CHAPTER 1

THE NEW CHALLENGE: ALL STUDENTS COLLEGE AND CAREER READY

The Common Core State Standards are designed to culminate at the level of college and career readiness, a lofty expectation given that as recently as the mid-1970s, fewer than half of high school graduates went on to college directly from high school, and many of them did not last long once there. Since then, the percentage of high school graduates making an immediate transition to community college has increased by 9 percentage points, from 18 to 27 percent, while the percent going to a four-year institution has gone up by 8 points, from 33 to 41 percent. This represents a 50 percent increase in students going directly to community college and a 25 percent increase for those going to four-year colleges.

Taken together, these figures tell us that high school graduates increasingly view a postsecondary education as their best option after high school, whether they wish to pursue a career or a college degree. However, among those who attend, a significant proportion, in the range of 40 percent or more, must take remedial courses initially. Many still drop out during the first year or don't continue to a second year. More students may be going to college, but this does not necessarily mean that more students are *ready* for college. This represents a new challenge to high schools, which were never designed to prepare the vast majority of students to be ready for postsecondary success.

This chapter seeks to address these challenges by asking what it means in the era of the Common Core State Standards to expect all students to be college and career ready. Why is this a worthwhile goal, and how will this goal affect high schools that have historically sorted students? And how has the development of college readiness standards over the past decade set the stage for a better understanding of college readiness?

Why College and Career Readiness for All?

The answers to these and related questions posed and discussed in this chapter have far-reaching implications for how US secondary schools are organized and how they educate students. The ways in which schools respond to them will have a profound effect not only on students, but on the economic and social future of the nation as a whole. Increasingly education is the key to social mobility and economic survival in a rapidly and continuously changing economy, particularly for young people who are not born into backgrounds of privilege.

A high school diploma has been touted for decades as the goal all students should pursue, but evidence suggests that achieving the diploma may no longer be a sufficiently high expectation. The academic skill level many diploma recipients achieve may not be adequate to qualify them for many of the careers and occupations emerging in the new economy. In fact, being able to get an entry-level job is not enough; having the skill level to start work today will likely not be enough to retain a job for life, take advantage of new opportunities, or cope with changes in the economy.

Success in the future will be much more a function not simply of what people have learned but of what they are capable of learning. Schooling will truly need to be about enabling students to learn throughout their careers. Creating lifelong learners, a cliché that has been used often and carelessly by many, will become an increasingly critical and compelling

goal of education. It's not at all clear what today's students will need to know throughout their lives, but it is likely that they will not be learning in school today much of what will be important to success over the course of their careers.

The Changing US Economy and the Changing Nature of Work

While schools have struggled to adapt to the changing needs of the workforce, the US economy has continued to evolve dynamically, having undergone a transformation over the past century that can only be described as remarkable and unprecedented by any measure. Farming, manufacturing, clerical, and middle management jobs have declined dramatically as service-related occupations and professional careers have increased in an equally dramatic fashion. Where manufacturing and farming in 1900 together were something on the order of 70 percent of US jobs, these activities occupied about 13 percent of the labor force by the end of the twentieth century. Between 1950 and 2000 alone, manufacturing jobs decreased from well over 30 percent to around 9 percent of all employment. This rapid shift in the structure and composition of the economy sent shock waves through the workforce as jobs that required highly specialized skills or repetitive manual labor disappeared overnight, to be replaced by occupations for which the displaced workers were entirely unprepared and generally ill unsuited. Entirely new categories of work have rapidly emerged with the shift from agricultural and industrial jobs to service jobs. Knowledge workers and the creative class have become increasingly prevalent in the workforce.

Take one small example from Lane County, Oregon, the home of the University of Oregon but also a county that, if it were a state, would fall between Delaware and Connecticut in area. The economy of Lane County had been largely dependent on timber extraction and lumber milling until the 1990s, when logging in federal forests was effectively shut down. Fortuitously, the luxury RV business grew rapidly in Lane County during the 1990s and early 2000s. Many timber workers made the transition from logging to assembling the RVs through retraining programs that helped them learn skills in the trades as well as the use of technical manuals, wiring schematics, and other complex informational texts that hadn't been a part of the timber industry.

Unfortunately for all of those workers who had survived one massive economic shift, the bottom fell out of the luxury RV industry less than ten years later in the mid-2000s, as first the cost of fuel skyrocketed and then the economy as a whole came unhinged. Almost overnight, nearly all

of the five thousand jobs in this industry disappeared as manufacturers either went bankrupt or cut back to skeleton crews. Worse yet, the remaining companies consolidated and centralized their operations elsewhere in the country, which meant that the thriving after-market industry that had sprung up around providing attractive and expensive options to these customized RVs also evaporated. Another industry that did not require high levels of formal schooling disappeared in the space of just eighteen months.

Lane County did see a rapid increase in employment opportunities around this same time, though. Some of the jobs were in the client support, or call center, sector. Others were at high-tech fabrication plants. Companies such as Enterprise Car Rental and Royal Caribbean Cruise Lines established major centers and hired entry-level employees and managers. Sony Disc Manufacturing and Hynix opened high tech production plants in the county. The only catch was that the prerequisite skills required for entry-level employment at these companies included the ability to use technology and computers; read and interpret manuals and rapidly changing schedules; keep pace with new product and production lines; solve problems creatively and patiently with a strong customer orientation, often as a member of a team; speak clearly and concisely and listen carefully; and be prepared to adapt on short notice to new company priorities. Nothing from their previous work experience prepared former timber workers or RV assemblers for this type of knowledge-intensive, dynamically changing workplace. While the local community hastily instituted training programs for call center workers, these were beyond the reach of those who lacked prior experience with computers, who had difficulty with a range of written material, whose communication skills were not strong and well developed, and for whom teamwork meant not getting in the way of or in a fight with a fellow worker.

Variations on this story have played out around almost every part of the United States during the past two decades. The story illustrates the painful truth that the skills needed to be successful in this new economy are fundamentally different from those that the old economy required. Increasingly important are skills such as the following:

- Foundational academic knowledge and the ability to apply knowledge
- Communication capabilities in reading and writing and, increasingly, speaking and listening
- Technology proficiency
- Problem-solving strategies
- Flexibility, initiative, and adaptability

This dramatically shifting set of expectations has signaled the obsolescence of the previously well-established and fundamental distinction between what should be taught to students planning to attend college versus those who plan to enter the workforce immediately.

Economic Impact of Education

Most educators and many students are familiar with studies showing the increase in earnings over a lifetime based on a person's level of formal education. These studies find in general that workers without a high school diploma earn by far the least; those with a diploma and even with a little college earn marginally more; those with two-year certificates do substantially better; and those with bachelor's degrees or better fare the best of all. Of course, some of this has to do with the economic class in which a person starts out initially and the difficulty of moving up the economic class ladder generally, but the fact that success is tougher for those who start from a lower economic level only strengthens the argument for more education as a means to overcome initial socioeconomic status. The United States offers far more opportunity for social mobility than many other countries. Unfortunately, the country is also among the most polarized in wealth distribution, a trend that is increasing. Economic mobility for those who do not already have money is linked increasingly to education and the ability to acquire new skills and certifications over the course of a career. The economic gap between the skilled and the unskilled is growing. The era of succeeding with little formal education and lots of hard work is pretty much over.

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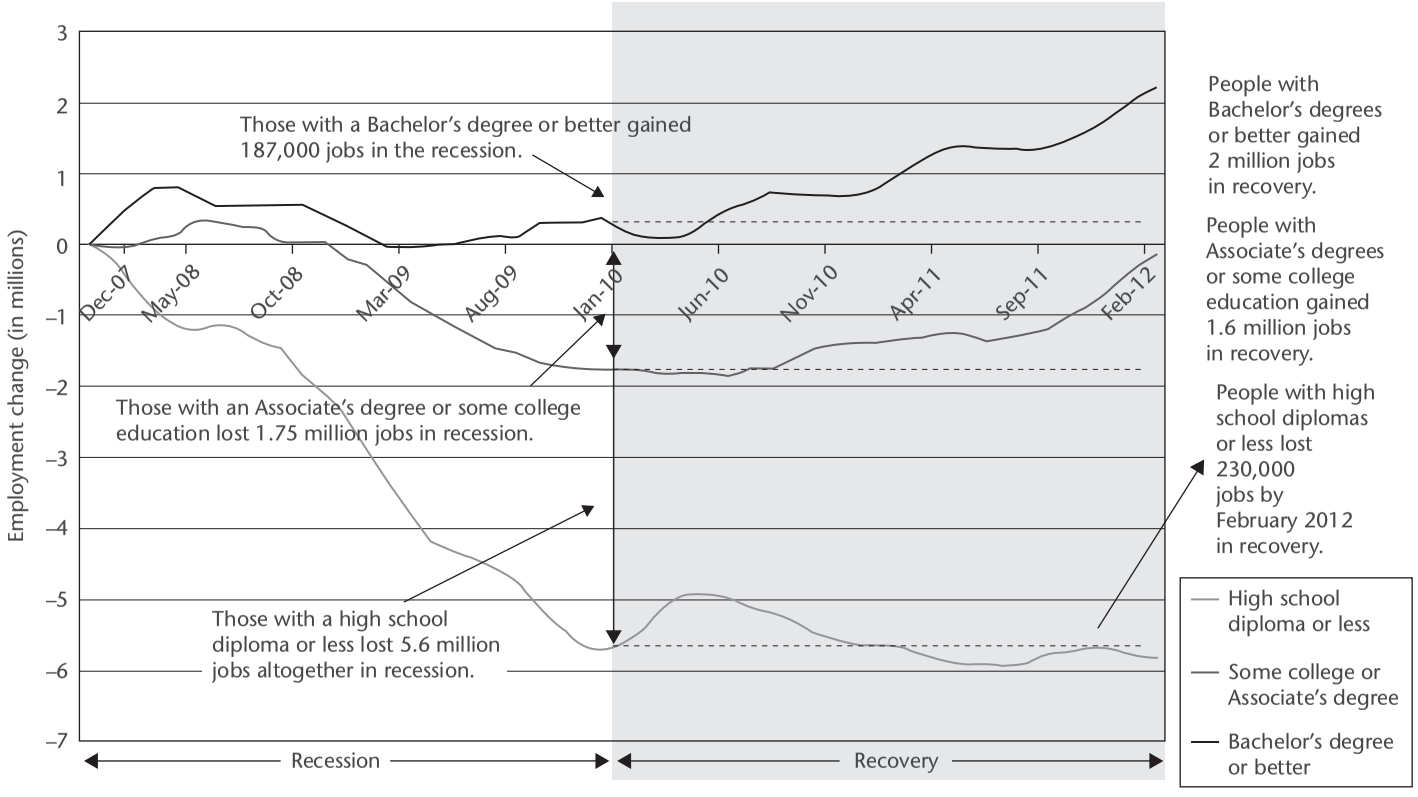
The evidence of the effect on employment status is demonstrated most clearly and dramatically in data on job loss and creation during the Great Recession and the tepid recovery period that followed. The trends identified in a report prepared by the Center on Education and the Workforce at the Georgetown Public Policy Institute are striking. Between December 2007, when the downturn began in earnest, and January 2010, when it was declared to be over, people with bachelor's degrees or better actually gained 187,000 jobs. During the recovery period from January 2010 through February 2012, this same group saw their employment numbers grow by an additional 2 million jobs. Those with an associate degree or

FIGURE 1.1 EMPLOYMENT CHANGES DURING THE RECESSION



Source: Carnevale, A. *The College Advantage* (Washington, DC: Georgetown Center on Education and Workforce, 2012). Author's estimate of the Current Population Survey data (2007–2012).

Note: The monthly employment numbers are seasonally adjusted using the US Census Bureau X-12 procedure and smoothed using four-month moving averages. The graph represents the total employment losses by education since the beginning of the recession in December 2007 to January 2010 and employment gains in recovery from January 2010 to February 2012.

some college lost 1.75 million jobs during the recession and saw 1.6 million jobs added during the recovery, more or less a wash. The effects on the final group, those with a high school diploma or less, are truly dramatic: the recession cost these people 5.6 million jobs, and the recovery has not reached them at all. Between January 2010 and February 2012 they have lost an additional 230,000 jobs (figure 1.1).

Note that this final group includes those with a high school diploma, the standard that most states set as the goal for all their students to reach and to which many high schools then aspire. Also note how completely inadequate the diploma is as a means to gain employment and secure a livable wage over the past 40+ years (figure 1.2). The new measure of a sufficiently prepared student is one who has knowledge and skills to keep learning beyond secondary school, first in formal settings and then in the workplace throughout their careers, so that they are capable of adapting to unpredictable changes and new economic conditions and opportunities.

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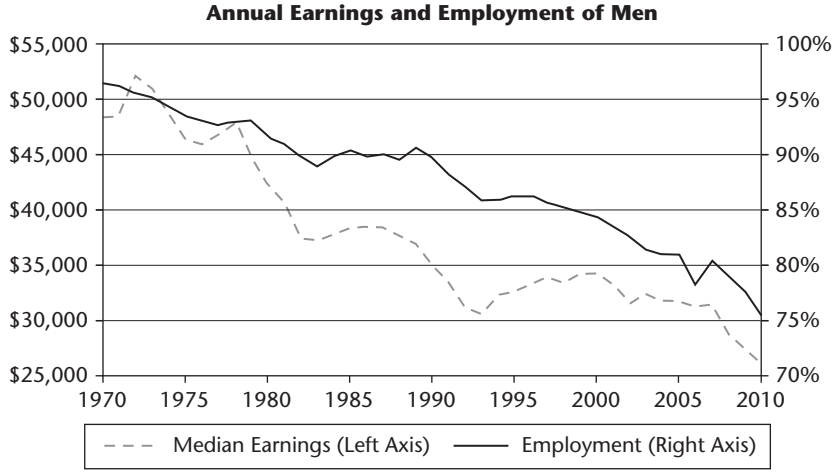
FIGURE 1.2 ANNUAL EARNINGS AND EMPLOYMENT OF MEN WITH A HIGH SCHOOL DIPLOMA AND NO POSTSECONDARY CREDENTIAL



Source: US Census and Current Population Survey, 1970–2011. Data analysis by the Brookings Institute.

Note: Male-only data used due to substantial changes in women's participation in the labor force over this period of time.

From Vocational Education to Career Technical Education

Before continuing this discussion of the current state of college and career readiness, it is necessary and useful to look back on how the concept of career readiness has evolved over the past one hundred or so years. Throughout most of the twentieth century, what is now called *career readiness* was labeled *vocational education* or *job training* and took the form of specific programs designed to prepare students for an entry-level job in an area of work, a job they could then theoretically do without change for their entire working lives.

From the 1920s on, many large school districts physically separated vocationally oriented students from students going on to college. Denver's High School for the Manual Arts and Benson Polytechnic High School in Portland, Oregon, are but two examples of names that lived on well beyond the period when these were institutions that attracted students citywide for specific vocational training. These early magnets offered high-quality training, with state-of-the-art equipment and instructors who possessed real-world experience in the vocational area they taught. They also provided related academic preparation for their students, but the emphasis was on the practical and the applied, and a high school diploma for students graduating from these schools was generally seen to be terminal, the final formal education they needed. The good news was that the training these schools provided prepared students well for entry into the workforce, and their graduates had an advantage in securing employment over applicants without such formal training.

By the early 1960s, a model commonly referred to as the "comprehensive high school" had become dominant. Often referred to as the "shopping mall" model, these schools attempted to meet student needs by offering different programs based on student aspirations. The physical layout reflected the philosophy that students were headed toward different futures that would require different knowledge and skill sets and that they would not likely need to interact with students pursuing other futures. Academically oriented students took classes in parts of the building that were designed to emphasize contemplation and reflection, while vocational students were mostly separated from their college-bound peers at the opposite end of the campus, ostensibly because their programs were noisier. This model, with its assumptions about the separation of college and work preparation, remained strongly rooted through the end of the century in many high schools and has only recently begun to be seriously questioned.

This discussion of traditional vocational education is not intended to ignore or discount the rise of career technical education (CTE) programs that offer students high-quality and challenging courses built around applied academics. However, in many schools, much of the sorting that existed during the era of vocational programs continues under the guise of CTE. Students continue to be grouped and physically separated based on differences in their post–high school goals.

The point is not that it never makes sense to provide separate programs for students who wish to follow different paths. For example, many jurisdictions offer high-quality regional vocational-technical institutes or skill centers devoted to specific occupational training; these are of high quality, very successful, and valuable, and they generally address student academic skill development as well. The larger question, though, is what steps today's secondary schools, saddled with the remnants and physical space legacy of vocational programs, are taking to ensure that all students have open to them the option of pursuing college or a high-quality career pathway, not just a job, immediately after high school.

The vocational education model worked well in part because students could be taught skills that were generalizable across many work settings, even if they were specific to a particular occupation. Someone skilled in metalworking could be a pipefitter or machinist in any of a dozen industries. Woodshop courses opened the door to a host of occupations ranging from construction to cabinetry that required the ability to use the machinery and methods students learned. Employers were eager to hire workers with these skills, and this training was not narrow or dead-end. Vocational education worked well within the economic context within which it existed.

What these students also gained was an orientation to the world of work—what I call "work readiness." Values such as commitment to quality, attention to detail, and pride in craftsmanship were conveyed, along with behaviors such as safety, teamwork, punctuality, cleaning up after one's self, and following supervisor-given directions. These skills were as important in many ways as the specific skills associated with operating machinery or creating products. For many of the students who struggled in traditional academic courses, the structure and regimen of the vocational courses offered a haven where they knew what was expected of them and where they could be successful.

Although young women had access to some programs, such as home economics and office occupations, vocational education was largely a male-oriented and male-dominated activity. The programs never were designed to reach or appeal to all students, particularly the full range of young

women. The notion of universal readiness was not central to this model. Vocational education in the shopping mall high school simply perpetuated aspects of the pre–World War II social sorting model without being as explicit, overt, or rigid about it. Students could theoretically change tracks, although this happened rarely in practice.

The Academic Core

Students not in a vocational-technical program had two choices. One path took them toward college. The other, the "general" track, took them nowhere in particular, preparing them for neither a job nor college. As high school participation increased during the 1920s and 1930s, a trend that accelerated after World War II, the core academic programs in high schools struggled with what to do with students whose futures were unclear. The strongly held belief was that most students were not suited for the rigors of the academic track. The students in the general preparation track inhabited an intellectual no-man's-land of sorts, without clear guidelines or reference points for what they should be learning and why they were learning it. This group became the largest one in many postwar high schools.

The long-time high school academic core consisting of English, mathematics, science, social studies, foreign languages, and art was more or less consistent throughout the twentieth century, and key elements of it look to be important for the foreseeable future. The content of this core may omit additional knowledge and skills that all students will need during their lives, a point taken up in chapter 7. At the moment, however, it is most relevant to this discussion to understand the ways in which this core has been taught to and learned by students.

Because college was not seen as a goal for all or even most students, educators had little reason to believe that academic core courses should be designed in ways that resulted in most or all students succeeding in them. After all, didn't many college freshmen fail the introductory courses they took? The teaching methods in core courses took on a decidedly abstract bent. The expectation was that students needed to work hard to understand and retain what they were being taught. That not all students would be able to do so was taken as something of a given.

In the absence of agreement on what constitutes an appropriate challenge level for core courses, high school instructors have been left to follow the tradition of the entry-level college class, where high standards meant a sizable number of students did not pass. The introduction

of competency-based instructional models is leading to a movement away from this mind-set. However, it is still possible to encounter teachers and schools that display remnants of this old Darwinian model, where course rigor is viewed as a function of how many students fail and only the strongest survive.

Many schools are now valiantly attempting to enroll all students into core academic courses without necessarily changing much about how these courses are taught or what is in them. In essence, the general track is being merged with the academic track. The challenge level of such courses can now be calibrated against the Common Core State Standards. However, enrolling more students in academically challenging courses without paying attention to the instructional methods used or the strategies needed to engage students at the cognitive levels envisioned by the Common Core is unlikely to result in more students being college and career ready. Students will need more reasons and more support if they are all to learn at a high common level. Breaking down formal and informal tracking requires significant redesign of core courses. Integrating students from the general education track can be even more challenging than involving CTE students in the core.

These changes can be achieved without lowering standards. They will require focusing on the most important content in the Common Core State Standards, making expectations crystal clear to students, providing formative feedback that lets students know where they really stand in a course, and supporting students who are struggling academically.

Perhaps most important is an idea that appears in multiple places in this book: all students need to take more ownership of their learning. Schools can help this process along by creating stronger links between the content and student aspirations and goals, and by redesigning core courses consistent with findings from brain and cognitive sciences, best practices pedagogy, and commonsense observations about how students learn best. The traditional core will need to change dramatically if the Common Core is to be taught successfully to the full range of students—CTE, general education, academically oriented, and students with special needs.

Creating College Readiness and Career Readiness for All

Schools follow changes in the economy; they do not lead them. Schools find themselves struggling to play catch-up as the economy continues to morph with dizzying speed and unpredictability. With no longer a need

to sort students into the academically capable and the manually proficient, how will schools adapt rapidly enough to enable all students to be ready for college and career? The process has been underway for some time now, although not all educators may have recognized the linkages between state actions and the larger economic context of schooling.

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The first acknowledgment by states that schools need to have all students succeed with a core set of content came during the 1990s when essentially every state adopted education standards that defined key knowledge and skills. The underlying rationale for the standards, in most cases, was to define what was required for success in a twenty-first-century economy and society. In some states, though, the standards were little more than codifications of basic skills and current content taught at each grade level, while in other states, the standards soared to rhetorical heights, waxing rhapsodic about students who would be global citizens who contributed throughout their lives to making the world a better place.

The challenge level of the standards varied dramatically from state to state, but they were almost always silent or intentionally vague on what the ultimate goal was that students were being prepared to reach. Rather than confront the issue head on, most states linked their standards at least indirectly to the goal of high school completion, with the implied assumption that graduates would be prepared for entry-level employment. Students who aspired to postsecondary education almost always needed to complete course work that exceeded the state standards. In other words, states were not anxious to embrace the expectation that all students would be ready to learn beyond high school and would be likely to do so.

Perhaps ninth-grade algebra courses are the example of the way standards played out in many schools. This course continues to have high failure rates even as it has become a universal expectation in many high schools. Failure in this one course can cut in half the proportion of students aspiring to college. The effect of failing algebra is even more pronounced on student aspiration to careers in science, technology, engineering, and mathematics (STEM). Biology courses, which often have similarly dismal pass rates, combine for a one-two punch that takes many students off the STEM pathway. The effect of failing one or both of these

courses is to truncate the pool of students who will be eligible for postsecondary programs or majors that require solid foundational math and science knowledge. Many students choose vocation-oriented options at this point, not because they are not capable of learning algebra or biology but because the price for continuing in the academic track, in the form of passing courses in which little of what they learn is applied, seems too steep to them.

The rise of two de facto sets of educational programs in many schools, one for students focused on completing high school and another for those going on to college, has been a troubling trend in the standards era of the past twenty-five years. Theoretically all students have been learning what the state standards call for, but not all students have been held to the same academic standards. While many state education leaders opine that their standards prepare students for a range of futures, little evidence exists to confirm this is the case, and few state standards have been specifically aligned to the knowledge and skills required for success in college and career programs. Under the standards model of the past two and a half decades, all students theoretically graduate with at least basic skills. However, access for all to college and career pathways was never the goal or the criterion measure.

The evidence supports the conclusion that states did not specifically target college and career readiness for all students. Although college-going rates continued to climb from 1990 to 2010 (with the exception of a 5 percent decline from 1997 to 2001, a time of rapid economic growth that created more immediate employment opportunities), remediation rates have remained stubbornly high, and national measures such as the SAT and ACT have not registered a significant increase in student performance. First-year college success rates and overall graduation rates have also been relatively stagnant overall.

The Rise of College Readiness Standards

By the late 1990s, the issue of the purpose of state standards was beginning to come into sharper relief. Several states by that point had already revised their standards at least once, some twice, often with great fanfare. Postsecondary institutions began to take note that the "standards" thing was not going away and that secondary schools were shaping what they taught based on state standards and the exams used to test those standards. It occurred to some leaders in the postsecondary community that

their ability to influence the high school curriculum, which had been well established from the time of the higher education–dominated Committee of Ten in the early 1890s, which had specified the college preparatory curriculum, might weaken if states were to write their own learning objectives and goals independent from what colleges wanted.

The less cynical view is that colleges wanted to be supportive of high schools preparing students properly to attend their institutions, and helping high school educators to understand what exactly students needed to be ready to succeed in college might be an important way to contribute. What better way to do so than to develop standards that defined what it meant to be college ready? Given the importance of evidence in the postsecondary world, the process chosen to develop these college readiness standards was to establish empirically what it took to be ready to succeed in entry-level postsecondary courses. The aim of the initial studies undertaken was to create a new standards-based specification of college readiness that paralleled and could be linked to the academic content standards that states had developed for their K–12 schools.

This work built on previous large-scale efforts to develop high-quality standards, most notably the New Standards Project. Founded in 1991, New Standards was a joint project of the National Center on Education and the Economy, the Learning Research and Development Center, and the University of Pittsburgh to develop internationally competitive performance standards in English, mathematics, science, and applied learning at the fourth, eighth, and tenth grades. The standards were accompanied by a "reference examination" that was calibrated to national content standards. This system was seen as a framework within which students could pursue certificates of initial mastery, which would serve as measures of readiness for college and careers. While not explicitly tied to college and career readiness, New Standards provided a model for high-quality standards and assessments that spanned multiple grade levels, had a content component, and pointed toward success after high school.

The first study specifically focused on college readiness was Standards for Success, which I designed and directed beginning in 2000 under the sponsorship of the Association of American Universities, an organization composed of sixty-two prestigious and well-known research universities. The study engaged more than four hundred faculty members at leading US universities in a structured process to identify what it takes for students to be ready to succeed in the entry-level courses at their institutions. Although the results of the three-year study were not surprising in some respects, they were quite remarkable in others.

Faculty did identify a great deal of content knowledge in core subjects that was consistent with what high school teachers generally taught. More surprising was that they stated emphatically that this prerequisite content knowledge was not the most important measure of potential success in their courses. With near unanimity, they stressed in no uncertain terms on campus after campus that students needed to know what to do with the content they were learning. They needed to be able to use their content knowledge in ways consistent with the subject area's rules and premises to generate intellectually interesting outputs. Repeating information alone was not sufficient. Faculty noted time and time again that otherwise well-prepared students could not grapple with a task or problem that asked them to go beyond what they had been taught literally. Students struggled to make inferences, interpret inconsistent or novel data, posit multiple explanations for a phenomenon, generate an original thesis and explore it, or extrapolate from a given set of information to a new and novel setting.

Students needed to know what to do with the content they were learning.

In essence, faculty were calling on students to have mastered what I describe as *key cognitive strategies*—ways of thinking and processing content at more complex levels to allow for its use and transfer to new settings and situations as needed. Chapter 3 contains a more in-depth discussion of these strategies because they are so important to understanding the difference between how the academic core is taught in high schools today and how it will need to change to prepare students for college and careers and to be lifelong learners.

Shortly after Standards for Success released its final report, *Understanding University Success*, and distributed it to every high school in the nation in 2003, the Washington, DC–based education policy-advocacy group Achieve undertook the American Diploma Project (ADP). Its goals were similar to Standards for Success: to define college readiness by gathering input from postsecondary faculty. This study queried postsecondary faculty regarding their expectations, but took the additional step of including instructors from two-year institutions along with economists and members of the business community. Achieve characterized the ADP standards as representing an "unprecedented convergence" of educator and employer opinions on what it means to be ready for college and careers. The two

studies reached significant agreement on the key knowledge and skills that underlie postsecondary readiness, but they also had differences.

National admissions test makers ACT and the College Board, which administers the SAT, shortly thereafter entered the arena of college readiness standards by creating their own systems. Developed through internal processes that included expert judgment panels and the use of each organization's extensive database of student performance on admissions tests, the standards each organization produced had much in common with Standards for Success and the ADP. The College Board's version, the Standards for College Success, drew from the Standards for Success and was the only set of college readiness standards to span sixth through twelfth grades. ACT followed suit with its College Readiness Standards, which described the knowledge and skills students would be expected to have mastered at various score levels on the ACT exam system, also known as the Educational Planning and Assessment System, or EPAS.

Several states developed versions of college readiness standards, but most set their exit standards somewhere before the end of twelfth grade. The state that has developed the most complete and aligned set of college readiness standards to date is Texas, also one of five states not adopting the Common Core State Standards as of the spring of 2013. In 2009, the Texas College and Career Readiness Standards were released to the public. These standards are interesting for a number of reasons. They were developed under the sponsorship of the Texas Higher Education Coordinating Board in collaboration the Texas Education Agency, which is responsible for K–12 education. These standards were created by vertical teams comprising faculty from middle and high schools and two- and four-year postsecondary institutions. They drew on the research on college readiness standards, previously produced college readiness standards systems, and high-quality high school standards from other states to help inform the professional judgments of the vertical teams.

Texas law required that these standards be used as the reference point for high school end-of-course examinations in multiple subjects. In addition to English and mathematics, standards were developed in science and social studies as well. Finally, and uniquely among all the college and career readiness standards that had been created to that time, the Texas system includes a set of cross-disciplinary standards that acknowledge the importance of learning skills that students need to be prepared to succeed in postsecondary studies. These skills include intellectual curiosity, reasoning, problem solving, academic behaviors, work habits, and academic integrity, skills that vertical team members in a range of subjects specified as

important to success in their subject area. The standards are being used throughout the state by groups such as Generation Texas in San Antonio as a focal point for local improvement efforts.

This chapter has reviewed the importance of having all students ready for college and careers, the challenge to high schools to develop programs that challenge all students at high levels, and the emergence and rapid evolution of college readiness standards. But what exactly does it mean to be college ready, and how is this different from being career ready? The next chapter goes into greater depth to answer this question and offers a comprehensive definition of college and career readiness.

Awareness and Action Steps

- Share information on the changing nature of the US economy by reviewing and discussing *The College Advantage: Weathering the Economic Storm* by Anthony Carnevale, Tamara Jayasundera, and Ban Cheah.
- Read and discuss the report *Pathways to Prosperity: Meeting the Challenge of Preparing Young Americans for the Twenty-First Century*, and consider the balance between career preparation and college preparation that is most appropriate.
- Determine whether tracking, formal or informal, is present in academic courses and how such practices affect student aspirations.
- Look at a blueprint or map of your school campus. Do you see evidence, either historical or recent, of the separation of vocational and college-track students built into the physical design of your school?
- Explore the degree of consensus in the school on the need for all students to be college and career ready.
- Consider how high-quality CTE programs that develop skills for twenty-first-century careers can help students become more college and career ready. Does viewing these programs through the lens of college and career readiness, not job training, suggest any necessary changes?
- Schedule a conference call with professionals who have taken nonlinear routes to their current positions. Have them share their pathway story to model how people change careers multiple times over their life, may have to move for a job, and may have to return to school or a training program at multiple points during a career.

- Visit the National Assessment Governing Board website to read the results of studies on the knowledge, skills, and abilities needed for different occupational areas (http://bit.ly/10utTvH) and the National Center on Education and the Economy's report, *What Does It Really Mean to Be College and Work Ready?* (http://bit.ly/1apPck1).
- Share with your students the comparison chart of the 2012 Bureau of Labor Statistics average salaries and unemployment rates across different levels of education attained, including occupational programs (http://bit.ly/18X2tSJ).
- Trace the story of your community's evolving workforce needs. How have these changes affected your students' families? How do these personal experiences influence and shape local conversations about the importance of having all students ready for college and careers?
- Identify how the national and international economies have led to changes in your local economy and what the future prospects are for changes that will affect the knowledge and skills students will need if they wish to work and live in the community.
- Analyze your school's data on student outcomes in ninth-grade algebra, subsequent course-taking decisions, and college matriculation. How does failing ninth-grade algebra limit future student options, particularly their ability to pursue STEM careers?
- Gather a small group of educators and guidance counselors to discuss the following question: What does it looks like, in concrete, observable ways, when students take ownership of their learning? What are three steps the school can take to increase student ownership of learning?
- Evaluate your school and local high school diploma requirements. For what types of jobs or employment tasks would a student who met just the minimum graduation requirements qualify? If you could design a set of diploma requirements that prepared all graduates for college and careers, what would the requirements entail?