# Reforming the American Community College:
# Promising Changes and Their Challenges

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**Abstract**

Enrolling more than 6 million students each fall, community colleges carry out a crucial function in higher education by providing access to college, including baccalaureate opportunities, occupational education, remedial education, and other educational services. At the same time, community colleges face great challenges that have elicited calls for major reforms. This paper begins by discussing the social roles and organization of community colleges in the United States, their main social contributions, and the challenges they face. It then describes and evaluates the sweeping policy proposals that have been made to address these challenges.

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# 1. Introduction

Community colleges—that is, publicly controlled colleges offering two-year degrees or less[1]—play a crucial role in higher education in the United States. In fall 2015, they numbered 920 (19.9 percent of all degree granting postsecondary institutions) and enrolled 6.2 million students (30.4 percent of all students in degree-granting institutions) (U.S. National Center for Education Statistics, 2017a, Tables 301.10, 303.25, 317.10).[2] Moreover, these institutions are key providers of baccalaureate opportunities, occupational education, remedial and developmental education, and other educational services (Cohen, Brawer, & Kisker, 2013).

This central role of community colleges is reflected in the considerable attention they have received, particularly in the last ten years, from the U.S. government and from leading foundations. They have been lavishing attention and funds on community colleges in the name of increasing access to higher education, revamping developmental education for students arriving in college without college-level academic skills, and facilitating student movement through higher education and into the labor force (Bill & Melinda Gates Foundation, 2017; Drummer & Marshburn, 2014; Fain, 2015; Hall & Thomas, 2012; Lumina Foundation, 2016; National Conference of State Legislatures, 2017; U.S. Office of the President, 2010).

The attention community colleges have been receiving is highly warranted, because of their important role in U.S. society, the obstacles they face in adequately meeting that role, and the difficulties in resolving those obstacles given the size and complexity of the community college sector. In the following, we describe the social roles and organization of community colleges in the United States, analyze their social contributions, and identify the challenges they face. We end with a description and evaluation of policy proposals that have been made to address the challenges faced by community colleges.

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[1] In Florida and some other states, we would also have to include as community colleges formerly two-year institutions that now offer bachelor's degrees as well (Floyd, Skolnik, & Walker, 2005; Remington & Remington, 2013).

[2] Unduplicated enrollments for the whole year were 9 million (U.S. National Center for Education Statistics, 2017b, Table 5).

## 2. The Organization and Social Role of U.S. Community Colleges

In this section, we describe the curricula and credentials, finance and governance, and missions and social roles of U.S. community colleges. We focus on the main patterns but—because U.S. community colleges are diverse—we also note important variations on those main patterns.

### 2.1 Curricula and Credentials

Community colleges offer a wide variety of programs and credentials. The programs span traditional academic subjects and occupational (that is, career and technical) training. The credentials include certificates (requiring a year or less of training), two-year associate degrees in both applied and liberal arts fields, and in some states, four-year bachelor's degrees (Cohen et al., 2013; Remington & Remington 2013).

In most community colleges, a majority of the credentials awarded are in occupational fields. In 2013, 67 percent of associate degrees and certificates awarded by community colleges were in occupational education (U.S. National Center for Education Statistics, n.d., Table P152). The community college role in workforce preparation and economic development ranges from preparing students for their first job to retraining unemployed workers and welfare recipients, upgrading the skills of employed workers, assisting owners of small businesses, and helping communities with economic development planning (Cohen et al., 2013; Dougherty & Bakia, 2000; Grubb, 1996; Jacobs & Dougherty, 2006).

However, baccalaureate preparation is also an important function of community colleges. Most community college students intend to get a bachelor's degree. Among first-time students who entered community colleges in 2003–2004, 81.4 percent aspired to ultimately complete a bachelor's degree or higher, and by 2007–2008, 21.1 percent had transferred to a four-year institution (Horn & Skomsvold, 2012, Tables 1-A & 3-A). Moreover, an increasing number of community colleges are offering bachelor's degrees (Floyd, Skolnik, & Walker, 2005; Remington & Remington, 2013; Ruud, Bragg, & Townsend, 2009).

Finally, overlapping with the above, community colleges operate sizable programs in remedial and developmental education, English as a Second Language, adult

education, dual enrollment courses involving high school students, and community services (such as concerts and day camps) (Cohen et al., 2013). Remedial and developmental education has been rather controversial (Mazzeo, 2002; Shaw, 1997). It encompasses courses—particularly in mathematics, reading, and writing—that provide secondary-school level instruction for students who either did not acquire the requisite skills in high school or lost those skills after being out of school for many years. It is estimated that about two thirds of students who enter community college enroll in developmental education at some point. Among students beginning higher education in 2003–2004, 68 percent of those in two-year institutions took at least one remedial class (Bailey, 2009, pp. 12–13). Moreover, an analysis of students entering community colleges in the academic year 2009–2010 estimated that 10 percent of all credits earned were in developmental education (Scott-Clayton & Rodriguez, 2015, p. 4).

## 2.2 Financing and Governance

Community colleges draw on a wide range of revenue sources (see Table 1). The single largest source is state governments, but community colleges also receive substantial funds from the federal and local governments (Romano & Palmer, 2015; U.S. National Center for Education Statistics, 2017a, Table 333.10).[3] In two thirds of states, the state funding involves a performance component, where funding is dependent in part on institutional success on such measures as student retention, graduation, and completion of developmental education (Dougherty et al., 2016).

**Table 1**
**Revenue Sources for U.S. Public Two-Year Colleges as of 2014–2015**

| Source | Percentage of Funding |
|---|---|
| Federal government (excluding student aid) | 23.8% |
| State governments (excluding student aid) | 28.1% |
| Local governments | 19.5% |
| Tuition and fees (including federal, state, and other student aid) | 17.0% |
| Other (donations, private contracts, etc.) | 11.6% |

*Note.* Source: U.S. National Center for Education Statistics (2017a, Table 333.10).

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[3] It should be noted that the state or local proportions of funding vary greatly by state.

U.S. community colleges are governed in a variety of ways. The typical form involves substantial federal, state, and local control with the state role being primary. Under the U.S. constitution, the regulation of education is a power reserved to the states. State governments therefore decide whether community colleges can be established and how they should operate. Typically, the states provide for local operating or advisory boards (some are elected; some are appointed by the state), although a few states operate exclusively state controlled systems with minimal local input (Fletcher, 2016). Meanwhile, the federal government, while it does not control the community colleges, exerts considerable influence through funding for student aid and aid to the states and colleges, enforcing constitutional protections against discrimination, and making influential pronouncements about what role community colleges should play (Cohen et al., 2013, Chapter 4).

State control over community colleges is usually exerted through state-appointed coordinating or governing boards that allocate state funding to community colleges and regulate their operations (Fletcher, 2016; Fletcher & Friedel, 2017). These coordinating or governing boards take a variety of forms, with the two modal forms being a state-appointed board that coordinates or governs community colleges alone (20 states) or one that coordinates or governs both community colleges and public universities (18 states) (see Table 2).

**Table 2**
**State-Level Community College Coordinating and Governance Structures as of 2015**

| Type of Structure | Number of States |
|---|---|
| Coordinating/governing board for community colleges is separate from K-12 and universities | 20 |
| Same coordinating/governing board for community colleges as for universities | 18 |
| Coordination for community colleges falls under a university coordinating/governing board | 5 |
| Same coordinating/governing board for community colleges as for K-12 education but separate from universities | 2 |
| No state-level coordinating or governing board | 5 |

*Note*. Source: Fletcher (2016, p. 35); also see Fletcher & Friedel (2017, p. 318)

### 2.3 Missions and Social Roles

A central feature of community colleges is that they are meant to be mass-access institutions, open to virtually the whole of a community. Hence, they offer a wide variety of programs and credentials, charge lower tuitions than most other institutions, admit students even if they lack conventional college qualifications, and operate in the evening and on weekends in dispersed locations as well as online. This breadth of mission is captured in the ethos of "the open-door college," which strongly differentiates community colleges from the more selective ethos of four-year colleges, particularly research universities (Bailey & Morest, 2006; Cohen et al., 2013; Handel & Williams, 2012).

In good part because of their broad mission and open-door ethos, U.S. community colleges tend to attract many more working class, minority, and older students than do public and private universities. With regard to social class, 58 percent of community college students in 2006 were in the bottom half of the socioeconomic status (SES) distribution, while the comparable figure for students in "competitive" public and private four-year colleges was 34 percent (Carnevale & Strohl, 2010, Table 3.7). Meanwhile, in 2003–2004, 40 percent of community college students were nonwhite, while only 30 percent of public four-year college students were students of color (Provasnik & Planty, 2008, p. 40). Finally, 53 percent of community college students in 2003–2004 were age 24 or older, while the figure for public four-year colleges was only 19 percent (Provasnik & Planty, 2008, p. 40).

For many of these students, community colleges serve as "second chance" institutions. If they did poorly in high school, they can still attend higher education. If they did poorly at a four-year college or graduated and still need more training, they can go to a community college to try again. If they entered the labor force and later lose a job, they can go to the community college for retraining.

In short, community colleges are assigned a key and very difficult role. They are expected to provide higher education opportunity and social mobility for less advantaged students. But this is to occur in a society with great social class and race inequality, where higher education access and completion are subject to powerful sociopolitical forces

mobilized to preserve that inequality (Bastedo & Jaquette, 2011; Brint & Karabel, 1989; Dougherty, 1994; Karabel, 2005).

To a considerable degree, community colleges effectively address the complicated mission that they have been assigned. Several studies find that states and localities that are highly endowed with community colleges have significantly higher rates of college attendance than states and localities with a smaller community college presence (Dougherty, 1994; Leigh & Gill, 2003; Roksa, 2008; Rouse, 1998). In fact, many baccalaureate recipients, particularly in states such as California and Florida, get their start at community colleges. In the 2013–2014 academic year, 46 percent of students who completed a degree at a four-year institution had enrolled at a two-year institution (if only for one course) in the previous ten years (National Student Clearinghouse Research Center, 2015).

Community colleges also play a central role in supplying trained workers for "middle-level" or "semiprofessional" occupations such as nurses, computer operators, and auto mechanics (Cohen et al., 2013; Grubb, 1996). In effect, community colleges play the role of the technical school and apprenticeship systems found in other countries. These career/technical graduates receive substantial economic payoffs. For example, students earning a vocational associate (two-year) degree from a community college on average earn 15 percent to 30 percent more in annual income than high school graduates of similar race and ethnicity, parental education, marital status, and job experience (Belfield & Bailey, 2017; Grubb, 2002; Marcotte, Bailey, Borkoski, & Kienzl, 2005; Rosenbaum, Ahearn, & Rosenbaum, 2017). In fact, there are community college vocational programs—particularly in nursing and certain technical fields—whose graduates earn more than many bachelor's degree holders. As a result, vocational education has emerged as a viable path to success for students able only to pursue short-term degrees.[4]

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[4] Still, the economic payoffs to community college degrees are largely not as good as those for bachelor's degrees. Across all fields of study, the average bachelor's degree pays about 40 percent to 50 percent more than the average high school degree, considerably more than the average vocational or academic associate degree (Grubb, 2002; Marcotte et al., 2005).

### 3. Fundamental Challenges for U.S. Community Colleges

Despite their undoubted contributions, U.S. community colleges have also been bedeviled by some major problems, particularly poor rates of credentials completion. We first document this problem and then analyze its causes.

### 3.1 Poor Credentials Completion

Many students entering the community college leave higher education without a degree (Rosenbaum et al., 2017). A national survey of students who entered a community college in fall 2010 found that six years later 45 percent had left higher education without a credential of any kind (see Table 3). This figure contrasts strongly with that for students entering public four-year colleges and universities: 24 percent (Shapiro et al., 2017).[5] Furthermore, despite the important role that community colleges play in baccalaureate attainment, many different studies find that entering a community college rather than a four-year college significantly lowers the probability that a student will attain a bachelor's degree (Dougherty, 1994; Doyle, 2008; Long & Kurlaender, 2009; Monaghan & Attewell, 2015).

**Table 3**
**Status Six Years After Higher Education Entrance in Fall 2010**

| Status | First College Entered | |
| --- | --- | --- |
| | Public Two-Year College | Public Four-Year College or University |
| Completion of degree or certificate within six years | 39% | 62.2% |
| Still enrolled in higher education | 16.1% | 12.9% |
| Left higher education without degree or certificate | 44.8% | 24% |
| Total | 100% | 100% |

*Note*. Source: Shapiro et al. (2017, Figure 14).

### 3.2 Contributory Factors

Several factors come together to produce the low rate of credentials completion described above. We will highlight both institutional and extra-institutional factors.

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[5] It should be noted that this completion gap would become smaller if we were to follow students longer. Community college students more often attend part-time and interrupt their enrollments so that many of them take longer than six years to complete (see Attewell & Lavin, 2007).

**Financial resources and family obligations.** Community college students are hampered by the fact that, on average, they are less well off financially than four-year college entrants. They also more often have family caregiving responsibilities. As a result, they more often need to take outside work, attend part-time, and interrupt their studies. All this makes it more likely that they will eventually drop out (Goldrick-Rab, 2010; Seidman, 2005).

**Student academic preparation and academic motivation.** Another major source of the subpar results for many community college entrants is the fact that many enter higher education facing major academic obstacles to succeeding in higher education (Bailey, Jaggars, & Jenkins, 2015, p. 52; Goldrick-Rab, 2010, pp. 451–452). For example, among students entering higher education in fall 2004 straight out of high school, 53.2 percent of those entering community college scored in the bottom half in tested math in the 12th grade, while the comparable figure for those entering public four-year colleges was 18.6 percent (Provasnik & Planty, 2008, p. 54). Moreover, compared to four-year college entrants, community college entrants tend to apply later for higher education and to be less clear about their academic plans (Bailey et al., 2015, pp. 27, 53; Karp, 2013, p. 5).

But even as we note these obstacles to success in the community college posed by student circumstances, this should in no way absolve community colleges. They must also acknowledge how certain of their institutional features and the place they hold in higher education play a major role in the difficulties students encounter (Bailey et al., 2015; Brint & Karabel, 1989; Dougherty, 1994, 2002; Rosenbaum et al., 2017).

**Institutional obstacles.**[6] The organization and operation of many community colleges and their place within a stratified system of higher education also has much to do with the inadequate outcomes for community college students (Bailey et al., 2015; Brint & Karabel, 1989; Dougherty, 1994, 2002; Handel & Williams, 2012; Rosenbaum et al., 2017; see also Bound, Lovenheim, & Turner, 2010). When we compare community college entrants and four-year college entrants with the same family background,

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[6] Our discussion below by no means exhausts the list of institutional obstacles. They also include inadequate financial aid, the greater difficulty of community colleges in socially integrating students due to their lack of residential housing, etc. For more, see Dougherty (1994, 2002), Handel and Williams (2012), and Morest (2013).

academic preparation, and educational and occupational aspirations, community college

entrants on average attain about 15 percent *fewer* bachelor's degrees than their four-year

college peers. This baccalaureate gap holds even in quasi-experimental studies that

systematically address issues of selection bias through instrumental-variables or

propensity-score analysis (Doyle, 2008; Long & Kurlaender, 2009; Monaghan &

Attewell, 2015; see also Dougherty, 1994, pp. 52–61; Jenkins & Fink, 2016).[7]

This suggests the impact of institutional and systemic factors on student

completion. Another indication of the role of institutional factors is that transfer rates

vary greatly across community colleges that are comparable in student composition and

urbanicity (Jenkins & Fink, 2016). Similarly, community colleges differ significantly in

their production of applied workforce credentials (certificates and associates of applied

sciences) and the average earnings of their graduates, even when we control for the

characteristics of their students (Clotfelter, Ladd, Muschkin, & Vigdor, 2013; Dunn &

Kalleberg, 2016).

One of the central institutional obstacles that community college students

encounter is that community colleges have great difficulty providing clear and consistent

advice to students that will allow them to chart efficient paths through the institution,

without getting lost, ending up in cul-de-sacs, or taking too many courses. As many

observers have noted, community colleges are typically organized like cafeterias, offering

a plethora of courses and programs but insufficient advice and structure on which ones to

choose (Bailey et al., 2015; Karp, 2013; Rosenbaum et al., 2017).

Intake student advising at too many community colleges is poorly organized, with

too many advisers who are part-time, not particularly expert, and not able to spend much

time with students (Bailey et al., 2015; Karp, 2013; Rosenbaum et al., 2017; Rosenbaum,

Deil-Amen, & Person, 2006). Furthermore, community colleges allow, and even

encourage, students to enroll up to and beyond the first day of classes. It is not

uncommon for more than half of new, first-time students to register for classes within

four weeks of the beginning of the semester. As we will note below, these deficiencies

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[7] Moreover, there is the problem that rates of transfer between community colleges and universities are
significantly higher for younger and more economically advantaged students than those with comparable
academic preparation and ambitions who are older and less advantaged economically (Dougherty & Kienzl,
2006; Wang, 2012).

are due not so much to inadequate concern on the part of community colleges as to commitment to keep the door to college open as wide and long as possible, desire to keep up enrollments numbers, reluctance to narrow student choices, and lack of financial and other resources to make that open-door commitment work as well as possible.

Subsequent advising is often haphazard as well, with limited monitoring of student progress and guidance. Typically, detailed case management is largely missing, with colleges often unable to keep track of students' progress and provide them with personalized, developmental advising (Bailey et al., 2015, pp. 14, 58–60, 64; Rosenbaum et al., 2017). Many community colleges offer student success courses ("College 101") to orient students to college life, advise them on courses, and instruct them in learning skills. However, these courses are often not well organized, and only a small number of students typically take them (Bailey et al., 2015, pp. 64–66; Center for Community College Student Engagement, 2012; Karp, 2013, pp. 16–17). For students who wish to complete a credential or transfer to a university, these advising breakdowns result in many students losing interest or motivation or proceeding so inefficiently that they fail to take the right courses or take too many and run out of time (Dougherty, 1994; Handel & Williams, 2012; Rosenbaum et al., 2006).

Students needing academic and social support are also not well served by the organizational structure favored by many community colleges. Student services often are scattered around the college and not well publicized. As a result, these student services may be hard to find and are accessed largely by students who are self-motivated and persistent (Bailey et al., 2015, p. 57; Karp, 2013, pp. 10–11; Rosenbaum et al., 2006, 2017; Scott-Clayton, 2015). But students are often unaware of the importance and requirements of seeking out an advisor, particularly if they are the first in their families to attend college and are attending part-time while working.

Finally, developmental education is not working well in many community colleges. National studies find that only 30 percent of developmental students finish the developmental math courses in which they are enrolled (the figure for those in reading courses is 71 percent) (Bailey, 2009, p. 13). And careful quantitative studies of the impact

of conventional[8] developmental education courses on course completion and later academic outcomes mainly find no impact, with positive impacts being rather rare and negative impacts not infrequent (Attewell, Lavin, Domina, & Levey, 2006; Bailey, 2009; Long & Boatman, 2013). As a result, conventional remediation frequently discourages students from completing their studies or lengthens the time to complete a degree, which is a problem for working-class and racial/ethnic minority students who have time-limited financial aid or pressing family obligations (Deil-Amen & Rosenbaum, 2002; Rosenbaum et al., 2017).

**Systemic problems.** The difficulties that community colleges face in adequately advising, supporting, and remediating their students arise in good part from systemic causes: particularly, inadequate funding and the very decentralized structure of U.S. higher education. With regard to funding, community colleges have long faced financial problems, but those have become worse in recent years as state funding has stalled and as enrollments (and therefore tuition incomes) have dropped (Kahlenberg, 2015; Phelan, 2014; Romano & Palmer, 2015). As a result, community colleges are much less well-funded than public universities. In fiscal year 2015, the average expenditure on instruction per full-time equivalent (FTE) student was $10,152 at public universities but only $5,097 at community colleges (U.S. National Center for Education Statistics, 2017a, Table 334.10; see also Kahlenberg, 2015). These financial problems make it hard for community colleges to hire enough counselors and full-time faculty members to provide adequate student advising and student support (Goldrick-Rab, 2010).

Another systemic problem is that community colleges are not well articulated with both high schools and public universities. These three sectors operate under still largely separate public missions, organizational cultures, and governance systems (Dougherty & Henig, 2016; Handel & Williams, 2012; McGuinness, 2003). This is a major reason why these different educational sectors usually lack a common data system and their curricula often do not articulate well to allow the smooth transition of students

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[8] The typical form of developmental education has involved semester-long courses that meet 3–5 hours a week, focus on narrow skills in math and English rather than higher-order skills (e.g., assessing an argument or understanding statistical tables), and use a teacher-centered pedagogy relying on checklists and skill drilling (Bailey et al., 2015, pp. 120–121, 128–129; Grubb & Associates, 1999, Chapter 5).

from one educational sector to another (Bailey et al., 2015; Handel & Williams, 2012; for insightful analysis of the roots of such disjunctures, see Clark, 1985; Hammack, 2004).

## 4. Promising Directions of Change

The difficulties community colleges encounter have produced a diverse array of policy and programmatic proposals. A number of strategies have crystallized out of these discussions: constructing clear pathways for students involving improved advising and instruction; restructuring occupational education; revamping transfer articulation; and reshaping developmental education (Bailey et al., 2015; Dougherty, 1994, 2002; Handel & Williams, 2012; Jenkins, Lahr, & Fink, 2017; Morest, 2013; Rosenbaum et al., 2006; Rosenbaum et al., 2017; Wyner, Deane, Jenkins, & Fink, 2016).

### 4.1 Constructing Clear Pathways for Students

The "guided pathways" model has emerged as a particularly influential strategy for moving community colleges away from the "cafeteria" model and toward a more integrated and cohesive model for student success in college (Bailey et al., 2015; Jenkins et al., 2017; see also Fein, 2012; Rosenbaum et al., 2006; Rosenbaum et al., 2017). This new approach has four central elements: systematically designing courses and programs to facilitate transition to employment and further education; emphasizing guided student choice of programs and careers and creating a comprehensive educational plan for every student; revamping advising structures and processes to ensure that students are making timely progress along their educational plan; and improving instruction. Moreover, under this model, practices are implemented at scale, covering all students and all programs of study in community colleges rather than just addressing the needs of a small cluster of students (Bailey et al., 2015; Jenkins et al., 2017). Unlike previous community college reform efforts, which tend to be characterized by a scattering of discrete reforms that encompass only a few students, the guided pathways model aims for comprehensiveness.

The guided pathways concept has been enthusiastically supported by the federal government, the Bill & Melinda Gates Foundation and other philanthropies, the American Association of Community Colleges (AACC), many state coordinating boards,

and a multitude of community colleges (Bailey et al., 2015; Jenkins et al., 2017). For example, the AACC is leading an initiative supporting the adoption of guided pathways reforms at 30 colleges across the country. And the California Legislature has appropriated $150 million to support the implementation of guided pathways reforms by the 114 California community colleges, which serve over 2 million students annually (Bailey et al., 2015; Jenkins et al., 2017).

**Systematic program and course design.** Under the guided pathways model, faculty and advisors should lay the groundwork for clearer pathways to further education and employment by mapping out programs of study in consultation with employers and university partners. Degree maps should be constructed that chart which courses should be taken and in what sequence in order to complete credentials or to be ready for transfer to a university (Jenkins et al., 2017). A key principle of the new pathways approach is that clear learning objectives (skills and knowledge) should be defined for each course and program, and each program should prepare students for employment and further education in a given field. These program objectives are supposed to provide a framework unifying curriculum, instruction, assessment, advising, and course scheduling (Bailey et al., 2015, p. 39).

**Guided student exploration and choice.** A second key element of the guided pathways approach is proactively reaching out to students to inform and structure their choices rather than letting them make poorly informed, often haphazard decisions (Bailey et al., 2015; Jenkins et al., 2017; Karp, 2013; Rosenbaum et al., 2006, 2017). This approach draws heavily on research in cognitive psychology and behavioral economics (Kahneman, 2011; Scott-Clayton, 2015; Thaler & Sunstein, 2008; Thaler, Sunstein, & Balz, 2013). This guided choice approach involves restricting the number of big choices students make so that they do not end up lunging at a choice with little information or making no choice at all because they are paralyzed by the number of options available. One way of guiding student choice is to combine various discrete majors into "meta-majors" that students initially select, and then within a meta-major they make a later selection of a particular major. For example, St. Petersburg College in Florida has 10 "Career and Academic Communities" (see https://go.spcollege.edu/aos), and Northeast Wisconsin Technical College has 13 "Fields of Interest" (see

https://www.nwtc.edu/programs/fields-of-interest). Within these meta-majors, students are helped to explore various degree and certificate options and more clearly see how these educational programs lead to further college and careers. Some colleges are also developing a default curriculum for each meta-major that provides exposure to the field of interest and lays the basis for later selecting a specific major (Bailey et al., 2015, pp. 37, 40–41, 44; Jenkins et al., 2017, pp. 11–16). Other colleges are designing, within each meta-major, student success courses that expand the student intake process through the first semester (Jenkins, et al., 2017).

An important part of the student orientation process envisioned by advocates of the guided pathways approach is that, using the degree maps as a starting point, students should create in consultation with an advisor an educational plan that takes into account a student's previous college-level coursework, any transfer goals, and whether the student can attend full-time or part-time (Jenkins et al., 2017). Ideally, this plan would be stored in the college's student information system, so that students and their advisors can monitor the students' progress and what courses they still need to take. The educational plans can also help colleges foresee what courses students will need to take and when, thereby allowing course scheduling that involves fewer cancelled courses or courses added at the last minute, providing students with greater ability to plan ahead.

**Revamped advising structures and processes.** The revamped advising system under the guided pathways model would involve hiring more advisers, providing them with more training, attaching them more directly to the meta-majors, and using a case-management approach (Bailey et al., 2015; Jenkins et al., 2017; Karp, 2013; see also Rosenbaum et al., 2006, 2017). Degree audit systems should continuously track student progress on their educational plan, provide suggestions on courses to take the following semester that are consonant with that plan, and prompt students and advisers to meet when the students reach certain cross points or hit a course snag (Bailey et al., 2015; Jenkins et al., 2017; Rosenbaum et al., 2017; Wyner et al., 2016). Many colleges are considering how technology can be used to monitor how well students are progressing toward their goals and to facilitate advising processes and interactions that students might need (Kalamkarian, Karp, & Ganga, 2017; Karp, 2013). While advising will become more automated, the aim is to allow for more personalized and in-person engagement.

**Improved learning within programs**. Finally, the guided pathways model aims to improve not just advising but also learning across a program. Program learning outcomes would be defined that line up with the requirements of universities and of employers. Colleges would track how well students are meeting those learning outcomes, and faculty would use that information to improve instruction both within and outside the classroom. Key elements of this instructional improvement would include a focus on inculcating skills, concepts, and habits of mind as much or more than transmitting knowledge content; faculty collaboration with student services personnel; rigorous peer-based professional development of faculty based on a collaborative inquiry model; and appropriate use of instructional technology (Bailey et al., 2015; Jenkins et al., 2017).

## 4.2 Restructuring Occupational Education

The guided pathways model has great relevance to restructuring occupational education (or career and technical education), in good part because it owes much of its origins to policy learning that occurred over several decades in the field of occupational education (Fein, 2012). However, career pathways into the labor market have some specific features in addition to those general to the guided pathways model.

Because the focus of career pathways is on preparation for work (even if later education may be contemplated as well), those calling for such pathways argue that community colleges need to work closely with noneducational entities to define skill requirements, determine labor demands, and allocate training efforts. These noneducational entities include employers, economic development and training agencies and organizations, and community service organizations (Bragg, Dresser, & Smith, 2012; Choitz, Norman, Smith, Speiser, & Paulson, 2015; Cleary, Kerrigan, & Van Noy, 2017; Fein, 2012; Jacobs, 2015; National Skills Coalition, 2017). Moreover, because many occupational education students tend to be older and have multiple life obligations, colleges undertaking a career pathways approach will need to schedule courses at times that jibe with students' work schedules, attend to students' need for short-term as well as long-term credentials, address students' life circumstances (including childcare, housing, and transportation needs), efficiently integrate academic skills development (adult education and developmental education) with occupational education and general education, and provide job-placement advising (Bragg, Dresser, & Smith, 2012; Fein,

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2012; National Skills Coalition, 2017, pp. 2–3; Rosenbaum et al., 2017). Advocates of career pathways argue that attention to both short-term credentials (certificates taking a year or less) and long-term ones (two-year associate or four-year bachelor's degrees) can be facilitated by constructing career pathways that allow for "stackable" credentials, where short-term credentials lead into and can be credited toward longer term ones (Fein, 2012; Jacobs, 2015; McCarthy, 2015; Rosenbaum et al., 2017; Strawn, 2011). Such stacking leads to consideration of how to facilitate student movement between community colleges and four-year colleges.

## 4.3 Revamping Transfer Articulation Between Community Colleges and Universities

Most recent recommendations for revamping transfer articulation draw on the general effort to create guided student pathways (Jenkins et al., 2017). However, transfer-specific reform strategies have been proposed as well. These can be broken down into three categories: changes specific to community colleges, changes specific to universities and four-year colleges, and cross-sector changes.

**Community college changes.** Those proposing reforms in transfer articulation argue that a fundamental prelude to improving the community college role in transfer is to create a transfer-affirming culture that permeates the community colleges and is clearly reflected in their missions, organization, and public presentation (Handel & Williams, 2012; Wyner et al., 2016). More specifically, community colleges need to ensure that their instruction is on par with the requirements of receiving universities and four-year colleges (Morest, 2013; Wyner et al., 2016). Moreover, it is argued that transfer aspirants should be encouraged to leave the community college with an associate degree in hand since there is evidence that, on average, transfer students who are degree holders succeed better after transfer than those who leave the community college without a degree (Bailey, Jenkins, Fink, Cullinane, & Schudde, 2017; Jenkins & Fink, 2015; but see Jenkins & Fink, 2016).[9] Finally, the quality of transfer advising should be improved by such means as pushing students to make an early selection of a major or meta-major so that their advising can become more focused; providing transfer program maps laying out

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[9] Jenkins and Fink (2016) find that the correlation between receipt of an associate degree and receipt of a bachelor's degree is not statistically significant in many states and even negative in some (Jenkins & Fink, 2016, p. 39n17).

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courses, their prerequisites, and recommended internships and other extracurricular activities; requiring students to take a college success course that includes rich transfer information; and advising students about how to finance their higher education over the full course of a bachelor's degree (Bailey et al., 2017; Handel & Williams, 2012; and Wyner et al., 2016).

**Changes by universities and four-year colleges.** A good part of transfer effectiveness lies in the hands not just of community colleges but also of four-year institutions and state governments. Four-year institutions decide how many transfer students they will accept, into which programs, and with which number of credits applied toward a bachelor's degree.

Hence, policy researchers recommend that universities must join community colleges in creating a transfer-affirming culture. This would involve explicitly recognizing how many transfer students they receive, how important they are to the university mission, and how well they perform at university (Handel & Williams, 2012; Wyner et al., 2016). In order to increase the number and preparation of transfer students, universities are urged to set admission targets for transfer students; provide transfer aspirants with detailed information about university course requirements, funding availability, and transfer credit policies; and set aside funding for transfer students (Dougherty, 2002; Handel & Williams, 2012; Wyner et al., 2016). Finally, universities should aid their transfer students by improving their university advising through detailed degree maps and dedicated transfer advisers (Wyner et al., 2016).

**Cross-sector changes.** The sector-specific reforms detailed above should be joined, reformers argue, by reforms that span and connect the community college and university sectors. Most importantly, those two sectors need to develop—typically under the aegis of state governments—agreements laying out clear student pathways, credit articulation arrangements, and comprehensive financial aid systems to help transfer aspirants succeed in community colleges, move into universities, and succeed in them as well (Bailey et al., 2017; Dougherty, 2002; Handel & Williams, 2012; Wyner et al., 2016). These agreements should define course sequences that meet university requirements and demands, particularly as they evolve over time. They should ensure that community college transfers have access to high-quality university majors, courses, and

internships. They should assure that community college students have ready access to financial aid after transfer via multi-year packages for transfer students meeting certain requirements. And they should aim to reduce credit loss after transfer. These transfer agreements need to be backed up by collecting data on how many students are transfer ready, do transfer, and succeed post-transfer and developing policy instruments that incentivize transfer effort and transfer effectiveness on the part of both community colleges and universities (Handel & Williams, 2012; Wyner et al., 2016).

**4.4 Reshaping Developmental Education**

The final set of policy recommendations for improving student outcomes in community colleges concern developmental education. Again, this effort is related to the guided pathways reforms, but there are additions specific to developmental education (Jenkins et al., 2017). Policy recommendations and ongoing efforts to revamp developmental education focus on three points: reducing the need for developmental education by improving high school preparation; revamping assessment at college entry of whether and what kind of developmental education students need; and reshaping developmental education instruction (Bailey et al., 2015; Morest, 2013; Rosenbaum et al., 2017).

**Reducing the need for developmental education.** Policy reformers argue that high schools and their students need to become more aware of where students' skills exiting high school do not align with college requirements through such means as early assessment and dual enrollment and make efforts to reduce that misalignment. For example, California has a program in which students are tested during the 10th or 11th grade on their college proficiency so they get a sense of where they really stand. Those who score low are provided special math and English courses. An evaluation of the California Early Assessment Program found that it reduces the need for remediation in college by 6.2 percent in English and 4.3 percent in math (Bailey et al., 2015; Long & Boatman, 2013). Another device for inculcating early awareness and remediation of skill

deficiencies is dual enrollment, in which high school students take college-level courses while still in high school (Bailey et al., 2015; Morest, 2013).[10]

Beyond urging that high schools and their students become more aware of college–skills misalignment, reformers also recommend efforts to forge greater curricular coherence across the high school–higher education divide (Conley, 2015; Kirst & Venezia, 2004; Rothman, 2011). One of the central initiatives to pursue this greater coherence is the Common Core State Standards. It aims to define standards for high school completion that would leave students prepared both for college and for labor-market entry. The theory of action is that state-specific standards of what students should learn in high school will drive changes in curriculum, assessment, and teacher preparation that will eventuate in improved student capacity to meet the demands of college (Conley, 2015; Rothman, 2011).

**Revamping student assessment at college entry.** Research has found that scores on proficiency exams at the outset of community college are not highly predictive of who actually needs developmental education. Hence, policy researchers have strongly advocated efforts to revamp how entry assessment is done (Bailey et al., 2015; Morest, 2013; Rosenbaum et al., 2017). Colleges are developing placement tests that more closely align with college-level skills demands (Bailey et al., 2015). But even if colleges do not wish to put in this much effort, they have been urged not to rely on single test scores but rather use multiple measures. The predictive validity of assessment of student need for developmental education is considerably higher if colleges use both proficiency test scores and high school transcript data (grade point average and number of English and math courses completed). This reduces the incidence of severe overplacement in developmental education (Bailey et al., 2015; Scott-Clayton, Crosta, & Belfield, 2014). Also, colleges should better publicize the placement tests so that students are more aware of them, and they should develop review courses to help students better prepare for them (Bailey et al., 2015; Rosenbaum et al., 2017).

**Reshaping developmental education instruction.** If students indeed need developmental education in community college, it becomes important to do it better,

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[10] Dual enrollment courses also provide an opportunity for colleges to provide early exposure to career planning and major or meta-major choice for students even before they enter the community college (Jenkins et al., 2017).

given the poor record of conventional developmental education (see above). Various efforts are being made across the U.S. to accelerate developmental education and tie it more closely to college-level demands so students are less discouraged and less often drop out (Bailey et al., 2015; Jenkins et al., 2017; Long & Boatman, 2013; Morest, 2013; Rosenbaum et al., 2017). The popular "co-requisite model" aims to place students in regular college-level courses—particularly students who need less developmental education—but provide extensive supplementary support (Bailey et al., 2015; Jenkins et al., 2017; Morest, 2013). Another emerging model is to contextualize developmental education with specific subject matter, often in vocational education, so that students can more readily grasp the utility of the math, reading, or writing skills they are acquiring in their developmental education course (Bailey et al., 2015; Long & Boatman, 2013; Morest, 2013). A final device is to compress developmental education courses and to tailor them to the specific skills students will need in introductory college-level courses (Bailey et al., 2015). Evaluation studies have begun to accumulate indicating the fruitfulness of each of these approaches (Bailey et al., 2015, pp. 133–137).

## 5. Assessing the Reform Program

The reform program described above—constructing clear pathways for students, reconstructing occupational education, revamping transfer articulation, and reshaping developmental education—is clearly attractive. It is conceptually elegant and increasingly backed up empirically. Still, that reform program faces daunting challenges. Let us review both the progress made by the reform program and the challenges it faces.

**5.1 Progress**

The advocates of the reform program have articulated a well conceptualized set of reforms that has attracted strong support from the Gates and other foundations, the federal and state governments, the AACC, many community colleges, and various policy and advocacy organizations (Jenkins et al., 2017). Moreover, early assessments of programs taking the guided pathways approach find evidence that it is yielding significant benefits (Bragg et al., 2012; Jenkins et al., 2017; Strawn, 2011; Zeidenberg,

Cho, & Jenkins, 2010). For example, an early assessment of the performance of the 30 community colleges that are part of the AACC Pathways Project has found that almost all are making clear progress in implementing key aspects of the reform agenda (Jenkins et al., 2017, pp. 6–10). While most have not yet moved to full-scale implementation, all are moving steadily through initial planning to partial implementation of many of the reforms discussed above.

**5.2 Challenges**

Despite the above, we are still a long way from determining whether these reform initiatives do indeed significantly boost the achievement and credential completion of community college students. Reason for caution comes from awareness of the important challenges—conceptual/empirical, financial, and political—that the reform program faces. Each is rather daunting, but by no means insurmountable.

**Conceptual/empirical challenges.** The reform program has not yet specifically addressed issues of race/ethnicity, age, and gender.[11] For example, is the quality of advising for female and minority students significantly affected by the racial/ethnic and gender background and attitudes of their advisers? Moreover, more research is required to know whether these reforms will help address the persistent completion gaps for low-income and racial/ethnic minority students in higher education.

But even if we do set these issues aside, there is still question about the empirical validity of the reform program. As its advocates note, there is good evidence backing up this or that element of the program, but there is not much evidence on the impact of the model as a whole. This lack is not easily remedied because it would be hard to do an experimental study on any model that requires institutional-level redesign (Bailey et al., 2015). That said, evaluations of the new Guttman Community College of the City University of New York—which has implemented many of the principles of the reform agenda—have found positive results (Bailey et al., 2015; Jenkins & Lahr, 2017; Rosenbaum et al., 2017).

**Financial challenges.** A full-throttle pursuit of the guided pathways reform agenda will not be cheap. In fact, research indicates that the cost per entering student will

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[11] However, the Community College Research Center is launching a research agenda to examine the impacts of guided pathways reforms on students of different racial/ethnic and income backgrounds.

go up, even if—because of higher completion rates—the cost *per graduate* will drop (Bailey et al., 2015; Jenkins et al., 2017). Given this, will guided pathways reforms suffer spending cuts in time of economic recession and cutbacks in government spending on higher education? This is particularly an issue for community colleges because of their greater dependence on state appropriations and the fact that they are already underfunded in comparison to public universities (Kahlenberg, 2015; Phelan, 2014; Romano & Palmer, 2015). Moreover, most colleges that are implementing guided pathways are receiving little or no funding—either from state government or from philanthropy—to do this work. The one major exception is California, which appropriated $150 million to its community colleges to implement pathways.

  **Political challenges.** The financial challenges described above morph easily into political challenges. The financial demands of the reform program will provoke some degree of political opposition. Moreover, the reforms proposed involve major changes in instruction and advising that touch very directly on the faculty role. While faculty may be broadly in sympathy with the goals of the guided pathways reform program, they may be disquieted by specific elements. An indication of this possibility was the stiff faculty resistance within the City University of New York to the changes proposed under the Pathways program (Bailey et al., 2015; Logue, 2017). Finally, the concept of guided choice faces a difficult challenge. There is a longstanding American tendency to decry efforts to guide student occupational choices as a "socialist" restriction on choice (Schlafly, 1997). This opposition to any seeming restriction of choice is short-sighted because it ignores the restrictions of choice created by systems of social stratification and market forces, but it remains a potent force as can be seen in the continuing American war over health care.

## 6. Summary and Conclusions

  This paper has analyzed the organization, social contributions, challenges, and new reform directions of the American community college. Numbering nearly a thousand and enrolling nearly one third of all students in American higher education, community colleges play a key role in college access, baccalaureate provision, and job preparation.

But this key role is marred by the fact that community colleges have inadequate rates of credentials completion. These problems are rooted to a great degree in institutional obstacles and systemic problems in higher education. A powerful reform agenda has risen to address these problems, centered on charting clear student pathways into, through, and out of the community college. This agenda provides a powerful roadmap for how to improve the community college. However, it also faces significant conceptual, financial, and political obstacles.

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