Over the last few decades, the importance of a college education has grown both for society and for individuals. This is reflected in the large earnings gap between individuals with a high school degree and those with a postsecondary credential. However, most students who start in community colleges never complete a degree or certificate. This constitutes a failure for those students to achieve their goals and represents a loss of potential earning power and economic growth and activity for the economy as a whole. Although students experience earnings gains by accumulating credits without graduating, they get a significant additional increase upon completing a credential.
The Growing Focus on College Completion

Public higher education policy in the latter half of the 20th century was designed to open college to the large majority of the U.S. population. The Servicemen’s Readjustment Act of 1944 (also known as the GI Bill), the California Master Plan for Higher Education of 1960, the Higher Education Act of 1965 (which established the Pell Grant), and the rapid growth of community colleges were all designed to make college accessible for all students.

They focused on reducing the cost of college to the student and, in the case of community colleges, established open-access, flexible, convenient colleges in reasonable proximity to a large majority of the population, especially including groups traditionally underrepresented in postsecondary education. At the same time, technology and the characteristics of work were also changing, resulting in increasing demand for a more educated workforce. These factors contributed to increases in college enrollment, such that by the turn of the century, over 75 percent of high school graduates had attended some postsecondary institution by their mid-twenties.

But over the last twenty years, educators and policy makers have turned their attention to college completion. While progress on enrollment cast community college performance in a positive light, the more recent focus on completion yields a much more negative image. In 2000, the Department of Education began publishing three-year graduation rates for most colleges that tracked cohorts of first-time, full-time students who started in community college. Graduation rates for many colleges were in the single digits and teens. The overall three-year completion rate for community college students nationwide was 24 percent for the 2000 cohort and 20 percent for the 2010 cohort. Researchers, college representatives, and policy makers have criticized this rate as incomplete and misleading. But more comprehensive measures from the 1990s showed that less than 40 percent of entering community college students completed any degree or certificate from any college within six years.

In response to low completion rates, educators, reformers, policy makers, and foundations called for a concerted effort to increase the number of individuals with college degrees and certificates—an effort that has come to be called the “completion agenda.” The administration of former U.S. President Barack Obama, Lumina Foundation, and the Bill & Melinda Gates Foundation all called for ambitious increases in the number of college graduates by the middle of the 2020s. Many states set goals designed to contribute proportionately to the national goals. In addition, the federal government and multiple foundations funded extensive research and reform portfolios.

Barriers to College Completion

Students and colleges will need to overcome a number of challenges to achieve the ambitious goals of the completion agenda. Community college students tend to face many serious barriers to success: low-income students are significantly overrepresented in community colleges, and most need to strengthen both academic and nonacademic skills.

Despite the substantial needs of their student populations, community colleges are given comparatively few resources. In 2011, public two-year institutions spent about $8,100 per student; in contrast, institutions in the public master’s sector spent just over $12,000. Thus, the colleges whose students have the greatest needs have the fewest resources to address those needs.

In addition, community colleges are not well organized to promote completion. The features that have allowed community colleges to expand access may not be optimal to promote completion of programs that support deep student learning and that prepare students for success. The traditional community college employs a “cafeteria-style” or “self-service” model. In this model, colleges provide many options and services, but students must find their own way through often complex or ill-defined programs. Such cafeteria organization creates problems in three areas: the structure of college-level programs, the intake process and student supports, and developmental education.

- **Structure of programs.** Community colleges are designed to facilitate enrollment to a heterogeneous student population with a wide variety of goals. Most offer an extensive array of courses and programs, and
students have broad flexibility to decide when to enroll and at what intensity, what programs to pursue, and which courses to take within those programs. Students can easily stop their program and presumably return to college when it is convenient. The potential for transfer to many different four-year colleges further complicates students’ choices. Research in behavioral economics demonstrates that individuals do not do a good job of making decisions when faced with such large sets of complex and ill-defined choices.¹¹

- **Intake and supports.** With limited resources, community colleges are unable to provide comprehensive advising to all students to help them navigate these complex institutions. There are often many hundreds of students for every counselor or advisor. As a result, college intake and advising often consist of a brief face-to-face or online orientation and a short meeting (not always mandatory) with an advisor, focused on registering for the first semester’s courses. Most colleges do not provide an organized process to help students form long-term goals and design an academic program to achieve those goals. Rather, students must recognize when they need help and seek it out on their own.¹² Moreover, most colleges do not closely monitor students’ progress toward their goals or through programs.

- **Developmental education.** Students’ progress is often stalled by lengthy developmental course sequences. All community colleges assess students’ academic skills at entry, and based on these assessments, college staff advise the majority of students to enroll in developmental education courses. Yet traditional developmental education is often not able to prepare students to succeed in college-level courses. Most students do not complete their assigned sequences, and enrolling in developmental education courses does not, on average, increase the probability that students will complete college-level courses or achieve other desired outcomes.¹³

Colleges have been willing, and are often enthusiastic, to experiment with new practices and strategies, but they have frequently directed them at one segment of the student experience, usually the beginning.

The Limitations of Traditional Reform

During the last two decades, community colleges have attempted many reforms to improve student success.¹⁴ The Achieving the Dream: Community Colleges Count (ATD) initiative (http://achievingthedream.org/) illustrates the fundamental characteristics of the types of reforms that have predominated in this period. In 2004, Lumina Foundation and its partners initiated ATD and funded twenty-seven colleges to carry out a series of reforms.
with the explicit goal of improving student outcomes. Subsequently, several hundred colleges participated in ATD. The developers articulated an underlying theory of action urging colleges to use their longitudinal data to identify barriers to student success and apply evidence-based reforms to correct those barriers, leading to increased completions. In addition to financial support, ATD colleges benefited from technical assistance by coaches and researchers and participated in workshops and conferences sponsored by ATD. Emblematic of the completion agenda, ATD represented an ambitious and well-funded initiative designed to introduce reforms that would lead to increases in college completion.

In 2011, MDRC, in partnership with the Community College Research Center (CCRC), published a report describing the interventions and the first five years of ATD experience among twenty-six of the twenty-seven initial college participants. The colleges introduced reforms in three broad areas: student support services, instructional support (such as tutoring), and changes in classroom instruction. Every college had some intervention devoted to improving outcomes for developmental students, and the majority of ATD reforms focused on helping students during the early stages of their college experience.

In general, the early ATD experience illustrates the dominant characteristics of community college reform during the completion agenda era. Colleges have been willing, and are often enthusiastic, to experiment with new practices and strategies, but they have frequently directed them at one segment of the student experience (usually the beginning); and they have generally reached a relatively small number of students (although “light-touch” efforts have sometimes reached larger groups of students).

The ATD evaluation found that despite enthusiastic reform activity, completion rates on average had not increased for participating colleges at the end of five years. Outcomes from a 2009 follow-up program, the Developmental Education Initiative funded by the Bill & Melinda Gates Foundation and designed to scale up promising practices introduced by ATD, were similarly disappointing.

Evaluations of targeted reforms of the type implemented by the ATD colleges show that even when they have positive effects on short-term outcomes—such as enrollment and success in entry-level college courses—the benefits to student participants tend to fade over subsequent semesters. This was the case in a rigorous evaluation, conducted by the National Center for Postsecondary Research, of learning communities in six community colleges.

The Accelerated Learning Program (ALP) developed at the Community College of Baltimore County provides another example of an intervention with short-term positive outcomes but no effect on graduation rates. ALP is a remediation model in which students referred to developmental reading are placed into a college-level English course with an additional academic support section. An evaluation showed that ALP students were 32 percent more likely to complete the first college-level English course within one year than similar students in standard developmental reading.
In the guided pathways model, the college intake process is organized first to help students choose a program of study and then to address academic weaknesses that would prevent students from succeeding in their chosen program.

These examples suggest that isolated interventions, even when they yield positive outcomes for participants, do not generally improve institutional graduation rates. National trends in graduation rates support this conclusion. As noted above, data from the 1990s showed that less than 40 percent of entering community college students graduated from any institutions within six years. Data from the National Student Clearinghouse for the cohort of students who entered in 2007 showed that 38 percent had completed a degree or certificate within six years.22

Two broad reasons help explain why institutional aggregates and broad measures of college performance have been immune to focused reforms and the college completion agenda. First, pilot projects rarely scale. Initiatives usually start by testing a practice using a small number of students, with the expectation that a successful practice will be used on all students in the target population. Pilot implementation makes sense in theory but rarely works in practice. Sometimes initial grant funding runs out, and the initiative fades away. Small pilots can rely on a small group of activist faculty, administrators, and stakeholders who are enthusiastic about reform, and they can be carried out without disrupting normal practices at an institution. But scaling requires engagement of a much larger segment of the faculty and may require budgeting, schedule, personnel, and administrative changes.

The ATD evaluation showed that 52 percent of the interventions reached less than 10 percent of their target populations, and only about one-third reached a quarter of them.21 The larger-scale interventions tended to be what the authors referred to as “light-touch,” providing services for five or fewer hours. Such limited penetration cannot be expected to increase the overall institutional performance numbers. And, as noted, the explicit and funded effort to scale apparently successful interventions through the Developmental Education Initiative was similarly disappointing.23

The second reason why discrete interventions might not move institutional performance measures is that in most cases, they address only one segment of a student's experience in college, rather than touching each progressive phase of the student's experience. This is known as the problem of vertical scaling. For example, as was the case with ATD, many reforms focus on developmental education, the first stage of many students' college careers. But if a student's college-level program is difficult to follow, and if the student does not continue to get support and guidance, any early benefit from the reform is likely to dissipate as the student progresses. A 2013 simulation that tested the effect of specific reforms on overall graduation rates found that a 20 percent increase in the share of students who complete a first college-level math course would generate only a 2.5 percent increase in the graduation rate.25

This simulation and the research cited above suggest that substantially improving rates of student progression and completion requires changes in practice throughout students' college experience, not just at the front end or any one segment. Indeed, while students deemed college-ready upon entry are more successful than those referred to developmental courses, the majority of each group do not end up earning a college credential, suggesting that even students judged to be academically prepared face barriers to success in college-level coursework. To state the problem differently, many of the initial reforms motivated by the completion agenda were in effect not designed to promote...
completion but, rather, to improve an intermediate step. Improving the intermediate outcomes had only modest effects on overall completion. Thus while these colleges may have had measureable student success goals (as the comprehensive model suggests), they were the wrong goals.

The Need for Comprehensive Reform

To make significant institution-wide increases in completion, colleges must first focus on the appropriate measures of student success. It is important not just to measure the outcomes for the small number of students in a pilot program or intermediate outcomes that do not necessarily lead to institutional change. Second, colleges must have a culture of evidence that leads them to act on the measureable student outcomes. Substantial improvement requires a continuous process of reform and assessment of evidence of improvement that must become embedded in the college culture. Finally, reform cannot be limited to a small group of students or one segment of the student experience. In summary, comprehensive reform requires three elements: a focus on measureable student success; a culture of evidence; and an intentional and cohesive package of programmatic components.

The guided pathways model is one example of a comprehensive reform that combines these three elements. It comprises an intentional and cohesive package of components, built around the development of simplified, well-organized, and easy-to-understand college-level programs of study. In this model, the college intake process is organized first to help students choose a program of study and then to address academic weaknesses that would prevent students from succeeding in their chosen program. The model is explicitly designed to support students throughout their college career by helping them choose a program, enter the program, complete the program, and make a successful transition to subsequent education or employment, and it emphasizes the need to monitor students’ progress, giving frequent feedback and support as needed.

There are a growing number of examples of comprehensive reforms that incorporate many elements of the guided pathways model. Perhaps the most complete example is Guttman Community College, which is part of the City University of New York (CUNY). Guttman was created to use research-based reforms to improve measureable student outcomes. The college developed a comprehensive design that combines enhanced advising, expanded services to help students choose majors, significant instructional reform, and profound curricular redesign and simplification. Students take a common first-year curriculum and choose from a small selection of programs during their second year. The college's designers selected the fields for these programs of study based on an analysis of the needs of the local labor market. One purpose of the common first-year curriculum is to guide students through the process of choosing an appropriate program of study. This includes exposure to workplaces in related fields and visits to bachelor’s degree programs at four-year CUNY...
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Each associate's degree program is also designed to allow students to transfer to any of CUNY's many nearby four-year colleges. Guttman is relatively new, so it has not been rigorously evaluated, but the three-year graduation rate was 48 percent for the college's first cohort, a rate that is more than twice the graduation rate for CUNY community college students overall. Although Guttman students are similar demographically to other CUNY students, there may be unmeasured student characteristics that account for some of this difference. Nevertheless, initial results are encouraging, and the college faculty and administrators are committed to continuing to improve their services based on evolving evidence on student outcomes.

The Accelerated Study in Associate Programs (ASAP) is another CUNY reform that follows the student from registration to graduation. This program combines extensive advising, some financial assistance, curricular reform, and a requirement to attend full-time. The program puts a strong emphasis on frequent counseling, both to help students choose their programs and to keep them on track toward completion. A random assignment evaluation by MDRC found that over a three-year period, 40 percent of all ASAP students had earned a degree from any college,
Ultimately, comprehensive reform will require two- and four-year colleges to better coordinate their programs so that coherent pathways can be developed to span the transfer process.

while only 22 percent of the control group had. Although ASAP includes all three elements of the comprehensive model noted above, by 2015 ASAP had not enrolled enough students for outcomes to be reflected in overall college graduation rates, but the positive evaluation results prompted the New York State and City governments to allocate $77 million in new money for four years to expand ASAP to 25,000 students by 2019. One college, Bronx Community College, will enroll all of their students in ASAP.

Conclusion
This article articulates a comprehensive change model that includes a focus on measurable student success, an intentional and cohesive package of programmatic components, and a culture of evidence. All of these elements are clearly present in the three examples described in the previous section. In all of these cases, the colleges and districts are focused primarily on student completion, the underlying theories of change are based on combining programmatic practices that support and guide students throughout their college careers, and the institutions are committed to tracking student progress and using evidence on student progress and program effectiveness to improve graduation rates.

Narrowly targeted reforms that either treat too few people or are limited to one segment of the student experience have a limited effect on student completion. In contrast, the comprehensive models discussed here, as exemplified by the guided pathways model, are fundamentally based on the integration of a set of coordinated reforms.

Whether a college chooses to develop guided pathways or other comprehensive models of reform, it will face a variety of barriers to successful implementation. If reforms are to comprise a cohesive package to support students throughout their college careers, then faculty must be willing to work collectively within and across programs and departments. This may come into conflict with a culture of faculty autonomy. Similarly, advisors must work closely with faculty—a collaboration that is weak in many colleges. Ultimately, comprehensive reform will require two- and four-year colleges to better coordinate their programs so that coherent pathways can be developed to span the transfer process. These are the collaborations and broad institutional policy changes that have typically been missing from higher education. These are the reforms needed now.
Notes
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2. Author’s calculation from Institute of Education Sciences, National Center for Education Statistics, Education Longitudinal Study of 2002.
5. Author’s calculation from Institute of Education Sciences, National Center for Education Statistics, National Education Longitudinal Study of 1988.
University, Teachers College, Community College Research Center, 2014); Thomas Bailey, Shanna Smith Jaggars, and Judith Scott-Clayton, Characterizing the Effectiveness of Developmental Education: A Response to Recent Criticism (New York: Columbia University, Teachers College, Community College Research Center, 2013).


20. Institute of Education Sciences, National Center for Education Statistics, Integrated Postsecondary Education Data System, Graduation Rate Survey (GRS), n.d.


22. Doug Shapiro et al., Completing College: A National View of Student Attainment Rates, Fall 2009 Cohort, Signature Report No. 10 (Herndon, VA: National Student Clearinghouse Research Center, 2013).

23. Rutschow et al., Turning the Tide.

24. Quint, Jaggars, Byndloss, and Magazinnik, Bringing Developmental Education to Scale.


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