Conclusion

Throughout this book we have argued that community colleges are designed and operate according to a cafeteria or self-service model. While colleges organized in this way do an excellent job of providing affordable access to college courses, they are not well configured to help students enter and complete high-quality programs of study—programs that prepare them for success in further education and advancement in the labor market. Cafeteria colleges rely on students to find their own paths through college and to seek out supports when they need them, but most students are not well equipped to do either. In fact, many students, particularly those without clear goals for college or careers, are confused and overwhelmed, and often make poor choices.

Despite more than a decade of determined reform in community colleges, much of which has focused on the intake system and developmental education in particular, few colleges have “moved the needle” on overall rates of student completion. Evaluations of major reform initiatives such as Achieving the Dream have found that it is insufficient to pilot and attempt to scale up discrete programmatic interventions. In this book, we have argued that a major reason such reforms have not succeeded is that they attempt to make incremental improvements to a model of college organization that is incompatible with their larger reform goals. If colleges are to improve outcomes for their large numbers of disadvantaged students, they need to redesign their practices and policies in fundamental ways.

We have argued that instead of expecting students to find their own way through college, colleges need to create clear, educationally coherent program pathways that are aligned with students’ end goals, help students explore and select a pathway of interest, and track and support students’ progress along their chosen pathway. In the introduction and Chapters 1
through 4 we described how this guided pathways model transforms key
functions of the college, including program design, student intake and sup-
port services, instruction, and developmental education. We recommended
key redesign features that research and experience suggest will improve
the effectiveness of each function, and cited examples of colleges that are
incorporating these key features on a large scale with their students. In
Chapter 5, we argued that successful implementation of the guided path-
ways approach requires active engagement of—and indeed leadership
from—a college’s faculty and staff, and we provided some suggestions for
creating that level of engagement. In Chapter 6, we discussed the costs of
implementing the guided pathways model, and emphasized that while such
a redesign will have some additional transitional and long-run costs, the
added costs will be worthwhile if they substantially improve the rates at
which students complete high-quality credentials—thereby lowering costs
per completion, increasing college efficiency, and increasing the return on
investment in community colleges by students and taxpayers.

In this conclusion, we describe how two similar students might experi-
ence the guided pathways model versus the cafeteria model at each stage
of their progression through college. Next, we offer some concrete steps
that faculty, student services staff, institutional researchers, and adminis-
trators can take to initiate and advance the redesign process on their cam-
puses. Finally, we discuss the prospects for guided pathways reforms to
spread more broadly among community colleges nationally, highlighting
both the promise and some of the challenges in the work ahead.

The Student Experience

A student’s progression through college can be divided into four phases:
connection, entry, progress, and completion.1 To illustrate the differences
between the cafeteria and guided pathways models, we compare the ex-
perience of two hypothetical students—a cafeteria college student and a
guided pathways college student—across these four phases.2 Both are from
first-generation, lower-income families; both worked hard and performed
well in high school; and both dream of earning a bachelor’s degree and
pursuing a career in business, although neither has any relatives or ac-
quaintances who are business professionals. Neither student has imme-
rate family members who have a college degree. Both enter higher edu-
cation through a community college, but the first student’s local community
college is designed and operated in accord with cafeteria model, while the
second student’s local community college has redesigned its programs and
services following the guided pathways approach.
As the Connection phase figure (Figure C.1) shows, the experiences of the two students diverge well before they apply to their local college. The cafeteria college’s connections with local high schools are weak; thus the first student has limited awareness of the programs offered by the college and receives little assistance to explore options for college and careers. She does learn about the local college’s dual-enrollment program, but the course she decides to take (photography) is based on personal interest rather than on her career goal. In contrast, the guided pathways college has forged stronger connections between its programs and its feeder high schools. For example, the college’s recruitment staff work with high school counselors to organize college and career exploration activities, help students identify a potential college major or exploratory major, and encourage students to participate in dual-enrollment courses fundamental to their field of interest.

With a better understanding of her pathway to a degree in business, and already having earned credits related to her program of interest through dual-enrollment courses, the guided pathways student graduates from high school motivated and prepared to immediately enroll in college full-time. Without a clear sense of the path ahead of her, the cafeteria college student decides to take time off before attending college (a “delayed entry”

<table>
<thead>
<tr>
<th>Cafeteria college student</th>
<th>Guided pathways college student</th>
</tr>
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<tbody>
<tr>
<td>Attends high school that is poorly informed about the local community college’s program offerings and readiness standards</td>
<td>Attends high school that aligns senior-year curriculum to the local community college’s readiness standards in its main program areas</td>
</tr>
<tr>
<td>Not helped to explore career and college options while in high school</td>
<td>Participates in pre-career assessment and exploration offered in collaboration with the community college</td>
</tr>
<tr>
<td>Takes dual-enrollment course in photography</td>
<td>Takes dual-enrollment courses in field of career interest: business</td>
</tr>
<tr>
<td>Graduates high school, gets a low-wage job, delays enrollment in college, enrolls later part-time</td>
<td>Graduates high school, gets a low-wage job, but enrolls full-time in community college in the fall with credits toward business degree</td>
</tr>
</tbody>
</table>

**FIGURE C.1.** Connection phase: from interest to enrollment.
that is associated with significantly lower degree completion rates), and then when she does enroll, she takes three courses in her first semester rather than a full course load.

In the Entry phase (Figure C.2), the cafeteria college student skips an optional new student orientation and begins her college experience by meeting with an advisor to register for her first-semester courses. Based on her placement test scores, the advisor registers her for a developmental math and English course, and also recommends a student success course; but because she performed relatively well in high school, the student feels she does not need the course and asks for something more “interesting.” She and the advisor settle on a psychology course. As the term progresses, the cafeteria college student begins to feel overwhelmed by the volume of information in the psychology lectures and readings, and is not sure how to approach the course’s term papers. Her developmental English course, which focuses on writing compositions, does little to help her navigate the reading and writing assignments in psychology. And she is very discouraged by the fact that she has been placed in a pre-algebra develop-

**FIGURE C.2.** Entry phase: from enrollment to entry into program of study.
mental math course, a full two levels below college-level math. She disliked math in high school. She still dislikes it and does not understand how pre-algebra, in particular, is relevant; and she dreads having to complete three semesters of math in college. By the end of her first term, she is beginning to feel disillusioned and discouraged. Although she passed all of her courses, she did not find any of them compelling, and she would rather not take yet another semester of math and English next term. Her dream of getting a bachelor’s degree in business still seems very far away.

In contrast, the new student at the guided pathways college attends a required business program orientation, in which faculty describe how the business meta-major’s first-semester course requirements are designed to help students explore the field before they commit to majoring in it. The initial coursework includes an introductory business course and a success course that helps students explore careers, specific programs, and transfer options in business. The success course also requires students to lay out an academic plan (based on faculty-created program maps) that will enable them to complete a selected program in two years and, if desired, transfer their credits toward junior standing in a business major at a selected university.

Because of her high school’s alignment of the senior year with community college entrance standards, the guided pathways student is placed directly into college-level English, but she still scores somewhat poorly in math. Based on her interest in business, the guided pathways college places her in a statistics-oriented developmental math course that will allow her to complete a college-level statistics course (fully transferable to state university business programs) by the end of her second semester. Following the default meta-major pathway, she also enrolls in the college’s social science course for business majors: a multidisciplinary blend of psychology, sociology, and economics that examines how consumers make decisions, using engaging class projects and readings. The course gets her interested in marketing and advertising; as part of her student success course, she reviews related program and transfer plans, and the instructor connects her to the college’s business program advisor to discuss her transfer options in more depth. Going into her second semester, the guided pathways college student is picking up momentum.

The Progress phase figure (Figure C.3) shows that the cafeteria college student continues to struggle in subsequent semesters. Even though she is weak in math, she enrolls in Economics 101, but fails it and fears having to take it again. None of the courses she has taken—including her business courses—have given her a sense of what working as a business professional is like. And given her difficulty with Economics 101, she
begins to further doubt whether she can get a bachelor’s degree in business. Even so, she does not visit the transfer center and indeed does not know about it. Neither does she connect with other business-oriented students through clubs or other activities; she is not aware of some of these opportunities and feels too busy to take advantage of others.

The guided pathways student performs poorly on her first Economics 101 quiz, but thanks to the college’s early alert system, the business program advisor reaches out to reassure her and push her to attend supplemental instruction sections led by peer tutors and managed by the Economics 101 instructors; doing so improves her performance in the course. The advisor also encourages her to participate in a young entrepreneurs club, which eventually connects her to a summer internship. After her third semester, the e-advising system reminds her (and her advisor) that it is time to apply for admission to university business programs, which she does.

As the Completion phase figure (Figure C.4) illustrates, the cafeteria college student is still enrolled part-time in community college after five years. She has not yet earned a degree, in part because she has occasional-

<table>
<thead>
<tr>
<th>Cafeteria college student</th>
<th>Guided pathways college student</th>
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<tbody>
<tr>
<td>• Poor self-advising leads to extra courses / excess credits</td>
<td>• E-advising system enables student and her advisor to monitor progress on student’s degree plan</td>
</tr>
<tr>
<td>• Fails Economics 101, considers retaking it</td>
<td>• Early alert initiated by Economics 101 instructor leads advisor to recommend tutoring, which enables her to pass the course</td>
</tr>
<tr>
<td>• Does not participate in clubs or activities</td>
<td>• Participates in young entrepreneur club suggested by business faculty; this helps connect her with internship</td>
</tr>
<tr>
<td>• Does not know college has transfer assistance center</td>
<td>• Applies to business programs at 2 universities with assistance from department advisors</td>
</tr>
</tbody>
</table>

Still lacks direction
Getting discouraged

Has program goal and completion plan
Builds on early momentum

**Figure C.3.** Progress phase: from program entry to completion of program requirements.
ally skipped semesters. After earning sixty college-level credits—the minimum amount required for the associate degree in business—she finally visits the advising center and discusses possibilities for transfer. The advisor tells her that several of the credits she has earned will not be accepted by local university business programs. However, her transcript does meet the requirements for an associate degree in general studies. The student decides to graduate with a general studies degree, take a break from school, and go back to work full-time. With only a general studies associate degree, however, she finds herself stuck in low-level clerical jobs she gets through a temp agency, and has difficulty finding steady work with good benefits.

In contrast, after two years, the guided pathways student completes an associate of arts degree with a focus in business, and enters the marketing program at the local university as a junior. She also starts a part-time job at the marketing firm where she had interned the previous two summers, and plans to continue working there while she finishes her bachelor’s degree.

<table>
<thead>
<tr>
<th>Cafeteria college student</th>
<th>Guided pathways college student</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Has not completed business program after 5 years of sporadic, part-time enrollment</td>
<td>• Completes business program in 2 years</td>
</tr>
<tr>
<td>• Realizes that some of the courses she took will not transfer for credit toward business program at state university; discovers that the university’s business program has restricted enrollment; decides to graduate with a general studies associate degree</td>
<td>• Accepted into bachelor’s program at state university; transfers all credits for junior standing in major</td>
</tr>
<tr>
<td>• Continues working in low-wage jobs</td>
<td>• Works part-time at marketing company where she interned, while starting at the university</td>
</tr>
<tr>
<td>• Disengaged by lecture-based courses</td>
<td>• Engaged particularly in social science course, based on topical readings and participation in class projects</td>
</tr>
</tbody>
</table>

**Figure C.4.** Completion phase: completion of credential of value for further education and labor market advancement.
In many ways, the experiences and behaviors of the hypothetical cafeteria college student, shown on the left-hand side of the figures, reflect typical experiences and behaviors of community college students today. Most students attend part-time, take multiple developmental courses initially, take breaks between semesters or drop out entirely, are confused about which courses to take, and, even if they persist, are surprised to find that they have earned college credits that will not apply to graduation or transfer in a specific major. The purpose of the guided pathways approach is to shift students’ experiences and behaviors to more closely resemble those of the hypothetical guided pathways student, shown on the right-hand side of the figures.

Previous chapters have provided a variety of concrete recommendations for how colleges might design and implement guided pathways in order to positively affect students’ motivation, persistence, and progression through college. While every member of the college will need to be involved in multiple aspects of guided pathways design and implementation, various personnel may wish to focus their energies on different aspects of the redesign, as we discuss below.

Roles in the Redesign Process

Based on our experience in working with colleges that have initiated the guided pathways design process, below we offer some ideas about how key stakeholders might participate in the redesign process at their own institution.

Faculty Members and Academic Administrators

CREATE MAPS FOR ALL PROGRAMS

The guided pathways approach is built around program maps; thus, creating maps for broad exploratory majors or meta-majors, as well as for the specific major programs embedded within them, is a key first step. The process of creating maps needs to be led by faculty from across disciplines, but it should also involve advisors, career services counselors, and other student services professionals as well.

The primary components of program maps include program learning outcomes, term-by-term course sequences, and milestones (such as critical courses students must pass) that mark students’ progress toward completion. For transfer programs, learning outcomes should align with requirements for junior standing in related majors at key transfer destinations.
For career programs, learning outcomes should incorporate industry skill standards.

Program maps should also specify how to support students who enter with varying levels of academic preparation, including the types of students who have traditionally been referred to remedial education, focusing on ways to contextualize basic skill building into challenging and program-relevant learning experiences, with the goal of accelerating students into college-level coursework as quickly as possible.

BUILD PARTNERSHIPS WITH TRANSFER DESTINATION PROGRAM FACULTY AND WITH EMPLOYERS

To guarantee that program maps will articulate seamlessly with key transfer destination programs, community college faculty need to build relationships with their counterparts at each transfer destination. Faculty may give priority to building strong transfer pathways with those destinations that serve transfer students effectively, and that themselves have strong labor market and education outcomes for their students. Similarly, career program faculty should work with employers to ensure that the learning outcomes for their programs are aligned with local labor force needs.

FOCUS ON BUILDING SKILLS, CONCEPTS, AND HABITS OF MIND

Program maps provide a key framework for individual instructors to use in improving their own courses’ curriculum and instruction. In particular, maps help each instructor identify which learning outcomes are most important to emphasize in order to support students’ development of the key skills, concepts, and habits of mind that will be critical to their success in their chosen field. To support one another in the process of redesigning course materials, activities, and instructional approaches, faculty can create intra-departmental or intra-program instructional inquiry groups. Groups may find it most effective to follow a structured process for their inquiry, such as identifying common challenges in the classroom and tackling each challenge in a systematic way by gathering data, developing hypotheses, experimenting with a new approach, and reporting back to the group.

CREATE AN INFRASTRUCTURE FOR FACULTY SUPPORT

Academic administrators must create an infrastructure to support the work of program mapping groups and instructional inquiry teams. For example, teaching and learning centers can move away from providing general workshops or one-on-one assistance to faculty, and instead focus on helping groups of faculty by organizing, facilitating, or providing expert...
advice to program mapping teams, instructional inquiry teams, or collaborative course design teams. After the initial work of program mapping groups is done, academic leaders should consider continuing these teams as part of a long-term governance body, which would be responsible for assessing student learning outcomes, revising program maps as necessary, and supporting efforts to improve instruction over time.

**Student Services Staff and Administrators**

**WORK WITH FACULTY TO DESIGN A MANDATORY PROCESS FOR PROGRAM EXPLORATION AND SELECTION**

All new students should be required to choose a broad program area, or meta-major, or a specific program that would be embedded within a meta-major. By requiring new students to choose a meta-major when they first enroll, colleges can provide undecided students with a structured way to explore specific programs over their first semester. However, some students will need up-front academic and career guidance in order to choose a meta-major in the first place. To provide both immediate help with meta-major selection and ongoing help with program exploration, colleges can use a mixture of online and face-to-face components, including online assessments and exploration tools, in-person advising sessions, and student success courses. While student services professionals will be responsible for much of the design and implementation of these components, it is critical to involve faculty perspectives and input in the process, and to keep faculty informed about how these processes affect the students who are interested in, or have selected, meta-majors in their program area.

**IMPLEMENT E-ADVISING TOOLS THAT CAN FACILITATE MONITORING AND SUPPORT FOR STUDENT PROGRESS ALONG PROGRAM PATHWAYS**

A variety of e-advising tools are now on the market, but few combine student tracking, case management, and early alerts into one package. Based on an ongoing CCRC project that is studying the implementation and adoption of e-advising tools at several community colleges and four-year institutions, we have observed that most institutions spend insufficient time and energy in up-front planning before they select their e-advising tool. As a result, tools may not meet advisors’ and students’ needs, resulting in an expensive product that few people use in an effective way. Before purchasing a product, we recommend at least a semester-long process of tool exploration—conducted not just by the technology staff but also by professional and faculty advisors—in order to ensure that the selected tool meets the needs of the college’s new guided pathways organization and
to explore how the work and responsibilities of faculty and staff would have to change to make effective use of the new tool.

**Institutional Researchers**

**Track Loss and Momentum Points Along Students’ Paths Through College**

Institutional researchers can track cohorts of entering first-time college students longitudinally, in order to locate “loss points,” that is, places along the path where students tend to struggle, and “momentum points” (for example, entering a program of study within one year) that, based on the experience of students in the past, are associated with an increased likelihood of completing a credential. Researchers should highlight variations in such loss and momentum points by program area. Not only do student pathways differ by program (because requirements vary), but faculty are most interested in students who are in their programs (or who could potentially be recruited into their programs) and therefore are most likely to be engaged by data on the progress of their own students.

**Follow Students as They Continue Their Education**

Community colleges will find it helpful to track the success of transfer students after they depart. Data from the National Student Clearinghouse can be used to identify not only which institutions but also which programs students are likely to major in (based on the majors of program graduates). Special attention should be given to how well transfer students perform at their destination institutions. If students have much worse outcomes at some destinations compared to others, community colleges may wish to steer their students to the higher-performing institutions (and programs within them), and build strong transfer partnerships that further reinforce students’ success at those institutions.

**Follow Students into Their Careers**

To the extent feasible, institutional researchers should track students’ employment outcomes. Surveys of program completers are typically insufficient to understand the real labor market benefits of a community college education. Instead, it is more useful to work with state agencies to match student records to unemployment insurance wage records. Colleges should examine labor market outcomes by program area both for students who complete programs and those who do not. Such data are useful for making a case to local and state stakeholders regarding the value of the college’s education programs. In addition to these analyses, however, colleges also
need to maintain strong communication with employers in relevant fields to ensure that their programs are up-to-date and continue to meet employer needs.

_Please note that the following content is a natural reading representation._

**College CEOs and Other Top Administrators**

**Reflect on Commitment to Student Success in Budgetary Decisions**

College leaders should clearly demonstrate their commitment to student success through a willingness to commit resources to guided pathways efforts that promise to improve outcomes on a substantial scale. For example, leaders may need to reallocate funds to support professional development or release time for cross-functional teams and collaborative inquiry groups, or to rethink the teaching loads and benefit packages of talented adjunct faculty. Leaders should also be willing to adopt practices (such as requiring all students to choose a major or meta-major; requiring orientation, advising, or student success courses for new students; and expecting students to update their program and academic plan each semester) that may risk reduced enrollment income in the short term but will improve student retention and completion in the long term. To fund these budgetary decisions, leaders should seek to identify college practices that do not help students enter and complete high-quality programs of study, and reallocate those resources to redesigned practices, programs, or services that support student progress into and through program pathways.

**Rethink Committee Structures to Focus on Student Success**

Too often, academic and administrative committees devote more attention to bureaucratic issues than to monitoring and improving student success. Colleges need to have some governance body that has strong representation from faculty as well as student services staff, and that is responsible for keeping a sharp focus on student success and for identifying ways to improve outcomes at scale. For such a committee to work, it needs to have clout. Therefore, top administrators should “lead by listening,” taking the recommendations of such a body seriously. Responsibilities and leadership of departmental bodies may also need to be rethought to shift their focus from offering courses to recruiting and supporting students through programs of study.

**Hire and Promote Faculty and Staff with a Strong Commitment to Improving Student Outcomes**

Faculty and professional staff should be centrally involved in rewriting their own job descriptions and promotion criteria in ways that focus on...
assessing and improving student success. However, this process of rewriting hiring and promotion policies is unlikely to happen without strong and unequivocal support from the top of the college. Leaders should also ensure that rewritten policies communicate the importance of shared responsibility for student outcomes and emphasize the importance of collaboration and inquiry in every position across the college.

The Way Ahead for Guided Pathways

Community colleges across the country are already experimenting with elements of the guided pathways approach by implementing program maps, exploratory meta-majors, e-advising and early alert systems, accelerated and contextualized developmental education, and faculty inquiry groups. To achieve substantial improvements in student completion rates, however, more colleges will need to embark on guided pathways, and those that have already begun the process will need to expand from implementing only one or two elements to implementing the full suite of elements in an integrated and systematic way. As we conclude this book, we consider how the dynamics of higher education reform, ongoing research and evidence gathering, and political and economic pressures may influence the adoption and expansion of guided pathways.

A Framework for Higher Education Reform

Higher education has entered a period of intense experimentation and innovation in which a variety of reform-oriented proposals and initiatives jockey for the attention of individual colleges and state systems. Rather than seeing the guided pathways model as yet another competing reform, we believe the model provides a framework around which to structure and focus many of these reforms—particularly those that are intended to improve outcomes for the typical community college student.

Current higher education policy debates and associated reform ideas revolve around college costs, the use of educational technology and online education, developmental education, advising and counseling, faculty development, competency-based education, financial aid regulation, performance funding, and the matriculation of high-performing disadvantaged students into elite colleges (and the associated undermatching problem). Below, we briefly summarize how the guided pathways framework can help shape and focus each of these issues.

We agree that colleges should reduce costs, but the discussion of this issue has focused on cost per enrollment or cost per credit hour. The guided
The guided pathways model directs our attention to two different concepts of cost: the full pathway cost per student, as opposed to the cost in one year or semester, and the cost per desired outcome (that is, completion of a high-quality credential that propels the student into further education and career advancement). As we have argued, the focus on cutting costs per student has led colleges to adopt practices that hurt outcomes. The guided pathways framework shifts colleges’ attention to minimizing the cost per successful outcome, thereby making best use of colleges’ limited resources to help students succeed.

Reformers have looked to educational technology and online programs to increase access to higher education and lower costs. We are skeptical about the potential costs saving, but in designing the use of technology, a focus on guided pathways leads us to ask how and under what circumstances these technologies can be used to address the educational needs of typical community college students. We have argued that it is often difficult to motivate such students in fully online programs. The guided pathways focus suggests that educational technology and online programs will be more effective if they are incorporated into well-structured programs that provide students with clear guidance, small class sizes, intensive student-faculty interaction, and a learning facilitation approach to teaching.

Advocates of competency-based education hope that it will both lower costs and allow colleges to do a better job of identifying and assessing the competencies needed for degrees and credentials. The guided pathways model encourages the development and definition of program-level competencies, and it emphasizes the need to incorporate those into well-structured programs. To the extent that reformers hope to use competency-based education for an unbundled approach to learning, they will need to consider how to support the many prospective students who are not already well focused and highly motivated.

There are now widespread efforts to reform and improve developmental education. The guided pathways model reconceptualizes remediation as part of the beginning of a college-level program of study. This perspective highlights the problem that for many students developmental education diverts them from college-level programs. In our view, developmental education should be designed to accelerate all students into college-level program-relevant coursework as quickly as possible, while providing the support necessary to ensure their success without lowering standards.

Educators agree that student services, including advising, are crucial for student success, and a variety of current reforms focus on hiring additional advisors or leveraging new technology to provide information and track...
students. The guided pathways perspective suggests that reforms to student services will be much more effective if they are implemented in concert with the development of program maps that provide a default course of study that students can follow to achieve clearly specified end goals for further education and employment. The perspective also highlights the need to integrate e-advising services and student success courses into students’ everyday experience, in order to free up advisors to focus their one-on-one time on the students who need it most.

Financial aid reform is at the top of the federal education reform agenda. Much of this discussion has focused on simplifying the application process. Simplification is certainly consistent with guided pathways, but the model also directs our attention to two additional issues with financial aid. First, deadlines and dates for the application and reapplication process—for example, for transfer-bound students, application dates for four-year college aid—should be incorporated into student milestones within their program maps. Second, while the current requirement that students be enrolled in a program in order to be eligible for federal financial aid is sensible, our analysis implies that many students meet this requirement by enrolling in a “program” that is poorly organized and delineated. If financial aid policies required students to enroll in a coherent program of study that clearly leads to employment and further education, this would encourage colleges to develop such programs and to create mechanisms that help entering students choose among them, thus making a real difference in students’ college experiences.

Every college has a program for faculty development, but most are based on a self-service model, and in cases where they are mandatory, they often fail to meet the real challenges that faculty face in the classroom. The guided pathways model implies that faculty development should be organized around collaborative activities designed to strengthen programs, develop program-level learning objectives, and experiment with new pedagogical approaches.

Performance funding policies are designed to help motivate colleges to focus more on improving student outcomes. An analysis based on guided pathways suggest that they are more likely to be effective if they are accompanied by other policies, such as those that encourage the creation of clearer programmatic pathways to baccalaureate transfer or to career advancement in high-demand fields. Funding models might also include incentives for progress on the critical milestones developed in program maps.

The reform of community to four-year college transfer in the past has focused on developing common course numbering and guaranteed transfer of credit. The guided pathways approach suggests that transfer policy is
more likely to be effective if it is incorporated into a system in which two- and four-year college faculty work together to create coherent programmatic pathways with well-constructed maps that cross the transfer divide—and that lead to career-path employment and further education at the graduate level in fields where it is required.

Finally, the undermatching problem has received intense focus from policymakers and researchers in recent years. Researchers have shown that many low-income students with strong high school academic records do not apply to selective colleges and therefore end up at local less-selective, more poorly funded colleges where they are thought to receive a lower-quality education and encounter weaker opportunities for long-term success. Providing useful and timely information to these students increases their chances of applying to and enrolling in a selective college. The guided pathways perspective is certainly consistent with providing more information to high school students, although we emphasize that it should be connected to well-organized college programs and that information should be provided for all students, not only those with strong academic records. Moreover, while the undermatching discussion implies a fixed distribution of quality among colleges, the guided pathways approach is designed to improve the quality of education throughout the less-selective sectors of higher education so as to improve all college outcomes—not just those of disadvantaged students with strong academic records, but also those of the large majority of students whose records would not gain them admission to a selective college.

In general, the guided pathways model provides a useful lens through which to analyze many reform strategies. Central to the guided pathways model—and its implications for a wide variety of reforms—is the development of coherent, relevant, and easily understood programs of study that ideally stretch back into the high school, as well as forward into bachelor's institutions and the labor market. This approach of providing clear educational pathways can help colleges and policymakers focus and leverage their ongoing reform efforts in ways that will have a substantial impact on student success.

Gathering Further Evidence

In this book, we have drawn evidence in support of our recommendations from a variety of sources. In particular, we have strong evidence that the current cafeteria structure of community colleges does not serve students well, and that reforms popular in the 1990s and early 2000s had little impact on either the basic structure or the outcomes of these colleges. We
also have strong evidence for key design features of the guided pathways model: for example, behavioral economics research demonstrates that providing a structure for decision making in the face of complex choices can lead to better, more satisfactory decisions, and psychological research demonstrates that motivation is strengthened by creating strong interpersonal connections. The field is also increasingly compiling qualitative, case study, and preliminary quantitative evidence about the effectiveness of specific guided pathway elements. For example, we presented evidence on how underprepared students can be engaged and motivated, and how they can ultimately succeed at a higher level with accelerated developmental education strategies that focus on immediate exposure to challenging and relevant course material coupled with a learning facilitation approach to teaching. Finally, colleges that have implemented major elements of the guided pathways model are enthusiastic about them; they feel they are moving in the correct direction, and point to encouraging preliminary student outcomes to support that view.

We believe that this foundation of knowledge, together with the vital importance of significantly improving college performance and student outcomes, justifies the ambitious and comprehensive model that we have proposed. But we still have many questions. How effective is the overall model? Which of its elements are most important? What are the most significant barriers to its implementation? Without answers to these questions, many colleges may be hesitant to take on the risks and challenges of guided pathways reform.

It is very difficult for researchers to rigorously evaluate whole-institution reforms such as the guided pathways approach. Most random-assignment studies in higher education have created program and control groups within one institution, which is not an option in this case. While K–12 researchers can sometimes randomly assign institutions to a specific reform (particularly in large cities with potentially hundreds of elementary or middle schools), college personnel are unlikely to agree to the random assignment of institutions; and even if they did, the number of colleges within a given system or state tends to be too small to yield the power necessary for a reasonable test of the reform. On the other hand, if a guided pathways college received many more student applications than it could accept, the college could determine admissions by lottery in order to randomly assign students to an intervention group (attending the guided pathways college) versus a control group (attending another local college). This strategy could work in dense urban areas in which students have access to several different colleges, such that being denied admission to the guided pathways college would not automatically translate into delaying college enrollment.
entirely. To capitalize on this opportunity, college systems in urban areas might consider introducing and evaluating a comprehensive guided pathways model in one or more colleges before scaling it system-wide.

Thus far, however, given that no institutions have yet adopted all the integrated elements of the overall model (although CUNY’s newest community college, Guttman, might come closest to doing so), we cannot yet evaluate guided pathways as a holistic reform. Yet as more colleges adopt guided pathways elements, researchers can begin to track the trajectory of these colleges’ outcomes and compare them to the trajectories of similar colleges that have not implemented guided pathways. Much can be learned from this approach, although it does not yield definitive causal results.

Another useful evidence-gathering approach is to focus on specific features of the model. For example, we have emphasized the importance of helping students to choose meta-majors at enrollment, and to choose specific programs of study within a semester or two. To better understand this element of the model, researchers could focus on questions such as these: What are the best and most effective ways to help support student choice of meta-majors and programs? How does the process work in colleges that have implemented meta-majors or other structures and practices designed to facilitate career and program choices? After students make their initial choice, how many change majors, and how disruptive is that change to their progress? Are students at colleges with structured decision-making processes more satisfied with their program decisions, compared to similar peers at similar colleges?

Of course, focusing on specific elements of the model does have one key drawback: a central tenet of the guided pathways approach is that it seeks to support student progress across entire program pathways, which implies significant coordination among groups of faculty and staff who currently have only limited interaction—for example, among developmental education and college-level faculty in disciplines outside of English and math, and among faculty and student services personnel. It also implies coordinated changes in curricula, pedagogic approaches, professional development, and student records. Implementing and studying only individual elements of the model will have a much more limited impact than implementing the full integrated model. However, studies of individual elements can still yield many insights about design, implementation, feasibility, and potential impacts. The recent study of ASAP at the City University of New York also indicates that it is possible to evaluate a program that contains a cluster, though not all, of the features of the guided pathways approach.
The guided pathways model represents a comprehensive reform, and no one study of it will be definitive. But a varied program of research can build a base of knowledge for the continued development and improvement of elements of the model, and can add to the body of evidence to assess the model’s effects.

**Economic and Political Pressures to Redesign Colleges**

Until recently, the cafeteria structure has been the foundation of a successful business model for community colleges. Low tuition, widespread locations, and a welcoming attitude to full- and part-time students generated a steady flow of enrollments—and if a self-service approach to course enrollment and student support services contributed to many students exiting college after only one or two semesters, that fact did not hurt (and indeed may have helped) a college’s financial bottom line.

In reaction to increasing political pressure for higher graduation rates over the past two decades, colleges began to reexamine their student outcomes and to experiment with new approaches to improve those outcomes. These reforms had many benefits: they were often exciting and engaging, appealed to funders, raised the profile of the colleges that implemented them, generated inspiring stories of individual student success, engaged highly dedicated faculty and staff, and generated an overall atmosphere of reform and innovation. Yet while these reforms clearly helped some students, they also tended to be small in scale, avoided disrupting the underlying structure and operations of the college, and did not require the participation of most faculty, student services professionals, and administrators. Not surprisingly, then, student outcome improvements were limited at the institutional level, and political pressures for improved college performance have continued to mount.

At the same time that colleges face pressure to improve outcomes, they also face pressure to cut costs. Accordingly, the guided pathways approach may not be immediately appealing, because it may entail increased costs. Moreover, the approach may raise fears that the college will risk losing students. For example, encouraging students to attend full-time, implementing more time-intensive intake processes, or requiring students to enroll in meta-majors may drive some prospective students away. To the extent that these fears are borne out, by working more closely with local high schools and adult basic education programs and particularly by clarifying the structure and value of their programs for prospective students, colleges should be able to replace lost recruits. And of course, the guided pathways approach should also help retain more students into subsequent
semesters. However, given that continuing students tend to take more expensive courses, their retention may not entirely cover the costs of any first-semester enrollment losses. Along those same lines, we have observed examples of colleges that lost revenue when they helped significant numbers of new students avoid inexpensive remedial courses and instead enroll directly into more-expensive college-level courses. And while we argue that guided pathways will reduce colleges’ cost per successful outcome, unfortunately that is not the way that colleges are funded. Publicizing a lower cost per outcome is little consolation if the college’s financial condition is deteriorating. In general, until policymakers recognize the perverse incentives involved in funding-by-enrollment and more explicitly support colleges in their attempts to cost-effectively improve students’ longer-term outcomes, it will take courage for college leaders to embark on guided pathways reform.

On the other hand, there are some indications that the traditional cafeteria model may be less sustainable than it has been in the past. After experiencing dramatic enrollment increases during and after the Great Recession, by 2014, enrollments in many community colleges were falling. This trend may start to shift the relative cost of new recruitment versus retention, making retention-focused models such as guided pathways more attractive relative to recruiting new students. In some geographic areas, enrollment declines have also created excess capacity. Given fixed classroom and faculty salary costs, colleges in these areas will lose substantial amounts of money unless they can fill these classrooms with continuing students. As a result, enrollment declines may help lower the additional incremental costs of moving to a guided pathways model.

Federal financial aid funding, which increased immediately after the Great Recession, has also leveled off, and more students are competing for these funds. This, combined with more stringent federal financial aid regulations—in particular, reducing the number of terms students are eligible for Pell grants from eighteen to twelve, and introducing increasingly strict standards for satisfactory academic progress—have put pressure on colleges not only to make greater efforts to retain students but also to help students get through faster.

Broader political trends may also provide a stronger impetus for reform in the future. There is no question that the scrutiny of student outcomes has strengthened over time, and the growing prevalence of performance funding will add fiscal and political incentives to improve student outcomes. Continued state and federal emphasis on increasing the number of degrees and certificates will raise the political cost of poor performance. If colleges can show that they are substantially improving student out-
comes, they will be more attractive to students and will put themselves in a better political position when arguing for increased public funding, or when working to shape other state education policies. In our experience, policymakers are often sympathetic to community colleges; thus, if community colleges can show effective efforts to improve, policymakers may be willing to continue and expand their support for these institutions.

Overall, with all of the controversy and debate surrounding higher education, it is easy to forget that the focused attention on improving college outcomes is a relatively recent phenomenon. In contrast to the decades of activity and reform in elementary and high schools, the intensive activity in higher education stretches back only ten to twenty years. We still have a great deal to learn about how to meet the challenge of increasing postsecondary student success, but the guided pathways model synthesizes our best knowledge thus far, and it offers a framework within which to align promising reform strategies. It will take a combination of economic, political, and evidence-based influences to persuade college leaders and policymakers to make the necessary investments—and take on the risks involved—in implementing guided pathways reforms. We believe that those reforms will enable community colleges to better serve their vital role in educating the millions of Americans who attend them each year.