# KEEPING STUDENTS ON COURSE

An Impact Study of a Student Success Course at Guilford Technical Community College

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April 2012





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#### Overview

Improving the success of academically underprepared students who are in need of developmental (or remedial) education is a key challenge facing community colleges today. Many of these students enter college with little awareness of these institutions' expectations or a clear model for how to make effective decisions about their academic careers. To help students address these challenges, a number of colleges across the country have looked to success courses (also called study skills, student development, or new student orientation courses). This report analyzes a success course for developmental education students at Guilford Technical Community College in Greensboro, North Carolina, and its impact on students' psychosocial skills and behaviors and academic achievement.

After joining Achieving the Dream: Community Colleges Count in 2004, a national organization designed to mentor colleges through an institutionwide, student success-oriented improvement process, Guilford chose to offer a revised version of its student success course to developmental education students, aimed at improving psychosocial awareness and academic achievement. Modeled on Skip Downing's *On Course* philosophy and curriculum, it placed an intensive focus on changing students' behaviors and attitudes, including increasing their awareness of their and others' emotions, understanding their own learning styles, improving time management skills, and recognizing their responsibility for their own learning. Guilford hoped that these changes in students' personal habits and behaviors might help them take better control of their academic lives, which would ultimately result in gains in achievement.

This study employed random assignment methodology to examine the impact of Guilford's success course. The key findings presented in this report are:

- Guilford's implementation of its student success course stayed true to the *On Course* philosophy, with a strong emphasis on improving students' psychosocial skills and habits.
- Challenges emerged during the study in maintaining instructors' enthusiasm for teaching the course.
- The course had a positive impact on students' self-management, interdependence, self-awareness, interest in lifelong learning, emotional intelligence, and engagement in college among students with low levels of these attributes.
- But the gains in efficacy did not lead to meaningful effects on students' academic achievement
  during the program semester or in postprogram semesters. Despite the absence of an overall
  effect, the program did have positive effects on the first cohort of students enrolled in the study,
  with students demonstrating improved grades, retention in college, and credits earned.

The results of this study reveal that improvements in students' attitudes and behaviors may not necessarily translate easily into better academic outcomes, though the strength of program implementation may play an important role in these effects. Additionally, the program's limited effects suggest that community colleges should look to more comprehensive ways of improving developmental education students' academic achievement, including reforms in developmental education instruction.

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#### **Preface**

Community colleges have long been a crucial pathway into the middle class for low-income students who face barriers to education. However, these institutions also face a number of challenges in helping their students succeed, including historically low graduation rates and large numbers of students who enter college academically underprepared. The majority of community college students are often required to take a lengthy series of developmental, or remedial, education classes. Many never successfully progress through preparatory classes into a college-level curriculum.

Given these challenges, many community colleges are experimenting with new methods for improving developmental education students' outcomes. Student success courses — also known as student development, study skills, or student orientation courses — are one popular method colleges have used to try to improve students' understanding of college and their ability to navigate their way through school. This study, which analyzes the impacts of a student success course on developmental education students' achievement at Guilford Technical Community College, provides one look at how these courses affect students' achievement.

The findings from this study reveal that Guilford's success course was able to foster some changes in students' attitudes and perspectives, such as their self-management, self-awareness, interest in lifelong learning, and engagement in college. Unfortunately, these improvements did not translate into improved academic outcomes for the overall group of students to whom the course was offered.

Although the positive effects on the first cohort's academic achievement are intriguing, the absence of an overall effect lends a more critical perspective on student success courses than have other recent quasi-experimental and experimental studies. While these courses have had a modest effect on student outcomes when paired with tutoring (as in Chaffey College's Opening Doors program) or in learning communities (as at Kingsborough Community College), this study suggests that they may have more limited value when offered without such supports.

While success courses may provide a positive benefit to students' understanding of college and its expectations, such courses may need to be more limited or integrated within larger structural changes in developmental education to improve students' academic progress.

Gordon L. Berlin President

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MDRC appreciates the cooperation of Guilford Technical Community College in writing this report. In particular, we thank Donald Cameron, Kathy Baker-Smith, Jacqueline Pettiford, Karen Ritter, Mary West, Angela Leak, and Sharon Pratt for helping us learn about their success course and playing such an integral role in setting up the study on site. We would also like to thank all of the faculty, staff, and students who met with us in focus groups and interviews to help us understand how Guilford's success course had affected their experiences at the college.

We are thankful to the many people who read and reviewed this report. We are also thankful for the written comments received from Thomas Brock, John Hutchins, Lashawn Richburg-Hayes, Sue Scrivener, Colleen Sommo, and Michael Weiss, at MDRC.

Finally, we thank MDRC's publications staff. Margaret Bald edited the report, and David Sobel and Stephanie Cowell prepared it for publication.

The Authors

# **Executive Summary**

Thousands of community college students across the country confront serious questions every day about their course-taking and career choices. They often are required to make key decisions relatively quickly, often with little introduction to how to make these choices most effectively. To further complicate matters, most community college students enter college academically underprepared and are required to take developmental, or remedial, English, math, and/or reading courses in order to advance to a college-level curriculum.<sup>1</sup>

Many colleges have looked to success courses, which seek to orient students to college life and assist them in making important decisions about college and their careers, as a way to help students address these challenges. In 2005, Guilford Technical Community College in Greensboro, North Carolina, joined many colleges across the nation in developing a success course for developmental education students as one of their strategies under the auspices of the Achieving the Dream: Community Colleges Count initiative. Achieving the Dream is a national organization designed to mentor colleges through an institutionwide, data-driven, student success-oriented improvement process. Along with developing students' study habits, Guilford's student success course placed an intensive focus on improving students' psychosocial and soft skills, such as their awareness of their and others' emotions, understanding of their own learning style, improved time management, and a recognition of their responsibility for their own learning. Guilford hoped that changing students' personal habits and attitudes might help them take better control of their academic lives and improve their overall achievement.

This report analyzes the impact of Guilford's success course on developmental education students' academic achievement as well as several social and psychological measures, including motivation, self-concept, and commitment to college. In sum, this study found that the success course had few effects on students' academic achievement, though the evidence suggests that there were some positive, differential effects for students in the first group to enter the study. The success course was also found to have a positive impact on several psychosocial outcomes, including students' self-management, interdependence, self-awareness, interest in lifelong learning, emotional intelligence, belief in self, and positive engagement in college.

<sup>&</sup>lt;sup>1</sup>Adelman (2004); Attewell, Lavin, Domina, and Levey (2006); Bailey, Joeng, and Cho (2010).

<sup>&</sup>lt;sup>2</sup>These courses are also termed study skills, student development, or new student orientation courses.

<sup>&</sup>lt;sup>3</sup>Achieving the Dream (2009).

#### **Guilford's Student Success Course**

Student success courses have become a popular strategy for increasing students' achievement in community colleges throughout the country. Guilford was particularly drawn to improving its developmental education students' success rate after noting their poor academic performance in the college's Achieving the Dream data analyses. In order to better address students' socioemotional needs as well as their academic skills, Guilford chose to redesign an existing study skills course, shifting the course toward a greater focus on students' responsibility for their own learning. Modeled on Skip Downing's *On Course* philosophy, this newly revised course focused on helping students overcome their personal challenges through intensive reflection on their past history and future goals. Additionally, the course provided some opportunities for academic skill-building through class presentations, journal writing, quizzes, and an end-of-semester course project. The course was offered as a two-credit class to students in need of one or more developmental education course in reading, English, or math and was taught by faculty or staff members trained in the *On Course* philosophy and pedagogy.

MDRC's evaluation of Guilford's success course began in spring 2008. It employs a random assignment evaluation design to examine the impact of the program on students' achievement. A total of 911 students were enrolled in the study over the course of three semesters (spring 2008, fall 2008, and spring 2009). Using a lottery-like process, students were assigned to either a program group (458 students), which received the success course intervention, or to a control group (453 students), which received the college's regular services (and were not enrolled in the success course). By comparing the outcomes of program and control group students over time, the study is able to gauge the impact of Guilford's student success course on academic measures such as students' persistence in college, grades, and course completion. Quantitative data on students' backgrounds and academic achievement were also collected through a baseline information form and student transcript data. Qualitative data were gathered on the program and students' experiences during two site visits to the college. During these visits, researchers interviewed administrators, faculty, staff, and participating students and conducted a student survey, which asked questions about the personal beliefs and habits the success course was expected to affect.

# **Key Findings**

• Guilford's implementation of the student success course stayed true to the *On Course* philosophy, with a strong emphasis on improving stu-

<sup>&</sup>lt;sup>4</sup>Stovall (2000); Derby and Smith (2004); Zeidenberg, Jenkins, and Calcagno (2007); Scrivener, Sommo, and Collado (2009); Scrivener et al. (2008).

<sup>&</sup>lt;sup>5</sup>Downing (2008).

dents' psychosocial skills and habits. Instructors in the course were generally well trained; all faculty and staff received at least a three-day introduction to the *On Course* pedagogy and curriculum. Lessons tended to engage students in critical reflection about their own personal experiences and habits, with an effort to promote an awareness of their own role in their learning and future responsibilities. Students were encouraged to reflect upon their role in their learning through assignments such as weekly journal writing or by sharing their personal experiences with the class. Students also received some instruction and practice in study and academic skills through activities such as quizzes and a formal class paper and presentation.

- Evidence suggests that the success course was more strongly implemented in the first semester of the study than in later semesters. During the first semester of the course, instructors had a great deal of enthusiasm for teaching the course and met monthly to discuss their teaching and best practices. During the final two semesters, however, this enthusiasm was less apparent. Several new instructors noted that they felt less prepared to teach the curriculum and deal with students' socioemotional issues, while some seasoned instructors explained that they had seen few benefits from the course in their first semester of teaching it. Additionally, because monthly meetings were discontinued in the final two semesters, several new instructors felt that they received less support in implementing the course.
- Students' participation in Guilford's success course declined over the course of the program semester, resulting in only 61 percent of the program group students taking and completing the course. However, it is difficult to conclude how this may have affected students' outcomes. Weeks or months often ensued between the time of random assignment and registration and the first day of classes, giving students ample time to reorganize their schedules and drop the class. When conducting exploratory analyses, the effect of student participation on academic outcomes was inconsistent over time. As a result, it is unclear whether a higher participation rate would have made the program more successful in improving academic outcomes.
- A follow-up survey of program and control group students found that Guilford's student success course had a positive impact on students' selfmanagement, interdependence, self-awareness, interest in lifelong learning, emotional intelligence, and positive engagement in college among students with low levels of these attributes. This suggests that Guilford's

success course was able to improve personal decision making, awareness of themselves and others, and commitment to their education among students who had lower levels of these abilities.

• Guilford's success course had no meaningful effects on students' academic achievement during the semester that the program operated or in the following semesters. There were no statistically significant differences between control and program group students in course registration or enrollment, credits attempted, course pass rates, course withdrawal rates, credits earned, successful completion of developmental education courses, or grade point averages, either during the semester of the success course or in the three following semesters. This lack of meaningful academic impacts suggests that the social and psychological impacts, though significant, may not have been strong enough to affect students' achievement and that other programs and services may be needed to improve their academic performance.

The results of this study reveal that Guilford's new success course, with its focus on social and emotional skills, was able to foster some changes in students' attitudes and perspectives. Unfortunately, however, these improvements did not translate into improved academic outcomes for the overall group of students to whom it was offered. While the mixed results from this study do not provide strong evidence that a success course alone improves student academic outcomes, these findings should be taken in concert with other studies that have shown more positive results for these courses, particularly when success courses are one component in more comprehensive programs.

For instance, the findings in this study are not unlike those from a student success program at Chaffey College, which targeted probationary students. At Chaffey, an enhanced version of the student success program, which framed the program as mandatory and included visits to the college's campus-based tutoring centers in reading, writing, and math, had positive impacts on students' engagement and achievement. Similarly, a number of positive impacts on students' outcomes have been observed with learning communities that included a student success course. At Houston Community College, for example, a program that linked a success course and developmental math resulted in positive effects on students' developmental math pass rates.

However, even when a program is well implemented, the impact of a one-semester intervention on students' achievement may be modest and less likely to achieve the lofty goals of

<sup>&</sup>lt;sup>6</sup>Scrivener, Sommo, and Collado (2009).

<sup>&</sup>lt;sup>7</sup>Weissman et al. (2011).

improved grades, credits earned, and graduation across the board. In each of the studies noted above, impacts on students' academic achievement tended to be modest and generally sustained only during the semester in which the program operated or one semester after. These short-term effects suggest that other issues may be creating more substantial barriers to students' academic progress than those a success course can address. For instance, while success courses may help improve students' soft skills and give them a better understanding of how to manage college life, students may still be overwhelmed by larger challenges in their lives, such as an inability to afford their school tuition or the struggle to balance work, school, and family responsibilities. Similarly, success courses do not address some of the structural and academic barriers students may face in college, such as the need to pass a long sequence of developmental education courses or continued failure in a particular academic course.

Success courses can play an important role in helping students to learn about the variety of programs and services that may benefit them during their academic career. However, these courses also present an opportunity cost for students, as they often enroll in a success course at the expense of taking an additional academic course. As this study found, students acquired fewer academic credits during the semester that they took the two-credit success course, in part because they were unable to fit in an additional academic course. An additional concern is that credits for most success courses are not transferrable to four-year institutions.

With these concerns in mind, colleges may wish to consider ways in which success courses can be incorporated into larger, more systemic approaches to improving developmental education students' academic experiences. Given the relatively short-term effects of these courses and the opportunity costs they present to students, colleges may need to look toward less ambitious interventions that support students' psychosocial well-being but do not require them to choose between academic courses and their introduction to college life. In order to effect greater changes in students' achievement, colleges might consider more comprehensive approaches to improving students' academic performance, such as reforms in developmental education instruction or the structuring of developmental education course sequences. A different combination of these efforts, which address students' social challenges while also focusing more concretely on their academic needs, may prove even more promising.

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#### Chapter 1

#### Introduction

Imagine your first day of college, a day when you are excited about your future prospects and nervous about your ability to meet the demands of a new school. A book sits before you, a text that could determine whether or not you succeed in college. However, rather than arithmetic formulas or philosophical treatises, this book contains a different set of challenges. It sets forth a bewildering array of courses, registration procedures, and degree requirements, asking you to make choices with which you have little experience. How do you decide which courses to take and how to focus your studies? On what basis should you make these important decisions about your future at college and in your career? As the semester goes on, an even more daunting array of questions faces you: How can you balance your studies with your responsibilities outside of school? What can you do if you fall behind in a particular subject? And most important, to whom can you turn for answers?

Thousands of students confront questions like these as they navigate their first semesters at community colleges across the country. Regardless of whether they are fresh from high school or returning after years away from education, these new students must make critical decisions about their course work and their careers relatively quickly, often with little guidance. To further complicate matters, the majority of community college students enter college academically underprepared and are required to take developmental, or remedial, English, math, and/or reading courses in order to advance to a college-level curriculum. These challenges can be important impediments to students' integration into college.

In 2005, Guilford Technical Community College in Greensboro, North Carolina, joined a steady stream of colleges that are looking to student success courses as a way to assist new students in navigating their college careers.<sup>2</sup> Often termed study skills, student development, or new student orientation courses, many colleges have implemented these courses in an effort to develop students' study habits, awareness of their learning styles, and time management and test-taking skills. Generally offered as semester-long, credit-bearing courses, student success courses are often used as a way to build students' academic and "soft skills," help them learn about the college's services, and orient them to the types of decisions and responsibilities they will face as college students. Many colleges have also aimed these courses directly toward

<sup>&</sup>lt;sup>1</sup>Adelman (2004); Attewell, Lavin, Domina, and Levey (2006); Bailey, Joeng, and Cho (2010).

<sup>&</sup>lt;sup>2</sup>Zachry and Orr (2009).

students who take developmental education classes as a way to help these students get a leg up on their academic success.<sup>3</sup>

Developed as one of its strategies for the Achieving the Dream: Community Colleges Count initiative, Guilford's student success course for developmental education students aimed to orient students to college life and assist them in making important decisions about college and their careers.<sup>4</sup> This report analyzes the impact of Guilford's success course on students' academic achievement as well as several social and psychological measures, including motivation, self-concept, and commitment to college. In sum, this study found that the success course had a positive impact on several psychosocial outcomes, including students' self-management, interdependence, self-awareness, interest in lifelong learning, emotional intelligence, and positive engagement in college. However, though there were some positive effects on achievement for students in the earliest cohort of the study, overall, the course had few effects on students' academic achievement. This lack of meaningful academic impacts suggests that the social and psychological impacts, though significant, may not have been strong enough to affect students' achievement and that other programs and services may be needed to improve their academic performance.

#### **Background on Student Success Courses**

Student success courses have become a popular strategy for increasing students' achievement in community colleges throughout the country. A number of studies of individual programs in the early 2000s associated these courses with promising increases in students' academic achievement and persistence in college. For instance, participants in a student success course at a rural Midwestern community college earned higher first-term grade point averages, completed more credit hours, were more likely to persist in college, and had greater odds of graduating by the end of a three-year follow-up period than their nonparticipating counterparts. Similarly, a study of a semester-long student orientation course at a Midwestern community college found that the course was associated with completion of a degree, persistence, and reenrollment after taking short breaks from school. Although neither of these studies employed random assignment methodology, which is considered the most reliable of program evaluation methods, their results are encouraging and suggest that more rigorous evaluation of success courses would be worthwhile.

<sup>&</sup>lt;sup>3</sup>Zeidenberg, Jenkins, and Calcagno (2007).

<sup>&</sup>lt;sup>4</sup>Achieving the Dream: Community Colleges Count is now an independent national nonprofit organization.

<sup>&</sup>lt;sup>5</sup>Stovall (2000).

<sup>&</sup>lt;sup>6</sup>Derby and Smith (2004).

More recent studies have also found promising student achievement outcomes. For example, a quasi-experimental analysis of student success courses in Florida community colleges found that enrollment in these courses was associated with greater likelihood of earning a credential, staying in school, and transferring to Florida's four-year colleges.<sup>7</sup> Additionally, several random assignment studies have found that student success courses can have promising effects on students' academic achievement and persistence in school when they are a part of larger packages of services. For instance, a student success program targeting probationary students at Chaffey Community College found that an enhanced version of the program, which framed the program as mandatory and included visits to the college's campus-based tutoring centers in reading, writing, and math, had positive impacts on students' engagement and achievement. After implementing the mandatory policy, the program had much higher participation rates, resulted in positive impacts on students' grade point averages, and was successful at moving students off probation.8 Similarly, a learning communities program for entering freshman at Kingsborough Community College, which linked a student success course with English and content courses, found that students who participated in the program moved more quickly through their developmental English requirements and were more likely to pass a standardized reading and writing test needed to transfer to a four-year college.9 However, both the Chaffey and Kingsborough success courses were integrated with other program supports, such as additional tutoring (Chaffey) or learning communities (Kingsborough), making it difficult to disentangle the effects of the success course alone on students' outcomes.

Promising results like these have led a number of individual schools, community college systems, and even states to mandate student success courses for newly entering students. For instance, the Virginia Community College System requires that all students at its 23 community colleges complete a Student Development Course within their first 15 credit hours. Similarly, first-time students at any of the Houston Community College System's six campuses are required to take a Freshman Success Course if they have earned 12 or fewer semester credit hours. Additionally, some community colleges require student success courses for developmental students, in particular. For example, 12 of 28 Florida community colleges require students who are taking one or more developmental courses to enroll in Student Life Skills courses.

Some positive effects have been seen for success courses targeted specifically to developmental education students, though the effects have depended on the course pairing and have

<sup>&</sup>lt;sup>7</sup>Zeidenberg, Jenkins, and Calcagno (2007).

<sup>&</sup>lt;sup>8</sup>Scrivener, Sommo, and Collado (2009).

<sup>&</sup>lt;sup>9</sup>Scrivener et al. (2008).

<sup>&</sup>lt;sup>10</sup>Virginia Community College System (2011).

<sup>&</sup>lt;sup>11</sup>Houston Community College System (2010).

<sup>&</sup>lt;sup>12</sup>Florida Department of Education (2005).

tended to dissipate over time. On the positive side, the quasi-experimental study analyzing the overall effects of success courses in Florida community colleges noted that developmental students who took a success course were more likely to earn a credential than students enrolled in developmental courses alone. Similarly, learning communities programs at Houston Community College and Queensborough Community College, which linked student success courses with developmental math courses, helped students attempt and pass their developmental math courses at higher rates during the semester that students participated in the linked courses. However, when a success course was linked with a developmental reading course at Hillsborough Community College, few effects were found on students' achievement. Similarly, in each of the programs noted above, the effects on students' achievement diminished in the semesters after the programs ended.

While success courses have shown some promising results and have become a popular method to try to improve community college students' achievement, few rigorous studies have analyzed the effects of these courses alone on students' outcomes. MDRC has conducted a number of studies analyzing the effects of student success courses within the context of learning communities, where a cohort of students co-enroll in two or more linked courses during a semester, or alongside other enhanced services, such as intensive advising. However, because the success courses are offered in combination with other academic and social services, it is difficult to know what effect, if any, the success course itself had on students' outcomes. A key question remains about whether success courses, which are generally designed to improve students' study skills and introduce them to college expectations, are a strong enough intervention in and of themselves to have an impact on students' academic achievement.

This study helps answer this question by studying the effects of a success course alone on students' outcomes. As will be discussed below, Guilford's success course was designed to enhance students' socioemotional skills, such as their emotional awareness, sense of self-responsibility, and self-management, while also focusing on improving some academic habits, such as studying, writing, and presenting in front of others. By analyzing the effects of this course in the absence of other enhanced services, this study is able to examine whether a one-semester, two-credit course, focused on both personal and academic abilities, translates into overarching changes in students' academic performance.

<sup>&</sup>lt;sup>13</sup>Zeidenberg, Jenkins, and Calcagno (2007).

<sup>&</sup>lt;sup>14</sup>Weissman et al. (2011).

<sup>&</sup>lt;sup>15</sup>Weiss, Visher, and Wathington (2010).

<sup>&</sup>lt;sup>16</sup>Scrivener, Sommo, and Collado (2009); Scrivener et al. (2008); Weissman et al. (2011); Weiss, Visher, and Wathington (2010).

#### **Overview of Guilford's Student Success Course**

Like many colleges across the country, Guilford was drawn to student success courses as a way to help struggling students overcome their academic and social challenges. When the college joined Achieving the Dream: Community Colleges Count, a national organization designed to mentor colleges through an institutionwide, student success-oriented improvement process, administrators noted the poor academic performance of students who were required to take developmental courses. The college chose to implement a number of interventions to reach these students, with a newly revamped student success course playing a primary role.

In order to better address students' socioemotional needs as well as their academic skills, Guilford chose to redesign an existing study skills course, shifting the course toward a greater focus on students' responsibility in their own learning. Modeled on Skip Downing's *On Course* philosophy,<sup>17</sup> this newly revised course focused on helping students overcome their personal challenges through intensive reflection on their past history and future goals. Additionally, the course provided some opportunities for academic skill-building through class presentations, journal writing, quizzes, and an end-of-semester course project. The course was offered as a two-credit course to students in need of one or more developmental education courses in reading, English, or math and was taught by faculty or staff members trained in the *On Course* philosophy and pedagogy. Chapter 3 provides more in-depth information about the design and implementation of the program.

#### Overview of the Evaluation

This study employs a random assignment methodology to analyze the effects of Guilford's success course on students' academic and socioemotional outcomes. Students who met the study's eligibility requirements (see Chapter 2) and agreed to participate in the study were assigned, at random, to a program group, who received the college's success course, or a control group, who received the college's standard services (excluding the success course). The study then tracked students' outcomes over the program semester (when the success course was offered to the program group) and the three semesters following to see if there were differences between the outcomes of students in the program group and those in the control group. A random assignment design ensures that differences in motivation and demographic characteristics do not bias the results of the study, as the program and control groups are similar at the time

<sup>&</sup>lt;sup>17</sup>Downing (2008).

<sup>&</sup>lt;sup>18</sup>Guilford had only a limited amount of resources available for the college success course, thus limiting the number of sections it could offer each semester. The lottery system that random assignment offered was seen as a more fair way to allow students to register for the course, as it allowed each student an equal opportunity for enrollment regardless of their motivation or the timing of their registration.

of entry into the study. As such, any differences in the program and control groups' outcomes can be attributed with a high level of confidence to the impact of the success course.

This study used four primary means of data collection and analysis: (1) an implementation study, based on interviews and focus groups, which analyzed the design and rollout of the program at the college; (2) observations of student success courses; (3) an analysis of a student survey, which gathered information on the socioemotional characteristics of both the program and control group; and (4) an impact analysis of students' achievement using transcript data from the college. The study is centrally concerned with changes in students' achievement, such as their persistence in college, grades, and credits earned. However, it also analyzes whether any changes in students' behaviors and beliefs occurred as a result of the program.

#### **Contents of This Report**

This report provides an analysis of both the implementation of Guilford's student success course and its impact on students' attitudes, personal habits, and academic achievement. Chapter 2 provides a brief description of the research design, including how students were identified and enrolled into the research sample, along with the characteristics of the sample. Chapter 3 discusses Guilford's implementation of the course for its developmental education student population. Chapter 4 provides an analysis of the impact of the course on students' academic achievement and college-going skills. Chapter 5 concludes with an integrative discussion of these findings.

#### Chapter 2

# The College, the Study Sample, and Data Sources

Guilford Technical Community College is located in Guilford County, North Carolina, a midsized county in the northern part of the state. It is the only community college in the county and is nestled among six other four-year colleges and universities in the area.<sup>1</sup> With a total of 11,226 students in 2008 (when this study began), the college is divided across three cities: Greensboro, Jamestown, and High Point.<sup>2</sup> With an operating budget of over \$86 million, Guilford employs approximately 1,600 full-time and part-time faculty and staff and is the third-largest community college in the state.<sup>3</sup>

The student success course described in this report was offered at all three of Guilford's campuses. Guilford is representative of the Greensboro area at large, with a diverse student body made up primarily of white and African-American students (see Table 2.1).<sup>4</sup> Like many community colleges across the country, a large proportion of the students attend the college part time, and nearly half of the student body receives some sort of financial aid. Far fewer students graduate than Guilford's leaders would like, though this low graduation rate differs little from that of other community colleges in the country.<sup>5</sup>

## Students Targeted by the Program

Based on an analysis of student outcomes, Guilford developed a number of criteria for the student population that would be targeted by the study. First and foremost, the college sought to recruit students who were required to take one or more developmental courses, as these students appeared to be the neediest and the least likely to succeed at the college. Additionally, given some of the challenges for entering students in making the transition to college, Guilford chose to focus primarily on new students, including those who had earned 20 or fewer credits at the college. Finally, in order to provide a fair test of the course, certain students were excluded from the study, such as those who had previously taken a success course or had been exposed to the *On Course* curriculum in other classes.

<sup>&</sup>lt;sup>1</sup>Guilford County (n.d.).

<sup>&</sup>lt;sup>2</sup>U.S. Department of Education (2011); Guilford Technical Community College (2011).

<sup>&</sup>lt;sup>3</sup>U.S. Department of Education (2011); Guilford Technical Community College (2011).

<sup>&</sup>lt;sup>4</sup>U.S. Bureau of the Census (2010).

<sup>&</sup>lt;sup>5</sup>U.S. Department of Education (2011).

#### Achieving the Dream: Community Colleges Count

#### Table 2.1

#### Selected Characteristics of Students Enrolled, Fall 2008 Guilford Technical Community College

Characteristic	Students
Total enrollment (N)	11,226
Enrollment by gender (%)	
Male	44.1
Female	55.9
Enrollment by race/ethnicity <sup>a</sup> (%)	
Hispanic	3.4
White	50.4
Black	36.8
Other	9.4
Students enrolled full time (%)	54.2
Students receiving some form of financial aid <sup>b</sup> (%)	62.7
First-time fall-to-fall retention rate <sup>c</sup> (%)	
Full-time students	56.0
Part-time students	37.0
Overall graduation rate <sup>d</sup> (%)	14.5

SOURCE: U.S. Department of Education, National Center for Education Statistics, Integrated Postsecondary Education Data System (IPEDS).

NOTES: aPercentages do not add up to 100 percent due to rounding.

In sum, students participating in the study were:

- At least 18 years of age
- Required to take one or more developmental courses
- New students or continuing students with fewer than 20 credit hours and who were not transfers from another college
- Not majoring in degree programs that required a student success course as part
  of the curriculum, such as business, architecture, or machining technology

<sup>&</sup>lt;sup>b</sup>Data are for first-time, full-time students seeking a certificate or degree.

<sup>&</sup>lt;sup>c</sup>Retention rates measure the percentage of first-time students beginning their programs in the fall of 2007 who continue into the following fall term.

<sup>&</sup>lt;sup>d</sup>Graduation rates are calculated for full-time, first-time students who began their program in 2005. Students are considered to have graduated if they completed their program within 150 percent of the normal time for completion.

- Not previous participants in a student success course
- Available to attend a student success course at the scheduled time

All students who met these criteria were invited to participate and offered an opportunity to voluntarily enroll in the study. Observations of the enrollment process revealed that study intake was conducted as intended and yielded a satisfactory sample for analyzing the effects of the student success course. However, as will be noted later, some challenges were posed by program group students who withdrew from the success course after their registration.

In order to have sufficient power to detect the effects of the program, Guilford and MDRC sought to enroll 1,000 developmental education students into the study over the course of three semesters, beginning with the spring 2008 semester. Because Guilford had limited resources available for the college success course, it could offer only a limited number of sections each semester. The lottery system that random assignment employed was seen as a more fair way to allow students to register for the course, as they each had an equal opportunity to enroll, regardless of their motivation or the timing of their registration. After random assignment, students assigned to the program group were required to register for and take the semester-long, two-credit student success course. Control students were barred from taking the course but received the normal services offered to the general student population. After three semesters of sample enrollment (spring 2008, fall 2008, spring 2009), Guilford achieved a total sample size of 911 students. Of these 911 students, 458 were assigned to the program group, which made them eligible to receive the college's success course. The remaining 453 students were assigned to the control group; they received the college's standard services. A total of 33 success courses were offered as a part of this program over the course of the three semesters.

# **Random Assignment Methodology**

As discussed in Chapter 1, this study uses random assignment in order to analyze the effects of Guilford's success course on students' outcomes. Seen as the gold standard in educational research, random assignment methodology is frequently compared to a coin toss or lottery system, whereby study participants are randomly assigned to either a program group or a nonprogram (control) group. Because each student has an equal chance of being placed into either group, the program and control group students should have similar characteristics at the outset of the study. This design helps protects against certain biases, such as differences in students' levels of motivation, and helps ensure that the observed differences can be attributed to the program rather than to the characteristics of the students.

However, there are some limitations to this methodology. Because random assignment involves only students who volunteer to participate, the sample could be qualitatively different

from the group of students who did not volunteer to participate. Additionally, this study specifically analyzed the outcomes of developmental education students, so the findings cannot be generalized for the larger student population at Guilford.

#### **Characteristics of the Sample**

As can be seen in Table 2.2, the study sample was similar to the overall Guilford student population in that it was largely female and racially diverse, although a higher proportion of female and African-American students were present in the study sample than in the general student population. Additionally, just over half of the study sample students were under 21 years of age, revealing that many of the students in the sample were recent high school graduates.

The figures displayed in Table 2.2 also indicate some of the challenges that students in the sample faced. For instance, about a quarter of all sample members reported being the first person in their family to attend college. Additionally, over one-third of the students who responded to the question were in households receiving some form of government assistance, such as food stamps, unemployment or disability insurance, supplemental security income, cash assistance, or welfare. Just over half the sample members were working when they entered the study, while only about a quarter said that they were financially dependent on their parents.

While, in general, the program and control group students were similar, there were a few significant differences between the two groups. For instance, while over 40 percent of the overall sample had graduated from high school in the previous year, significantly fewer program group students were recent graduates than control group students. Additionally, a higher proportion of program group members had a working computer in their home, an Internet connection, and access to a working car. Modest variation across treatment groups in students' characteristics will occur by chance in random assignment. However, this does not indicate any systematic difference between research groups and does not bias the results.

## **Data Sources and Follow-Up Periods**

#### **Quantitative Data**

Students enrolling in the study completed a baseline information form, which collected certain demographic and background information. These data were used to describe the sample as well as to analyze the similarities and differences between students in the program and control groups.

Guilford also provided transcript data on students enrolled in the study (both program group and control group students). These data provided information about students' persistence

# **Achieving the Dream: Community Colleges Count**

Table 2.2
Characteristics of Sample Members at Baseline
Guilford Technical Community College

Characteristic	Full Sample	Program Group	Control Group
	1		
Gender (%) Male	31.2	30.7	31.6
Female	68.8	69.3	68.4
гепате	08.8	09.3	08.4
Age (%)			
18 - 20 years old	53.6	50.0	57.2 **
21 - 25 years old	12.4	14.4	10.4 *
26 - 30 years old	10.2	11.9	8.5 *
31 and older	23.8	23.7	23.9
Average age (years)	25.3	25.5	25.1
Marital status (%)			
Married	12.2	12.5	11.9
Unmarried	71.7	72.0	71.3
Missing	16.1	15.5	16.8
Race/ethnicity <sup>a</sup> (%)			
Hispanic	5.7	5.6	5.9
White	28.5	28.1	29.0
Black	58.5	58.4	58.6
Other	7.2	7.9	6.5
Number of children (%)			
None	64.0	64.4	63.6
1	12.4	10.6	14.1
2	12.9	13.0	12.9
3 or more	10.7	12.0	9.4
Household receiving any of the following benefits <sup>b</sup> (%):			
Unemployment/Dislocated Worker Benefits	5.5	4.8	6.2
Supplemental Security Income (SSI) or disability	7.8	7.8	7.8
Cash assistance or welfare (TANF)	2.3	1.7	2.9
Food stamps	23.3	22.0	24.6
None of the above	51.9	54.1	49.7
Missing	17.3	16.3	18.4
Financially dependent on parents (%)	27.7	27.3	28.0
Missing (%)	11.0	9.4	12.5
Currently employed (%)	54.3	55.0	53.5

(continued)

Table 2.2 (continued)

Characteristic	Full Sample	Program Group	Control Group
		<u> </u>	1
Date of high school graduation or GED receipt (%) During the past year	45.8	41.6	50.1 **
Between 1 and 5 years ago	19.1	20.0	18.2
Between 5 and 10 years ago	9.6	11.1	8.0
More than 10 years ago	25.5	27.3	23.8
Student status (%)			
Incoming freshman	82.9	83.1	82.7
Returning student	17.1	16.9	17.3
Completed any college courses (%)	19.9	19.4	20.5
First person in family to attend college (%)	26.0	24.2	27.8
Highest degree or diploma earned by mother (%)			
Not a high school graduate	14.4	14.2	14.5
High school diploma or GED	30.1	28.1	32.0
Occupational or technical certificate or associate's degree	26.9	28.1	25.7
Bachelor's degree or higher	11.6	11.7	11.5
Missing	17.0	17.8	16.2
Working personal computer in home (%)	72.3	76.6	68.0 ***
Computer has Internet access (%)	68.6	72.1	65.1 **
Own or have access to a working car (%)	82.2	84.8	79.5 **
Sample size	911	458	453

SOURCE: MDRC calculations using Baseline Information Form (BIF) data.

NOTES: A two-tailed t-test was applied to differences between the groups. Statistical significance levels are indicated as: \* = 10 percent; \*\* = 5 percent; and \*\*\* = 1 percent.

This table displays most, but not all of the baseline variables that were checked for significance.

Estimates are adjusted by campus and research cohort.

Distributions may not add to 100 percent because of rounding.

in the student success course and at the college overall, as well as information on their grades, enrollment status, and credits earned. This report presents information on a number of academic outcomes during the semester in which the program was offered as well as three additional semesters after the program semester.

Finally, a survey was disseminated to students in order to collect information on their social and emotional perspectives. All students enrolled in the study (both program and control group students) were presented with an opportunity to complete the survey during the semester

<sup>&</sup>lt;sup>a</sup>Respondents who said they are Hispanic and chose a race are included only in the Hispanic category.

Respondents who said they are not Hispanic and chose more than one race are only in the multiracial category.

<sup>&</sup>lt;sup>b</sup>Distributions may not add to 100 percent because categories are not mutually exclusive.

following the program semester. The survey questions were designed to gather data on the personal beliefs and habits that the course was expected to affect. Additionally, the survey assessed students' use of and participation in other campus services, such as advising, career services, and counseling.

#### **Qualitative Data**

Researchers also collected qualitative data on Guilford's success course in two, two-day site visits to the college in spring 2008 and fall 2008. Researchers interviewed faculty, staff, and administrators in charge of designing and implementing the student success course. These interviews yielded important information about the program's design, the challenges of implementing the program, the training of the faculty and staff who led the courses, and the contrast between the services that students received in the success course and those offered by other programs on campus. Additionally, the research staff conducted focus groups with a small subset of program group students and students who did not participate in the success course to understand more about their experiences in college and, for the program group, their experiences in the student success course. Researchers also observed several of the success courses during both semesters in order to assess whether differences existed among the classes as well as in the implementation of the course across different semesters.

#### Conclusion

Guilford was able to identify a clear target group for its success course intervention, which would provide a strong contrast between those who received the course (the program group) and those who did not (the control group). Though there were some minor differences between the program and control group students recruited into the study, the two groups had relatively similar characteristics overall, with both groups facing a number of social and financial challenges. Researchers' visits to the college during the spring and fall 2008 semesters allowed for a more in-depth investigation of these issues and an opportunity to monitor the development of Guilford's student success course on the ground. The following chapter will discuss what researchers observed during these visits and whether the success course was implemented as program designers had intended.

#### Chapter 3

# Implementation of the Student Success Course

This chapter describes the design of Guilford's student success course for developmental education students and its operation during the study period. This chapter draws on information from the interviews, focus groups, and classroom observations conducted during the two site visits to the college in spring 2008 and fall 2008. It begins with a discussion of the administration and start-up of the program and provides an overview of the training provided to the faculty and staff teaching the course. It then discusses the implementation of the course and the teaching and learning provided in the classroom.

The key findings from this chapter are:

- The level of training for teaching the success course varied by staff person. However, all faculty and staff teaching the student success course received at least the minimum three-day training required for teaching the *On Course* curriculum.
- While all faculty and staff teaching the course received training, teachers in
  the first semester reported receiving more ongoing support and experiencing
  a greater level of excitement about teaching the curriculum than instructors
  who taught during subsequent semesters.
- The curriculum and instruction in the success course was relatively standard across classrooms, with students receiving similar lessons and assignments across different course sections

# Implementation of the *On Course* Philosophy in Guilford's Student Success Course

Though Guilford had offered a more general study skills course to students for several semesters, a small group of administrators, including the college's interim vice president of instruction, the director of advising, and the director of developmental education, along with several faculty and staff, became interested in providing a more intensive opportunity for students to explore their personal and career goals and consider the habits that might promote their success in college. When the college joined Achieving the Dream in 2004, these leaders used this opportunity to explore new strategies for promoting students' success. In particular, they

became interested in exploring new models for revamping their study skills course so that it would promote more success-oriented behaviors and habits for their students.<sup>1</sup>

While a number of different published curricula exist for these courses,<sup>2</sup> Guilford chose to implement a socioemotional-based curriculum, On Course: Strategies for Creating Success in College and in Life, developed by Skip Downing.<sup>3</sup> This curriculum was designed specifically to help students overcome the personal and academic challenges that might impede their success in college. Guilford was particularly enthusiastic about the On Course curriculum's focus on "eight core principles" aimed at helping students become more active and responsible learners. As can be seen in Box 3.1, these core principles tend to center on modifying students' personal habits, such as heightening their sense of self-responsibility and self-management, or improving their interpersonal skills, including increasing students' awareness of others' emotions and perspectives. In order to foster students' development of these skills, Downing's curriculum employs a number of different active and collaborative teaching strategies, such as small student-led working groups, informal class presentations, and intensive journal writing. These assignments are offered alongside more traditional course work, such as reading assignments, essays, quizzes, and a formal class project, which are intended to improve students' academic skills. Guilford administrators and faculty hoped that this dual focus would improve both students' academic achievement and their socioemotional skills.

Several of these leaders learned about the *On Course* curriculum through national conferences, Internet research, and their discussions with administrators at other community colleges. After attending introductory sessions at a national training conference, this group of leaders began implementing a modified, one-credit study skills course, using the *On Course* curriculum, for students majoring in business technology in fall 2005. Rather than being devoted solely to improving study skills, the new course now focused on developing students' personal and work habits, such as promoting students' time management skills and sense of personal responsibility, while also developing their career planning and academic skills. The college's institutional researcher monitored the results of this revised course during the 2005-2006 academic year and found promising increases in students' persistence as well as a bump in the three-year graduation rates for students who had taken the student success course. They also noted that the course appeared to have the potential to reduce racial achievement gaps for African-American male students, as the college observed an increase in the fall-to-spring persistence rates for African-American men taking the course.

<sup>&</sup>lt;sup>1</sup>Zachry and Orr (2009).

<sup>&</sup>lt;sup>2</sup>Ellis (2008); Downing (2008); Kanar (2010); Holschuh and Nist-Olejnik (2010).

<sup>&</sup>lt;sup>3</sup>Downing (2008).

<sup>&</sup>lt;sup>4</sup>Zachry and Orr (2009).

Box 3.1
Core Principles of the On Course Curriculum

<b>Core Principles</b>	<b>Definition</b>
Accepting Personal Responsibility	Seeing oneself as a primary cause of one's outcomes and experiences
Self-Motivation	Finding purpose in life by discovering personally meaningful goals
Self-Management	Consistently planning and taking purposeful action in pursuit of goals
Interdependence	Building mutually supportive relationships that foster the achievement of goals
Self-Awareness	Awareness of one's own beliefs, attitudes, and behaviors
Lifelong Learning	Finding valuable lessons and wisdom in personal experiences
Emotional Intelligence	Effectively managing emotions in support of goals
Belief in Self	Seeing oneself as a capable, loveable, and an unconditionally worthy human being

#### A Success Course for Developmental Education Students

After noting the promising results for business technology students' achievement, Guilford leaders became interested in offering the revised student success course to other students at the college. They particularly focused on providing an expanded version of the course for students who came to college with developmental, or remedial, needs in math, English, and reading. These leaders also hoped that a two-credit version of this success course would provide even more opportunities for students to develop the personal habits and academic skills needed to be successful in college. In fall 2007, Guilford implemented a new two-credit pilot of this course geared toward students who were taking one or more developmental education classes. This pilot course provided a trial run for the course before the random assignment study of the course

began and allowed the leadership team to assess and modify the course pedagogy and curriculum over the course of the semester.

The new success course targeted to developmental education students began in earnest in the spring 2008 semester, when formal study of the program began. Similar to the fall 2007 pilot, Guilford offered its new two-credit success course to students who were required to take one or more developmental education courses, either in reading, English, or math. A number of different sections of the course were offered throughout the day, allowing students several choices for enrollment. Though only students who were assessed as having developmental needs were qualified to take this course, students were not required to co-enroll in the success course and a developmental education or other course. Instead, the success course was offered as a stand-alone course.

#### Staffing and Training

Initially, when the student success course was piloted with developmental education students, the faculty, staff, and administrators who had originally been trained in the *On Course* philosophy were responsible for teaching the course. These instructors received an intensive level of training, including a three-day seminar led by Skip Downing on the philosophy behind and basic mechanics of the curriculum. Some of these instructors also participated in a week-long seminar, which provided training on the implementation of the *On Course* curriculum and skills needed to train other instructors in the *On Course* philosophy. As well as teaching during the spring 2008 semester, many of these leaders were also responsible for recruiting more faculty to teach the course during subsequent semesters, as well as ensuring that these faculty and staff received the training and support they needed to effectively teach the curriculum. In total, approximately 30 administrators, faculty, and staff served as instructors of the success course over the three semesters of this study.

During the three semesters of the study, faculty and staff teaching the course received varying levels of professional development. Virtually all instructors received the basic training required to teach the course, which included a three-day seminar introducing new instructors to the *On Course* pedagogy, course materials, activities, and assignments. Instructors were either trained at Guilford, by a few of the instructors who had received advanced training, or at Downing's introductory institute off campus. Approximately 20 percent of the faculty and staff teaching the course also received more advanced preparation, which consisted of an additional *On Course* training with a deeper focus on the course pedagogy and curriculum. Finally, some faculty took advantage of other professional development opportunities, such as conferences and on-campus workshops, which provided them with ideas and strategies for teaching the course.

While the success course instructors received a substantial amount of instructional training, interviews and focus groups during spring and fall 2008 revealed that some newer instructors felt that they did not receive enough ongoing support for teaching the course. During the first semester of study, the 24 instructors met monthly to discuss their teaching and share best practices. However, in the second semester of the study, these monthly meetings were replaced by one meeting at the beginning of the semester to orient the new instructors. In lieu of the monthly meetings, newer instructors were encouraged to set up one-on-one appointments with more seasoned instructors when they felt that they needed additional support. However, because many of the new instructors did not take advantage of the meetings, they did not benefit from this help.

Differences were also noted in instructors' level of excitement about the curriculum during the second semester of the course. Several new instructors interviewed in fall 2008 communicated less enthusiasm about the pedagogy of the course and a limited knowledge of the course's expectations. Several of these individuals also mentioned difficulties in handling students' psychosocial problems, particularly when they involved more serious emotional difficulties, such as family problems or suicidal tendencies. Given the depth of students' socioemotional problems and the frequency with which these issues came up in the course, several of these new instructors suggested that only those with a counseling background should teach the course.

There were also noticeable differences in seasoned instructors' enthusiasm about the course during the second semester of its implementation. In some instances, these instructors were less excited about the course because they had not seen the kind of changes that they were expecting in students' behaviors during their first semester teaching. In focus groups, several of these teachers wondered whether the course was helping their students tackle some of their personal and academic challenges in the ways that they had originally hoped. Because of these differences in their instructors' attitudes, students who took the student success course in the later implementation period may have had a qualitatively different experience in the classroom from that of students who took the course during the first semester of its implementation.

#### Participation in the Student Success Course

In general, the sample of students met Guilford's eligibility requirements, which indicates that the college was successful in recruiting from its target population. As Table 3.1 shows, almost 90 percent of program and control group students had fewer than 20 credits. Additionally, very few program or control group students had any previous exposure to a student success course. Finally, relatively few control group students registered for the success course, revealing that Guilford was successful in limiting the course to students in the program group.

#### Achieving the Dream: Community Colleges Count

Table 3.1

Program Requirements/Participation
Guilford Technical Community College

Outcome (%)	Program Group	Control Group	Difference	Standard Error
Prior to random assignment				
Fewer than 20 cumulative credits <sup>a</sup>	88.6	87.3	1.3	2.0
Previously registered for a Study Skills course <sup>a, b</sup>	0.0	1.3	-1.3 **	0.5
<u>Program semester</u> <sup>c</sup>				
Registered for any courses	85.8	84.1	1.7	3.7
Registered for Study Skills course <sup>d</sup>	71.6	3.1	68.5 ***	5.6
Withdrew from Study Skills course during semester <sup>e</sup>	11.1	0.9	10.2 ***	1.8
Sample size (total = 911)	458	453		

SOURCE: MDRC calculations from Guilford Technical Community College transcript data.

NOTES: Rounding may cause slight discrepancies in sums and differences.

A two-tailed t-test was applied to differences between research groups. Statistical significance levels are indicated as: \*\*\* = 1 percent; \*\* = 5 percent; \* = 10 percent.

However, some challenges arose regarding program students' actual participation in the course. A total of 458 students were assigned to the program group during the three semesters of the study and registered for one of Guilford's student success courses. However, as can be seen in Table 3.1, nearly 30 percent of these students were no longer registered for the success course after the close of the college's add/drop period, a few days after classes began (see Box 3.2 for more information on how to read impact tables). Additionally, another

<sup>&</sup>lt;sup>a</sup>Calculated based on transcripts from summer 2004 to random assignment.

bStudy Skills courses previously available were ACA 111 or ACA 118.

<sup>&</sup>lt;sup>c</sup>Estimates are adjusted by campus and research cohort. Standard errors are clustered by Study Skills course (ACA 118) section for the program group.

<sup>&</sup>lt;sup>d</sup>ACA 118: registration was calculated after the add/drop period.

eACA 118: withdrawal was calculated after the add/drop period.

#### **Box 3.2**

#### How to Read Tables in This Report

Most tables in this report use a similar format, illustrated below. The abbreviated table below displays transcript data and shows some educational outcomes for the program and control groups. The first row, for example, shows that program group students attempted an average of 3.2 courses during the program semester and control group students attempted an average of 2.9 courses during the program semester.

Because individuals were assigned randomly either to the program or control group, the effects of the program can be estimated by showing the difference in outcomes between the two groups. The "Difference" column in the table shows the differences between the two research groups' outcomes — that is, the program's estimated impacts on the outcomes. For example, the average estimated impact on number of courses attempted can be calculated by subtracting 2.9 from 3.2, yielding an estimated average impact of .03 courses attempted. This difference represents the estimated impact of the program rather than the true impact, because although study participants are randomly assigned to the program and control groups, differences can still be observed by chance.

Differences marked with one or more asterisks are deemed "statistically significant," meaning that if the true impact is zero, then there is only a small probability of observing, by chance, an impact as large (or larger) than the one observed. The number of asterisks indicates the probability of observing differences at least as extreme as the observed differences, if the program's true impact is zero. One asterisk corresponds to a 10 percent probability; two asterisks, a 5 percent probability; and three asterisks, a 1 percent probability. For example, as the first row of the table excerpt shows, the program's estimated impact on number of courses attempted during the program semester is 0.3. The one asterisk indicates that this difference is statistically significant at the 10 percent level, meaning that there is less than a 10 percent chance of observing a difference this large if the program's true impact is zero.

The right-hand column of the impact tables in this report provides more information about the differences. The standard error of the impact estimate is the measure of uncertainty associated with it, and this is used to calculate the statistical significance of the impact. Additionally, some tables in this report show effect size as well as standard error. The effect size provides a way to interpret the substantive significance of an effect. It is calculated as the difference between the outcomes for the program and control group, divided by the standard deviation of the control group. Thus the effect size "standardizes" the impacts across measures.

	Program	Control		Standard
Outcome	Group	Group	Difference	Error
Number of courses attempted	3.2	2.9	0.3 *	0.2
Number of credits attempted	10.2	10.0	0.2	0.5
Regular credits	4.8	4.5	0.3	0.4
Equated credits	5.4	5.5	-0.1	0.4

11 percent of program students formally withdrew from the success course during the program semester.<sup>5</sup> Therefore, only 61 percent of the program group actually received the full success course treatment.

In essence, this drop in participation reflected a normal pattern, as students typically shift their course-taking before and during the semester. As with many course registrations, weeks or months often ensued between the time of random assignment and registration and the first day of classes, giving students ample time to reorganize their schedules and drop the class. Furthermore, a number of students withdrew from the course before the end of the add/drop period, as is common during the beginning days of a college semester. In addition, Guilford drops all students who have not yet paid their tuition for the semester or are not in good financial standing at the close of the add/drop period. Guilford did not make an exception to this rule for the students in this study, meaning that a number of students may have inadvertently been dropped from the course.

Students in the success course also highlighted another reason for the withdrawal rate. In focus groups, a number of students explained that they felt the description of the class in Guilford's course catalogue was misleading, as it described the success course as a study skills course. Upon attending the class, they were surprised to find out that much of the class was devoted to personal reflection and journal writing rather than to study habits and academic skill development. While these students adjusted to the different course content, they noted that a number of others had dropped the course because it did not meet their expectations.

Though Guilford could increase students' participation by making the success course mandatory, findings from this study do not suggest that increased participation would result in a significant change in students' outcomes (see Chapter 4 for more information).

#### Instruction and Learning in the Student Success Course

Guilford's student success course was generally taught by two instructors and structured around the *On Course* curriculum, which centered on developing students' socioemotional skills along with their academic abilities. In general, the course employed a more active and collaborative pedagogy, with instructors acting less as lecturers and more as facilitators of group discussions and activities. Lessons tended to engage students in critical reflection about their personal experiences and habits, in an effort to promote their awareness of their own role in their learning

<sup>&</sup>lt;sup>5</sup>About a third of those students also withdrew from all their other courses.

<sup>&</sup>lt;sup>6</sup>In order to ease the transition from one college to another across colleges in the state, North Carolina has state-mandated descriptions for most community college course offerings. As a result, Guilford's course description for the student success course still noted a focus on study skills, even though the curriculum for the course had been markedly changed.

and future responsibilities. As seen in Box 3.3, students were encouraged to reflect upon their role in their learning through assignments such as weekly journal writing or sharing their personal experiences with the class. These activities were expected to increase students' understanding of and commitment to their own as well as others' learning, thus providing them with important skills for further defining their college and career choices.

Students also received some instruction and practice in study and academic skills. For instance, some of the course lessons focused on note-taking, time management, and test preparation. In addition to journal writing, students were also required to complete a more formal term paper and class presentation, which helped them hone some of their writing and grammar skills. In general, success course instructors actively engaged students in this learning process through activities such as group readings, projects, and classroom discussions; however, at times, teachers took a more "stand and deliver" approach when reviewing for quizzes or tests. A consistent thread throughout most sections of the course was that instructors made an effort to boost students' confidence and self-esteem.

## **Contrast Between Program Group Students' and Control Group Students' Experiences**

Socioemotional and academic skill-building was a distinct hallmark of Guilford's success course and was intended to provide a unique support to students enrolled in the course. As noted earlier, students assigned to the program group were expected to take the course while control group students were barred from taking it. However, both program and control group students had access to the college's other support programs, including services such as advising, tutoring in academic labs, and career counseling (see Box 3.3).

Given that some of Guilford's developmental courses also focused on improving students' study and academic skills and that some crossover existed with instructors in these two areas, some concerns were raised about the uniqueness of Guilford's success course curriculum and focus. For instance, interviews revealed that some developmental education instructors believed that they regularly did "hand-holding" with their students, teaching them skills such as how to keep a notebook and the importance of being on time. However, while these developmental faculty at times covered topics similar to those in the success course curriculum, they emphasized that the content and approach of the student success course differed from that of their developmental courses. For example, faculty in developmental English courses tended to focus primarily on teaching reading and writing rather than having students share their personal experiences. In contrast, the student success instructors tended to take on a "life coach" or counselor role, modeling particular habits and behaviors for students. Similarly, the success course focused primarily on students' personal problems and soft skills while developmental

#### **Box 3.3**

### Differences in Services Provided to Program and Control Group Students

#### **Program Group Experience**

Access to support services offered to all students, such as:

- Advising
- Tutoring in the math and writing labs
- Career counseling in career center
- Information on transferring to a fouryear college at the College Transfer Center

Required enrollment in a two-credit, semester-long student success course

- Training in and reflection on socioemotional aspects of learning, such as self-management, selfresponsibility, and awareness of personal learning styles
- Collaborative learning projects and discussions intended to increase interpersonal skills and emotional intelligence
- Instruction and practice in selected academic skills, such as writing and grammar
- Training in study skills, such as time management, note taking, and test preparation
- Development of public speaking skills through formal and informal classroom presentations
- Additional support and encouragement to use needed student services

#### **Control Group Experience**

Access to support services offered to all students, such as:

- Advising
- Tutoring in the math and writing labs
- Career counseling in career center
- Information on transferring to a four-year college at the College Transfer Center

Barred from enrolling in the student success course

courses were devoted to academic instruction. While there was a minor focus on soft skills in developmental courses, instructors tended to address these issues in passing and rarely had time to fully address these matters in their academic courses.

Students also emphasized the marked differences in the activities and assignments they undertook in their success course in contrast to their developmental education or other academic courses. In focus groups with researchers, most students said that they felt a real connection with their student success instructors and believed that these instructors cared about their success, which was not always the case with their academic instructors. Additionally, students noted teachers' different approach to the success course material in contrast with their academic courses, even when they had the same teacher for both.

#### Conclusion

In sum, while Guilford's success course for developmental education students aligned with the *On Course* curriculum and ideals, a number of challenges also arose in the implementation of the course over the course of the three semesters. First, instructors' enthusiasm for the course and support for its implementation waned somewhat over the final two semesters of the study, which may have led some students to have a different course experience. Additionally, a substantial proportion of students who had originally enrolled in the class withdrew by the end of the program semester, so that only a subset of students received the full success course treatment. These issues may have led a number of students in the program group to receive qualitatively different experiences of the course than the program designers had intended and may have reduced their exposure to the course's ideology.

#### Chapter 4

#### Impacts of the Student Success Course

This chapter highlights the impacts of Guilford's student success course on students' socioemotional skills and well-being as well as their academic achievement. The chapter begins with a discussion of the findings from a survey of both program and control group students, which asked about their changes in personal habits and use of campus services. The analysis then moves on to the effects of the course on students' academic performance, including their persistence, grades, courses attempted, and credits earned. The chapter concludes with a discussion of the differential findings from a subgroup of students who took the success course during the first semester of its implementation.

The key findings from this chapter are:

- Guilford's student success course had a positive impact on students' self-management, interdependence, self-awareness, interest in lifelong learning, emotional intelligence, and positive engagement in college, among students who had low levels of these attributes. The program had no effect on students' acceptance of personal responsibility, self-motivation, and use of Guilford's support services.
- Though Guilford's success course had some positive effects on students' social and psychological well-being, it had no meaningful effects on students' academic achievement, including course registration or enrollment, credits attempted, course pass rates, course withdrawal rates, credits earned, successful completion of developmental education courses, or grade point average. This lack of meaningful academic impacts suggests that the social and psychological impacts may not have been strong enough to affect students' achievement and that other programs and services may be needed to improve their academic performance.
- Guilford's student success course had a differential effect on the first cohort
  of students who enrolled in the study. However, it is unclear whether this effect was a result of different experiences in the course by the first cohort of
  students, differences in the control groups' performance across the cohorts,
  or other factors.

#### Effects on Students' Socioemotional Skills and Well-Being

Guilford administrators hoped that the student success course would have a positive impact on students' self-esteem, life skills, and attachment to the college. In order to assess whether the course made a difference in these socioemotional characteristics, MDRC developed a survey that was administered to both the program and the control group and asked students to reflect on any changes in their personal habits and self-awareness over the previous semester. It focused primarily on aspects of the *On Course* curriculum's eight core principles, including self-management, self-responsibility, self-motivation, interdependence, self-awareness, belief in self, emotional intelligence, and interest in lifelong learning. Many of the questions were revised statements taken from the curriculum developer's own questionnaires. However, several questions were also asked about students' engagement in college and their use of particular college services, which were drawn from the Community College Survey of Student Engagement or from other MDRC surveys.<sup>1</sup>

The survey was administered to students within six months of the program semester. Students were presented with a series of statements and asked to indicate how much they agreed or disagreed with each statement on a five-item scale that ranged from "strongly disagree" to "strongly agree." Additionally, they were asked to rate how often they used various student services on a three-item scale ranging from "rarely/never" to "often" and how often they experienced different indicators of positive engagement on a four-item scale ranging from "never" to "very often." See Appendix A for more details on the survey scales. Just over 70 percent of participants responded to the survey. Although a higher response rate is usually preferable, few differences existed in the baseline characteristics of the program and control group students who responded,<sup>2</sup> making it reasonable to assume that the impacts in survey outcomes were caused by the program itself.

The survey results are displayed in Table 4.1, which details students' self-assessment of their own psychosocial competencies and skills, their use of Guilford's services, and their engagement in college. To facilitate interpretation of the students' self-assessment, the table presents the proportion of students that had high levels and low levels of these characteristics,

<sup>&</sup>lt;sup>1</sup>The Community College Survey of Student Engagement, administered annually at community colleges across the country, asks students about their college experiences in order to assess institutional practices and student behaviors that are highly correlated with student learning and student retention. Community College Survey of Student Engagement (2011).

<sup>&</sup>lt;sup>2</sup>Separate tests for differences in baseline characteristics were performed on the survey sample. The results were similar to those of the overall sample, with slightly fewer significant differences appearing in the survey sample.

#### Achieving the Dream: Community Colleges Count

Table 4.1
Survey Outcomes
Guilford Technical Community College

	Program	Control		Standard	Effect
Outcome (%)	Group	Group	Difference	Error	Size
Accepting personal responsibility <sup>a</sup>					
Low	14.2	12.4	1.9	2.4	0.1
High	26.9	25.5	1.4	2.9	0.0
Self-motivation <sup>b</sup>					
Low	20.0	22.4	-2.4	2.8	-0.1
High	0.0	0.0	0.0	0.0	0.0
Self-management <sup>c</sup>					
Low	13.9	20.0	-6.1 **	2.6	-0.2
High	27.1	23.4	3.7	3.3	0.1
Interdependence <sup>d</sup>					
Low	10.5	18.2	-7.6 ***	2.8	-0.2
High	22.0	17.0	5.0	3.3	0.1
Self-awareness <sup>e</sup>					
Low	12.7	18.2	-5.5 **	2.7	-0.1
High	27.0	23.8	3.2	3.0	0.1
Lifelong learning <sup>f</sup>					
Low	8.4	14.0	-5.6 **	2.4	-0.2
High	24.6	24.1	0.5	3.4	0.0
Emotional intelligence <sup>g</sup>					
Low	7.5	16.4	-8.9 ***	3.0	-0.2
High	18.8	19.6	-0.9	2.8	0.0
Belief in self <sup>h</sup>					
Low	7.8	14.0	-6.2 **	2.7	-0.2
High	26.6	25.4	1.2	3.1	0.0
Use of GTCC services <sup>i</sup>					
Low	11.6	15.5	-3.9	3.0	-0.1
High	16.5	15.7	0.8	3.4	0.0
Positive engagement <sup>j</sup>					
Low	10.8	18.0	-7.2 ***	2.7	-0.2
High	14.3	15.7	-1.4	2.5	0.0
Sample size (total = 661)	329	332			
	32)	- 23 <u>2</u>		(	ntinued)

(continued)

#### Table 4.1 (continued)

SOURCE: MDRC calculations from Guilford Technical Community College survey data.

NOTES: Rounding may cause slight discrepancies in sums and differences.

A two-tailed t-test was applied to differences between research groups. Statistical significance levels are indicated as: \*\*\* = 1 percent; \*\* = 5 percent; \* = 10 percent.

Estimates are adjusted by campus and research cohort.

Standard errors are clustered by the Study Skills course (ACA 118) section for the program group.

The "self-management," "interdependence," "self-awareness," "lifelong learning," and "positive engagement" scales had actual positive impacts for the overall scale as well as the low part of the distribution's impact indicated by the stars in the table. The "belief in self" scale's impact shown in the table does not translate to a positive impact for the overall scale as the other impacts do.

"Low" is the percentage of sample members scoring one standard deviation below the mean; "high" is the percentage of sample members scoring one standard deviation above the mean.

a5-item scale about feelings of personal responsibility; response categories range from 1 = "strongly disagree" to 5 = "strongly agree." The five items are averaged.

<sup>b</sup>3-item scale about feelings of self-motivation; response categories range from 1 = "strongly disagree" to 5 = "strongly agree." The three items are averaged.

<sup>c</sup>4-item scale about feelings of self-management; response categories range from 1 = "strongly disagree" to 5 = "strongly agree." The four items are averaged.

d5-item scale about feelings of interdependence; response categories range from 1 = "strongly disagree" to 5 = "strongly agree." The four items are averaged.

<sup>e</sup>4-item scale about feelings of self-awareness; response categories range from 1 = "strongly disagree" to 5 = "strongly agree." The five items are averaged.

<sup>f</sup>4-item scale about feelings of lifelong learning; response categories range from 1 = "strongly disagree" to 5 = "strongly agree." The four items are averaged.

g4-item scale about feelings of emotional intelligence; response categories range from 1 = "strongly disagree" to 5 = "strongly agree." The four items are averaged.

<sup>h</sup>5-item scale about feelings of belief in self; response categories range from 1 = "strongly disagree" to 5 = "strongly agree." The five items are averaged.

<sup>i</sup>9-item scale about frequency of use of GTCC services; response categories range from 1 = "rarely/never" to 3 = "often." The nine items are averaged.

 $^{j}$ 17-item scale about frequencies of positive student engagement; response categories range from 1 = "never" to 4 = "very often." The seventeen items are averaged.

respectively.<sup>3</sup> As can be seen in the table, a larger proportion of control group students fall into the lower levels of self-management, interdependence, self-awareness, interest in lifelong learning, emotional intelligence, and positive engagement in college than do program group students.<sup>4</sup> However, there are no significant differences in the proportion of control and program group students exhibiting higher levels of these characteristics. This indicates that the program changed the distribution of these scales more by moving students out of the lowest levels than by moving students to the highest levels. In other words, the student success course appears to

<sup>&</sup>lt;sup>3</sup>Students scoring in the high range were 1 standard deviation above the average score; students scoring in the low range were 1 standard deviation below the average.

<sup>&</sup>lt;sup>4</sup>These measures had positive impacts for the overall scale as well as the low part of the distribution's impact indicated by stars in Table 4.1. The "belief in self" scale's impact shown on Table 4.1 does not translate to a positive impact for the overall scale as the other impacts do.

have benefitted students with lower levels of self-management, interdependence, self-awareness, interest in lifelong learning, emotional intelligence and engagement in college, helping them to develop more of these skills. The success course had no impact on a few characteristics, including students' acceptance of personal responsibility, self-motivation, and use of Guilford's support services. See Table 4.1 and the description of survey scales in Appendix A for more details.

Therefore, it appears that Guilford's success course was able to help students with lower psychosocial skills and abilities to become more aware of themselves and some of the ways that they could affect their own educational and personal trajectories. These results are heartening, as this was the subset of students that the faculty and staff who implemented Guilford's revised success course were particularly interested in reaching. Unfortunately, the course did not appear to have an impact on these students' awareness of themselves as the primary cause of their outcomes and experiences (self-responsibility), their discovery of personally meaningful goals (self-motivation), or their use of services such as tutoring and advising. This suggests that while the course was able influence some aspects of students' attitudes and behaviors, other interventions may be needed to influence their sense of self-responsibility, self-motivation, and their use of student support services.

#### **Academic Findings**

In addition to influencing students' social and emotional habits and behaviors, Guilford's student success course curriculum was designed to help students develop better study and academic skills. The course's designers hoped that improvements in students' study and personal habits might also lead to higher levels of academic achievement, including success in their academic courses, higher persistence rates in college, and better progress through developmental education. Using transcript data, this section describes the effects of the student success course on various educational outcomes during sample members' first semester in the study (the "program semester") and three postprogram semesters.

#### **Effects on Educational Outcomes During the Program Semester**

As can be seen in Table 4.2, few significant differences existed between the academic outcomes of program and control group students during the semester in which the program operated (see Box 3.2 for more information on how to read these tables). Initially, a significant difference was detected in the number of courses program and control group students attempted in the program semester, with program group students taking about a third of a course more than control group students, on average. However, this difference is driven by the student

#### **Achieving the Dream: Community Colleges Count**

Table 4.2

Academic Outcomes in Program Semester
Guilford Technical Community College

Outcome	Program Group	Control Group	Difference	Standard Error
Registered for any courses (%) <sup>a</sup>	85.8	84.1	1.7	3.7
Registered for study skills course (%)	71.6	3.1	68.5 ***	5.6
Number of courses attempted	3.2	2.9	0.3 *	0.2
Number of credits attempted Regular credits Equated credits	10.2 4.8 5.4	10.0 4.5 5.5	0.2 0.3 -0.1	0.5 0.4 0.4
Attempted Developmental Math (%) Attempted Developmental English (%) Attempted Developmental Reading (%)	62.1 37.6 37.7	61.3 39.5 38.2	0.8 -1.9 -0.5	3.6 4.2 3.7
Passed all courses (%)	31.7	35.7	-3.9	3.0
Withdrew from any courses (%)	35.5	35.7	-0.2	3.7
Number of credits earned Regular credits Equated credits	6.1 3.0 3.1	6.4 2.9 3.6	-0.3 0.1 -0.4	0.4 0.3 0.3
Passed Developmental Math (%) Passed Developmental English (%) Passed Developmental Reading (%)	34.9 21.5 22.8	37.6 26.6 25.9	-2.7 -5.1 -3.1	3.5 3.1 3.1
Term GPA (%) No GPA <sup>b</sup> 3.0 to 4.0 or B/A 2.0 to 2.9 or C/B- 1.0 to 1.9 or D/C- 0 to 0.9 or F/D-	54.7 21.1 11.0 4.8 8.3	49.7 21.9 12.3 5.7 10.3	5.0 -0.8 -1.3 -0.9 -2.0	3.9 2.7 2.1 1.4 1.8
Sample size (total = 911)	458	453		

SOURCE: MDRC calculations from Guilford Technical Community College transcript data.

NOTES: Rounding may cause slight discrepancies in sums and differences.

A two-tailed t-test was applied to differences between research groups. Statistical significance levels are indicated as: \*\*\* = 1 percent; \*\* = 5 percent; \* = 10 percent.

Estimates are adjusted by campus and research cohort.

Standard errors are clustered by Study Skills course (ACA 118) section for the program group.

<sup>&</sup>lt;sup>a</sup>Students who dropped all courses before the drop date are not counted as registered.

<sup>&</sup>lt;sup>b</sup>The "No GPA" category includes students who were not registered, students who withdrew from all classes, and students who took only developmental courses, which are not included in GPA calculations. The Study Skills course (ACA 118) was not included in GPA calculations for this table.

success course itself. When excluding the success course, the differences in courses attempted are reversed,<sup>5</sup> with control group students taking about a third of a course more than the program group.

This reveals that while the success course may have added to the number of courses students attempted overall, it actually lowered the number of other credit or developmental courses students took during the program semester. However, given that Guilford's success course was offered as a two-credit course, this finding is not surprising, as the success course might have crowded out other credit courses that program students could have taken. Therefore, the more important question is whether the student success course was able to have an impact on students' performance in their other courses, thus demonstrating the utility of taking this course in place of other courses students might attempt.

Unfortunately, the student success course did not produce statistically significant effects on students' academic outcomes during the program semester. As can be seen in Table 4.2, all students, regardless of whether they were program or control group students, had academic difficulties, with relatively low course pass rates and credits earned. However, no significant differences exist between program and control group students' academic outcomes, including course registration or enrollment, credits attempted, course pass rates, course withdrawal rates, credits earned, successful completion of developmental education courses, or grade point averages. This means that the success course did not have a significant impact on program group students' overall achievement during the semester that they took the student success course.

#### Effects on Educational Outcomes After the Program Semester

When analyzing the effects of Guilford's student success course, MDRC examined Guilford transcript data through the fall 2010 semester, or up to three semesters after students were originally eligible for the program. The analysis below captures the effects of Guilford's student success course though the third semester after students were randomly assigned to the program.

As with the findings during the program semester, there are no significant differences in academic outcomes between the program and control groups in the first postprogram semester (see Table 4.3). While enrollment decreased in general during the first postprogram semester and students continued to experience academic difficulties, the program and control groups were similar. As during the program semester, the student success course did not produce any

<sup>&</sup>lt;sup>5</sup>This alternate version of courses attempted, excluding the success course, is not shown in the tables.

<sup>&</sup>lt;sup>6</sup>The grade point averages (GPA) shown in the tables were calculated excluding the student success course in order to examine what impact the student success course had on students' GPA in other courses.

#### **Achieving the Dream: Community Colleges Count**

Table 4.3 **Academic Outcomes in First Postprogram Semester Guilford Technical Community College** 

	Program	Control		Standard
Outcome	Group	Group	Difference	Error
First postprogram semester				
Registered for any courses (%) <sup>a</sup>	63.6	61.6	2.0	3.5
Number of courses attempted	2.3	2.2	0.1	0.2
Number of credits attempted	7.6	7.3	0.3	0.5
Regular credits	5.2	4.9	0.3	0.4
Equated credits	2.3	2.4	0.0	0.2
Attempted Developmental Math (%)	30.2	27.3	2.9	3.1
Attempted Developmental English (%)	16.1	18.4	-2.4	2.5
Attempted Developmental Reading (%)	12.7	13.6	-0.9	2.4
Number of credits earned	4.4	4.3	0.1	0.4
Regular credits	3.2	3.2	0.0	0.3
Equated credits	1.2	1.2	0.1	0.1
Passed Developmental Math (%)	15.4	13.1	2.3	2.2
Passed Developmental English (%)	8.7	8.9	-0.2	1.6
Passed Developmental Reading (%)	7.1	7.4	-0.2	1.7
Term GPA (%)				
No GPA <sup>b</sup>	51.2	51.8	-0.6	3.2
3.0 to 4.0 or B/A	19.6	21.5	-1.9	2.7
2.0 to 2.9 or C/B-	10.1	12.1	-2.1	2.0
1.0 to 1.9 or D/C-	7.2	4.8	2.4	1.7
0 to 0.9 or F/D-	12.0	9.7	2.3	1.8
Sample size (total = 911)	458	453		

SOURCE: MDRC calculations from Guilford Technical Community College transcript data.

NOTES: Rounding may cause slight discrepancies in sums and differences.

A two-tailed t-test was applied to differences between research groups. Statistical significance levels are indicated as: \*\*\* = 1 percent; \*\* = 5 percent; \* = 10 percent. Estimates are adjusted by campus and research cohort.

Standard errors are clustered by the Study Skills course (ACA 118) section for the program group <sup>a</sup>Students who dropped all courses before the drop date are not counted as registered.

<sup>b</sup>The "No GPA" category includes students who were not registered, students who withdrew from all classes, and students who took only developmental courses, which are not included in GPA calculations.

meaningful changes in students' persistence (as evidenced in students' registration rates), credits or courses attempted, credits earned, successful completion of developmental education courses, or grade point averages.

Extended follow-up of Guilford's success course demonstrates that there was not any change in overall impacts in the longer term, through the third postprogram semester. Table 4.4 shows that none of the cumulative outcomes in the third postprogram semester is statistically different between program and control groups. As was the case in the program semester and the first postprogram semester, the student success course did not produce any meaningful changes in students' persistence, credits or courses attempted, credits earned, successful completion of developmental education courses, or grade point averages measured cumulatively through four semesters beginning with the program semester.

These findings indicate that while Guilford's success course was able to change some aspects of students' personal habits, it did not have a meaningful impact on the overall academic achievement of these students during the program semester or the semesters following the program. However, the success course was found to have some promising effects on certain student subgroups, as can be seen in the exploratory analysis discussed below.

## Subgroup Analysis: Effects on Students Enrolled in Courses During the Program Semester

As discussed earlier in Chapter 3, a substantial proportion of students assigned to the program group did not actually receive the full success course, either because they did not take any classes at Guilford that semester or because they dropped or withdrew from the success course during the program semester. It is expected that students' nonparticipation would affect the overall impact of the success course on students' outcomes. When program members do not participate, the differences between the program and control groups are diluted, as the program group contains a number of students who did not receive the full treatment. Unfortunately, removing nonparticipants from the program group would detrimentally affect the integrity of the study, as it would allow students to select themselves into the program by their own actions, not by random assignment. However, the effect of nonparticipation can be explored through an analysis that examines only those students, among both the program and control group, who took courses during the program semester.<sup>7</sup>

This exploratory analysis is detailed in Appendix B. It suggests that program students' participation in the student success course may have effects on some academic outcomes.

<sup>&</sup>lt;sup>7</sup>Because dropping students from the sample fundamentally changes the random assignment procedure, this analysis should be considered as only exploratory.

#### **Achieving the Dream: Community Colleges Count**

#### Table 4.4

#### **Academic Outcomes: Cumulative from Program to Third Postprogram Semester Guilford Technical Community College**

Outcome	Program Group	Control Group	Difference	Standard Error
Registered for any courses (%) <sup>a</sup>	90.6	90.3	0.3	2.7
Number of semesters registered	2.4	2.4	0.0	0.1
Number of credits attempted Regular credits Equated credits	30.2	29.9	0.3	1.6
	20.1	19.6	0.4	1.4
	10.1	10.3	-0.1	0.7
Number of credits earned	18.4	18.6	-0.2	1.3
Regular credits	12.8	12.7	0.1	1.1
Equated credits	5.6	5.9	-0.3	0.5
Passed Developmental Math (%) Passed Developmental English (%) Passed Developmental Reading (%)	48.8	47.8	1.1	3.2
	31.4	32.9	-1.5	3.5
	29.2	30.5	-1.4	3.4
Term GPA (%) No GPA <sup>b</sup> 3.0 to 4.0 or B/A 2.0 to 2.9 or C/B- 1.0 to 1.9 or D/C- 0 to 0.9 or F/D-	28.9	24.7	4.2	3.4
	20.5	20.8	-0.3	2.7
	19.2	22.3	-3.1	2.8
	14.4	14.6	-0.2	2.4
	17.0	17.7	-0.7	2.6
Sample size (total = 911)	458	453		

SOURCE: MDRC calculations from Guilford Technical Community College transcript data.

NOTES: Rounding may cause slight discrepancies in sums and differences.

A two-tailed t-test was applied to differences between research groups. Statistical significance levels are indicated as: \*\*\* = 1 percent; \*\* = 5 percent; \* = 10 percent.

Standard errors are clustered by Study Skills course (ACA 118) section for the program group.

<sup>&</sup>lt;sup>a</sup>Students who dropped all courses before the drop date are not counted as registered.

<sup>&</sup>lt;sup>b</sup>The "No GPA" category includes students who withdrew from all classes and students who took only developmental courses, which are not included in GPA calculations. The Study Skills course (ACA 118) was not included in GPA calculations for this table.

However, these effects are not consistent across the two semesters. As a result, it is unclear whether a higher participation rate would have made the program more successful in improving academic outcomes.

#### **Subgroup Analysis: Effects on Students by Cohort**

While there were no overall impacts on students' achievement, an analysis of the effects of the student success course on individual student cohorts tells a more promising story. As discussed in Chapter 3, the initial cohort of instructors for the success course was more enthusiastic and had more supports than those who taught the course during the second and third semesters. Additionally, several new instructors who taught students in the second and third cohort noted challenges in helping students with more severe behavioral and emotional problems. Such issues raised questions about whether differences might exist in students' outcomes among these three semesters.

Table 4.5 and Table 4.6 depict the academic outcomes of the first cohort of students and the remaining two cohorts of students during the program semester and the first postprogram semester, respectively. As can be seen in these tables, the student success course had a differential effect on the first cohort of students that enrolled in the study. During the program semester, the success course reduced the number of students receiving a D- or F in their courses among those students in the first cohort (see Table 4.5). In addition, the success course resulted in a number of impacts on the first cohort of students' achievement during the first postprogram semester (see Table 4.6).

Extended follow-up of students by cohort, shown in Table 4.7, reveals that the positive, statistically significant impact on regular credits earned for the first cohort is sustained in the second and third postprogram semesters, with a marginally increasing cumulative impact on regular credits earned at the end of each semester. By the end of the second postprogram semester, program group students in the first cohort are 2.3 regular credits (not shown in table) ahead of their control group counterparts, and by the end of the third postprogram semester, program group students are 3.1 regular credits ahead. As can be seen in Tables 4.5 to 4.7, this impact on regular credits earned for the first cohort is driven by higher rates of regular courses attempted on average by the program group students.

Some of this variation in student outcomes may have resulted from the differences in the implementation of the success course during these three semesters. As noted in Chapter 3,

<sup>&</sup>lt;sup>8</sup>Because random assignment was performed by cohort, these are unbiased, fully experimental impacts within each cohort. Moreover, baseline characteristics do not differ significantly between the spring 2008 cohorts and the following cohorts.

## Achieving the Dream: Community Colleges Count Table 4.5

#### Transcript Outcomes, Program Semester, by Cohort Guilford Technical Community College

			2008 Cohort				and Spring 2009 Co		Difference
	Program			Standard				Standard	
Outcome	Group	Group D	ifference	Error	Group	Group	Difference	Error	Subgroups
Program Semester									
Registered for any courses (%) <sup>a</sup>	88.5	86.1	2.5	4.9	84.7	83.3	1.4	4.2	
Registered for study skills course	71.0	2.2	68.8 ***	7.7	71.9	3.4	68.4 ***	5.7	
Number of credits attempted	10.5	10.1	0.4	0.7	10.0	9.9	0.1	0.6	
Regular credits	4.9	4.9	0.0	0.6		4.3	0.4	0.4	
Equated credits	5.7	5.2	0.4	0.6	5.3	5.6	-0.3	0.4	
Attempted Developmental Math (%)	66.3	61.9	4.4	6.0	60.3	61.2	-0.9	4.2	
Attempted Developmental English (%)	38.8	37.6	1.2	7.1	37.0	40.4	-3.4	4.7	
Attempted Developmental Reading (%)	37.1	31.9	5.3	6.1	38.0	41.0	-3.0	4.1	
Number of credits earned	6.4	5.9	0.5	0.6	6.0	6.7	-0.6	0.5	
Regular credits	3.4	2.7	0.7	0.5	2.8	3.0	-0.1	0.3	
Equated credits	3.0	3.2	-0.2	0.5	3.2	3.7	-0.5	0.4	
Passed Developmental Math (%)	35.2	33.8	1.4	5.9	34.8	39.2	-4.3	4.5	
Passed Developmental English (%)	18.3	25.0	-6.7	4.9		27.2	-4.3	3.9	
Passed Developmental Reading (%)	22.0	21.4	0.6	4.8	23.2	27.8	-4.6	3.8	
Term GPA (%)									
No GPA <sup>b</sup>	48.6	44.4	4.2	7.2	57.2	52.0	5.2	4.4	
3.0 to 4.0 or B/A	21.4	22.8	-1.4	5.6	21.1	21.5	-0.4	3.7	
2.0 to 2.9 or C/B-	16.2	12.3	3.9	5.1	8.8	12.3	-3.5	2.3	
1.0 to 1.9 or D/C-	6.9	5.1	1.8	2.6	4.0	6.0	-2.0	1.7	
0 to 0.9 or F/D-	6.9	15.4	-8.5 **	3.5	8.9	8.2	0.7	2.0	††
Sample size (total = 911)	131	136			327	317			

(continued)

#### Table 4.5 (continued)

SOURCE: MDRC calculations from Guilford Technical Community College transcript data.

NOTES: Rounding may cause slight discrepancies in sums and differences.

A two-tailed t-test was applied to differences between research groups. Statistical significance levels are indicated as: \*\*\* = 1 percent; \*\* = 5 percent; \* = 10 percent.

A two-tailed t-test was applied to differences of impacts between subgroups. Statistical significance levels are indicated as:  $\dagger\dagger\dagger = 1$  percent;  $\dagger\dagger = 5$  percent;  $\dagger = 10$  percent.

Estimates are adjusted by campus and research cohort.

Standard errors are clustered by the Study Skills Course (ACA 118) section for the program group.

<sup>a</sup>Students who dropped all courses before the drop date are not counted as registered.

<sup>b</sup>The "No GPA" category includes students who were not registered, students who withdrew from all classes, and students who took only developmental courses, which are not included in GPA calculations. The Study Skills course (ACA 118) was not included in GPA calculations for this table.

Table 4.6

Transcript Outcomes, First Postprogram Semester, by Cohort
Guilford Technical Community College

			g 2008 Cohort				and Spring 2009 Co		Difference
	Program				Program				Between
Outcome	Group	Group I	Difference	Error	Group	Group	Difference	Error	Subgroups
First postprogram semester									
Registered for any courses (%) <sup>a</sup>	63.3	52.3	11.0 *	6.1	63.7	65.5	-1.8	4.1	†
Number of credits attempted	7.7	6.1	1.5 *	0.8	7.6	7.7	-0.2	0.6	†
Regular credits	5.9	4.2	1.7 **	0.7	5.0	5.2	-0.2	0.5	††
Equated credits	1.7	1.9	-0.2	0.4	2.6	2.5	0.1	0.3	
Attempted Developmental Math (%)	26.5	20.0	6.5	5.1	31.8	30.3	1.4	4.0	
Attempted Developmental English (%)	12.2	16.9	-4.7	4.3	17.6	19.0	-1.4	3.1	
Attempted Developmental Reading (%)	5.2	11.9	-6.8 *	3.4	15.8	14.3	1.5	2.8	†
Number of credits earned	4.5	3.7	0.8	0.5	4.4	4.6	-0.2	0.5	
Regular credits	3.5	2.6	1.0 **	0.5	3.1	3.4	-0.3	0.4	
Equated credits	1.0	1.1	-0.1	0.3	1.3	1.2	0.2	0.2	
Passed Developmental Math (%)	14.5	11.1	3.4	3.7	15.8	13.9	1.9	2.7	
Passed Developmental English (%)	7.0	10.2	-3.2	2.8	9.4	8.3	1.1	2.0	
Passed Developmental Reading (%)	3.7	7.5	-3.8	2.6	8.5	7.3	1.3	2.0	
Term GPA (%)									
No GPA <sup>b</sup>	51.0	58.2	-7.2	5.5	51.2	49.1	2.1	4.0	
3.0 to 4.0 or B/A	18.3	18.4	-0.1	4.6		22.8	-2.7	3.2	
2.0 to 2.9 or C/B-	10.8	11.7	-0.9	3.6	9.8	12.3	-2.6	2.3	
1.0 to 1.9 or D/C-	10.7	2.2	8.6 ***	3.3	5.8	6.0	-0.2	2.0	
0 to 0.9 or F/D-	9.2	9.6	-0.4	4.0	13.1	9.8	3.4	2.2	1 1
Sample size (total = 911)	131	136			327	317			

(continued)

#### Table 4.6 (continued)

SOURCE: MDRC calculations from Guilford Technical Community College transcript data.

NOTES: Rounding may cause slight discrepancies in sums and differences.

A two-tailed t-test was applied to differences between research groups. Statistical significance levels are indicated as: \*\*\* = 1 percent; \*\* = 5 percent; \* = 10 percent.

A two-tailed t-test was applied to differences of impacts between subgroups. Statistical significance levels are indicated as:  $\dagger\dagger\dagger$  = 1 percent;  $\dagger$  = 5 percent;  $\dagger$  = 10 percent.

Estimates are adjusted by campus and research cohort.

Standard errors are clustered by the Study Skills Course (ACA 118) section for the program group.

<sup>a</sup>Students who dropped all courses before the drop date are not counted as registered.

<sup>b</sup>The "No GPA" category includes students who were not registered, students who withdrew from all classes, and students who took only developmental courses, which are not included in GPA.

# Achieving the Dream: Community Colleges Count Table 4.7 Cumulative Academic Outcomes, Program to Third Postprogram Semester, by Cohort Guilford Technical Community College

	D		2008 Cohort	Ct 1 1			and Spring 2009 C		Difference
0.4	Program		cc	Standard	-		D:00		Between
Outcome	Group	Group Di	Herence	Error	Group	Group	Difference	Error	Subgroups
Registered for any courses (%) <sup>a</sup>	93.8	90.5	3.3	3.7	89.3	90.2	-0.9	3.3	
Number of semesters registered	2.5	2.2	0.2	0.2	2.4	2.5	-0.1	0.1	
Number of credits attempted	31.3	27.9	3.4	2.3	29.8	30.7	-1.0	1.9	
Regular credits	21.9	18.8	3.2	2.2	19.3	20.0	-0.6	1.6	
Equated credits	9.4	9.1	0.3	0.9	10.4	10.8	-0.3	0.9	
Number of credits earned	19.7	16.7	3.0	2.0	17.9	19.5	-1.6	1.5	†
Regular credits	14.5	11.4	3.1 *	1.7	12.1	13.3	-1.2	1.3	†
Equated credits	5.2	5.3	-0.1	0.6	5.8	6.2	-0.4	0.6	
Passed Developmental Math (%)	48.8	44.9	3.9	5.6	48.9	48.9	0.0	3.9	
Passed Developmental English (%)	28.3	32.3	-4.0	5.5	32.7	33.1	-0.4	4.3	
Passed Developmental Reading (%)	28.8	24.5	4.4	4.9	29.3	33.2	-3.9	4.3	
Term GPA (%)									
No GPA <sup>b</sup>	28.2	24.3	3.8	5.3	29.1	24.9	4.2	4.0	
3.0 to 4.0 or B/A	20.6	18.4	2.3	4.5	20.5	21.8	-1.3	3.5	
2.0 to 2.9 or C/B-	21.4	24.3	-2.9	4.9	18.3	21.5	-3.2	3.3	
1.0 to 1.9 or D/C-	13.1	13.9	-0.8	4.5	15.0	14.8	0.2	2.9	
0 to 0.9 or F/D-	16.8	19.1	-2.3	4.3	17.1	17.0	0.1	3.1	
Sample size (total = 911)	131	136			327	317			

(continued)

#### **Table 4.7 (continued)**

SOURCE: MDRC calculations from Guilford Technical Community College transcript data.

NOTES: Rounding may cause slight discrepancies in sums and differences.

A two-tailed t-test was applied to differences between research groups. Statistical significance levels are indicated as: \*\*\* = 1 percent; \*\* = 5 percent; \* = 10 percent.

A two-tailed t-test was applied to differences of impacts between subgroups. Statistical significance levels are indicated as:  $\dagger \dagger \dagger = 1$  percent;  $\dagger = 5$  percent;  $\dagger = 10$  percent.

Standard errors are clustered by the Study Skills Course (ACA 118) section for the program group.

<sup>a</sup>Students who dropped all courses before the drop date are not counted as registered.

<sup>b</sup>The "No GPA" category includes students who withdrew from all classes and students who took only developmental courses, which are not included in GPA calculations. The Study Skills course (ACA 118) was not included in GPA calculations for this table.

instructors had a higher level of enthusiasm about the success course and more extensive support and training during the first program semester than in later semesters. It is possible that this elevated level of interest and support may have resulted in the first cohort of students receiving a stronger version of the student success course, which could have resulted in more substantial impacts. Additionally, later instructors' lower levels of excitement may have dampened students' achievement. However, some of the differences seem to be related to control group students performing better in later cohorts than in the first cohort. Since the cohorts are similar in background characteristics, there may be other explanations for the differences between the cohorts. As a result, it is difficult to make a definitive conclusion about the causes of these differential effects.<sup>9</sup>

<sup>&</sup>lt;sup>9</sup>The survey outcomes, when analyzed by cohort, were consistent with these findings, but the differential impacts between cohorts were not statistically significant for the survey, likely because of the smaller survey respondent sample size. See Appendix Table C.1 for details.

#### Chapter 5

#### **Summary and Conclusions**

When Guilford sought to rigorously examine the effects of its new student success course, administrators and faculty alike hoped to learn whether the course could improve developmental education students' academic achievement and, if so, how these effects came about. In particular, Guilford's leaders hoped that this course would foster the kinds of social and emotional behaviors that would allow their developmental education students to make an easier transition to college life. Additionally, with the newfound skills and the additional academic preparation the course offered, these leaders hoped that the developmental education students who took the course would be more motivated and better prepared to continue in college, earn higher grades and more credits, and ultimately earn a degree.

The results of this study reveal that Guilford's new success course, with its focus on social and emotional skills, was able to foster some changes in students' attitudes and perspectives. Specifically, the course was able to influence students' emotional awareness of themselves and others, their interest in learning, and their engagement in college. Such changes should not be taken lightly, as students' interest in and commitment to learning is a foundational aspect of their continued persistence in college, particularly in the face of tough personal, economic, or academic challenges. Similarly, the course's ability to foster certain "soft skills," such as an awareness of others' emotions and the ability to work productively in groups, is a key asset, as such skills are critical attributes for success in today's 21st-century workplace. The development of such skills alone may warrant colleges' implementation of similar types of student success courses, which focus on building up students' relational skills and personal awareness.

However, although Guilford's student success course was able to foster a number of positive personal habits and perspectives in students, these attributes did not translate into improved academic outcomes for the overall group of students to whom it was offered. That said, the students in the first cohort of the study did show some substantial academic improvements, so the lack of overall impacts may have resulted from the differential ways in which the course was offered across these three semesters. The earliest cohort of students may have received a qualitatively different success course than those who enrolled in later semesters. It is possible that the higher level of enthusiasm and support of instructors in the first cohort may have influenced the effectiveness of the course.

<sup>&</sup>lt;sup>1</sup>Murnane and Levy (1996).

The quality of a program's implementation can have important effects on students' achievement. For example, an evaluation of a program designed to improve former Temporary Assistance for Needy Families recipients' employment outcomes by providing job preparation and placement, work stabilization, and advancement services in six South Carolina counties found that one county did significantly better than the others in increasing the number of participants who obtained employment. Use of retention and advancement services was higher in this county than the others. This was attributed to the fact that the implementation of the program in this county most closely mirrored what the program's designers had envisioned.<sup>2</sup>

The differential impacts of the success course on the various cohorts could also speak to the challenges community colleges face in scaling up promising programs. The first cohort of students who enrolled in the success course were taught primarily by instructors who had attended a training led by the *On Course* creator and were enthusiastically spearheading the implementation of the new course. However, in order to support the continued scale-up of this intervention, the college chose to implement a train-the-trainer model, whereby Guilford faculty recruited and trained new teachers. Less support was provided to these new instructors over the course of the semester, as the college focused on adding more sections.

The differential findings among the three cohorts of students enrolled in this study suggest that the quality of the program's implementation may have played a key role in students' outcomes. It appears that the students who received a stronger version of the program in the first program semester may have benefitted more from the success course than those who enrolled in the course in later semesters. Studies of other community college programs, such as learning communities<sup>3</sup> and a success program for probationary students,<sup>4</sup> suggest a similar trend, as students who received stronger versions of the program had more promising academic results than those who received weaker versions. These findings thus underscore the need for program developers to pay careful attention to the development and implementation of their intervention as well as the staff charged with leading it. As Guilford's results suggest, implementing a curriculum with enthusiastic instructors who have sufficient support could make an important difference in students' academic outcomes.

While, overall, the mixed results from this study do not provide strong evidence that a success course alone improves student academic outcomes, it should be remembered that this study is a test of a single success course, and the results should not be seen as definitive proof that no success course can increase students' achievement. Indeed, these findings should be taken in concert with other studies that have shown more positive results for these courses,

<sup>&</sup>lt;sup>2</sup>Scrivener, Azurdia, and Page (2005).

<sup>&</sup>lt;sup>3</sup>Weiss, Visher, and Wathington (2010).

<sup>&</sup>lt;sup>4</sup>Scrivener, Sommo, and Collado (2009).

particularly when success courses are one component in more comprehensive programs. For instance, the findings in this study are not unlike those from Chaffey College's success course, which had no meaningful impacts on students' academic outcomes in the program semester or first postprogram semester.<sup>5</sup> However, an enhanced version of that program did have positive impacts on the number of credits students earned and on grade point averages, and helped a substantial proportion of students move off academic probation.

Similarly, a number of positive impacts on students' outcomes have been observed in learning communities that included a student success course. For example, a learning communities program at Houston Community College linked student success courses with developmental math courses and also provided enhanced student services. Students who participated in this program were more likely to pass their developmental math course than those who attempted the same course in stand-alone classes. These results could be seen as an effect of students having learned study skills in the student success course.<sup>6</sup> A learning communities program at Kingsborough Community College in Brooklyn, New York, which linked a student success course with English and content courses and provided additional enhanced services for incoming freshmen, had some similar effects. Students who participated in the program moved more quickly through developmental English requirements than their control group counterparts and passed standardized reading and writing skills tests (needed to transfer to a four-year college) at a higher rate both during the program semester and by the end of a two-year follow-up period.<sup>7</sup> These findings reveal that student success courses, along with other services, can positively influence students' outcomes.

However, even when program implementation is strong, it should also be noted that the impact on students' achievement of a one-semester intervention may be modest and less likely to achieve the lofty goals of improved grades, credits earned, and graduation across the board. For instance, in studies of learning communities, which linked developmental or credit-bearing courses with a student success course for one semester, the impacts on students' academic achievement tended to be modest and generally only sustained during the semester in which the program operated. Similar results have also been seen for one- and two-semester advising interventions and mentoring programs as well programs that included student success courses.

These studies reveal that though programs that focus on improving particular aspects of students' college experience are worthwhile, such as a success course focused on students' well-being or more intensive advising programs, they may not be sufficient to translate into greater

<sup>&</sup>lt;sup>5</sup>Scrivener, Sommo, and Collado (2009).

<sup>&</sup>lt;sup>6</sup>Weissman et al. (2011).

<sup>&</sup>lt;sup>7</sup>Scrivener et al. (2008).

<sup>&</sup>lt;sup>8</sup>Weissman et al. (2011); Weiss, Visher, and Wathington (2010).

<sup>&</sup>lt;sup>9</sup>Scrivener and Coghlan (2011); Visher, Butcher, and Cerna (2010).

academic success. The short-term effects on student outcomes that resulted from these programs suggest that other issues may be creating more substantial barriers to students' academic progress. For instance, while success courses may improve students' soft skills and help them better understand how to manage college life, students may still be overwhelmed by larger challenges in their lives, such as an inability to afford their school tuition or the need to balance work, school, and family responsibilities. Similarly, success courses, and other, similar student support interventions, do not offer solutions to some of the structural or academic barriers students may face in college, such as having to pass a long sequence of developmental education courses or continued failure in a particular academic course.

Given these issues, colleges should carefully consider how success courses are integrated into the larger fabric of students' course work. Success courses may play an important role in helping introduce and support students as they make the transition to college, allowing them to learn about the variety of programs and services that may benefit them during their academic career. However, these courses also present an opportunity cost for students, as they often enroll in a success course at the expense of an academic course. As this study found, students earned fewer academic credits during the semester that they took the success course, in part because they were unable to fit in an additional academic course. An additional consideration is that most success courses do not offer credits that are transferrable to four-year institutions.

With these concerns in mind, colleges may wish to seek ways to incorporate success courses into larger, more systemic approaches to improving developmental education students' academic experiences. Given the relatively short-term effects of these courses and the opportunity costs they present to students, colleges may need to consider smaller interventions that support students' psychosocial well-being but do not require students to choose between their academic course-taking and their introduction to college life. In order to effect greater changes in students' achievement, colleges might look toward more comprehensive approaches for improving developmental education students' academic performance, such as reforms in developmental education instruction or the structuring of developmental education course sequences. A different combination of these efforts, which addresses students' social challenges while also focusing more concretely on their academic needs, may prove even more promising in fostering students' academic progress.

# Appendix A Technical Appendix

#### **Description of Survey Scales**

The following multi-item scale measures are presented in Table 4.1 and Appendix Table C.1 and were created using data from the student survey. Multi-item scales are useful for measuring complex constructs, such as those outlined below, because such constructs cannot be assessed easily within a single-item measure. The original source of these scales is the *On Course* self-assessment included in the curriculum.<sup>1</sup> For all measures, a summary scale score is calculated and then divided by the number of items that make up the scale, to create an average scale score. Finally, Cronbach's alpha<sup>2</sup> — an indicator of how well the items included in the scale measure a common underlying construct — is presented for each scale. Higher values indicate that the scale is representative of an underlying construct: A Cronbach's alpha of 0.8 or above indicates good internal consistency of the scale, with slightly lower values being considered acceptable.

#### Accepting Personal Responsibility (5-item scale, Cronbach's Alpha = 0.75)

- 1. I have become more aware of my responsibility for my academic learning.
- 2. I now make more of an effort to attend class on time.
- 3. I now make more of an effort to attend class regularly.
- 4. I am more likely to find positive ways to solve my problems.
- 5. If I miss class, I am more likely to find out what assignments I missed.

#### Self-Motivation (3-item scale, Cronbach's Alpha = 0.80)

- 1. I have developed higher expectations for my future.
- 2. Receiving a college education has become a high priority in my life.
- 3. I have learned how to better plan for my educational goals.

#### Self-Management (4-item scale, Cronbach's Alpha = 0.76)

- 1. I know more about how to use organizational tools such as calendars or to-do lists.
- 2. I am better able to prioritize tasks, so that I give myself enough time to get things done.

<sup>&</sup>lt;sup>1</sup>Downing (2008) was used, with the exception of five questions that were phrased negatively and that loaded heavily on their own latent construct in a factor analysis, making them bad fits for the scales used here.

<sup>2</sup>Cronbach (1951).

- 3. I have become more committed to my schoolwork.
- 4. I have a better understanding of how my schoolwork affects my success.

#### Interdependence (5-item scale, Cronbach's Alpha = 0.80)

- 1. I have learned how to use study groups more effectively.
- 2. I have found a trustworthy person to turn to if I have problems.
- 3. I have learned how to listen more carefully to people.
- 4. I am more aware of where to go for help when I am confused about which courses to take.
- 5. I now know where to go to get help if I am having trouble paying my tuition.

#### **Self-Awareness (4-item scale, Cronbach's Alpha = 0.78)**

- 1. I have become more aware of my strengths and weaknesses.
- 2. I have a greater ability to change bad habits.
- 3. I am more aware of the ways I can get off track from achieving my goals and dreams.
- 4. I am more likely to succeed in college.

#### Lifelong Learning (4-item scale, Cronbach's Alpha = 0.82)

- 1. I have developed better study skills.
- 2. I have a better understanding of how I learn.
- 3. I have discovered how to learn from my failures and disappointments.
- 4. I have figured out how to learn a subject even if it is hard to learn in class.

#### Emotional Intelligence (4-item scale, Cronbach's Alpha = 0.79)

- 1. I have better control over my emotions, such as anger or sadness.
- 2. I have become more aware of my feelings.
- 3. I have become more aware of the feelings of others.
- 4. Choosing courses in school that are both challenging and interesting has become more important to me.

### Belief in Self (5-item scale, Cronbach's Alpha = 0.86)

- 1. I have developed a greater sense of confidence in my academic abilities.
- 2. I feel better about who I am.
- 3. I have learned how to celebrate my accomplishments.
- 4. I have learned that high self-esteem can help me succeed.
- 5. I am more honest with others about my needs.

### Response categories for all of the above questions:

```
Strongly disagree (1)
Disagree (2)
Neutral (3)
Agree (4)
Strongly agree (5)
```

Responses were summed and averaged within scales. Scores ranged from 1 to 5 within all the above scales.

### **Use of Guilford Services (9-item scale, Cronbach's Alpha = 0.79)**

### How often have you used...

- 1. Academic advising/planning
- 2. Career Center
- 3. Counseling
- 4. Tutoring Center
- 5. Walk-in Math Lab
- 6. Transitions Program
- 7. Mentoring
- 8. College Transfer Center
- 9. Writing Lab

### Response categories:

```
Rarely/Never (1)
Sometimes (2)
Often (3)
```

## Responses were summed and averaged. Scores ranged from 1 to 3.

### Positive Engagement (17-item scale, Cronbach's Alpha = 0.90)

- 1. Asked questions in class or contributed to class discussions
- 2. Made a class presentation
- 3. Prepared two or more drafts of a paper or assignment before turning it in
- 4. Worked on a paper or project that required integrating ideas or information from various sources
- 5. Worked with other students on projects during class
- 6. Worked with classmates outside of class to prepare class assignments
- 7. Used the Internet or instant messaging to work on an assignment
- 8. Used e-mail to communicate with an instructor
- 9. Discussed grades or assignments with an instructor
- 10. Talked about career plans with an instructor or advisor
- 11. Discussed ideas from your readings or classes with instructors outside of class
- 12. Received prompt feedback (written or oral) from instructors on your performance
- 13. Worked harder than you thought you could to meet an instructor's standards or expectations
- 14. Worked with instructors on activities other than course work
- 15. Discussed ideas from your readings or classes with others outside of class (students, family members, coworkers, etc.)
- 16. Had meaningful conversations with students of a different race or ethnicity other than your own
- 17. Had meaningful conversations with students who differ from you in terms of their religious beliefs, political opinions, or personal values

#### Response categories:

Never (1)
Sometimes (2)
Often (3)
Very Often (4)

Responses were summed and averaged. Scores ranged from 1 to 4.

# Appendix B Sensitivity Analysis

As discussed in Chapter 4, a substantial proportion of students assigned to the program group did not remain enrolled in the success course after the add/drop period. In order to assess whether this is the main reason for a lack of academic impacts, a nonexperimental analysis is presented here on program semester students who actually attended Guilford that semester.

An analysis of program group students revealed that half of those who did not take the success course did not take any classes in the program semester at all. Removing the proportions of program and control group students who took no classes during the program semester provides a relatively comparable group of students among these two groups. By dropping nonenrollees from both groups, the program group achieves a relatively higher participation rate in the success course (83 percent of the program group as opposed to 72 percent in the full sample), allowing for a relatively unbiased estimate of student achievement with a higher participation rate.

This exploratory analysis suggests some minor changes in students' achievement. While most academic outcomes did not change in this subanalysis, the success course was associated with a decrease in students' completion of developmental English during the program semester (see Appendix Table B.1). However, during the first postprogram semester, the student success course was associated with an increase in students' developmental math pass rates (see Appendix Table B.2). Nevertheless, the academic outcome impacts presented in these tables are substantively the same as those from the experimental analysis of the full study sample and do not offer evidence that increased participation alone would have led to improved academic outcomes for these students.

<sup>&</sup>lt;sup>1</sup>Appendix Table B.1 also shows a marked increase in students with "No GPA," an increase in the number of courses attempted, and a decrease in equated credits earned. However, these outcomes are driven by program students' enrollment in the student success course and their higher participation rate in this subsample. Similar to the description provided in the earlier analysis of academic outcomes, program students taking the success course were less likely than the control group to have had the time or resources to take some other courses that might have counted toward their GPA or toward other non-GPA, equated-credit courses. Although the two-credit success course contributes fewer credits than a typical class, it does seem to have tipped the balance of the average number of courses attempted.

# **Achieving the Dream: Community Colleges Count Appendix Table B.1**

### Academic Outcomes in Program Semester (Program Semester Enrollees Only) **Guilford Technical Community College**

Outcome	Program Group	Control Group	Difference	Standard Error
Registered for any courses (%) <sup>a</sup>	100.0	100.0	0.0	0.0
Registered for study skills course (%)	83.5	3.6	79.9 ***	3.7
Number of courses attempted	3.8	3.5	0.3 ***	0.1
Number of credits attempted Regular credits Equated credits	11.9 5.6 6.3	11.9 5.3 6.5	0.0 0.2 -0.2	0.3 0.3 0.4
Attempted Developmental Math (%) Attempted Developmental English (%) Attempted Developmental Reading (%)	72.2 43.7 43.8	73.0 47.0 45.7	-0.8 -3.2 -1.9	3.3 4.7 3.9
Passed all courses (%)	37.1	42.3	-5.2	3.2
Withdrew from any courses (%)	41.3	42.5	-1.2	3.9
Number of credits earned Regular credits Equated credits	7.2 3.5 3.7	7.6 3.4 4.2	-0.5 0.1 -0.5 *	0.4 0.3 0.3
Passed Developmental Math (%) Passed Developmental English (%) Passed Developmental Reading (%)	40.9 25.1 26.6	44.5 31.6 30.8	-3.6 -6.5 * -4.3	4.1 3.5 3.4
Term GPA (%) No GPA <sup>b</sup> 3.0 to 4.0 or B/A 2.0 to 2.9 or C/B- 1.0 to 1.9 or D/C- 0 to 0.9 or F/D-	47.1 24.6 13.0 5.6 9.7	40.4 26.0 14.5 6.8 12.3	6.6 * -1.4 -1.5 -1.2 -2.5	3.8 2.9 2.4 1.7 2.1
Sample size (total = 774)	393	381		

SOURCE: MDRC calculations from Guilford Technical Community College transcript data.

NOTES: Rounding may cause slight discrepancies in sums and differences.

A two-tailed t-test was applied to differences between research groups. Statistical significance levels are indicated as: \*\*\* = 1 percent; \*\* = 5 percent; \* = 10 percent. Estimates are adjusted by campus and research cohort.

Standard errors are clustered by Study Skills course (ACA 118) section for the program group.

<sup>&</sup>lt;sup>a</sup>Students who dropped all courses before the drop date are not counted as registered.

<sup>&</sup>lt;sup>b</sup>The "No GPA" category includes students who withdrew from all classes and students who took only developmental courses, which are not included in GPA calculations. The Study Skills course (ACA 118) was not included in GPA calculations for this table.

# Achieving the Dream: Community Colleges Count Appendix Table B.2

## Academic Outcomes in First Postprogram Semester (Program Semester Enrollees Only) Guilford Technical Community College

Outcome	Program Group	Control Group	Difference	Standard Error
First postprogram semester				
Registered for any courses (%) <sup>a</sup>	71.6	70.0	1.6	3.2
Enrolled full time (%)	53.0	51.7	1.3	4.8
Number of credits attempted	8.6	8.3	0.3	0.5
Regular credits	6.0	5.7	0.3	0.5
Equated credits	2.6	2.6	0.0	0.3
Attempted Developmental Math (%)	33.9	30.1	3.9	3.3
Attempted Developmental English (%)	18.1	20.4	-2.3	2.7
Attempted Developmental Reading (%)	14.2	15.0	-0.8	2.7
Number of credits earned	5.0	4.9	0.2	0.4
Regular credits	3.7	3.6	0.0	0.4
Equated credits	1.4	1.3	0.1	0.2
Passed Developmental Math (%) Passed Developmental English (%) Passed Developmental Reading (%)	17.6	13.6	4.0 *	2.4
	9.8	10.1	-0.3	1.8
	7.8	8.0	-0.1	1.9
Term GPA (%) No GPA <sup>b</sup> 3.0 to 4.0 or B/A 2.0 to 2.9 or C/B- 1.0 to 1.9 or D/C- 0 to 0.9 or F/D-	44.7	45.5	-0.9	3.2
	22.6	24.2	-1.6	3.1
	11.3	13.8	-2.5	2.2
	8.0	5.4	2.5	2.0
	13.5	11.0	2.4	2.0
Sample size (total =774)	393	381		

SOURCE: MDRC calculations from Guilford Technical Community College transcript data.

NOTES: Rounding may cause slight discrepancies in sums and differences.

A two-tailed t-test was applied to differences between research groups. Statistical significance levels are indicated as: \*\*\* = 1 percent; \*\* = 5 percent; \* = 10 percent.

Estimates are adjusted by campus and research cohort.

Standard errors are clustered by the Study Skills course (ACA 118) section for the program group.

<sup>a</sup>Students who dropped all courses before the drop date are not counted as registered.

<sup>b</sup>The "No GPA" category includes students who were not registered, students who withdrew from all classes, and students who took only developmental courses, which are not included in GPA calculations.

# Appendix C Survey Outcomes by Cohort

# **Achieving the Dream: Community Colleges Count**

# **Appendix Table C.1**

# Survey Outcomes, by Cohort Guilford Technical Community College

	<del></del>	Sprii	ng 2008 Cohort				and Spring 2009 Co		Difference
	Program			Standard	Program				Between
Outcome	Group	Group	Difference	Error	Group	Group	Difference	Error	Subgroups
Accepting personal responsibility <sup>a</sup>									
Low	7.2	11.3	-4.0	5.1	17.1	12.9	4.3	2.9	
High	27.5	25.1	2.3	6.4	26.6	25.6	0.9	3.3	
Self-motivation <sup>b</sup>									
Low	10.4	16.2	-5.8	5.3	23.9	24.9	-1.0	3.5	
High	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Self-management <sup>c</sup>									
Low	5.3	14.1	-8.8 **	3.9	17.4	22.4	-5.0	3.3	
High	31.6	30.2	1.4	6.0	25.4	20.4	4.9	3.8	
Interdependence <sup>d</sup>									
Low	4.1	13.2	-9.1 **	4.1	13.2	20.2	-7.0 *	3.7	
High	27.2	20.4	6.8	5.7	19.8	15.7	4.1	3.8	
Self-awareness <sup>e</sup>									
Low	6.2	16.3	-10.1 **	4.7	15.3	18.9	-3.6	3.5	
High	29.2	24.5	4.6	5.6	26.1	23.5	2.6	3.7	
Lifelong learning <sup>f</sup>									
Low	2.9	12.3	-9.4 **	4.0	10.7	14.6	-4.0	3.1	
High	29.5	25.2	4.4	5.7		23.5	-0.8	4.0	
Emotional intelligence <sup>g</sup>									
Low	2.9	14.4	-11.5 ***	4.0	9.4	17.2	-7.9 **	3.7	
High	25.0	26.5	-1.6	5.6	16.3	16.6	-0.3	3.1	

(continued)

### **Appendix Table C.1 (continued)**

		Spring	2008 Cohort		Fa	.11 2008 a	and Spring 2009	Cohorts	Difference
	Program	Control		Standard	Program	Control		Standard	Between
Outcome	Group	Group D	ifference	Error	Group	Group	Difference	Error	Subgroups
Belief in self <sup>h</sup>									
Low	0.9	9.3	-8.4 **	3.3	10.7	15.9	-5.2	3.4	
High	34.9	31.2	3.7	5.9	23.1	23.1	0.0	3.8	
Use of GTCC services <sup>i</sup>									
Low	8.2	12.3	-4.1	4.2	13.0	16.8	-3.8	3.7	
High	20.1	19.1	0.9	6.1	15.1	14.2	1.0	4.0	
Positive engagement <sup>j</sup>									
Low	11.2	21.7	-10.5 *	5.6	10.6	16.4	-5.8 *	3.1	
High	17.9	16.3	1.6	5.1	12.9	15.3	-2.4	3.0	
Sample size (total = 661)	95	99			234	233			

SOURCE: MDRC calculations from Guilford Technical Community College survey data.

NOTES: Rounding may cause slight discrepancies in sums and differences.

A two-tailed t-test was applied to differences between research groups. Statistical significance levels are indicated as: \*\*\* = 1 percent; \*\* = 5 percent \* = 10 percent.

Estimates are adjusted by campus and research cohort.

Standard errors are clustered by the Study Skills course (ACA 118) section for the program group.

"Low" is the percentage of sample members scoring one standard deviation below the mean; "high" is the percentage of sample members scoring one standard deviation above the mean.

<sup>a</sup>5-item scale about feelings of personal responsibility; response categories range from 1 = "strongly disagree" to 5 = "strongly agree." Items are averaged.

b3-item scale about feelings of self-motivation; response categories range from 1 = "strongly disagree" to 5 = "strongly agree." Items are averaged.

<sup>c</sup>4-item scale about feelings of self-management; response categories range from 1 = "strongly disagree" to 5 = "strongly agree." Items are averaged.

<sup>d</sup>5-item scale about feelings of interdependence; response categories range from 1 = "strongly disagree" to 5 = "strongly agree." Items are averaged.

e4-item scale about feelings of self-awareness; response categories range from 1 = "strongly disagree" to 5 = "strongly agree." Items are averaged.

<sup>6</sup>4-item scale about feelings of lifelong learning; response categories range from 1 = "strongly disagree" to 5 = "strongly agree." Items are averaged.

g4-item scale about feelings of emotional intelligence; response categories range from 1 = "strongly disagree" to 5 = "strongly agree." Items are averaged.

h5-item scale about feelings of belief in self; response categories range from 1 = "strongly disagree" to 5 = "strongly agree." Items are averaged.

<sup>19</sup>-item scale about frequency of use of GTCC services; response categories range from 1 = "rarely/never" to 3 = "often." Items are averaged.

j17-item scale about frequencies of positive student engagement; response categories range from 1 = "never" to 4 = "very often." Items are averaged.

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