software and an instructor facilitator. A third model was described as being a full concurrent “paired course” with a separate instructor providing face-to-face classroom instruction throughout the 16-week semester. We did not have an opportunity to interview any colleges that offered concurrent supports attached to CTE courses, so we cannot speak to how these were designed and implemented by colleges.

Although the development of concurrent academic supports by two-thirds of Texas community colleges suggests that policymaker resources and guidance might have been helpful in spurring action, there were also some colleges that decided not to develop concurrent academic supports—and, in some cases, not to change practices in any way in response to the new diagnostic evidence. Twenty-eight percent of community colleges continued to place students

directly into developmental education courses as their primary approach (Figure 2).

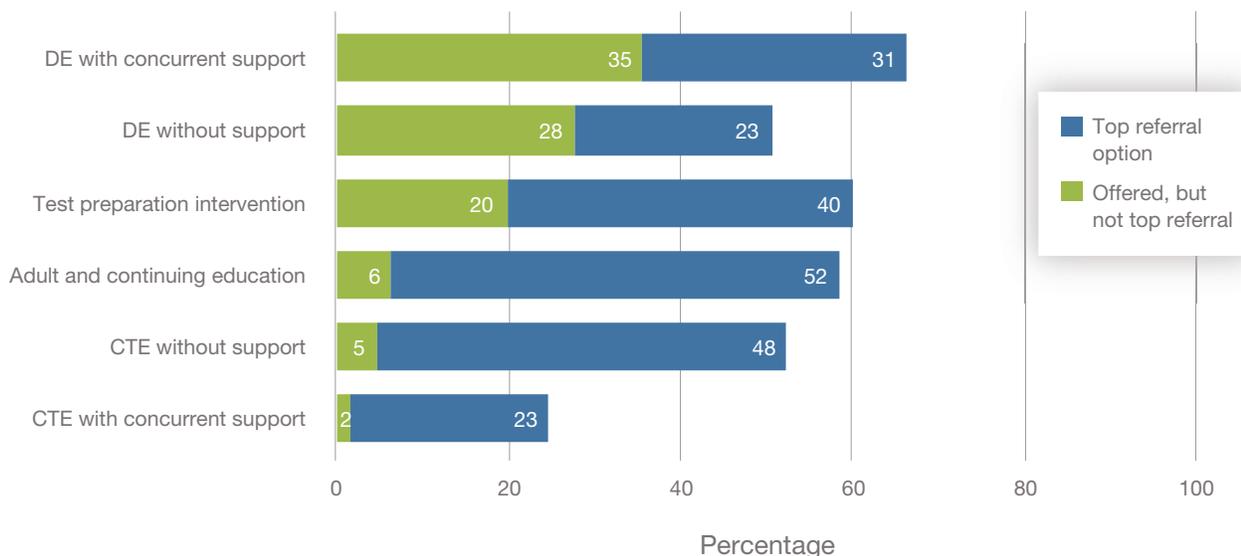
Discussions with college administrators, faculty, and advisers suggested several important barriers to developing concurrent academic supports for students assessed at lower levels (Table 2). First, there was **limited evidence suggesting that students assessed at lower levels needed additional support**. Prior to the introduction of the TSIA, the state could not identify and provide evidence regarding students testing at these lower ranges. There was also limited discussion of this population in the literature, so practitioners and policymakers could not identify evidence from outside Texas indicating a need to serve these lower-scoring students in a targeted way beyond what other students entering college in need of academic support received. Without clear evidence that this particular group of students was distinct from the overall developmental education population, some college staff were not convinced that new approaches and additional supports were needed. Experiences in our case study colleges suggested that some college staff needed to see more evidence on this group of lower-scoring students to build buy-in around the need for targeted action.

Another major barrier that colleges faced were **small populations of students testing at the lowest levels**. With relatively few students testing at these levels in each college, the per-student costs of developing targeted academic supports was often high. Some college administrators reported that they did not see it as sustainable to develop specialized supports for such a small population of students, expressing a desire to invest in reforms that touched a larger portion of the student population. To overcome these challenges, some colleges decided to rely on existing supports rather than creating new ones (e.g., adult education programs, tutoring). Other colleges borrowed from the design of their corequisites to develop concurrent academic supports more easily.

Colleges in Texas also faced several **competing priorities**. At the same time as the guidance on lower-scoring students was being rolled out, colleges in Texas were experimenting with a variety of other developmental education reforms (e.g., corequisite remediation, multiple measures) and high-priority initiatives (e.g., guided pathways, dual credit). Each

FIGURE 2

Percentage of Colleges Reporting They Provide Supports and Offer Supports as the Primary Referral



NOTE: Data based on the states Developmental Education Practices Survey, which is fielded annually to Texas public postsecondary institutions and receives a 100-percent response rate due to mandated completion. Percentages represent the percentage of colleges who reported something as their top referral option (numbers on the left, represented by the grey bar) and the percentage who reported something as being offered, but not the primary referral option (numbers on the right, represented by the blue bar). More information on this survey item is provided in the online technical appendix.

of these required the attention of busy administrators and commitment and resources from instructional, advising, and student support departments. In addition, some of these other reforms came with stronger mandates while the guidance for targeted support to lower-scoring students was communicated to colleges as being optional. Administrators and college staff reported that the large number of reforms and the greater prioritization of other initiatives limited the time and resources they were able to devote to the targeted reforms for students testing at the lowest levels.

Efforts to Enroll Students in Concurrent Academic Supports

In addition to developing concurrent supports, colleges also needed to ensure that students enrolled in them. We did not have statewide evidence on the proportion of lower-scoring students who ended up co-enrolling in a developmental education course and concurrent academic support because of inconsistencies in reporting practices across institutions for NCBOs, but evidence from our case study colleges

indicated that there were challenges with consistently enrolling students in the concurrent academic supports. At one college, we found that, despite a clearly listed requirement of an NCBO for students with ABE level scores of 3 and 4, only 51 percent of the students in the developmental education course also were enrolled in the concurrent academic support. (A brief description of the analysis and numbers underlying this evidence is provided in the online technical appendix.) Another college developed a new concurrent academic support during the study period, and fewer than ten students enrolled in the academic support out of more than 500 students who tested at the lowest levels on the exam.

Colleges faced several barriers that might have hindered their abilities to consistently enroll students in concurrent academic supports (Table 2). First, many colleges established **voluntary enrollment policies for academic supports**. As Figure 2 indicates, only 35 percent of colleges reported referring students to a developmental education course as the primary option, and only one college reported referring students primarily to a CTE course with a

concurrent support. Put another way, many colleges that offered a developmental education course with a concurrent support also allowed students to enroll directly in the course without the concurrent support. Among colleges offering developmental education with a concurrent academic support, many also reported allowing students directly into stand-alone developmental education courses without the support. There were few incentives for students to enroll in additional hours of instruction and pay additional tuition for the supports when they were permitted to directly enter developmental education courses without them. In addition, these voluntary policies left it up to advisers to decide whether to recommend and encourage students into supports, leading to inconsistent advising practices across advisers. Colleges that required all students testing at the lowest levels to enroll in the academic supports and built these requirements directly into placement charts were somewhat more successful in getting these students to enroll.

Colleges also had **limited information and training on the alternative pathways and academic supports available to lower-scoring students.**

Advisers were responsible for keeping track of many different interventions, programs, and services that evolved on a semester-by-semester basis, and the degree to which advisers were well-informed about all the offerings varied. Colleges typically relied on course catalogs, departmental meetings, and informal faculty-adviser interactions to ensure that advisers were well-informed about course offerings, and a lack of formal and systematic training led to uneven knowledge across advisers. Interventions for this small population of students testing at the lowest levels might not always have been well-advertised, or might not have been prioritized given the small size of the population qualifying for the services. One strategy for overcoming these informational issues was to integrate placement guidance directly into simple placement charts. Other strategies consisted of the development of informational guides on the supports for advisers, more systematic and regular trainings for advisers, and additional communication efforts between faculty and advisers to facilitate understanding of what the supports were and how to describe them to students.

Efforts to Refer Students into Adult and Continuing Education Programs

Under the third reform, state policymakers recommended that colleges consider referring students testing at the lowest levels of readiness to adult or continuing education programs. Figure 2 suggests that more than one-half of the colleges in the state did offer adult or continuing education programs as an option for students who tested at the lowest levels. However, only 6 percent of community colleges reported primarily referring lower-scoring students to these programs, with referral into developmental education (with or without concurrent support) continuing to remain the primary option for most colleges. All three of our case study colleges had robust adult education programs and participated in the Accelerate Texas grant program to strengthen these programs. Yet only one of the three designated adult education as the primary referral for lower-scoring students (those with ABE level scores of 1 and 2). The other two colleges did not refer TSIA-testing students to adult education but did offer intensive academic supports through continuing education (with one adopting a model similar to CUNY Start); however, because the colleges did not require students testing at lowest levels to enroll in these noncredit programs, they did not see broad take-up of the supports as students instead chose to enroll in developmental education courses.

Interviews with college administrators and faculty at our case study and interview colleges suggested that their adult education programs were designed according to evidence-based practices, whereby basic skills instruction was contextualized to align with credit-bearing content (typically CTE content) and articulated into for-credit instruction and a postsecondary certificate in the field. However, these integrated programs continued to serve primarily the special populations of adult learners that they had served prior to reforms. Very few colleges adopted this as their primary strategy for serving TSIA-testing students.

We identified several barriers that limited the efforts of colleges to use adult education in a more prominent way to serve enrollees scoring at the lowest levels on the TSIA (Table 2). First, we heard about many issues with **siloes and limited communication and collaboration among departments.**

Comprehensive efforts to refer lower-scoring students to adult education required collaboration across adult education departments, other instructional departments, and advising departments. Evidence from the study suggested that there were often strong divisions among the various departments that limited efforts to systematically engage in cross-departmental collaboration and communication. For example, some instructional departments did not value adult and continuing education resources and did not want to divert students from stand-alone developmental education courses into noncredit options. Some colleges overcame the issue of siloed departments by reorganizing to place different instructional departments under the same administrators. Others devoted resources and leadership capital to encourage regular interactions between adult education departments and other instructional departments. At the state and federal levels, colleges reported that efforts to streamline funding and accountability for adult education programs and other postsecondary programs also would be helpful in overcoming siloes, a suggestion that has been made elsewhere in the literature (Foster and McLendon, 2012).

Colleges also encountered issues with a **lack of student interest in participating in adult and continuing education and CTE programs, and hesitancy of advisers to steer students away from areas of interest**. Several colleges reported that they didn't pursue adult education as a primary strategy because

We identified several barriers that limited the efforts of colleges to use adult education in a more prominent way to serve enrollees scoring at the lowest levels on the TSIA.

noncredit programs were unattractive to TSIA-testing students. Students did not want to enroll in something other than the “normal” pathway that most college enrollees took, and were worried that these programs would hold up progress to a degree. Despite the fact that many adult and continuing education programs were offered at little or no cost to students, students were concerned about not being able to use financial aid to pay for adult education programs if they did not carry a full load of credit-bearing courses.

In addition, it was more common for colleges to integrate adult education with CTE programs, even though many students assessed on the TSIA were interested in traditional academic degrees rather than CTE programs. Advisers raised concerns about denying entry to academic degree programs for lower-scoring students. Postsecondary advising in open access colleges had long relied on student preferences to determine program enrollment, and shifting to an advising model that was more adviser-driven and prescriptive was not something that had strong support among college staff. Advisers at many community colleges did, however, express a willingness to discuss other careers and programs with students in an effort to help them make better decisions. Some colleges built in career advising as a core part of the intake process to facilitate these conversations, and the state agencies offered labor market data to support this career advising. Ensuring that advisers were well-informed about the variety of programs offered by the college was also important in helping to support these conversations. Another useful strategy reported by colleges was to require all students (i.e., academic, CTE, adult education) to enter through a single advising door and see common advisers. This increased the likelihood that advisers were well-informed about the variety of programs and supports available to students testing at the lowest levels.

Another set of barriers to referring lower-scoring students into adult education programs that colleges faced was **limited intake processes for enrollment and a lack of time to incorporate holistic advising and discussion of career options**. Many community colleges had enrollment and advising processes that involved limited opportunities for interaction with students prior to course registration, even as strong

college advising is known to be very important for college students, especially those who might be underprepared (Alamprese, 2002). For example, one case-study college did not require students to see an adviser prior to course registration because the college was concerned about depressing new enrollment by placing undue barriers on students. When colleges did require face-to-face advising sessions prior to course registration, advisers reported that they did not have sufficient time and information to holistically advise students, incorporate multiple measures for placement, and identify the academic and non-academic supports best suited for the student's needs. With these limitations, advisers at many colleges continued to rely heavily on placement charts and test scores as the primary tool guiding their advising. Steering lower-scoring students into integrated adult education and CTE programs was a particular challenge with limited intake processes because advisers needed the time to discuss shifts in programs and career plans. Over the period of the study, we saw evidence that many colleges were engaged in efforts to enhance their intake processes, such as developing ways to collect additional information on these students for use of multiple measures and early alert systems, and increasing efforts to pursue multiple face-to-face interactions with students over the first semester by assigning students first-year advisers and requiring them to meet regularly and proactively with students (referred to as *intrusive advising*). These efforts helped to ensure that advisers had more time to talk with struggling students, including those who scored at the lowest levels on the state's placement exam, and to identify the appropriate supports.

Support for Lower-Scoring Students from Broader Reforms

Although the primary focus of this report was on the state's three areas of reform that explicitly targeted academic support to students testing at the lowest levels, our technical assistance work with our case study colleges and interviews with college staff often shifted to other, broader initiatives. THECB and college stakeholders believed strongly that students at all levels could benefit from the broader developmental

education reforms, such as acceleration of students into corequisite remediation and use of multiple measures for placement. For example, the state strongly advocated accelerating students with ABE level scores of 4 directly into corequisites if other measures, such as high school grades, indicated sufficient levels of readiness. Given the small number of students testing at the lowest levels and the large number of competing priorities that colleges and school staff had to balance, some college administrators and faculty we spoke with favored these broader initiatives.

Beyond these broad developmental education reforms, there were a variety of other initiatives and reforms that colleges reported as being useful for supporting students assessed at the lowest levels (Table 3). For example, students testing at these lower levels were often encouraged to retest and engage in test preparation efforts and received additional screening for language needs or disabilities. Advisers described holistic discussions about placement (when time permitted) as being useful, including conversations about career plans. Early alert systems, strong tutoring programs, and strong wraparound supports (e.g., counseling, food pantries) helped to supplement adviser capacity and connect students to a wider variety of academic and nonacademic supports. Other student support strategies—such as tutoring, learning communities, and student success courses—were broadly available at community colleges in Texas, and were reportedly helpful for lower-scoring students. Finally, guided pathways—an initiative to provide students with clear pathways through college that include specific course sequences, progress milestones, and program learning outcomes—were being scaled to colleges across the state and were said to be useful for all students.

Lessons Learned from Texas Efforts to Support Lower-Scoring Students

Overall, our work with Texas policymakers and community colleges offered evidence that the state's reforms for students testing at the lowest levels were adopted by many colleges, and that the colleges used

TABLE 3

Broader Initiatives and Programs Supporting Lower-Scoring Students

Initiative	Students Targeted	How Initiative Could Support Students Testing at the Lowest Levels
Retesting and test preparation	All students below college-ready levels	Placement test scores might not have accurately assessed student readiness, and retesting and test preparation improves accuracy of placement
Language assessment, ESOL pathways	Students facing English language deficits	Placement test scores might signal unidentified issues with English language for some students that might be better addressed through pathways and academic supports that offer language instruction
Holistic advising, multiple measures	All students below college-ready levels	Placement test scores might not have accurately assessed student knowledge and needs for support, use of other measures and holistic advising can help to ensure appropriate placement and support
Career assessment and advising	Students visiting career center; universal screening in some cases	Students with low incoming levels of readiness might benefit from participating in integrated adult education and CTE pathways, but this requires advising conversations about changing plans for education and careers
Early alert, intrusive advising	All students, first-time students	Students with low incoming levels of readiness might be more likely to run into trouble in early semesters and require intrusive advising and support
Nonacademic wraparound resources	All students, low-income students	Students testing at the lowest levels were disproportionately likely to be economically disadvantaged and older, and might require wraparound resources, such as food pantries, child care, and housing assistance.
Guided pathways, stackable credentials	All students	Guided pathways and stackable credential programs might help to align and streamline adult education, CTE, and academic programs and provide students who have low incoming levels of readiness with clearer pathways to completion with multiple on- and off-ramps
Math pathways	All students, DE students	Students at all levels of readiness might benefit from non-algebra pathways that allow for alternative routes to completion of math course requirements
Corequisite remediation	DE students	Accelerated developmental education (DE) pathways might have the potential to benefit students at the lowest levels of readiness
Integration of reading and writing	DE students	Accelerated DE pathways and integrated instruction might have the potential to benefit underprepared students at the lowest levels of readiness
Learning communities	DE students	Enrolling students with lower levels of readiness in blocks of courses with common cohorts of students and instructors might provide a more cohesive and supportive environment
Tutoring	All students	Students with lower levels of readiness might be particularly likely to need and benefit from tutoring
Student success courses	All first-time students	Students with lower levels of readiness also might need support around student success skills and connections to college resources

these state resources to develop targeted approaches to advising and support for these students (Table 2). Most colleges reported differentiated placement and advising for students testing at the lowest levels, and at least one-half of the colleges across the state reported offering concurrent academic supports and adult education programs. However, fewer colleges required students to enroll in these concurrent academic supports or adult education programs as a primary placement option, and more than one-half of colleges continued to allow students to enroll directly into stand-alone developmental education courses.

Institutions faced various barriers that prevented them from fully utilizing the resources and guidance offered by state policymakers, and some colleges found strategies to overcome these barriers.

Without evidence of the effects of the Texas reforms on student outcomes, we cannot make recommendations as to whether other states and colleges should pursue similar efforts. However, our evidence on implementation does offer a few important lessons learned for efforts in Texas and elsewhere to provide additional support to students who enter college with academic readiness below a ninth-grade level.

Although assessment scores have the potential to provide useful information for enhancing advising and instruction, their ability to comprehensively and accurately identify students in need of academic support is limited, and the roll-out of new scores must be accompanied with substantial support for institutions. The availability of more-robust information on levels of academic readiness helped colleges recognize the differentiated needs of their larger population of underprepared students. This improved information also communicated to colleges that improving success rates for all students—including those scoring at the lowest levels on the assessment—was a priority for the state. Many colleges reported using the state’s new assessment scores to differentiate practices, and the availability of scores to identify lower-scoring students was a critical driver of efforts to target additional academic support to these students. However, research has raised concerns about the validity and reliability of assessments for placement (Scott-Clayton, 2012), and some states and colleges are moving away from assessments. THECB and college administrators advocated the use of multiple measures and substantial opportunities for retesting and test preparation to address these concerns but continued to consider placement scores as a valuable source of information on student readiness and needs for support. However, many colleges used multiple-measures placement approaches only for students who made top scores on the TSIA (those being placed into corequisites) and did not consider other measures for students testing at the lowest levels. Broad concerns also remained about the accuracy of test scores for students who didn’t prepare sufficiently for the test and students who faced limitations with English language skills or disabilities.

Assessments also were limited because of variation in testing requirements across student populations. For some of the students without TSIA scores—particularly military and veteran students and certificate program students—faculty, advisers, and administrators raised concerns about not having the ability to identify those with lower levels of incoming readiness, thus limiting chances to intervene. Students in certificate programs and noncredit programs also were subject to different testing requirements, making

it challenging for colleges to comprehensively assess the academic needs of their students.

When states introduce new assessments with a broader range of diagnostic scores, colleges require substantial support to incorporate the new and more complex set of scores effectively. For example, colleges might face challenges with integrating new data into inflexible student information systems. Advising departments often face limited capacity, and it is critical that there is clear guidance on the appropriate ways to incorporate scores into advising practices at the state and institutional levels. When scores are intended to be used for differentiating instruction as well, additional guidance is required to support those efforts. States and colleges implementing new, more-complex sets of diagnostic scores should supplement these scores with substantial training and guidance to support their effective use.

State resources and guidance can drive the adoption of innovative approaches by community colleges to target additional academic support to students testing at the lowest levels. Although the state did not mandate that all institutions offer targeted academic support to students testing at the lowest levels, the resources and guidance offered by the state spurred the development of targeted academic supports at many colleges. Given limited evidence on what types of interventions might be effective with this student population, Texas policymakers encouraged a broad variety of approaches. The field now needs more evidence on the effects of different approaches to understand which types of interventions are most effective at providing college students who have lower incoming levels of readiness with a reasonable chance at earning a degree or certificate. CUNY Start, for example, serves as one model that has demonstrated effectiveness (Scrivener et al., 2018). At least one other ongoing study is examining interventions developed by two Texas community colleges in response to the policies described in this report, with findings anticipated in late 2019 (Visher et al., 2017).

If states and institutions aim for all students testing at the lowest levels to receive targeted academic support, colleges and students benefit from mandates and consistent messaging. Although many community colleges in Texas developed differentiated advising and targeted academic

supports for students testing at the lowest levels, approximately one in four continued to primarily place students directly into developmental education in the same way they had prior to the rollout of new reforms. Administrators and faculty at several colleges directly attributed their decisions not to develop academic supports to the voluntary nature of the state's reforms, and there was confusion among others about whether the reforms (and development of targeted academic supports) were mandatory or optional. Given limited evidence on effective practices for supporting these students who test at the lowest levels, it might be too early to institute mandates calling for any one approach. But at minimum, it is important for states to provide consistent messaging to colleges about why policymakers are recommending specialized academic supports for students who test at the lowest levels, and how these efforts fit into the broader context of developmental education reforms that the state is pursuing.

At the institutional level, we saw evidence that some colleges faced challenges getting lower-scoring students to systematically take up their targeted academic supports. Many attributed this failure to enroll students to the roll-out of academic supports as "optional," and the preferences of students to enroll directly into developmental education without additional academic support whenever possible. When colleges did develop mandatory placement policies, they reported more success in enrolling large proportions of students. However, mandatory placement policies also should incorporate multiple measures and be supplemented with better identification practices for students with Limited English Proficiency and students with disabilities to ensure comprehensive and accurate assessments of student needs.

Cross-departmental collaboration and communication are critical to success. As is true with many programs and initiatives within colleges, successful roll-out requires a coordinated effort that involves instructional departments, advising departments, and other departments within the college. Intervening with students at the lowest levels of readiness might be particularly challenging in terms of coordination because it might require both developmental education and adult education resources and the integration of these basic skill programs with college CTE and/or

academic programs. Breaking down siloes is essential to delivering coordinated services across departments. To facilitate improved coordination, colleges can establish formal policies and processes and can engage in efforts to build a collaborative culture that encourages communication and emphasizes the value of cross-department efforts. Leadership support and prioritization at all levels of the institution are also likely to be necessary to overcome institutional siloes. At the state and institutional levels, policies that align and streamline funding and requirements for adult education and postsecondary education also can help to support stronger integration of programs.

More-frequent integration of adult education programs with CTE programs (as opposed to academic pathways) might limit accessibility of those programs to students interested in other programs and careers. Although many students enter college without knowing exactly what fields of study and careers they would like to pursue, many others do have specific preferences. And in Texas, where requirements for students to demonstrate readiness in math, reading, and writing are restricted to longer certificate programs (of at least 30 credit hours) and degree programs, the students taking the TSIA are often those interested in these specific programs. Because of time and resources requirements and limited student populations, most colleges have sought to integrate adult and postsecondary education programs with only a limited number of fields, many of which are CTE-focused and integrated with postsecondary programs that do not require TSIA testing. This meant that participation in adult education often required students to switch plans for their fields of study and career. Strong career advising and realistic conversations between advisers and students about the academic requirements of various pathways played a valuable role in supporting efforts to refer students to CTE pathways, but colleges often faced limited advising capacity, and some advisers continued to feel uncomfortable steering students away from their preferred fields of study. In addition, many students testing at the lowest levels might want to continue to pursue degree programs even when well informed about their options and limitations. If colleges want to continue to allow students to drive decisionmaking and also want to be able to provide targeted supports to students testing at lower

levels of readiness, onramps are needed for both CTE and academic programs. Texas policymakers did this by offering several options for colleges (i.e., concurrent NCBO supports and referrals to adult education). If colleges want to use adult education programs as the sole source of academic support for students testing at the lowest levels, they should ensure that adult education is integrated with CTE and academic programs.

Targeted academic supports are not the only approach to addressing the needs of students testing at the lowest levels; many other types of reforms also show promise with this population. Students testing at the lowest levels on the state’s assessment faced limited chances of success in traditional developmental education coursework, suggesting that additional (targeted) intervention might have been important. Several colleges that developed targeted academic supports reported them as useful in supporting student success. Yet colleges also emphasized a broader set of reforms and initiatives that were helpful in comprehensively addressing the needs of students testing at the lowest levels. For example, some argue that the issues with developmental education were largely structural—with students required to complete many semesters of coursework prior to entering credit-bearing coursework—and that such acceleration reforms as corequisite remediation might be the primary reform needed to address success for all students testing below college-ready levels (Complete College America, undated). In addition, we heard that placement test scores were not reflective of student abilities for some students assessed at the lowest levels and instead were driven by misunderstandings about the test, insufficient preparation, and test anxiety. Policies that incorporated multiple measures, allowed for retesting, and offered opportunities for test preparation were viewed as beneficial, regardless of whether students initially tested at the lowest levels or slightly higher levels. Many students also required nonacademic support, and such initiatives as early alert systems and efforts to provide strong wraparound supports (e.g., food pantries, counseling) were perceived as valuable in addressing these needs. A combination of broad and targeted initiatives might be the best way to address the needs of students at the lowest levels of college readiness.

In conclusion, Texas policymakers and colleges have been leaders in reforming developmental education, and their reforms targeted to students testing at the lowest levels on the state assessment signaled a clear interest in continuing to support students entering at all levels of readiness. The experiences of Texas community colleges in adopting these reforms and the successes and challenges they faced offer important lessons for other states considering how best to support students testing at the lowest levels of readiness.

Notes

¹ For example, House Bill 1244, 82R granted THECB the authority to set a single statewide standard for college readiness, which led to the development of the state’s common TSIA placement exam and cut scores (Texas Legislature Online, 2011a). Senate Bill 162, 82R called for institutions to pursue accelerated models of developmental education and new instructional approaches (Texas Legislature Online, 2011c).

² For example, Florida’s move to eliminate placement testing is described in Park et al. (2016). A discussion of the California State University system’s efforts to eliminate placement testing can be found in Xia (2017).

³ The TSIA was developed by the College Board and validated in a 2016 study. For more information on the validity of the assessment, see Cui and Bay (2017).

⁴ More-detailed descriptions of the score levels and their associated skill descriptors for reading, writing, and mathematics are provided in the technical appendix. These scores mapped onto the National Reporting System (undated), the accountability system for federal funded adult education programs.

⁵ House Bill 2223 called for 25 percent of developmental education enrollments to be in corequisite remediation by fall 2018, 50 percent by fall 2019, and 75 percent for fall 2020 (Texas Legislature Online, 2011b). Students receiving ABE level scores of 1 through 4 receive a one-semester exemption but are counted along with the higher-scoring population and expected to be enrolled in corequisites by the second semester.

⁶ Because the Accelerate Texas program had a separate, independent evaluation and was not used by any of our study colleges as a primary resource for supporting TSIA-testing students, we do not devote attention to it in this report. More information on the program can be found in Public Policy Research Institute (2016).

⁷ Adult education programs have their own testing requirements using a variety of different assessments, such as the Test of Adult Basic Education. Institutions can set their own assessment policies for students in short certificate programs in order to assess needs for support, and we heard of at least one college that requires universal testing of short certificate students with the TABE. The TSIA also can be administered to these students, but the state’s Texas Success Initiative policy prevents this score from being used to require developmental education for students enrolled in short-term certificate programs.

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About This Report

Between 2011 and 2015, Texas policymakers rolled out new resources and guidance to support the success of students who enroll in college and test at the lowest levels of readiness (i.e., below the ninth-grade level). The Texas Higher Education Coordinating Board (THECB) partnered with the RAND Corporation and American Institutes for Research to support the state's developmental education reform efforts through a combination of continuous improvement support and analysis of statewide data on implementation.

This report describes the state's new resources and guidance, the students that these new reforms were intended to help, the implementation of the state-recommended reforms by community colleges, and some lessons learned for Texas and other states that pursue similar reforms. The research was undertaken by RAND Education and Labor, a division of the RAND Corporation that conducts research on early childhood through postsecondary education programs, workforce development, and programs and policies affecting workers, entrepreneurship, and financial literacy and decisionmaking. The research reported here was supported, in whole or in part, by the Institute of Education Sciences, U.S. Department of Education, through grant R305H150069 to the RAND Corporation. The opinions expressed are those of the authors and do not represent the views of the Institute or the U.S. Department of Education.

More information about RAND can be found at www.rand.org. Questions about this report should be directed to ldaughter@rand.org, and questions about RAND Education and Labor should be directed to educationandlabor@rand.org.

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