



BEYOND ACADEMIC READINESS

BUILDING A BROADER RANGE OF SKILLS FOR SUCCESS IN COLLEGE

By Jenny Nagaoka and Matthew A. Holsapple
Ready or Not: It's Time to Rethink the 12th Grade
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INTRODUCTION

In recent years, education policymakers have rallied around the goal of preparing each and every high school student to go on to succeed in a college-level course of study. Given the realities of the 21st-century economy—that it now takes at least a year or two of postsecondary education or occupational training just to gain a toehold in the labor market—it simply no longer makes sense to treat the high school diploma as a terminal degree.

But for all the agreement on the goal of preparing every student for college, it remains unclear what “college readiness” means, precisely, or what the K-12 and higher education sectors can do to help more students succeed once they arrive on campus.¹

To date, policymakers have defined “readiness” mainly in academic terms, arguing that high schools must ramp up their standards and course requirements so that the content and skills students learn in grade 12 align closely with the demands of first-year college coursework. Increasingly, though, researchers have shown that college readiness entails much more than academic achievement alone (Conley 2014; Duckworth et al. 2007). At least as important are students’ knowledge about college itself (e.g., how to plan and pay for it, how to choose an appropriate school and degree program, and how to navigate the complex bureaucracies of higher education); the cognitive strategies they bring to their coursework (e.g., their ability to formulate interesting research questions and make precise and accurate claims); and a range of so-called “noncognitive” factors (e.g., the ability to regulate one’s behavior, manage a complex schedule, adapt to new social environments, set realistic goals, and believe that hard work will pay off).²

In short, the journey from high school to higher education is much more complicated than policymakers tend to imagine. For many, if not most,

Historically, high schools and colleges have done precious little to make the transition less challenging.

deeply personal, raising difficult questions about identity, belonging, purpose, and more. Historically, though, the nation's high schools and colleges have done precious little to make that transition less challenging. Rather than working together to bridge the gaps that divide the two sectors, mostly they have left it up to students themselves to figure out how to accomplish the leap from high school to college and on to a certificate or degree.

The previous reports in this series, *Ready or Not: It's Time to Rethink the 12th Grade*, have made the case that if secondary and postsecondary education were to find ways to align grade 12 more closely to the first year of college, then many more students—particularly those from low-income backgrounds and other underserved communities—would be likely to succeed in college. As Joel Vargas and Andrea

students, it is in fact a major life transition. Going to college requires them to take risks that are not just academic and financial but

Venezia (2015) argue, the two sectors should acknowledge that they have a shared responsibility to support students as they move through this “transition zone.” In addition, they should make it a priority to collaborate in a few key areas in particular: co-design a set of courses, experiences, and support services that connect high school and college; co-deliver them as much as possible; and co-validate the content and skills to be learned over these two years (see *box*).

One promising area for collaboration, which Michael Grady explores in his report (2016) for the series, is for secondary and postsecondary education to share the wealth of data that each sector collects, in order to generate richer information about students' academic, financial, and individual needs. In her contribution to the series, Elisabeth Barnett (2016) points to a number of specific milestones that signal students' readiness for college, and which can help them build “momentum” toward postsecondary enrollment and success. They include, for example, earning six or more college credits while in high school, completing one or more college applications, and compiling a good attendance record.

Guiding Principles for Secondary-Postsecondary Partnerships That Increase College Success

Co-Design

Together deciding on and designing courses, curricular pathways, and support systems—as well as professional development opportunities and data platforms—that impact what and how students learn.

Co-Delivery

Sharing and coordinating faculty and staff, facilities, and other resources to carry out the co-designed learning experiences and supports.

Co-Validation

Accepting agreed-upon assessments, successful completion of performance tasks and experiences, and other indicators of learning as evidence of proficiency—including for placement in credit-bearing, college-level courses.

In the present paper, the final installment in this series, we take a closer look at the noncognitive dimension of college readiness, focusing on the critical need for students in grades 9 through 12 to become independent, self-directed learners and to build strong identities as future college students. Specifically, we argue that high schools—with input and support from higher education—should make it a priority to give students early experiences in college-like settings or, better yet, on actual college campuses.

This paper is organized into two main sections. First, we examine a pair of reasons, related to noncognitive abilities, why students often struggle in the transition to college. Second, we draw on research into adolescent development to describe how high schools can foster the development of noncognitive factors and the role of higher education in supporting students to further develop these skills once they arrive at college.

What Are Noncognitive Factors?

There is no common definition of “noncognitive factors,” nor an agreed-upon list of these abilities.

In the 2012 report *Teaching Adolescents to Become Learners*, authors Jenny Nagaoka, Camille Farrington, and their colleagues note that “noncognitive factors” are “skills, behaviors, strategies, beliefs, [and] attitudes” that matter for school performance, but are not core academic skills.

This paper focuses on two specific noncognitive factors that research shows contribute to college readiness:

1. Becoming an independent, self-directed learner
2. Building an identity as a college student

Other examples of noncognitive factors noted in this paper are the abilities to:

- > Regulate one’s behavior
- > Manage a complex schedule and workload
- > Adapt to new social environments
- > Navigate the norms and expectations of college life
- > Set realistic goals
- > Advocate for oneself
- > Persevere in the face of challenges
- > Believe that hard work will pay off

DEFINING THE PROBLEM: WHY DO STUDENTS STRUGGLE IN THE TRANSITION FROM HIGH SCHOOL TO COLLEGE?

As the value of postsecondary certificates and degrees has skyrocketed, so too have researchers ramped up their efforts to identify the factors that cause students to struggle, or lead them to succeed, in higher education. Compared to what was known about college readiness just a decade ago, the current knowledge base is far more sophisticated, showing that “readiness” means a lot more than just academic preparation.

For example, in his well-known model of college readiness, the researcher David Conley (2014) offers a four-part framework, including the need for students to develop key content knowledge, cognitive strategies, learning skills and techniques, and knowledge about the transition to college. Similarly, another influential framework, the College Readiness Indicator System, identifies three areas of college readiness: academic preparation, academic tenacity, and college knowledge (Borsato, Nagaoka, & Foley 2013). Both of these models highlight important noncognitive factors—such as time management, perseverance, and goal setting—that facilitate students’ learning of academic content and strategies and their college planning process.

Further, to the extent that researchers have focused specifically on students' decisions to leave college, a key variable appears to be individuals' personal and social integration into the college environment (Tinto 1993; Braxton 2000). Thus, in addition to having academic, institutional, and cultural dimensions, the struggle to make a successful transition has a psychological dimension as well, which—once again—highlights the importance of certain noncognitive factors.

In this section, we review the current state of the research into each of these areas, with special attention to 12th graders' sense of agency and their identity as capable students.

ACADEMIC PREPARATION IS NOT ENOUGH

The main thrust of recent policy efforts in this area has been to boost academic achievement by creating more rigorous high school graduation requirements, increasing participation in advanced coursework such as Advanced Placement and International Baccalaureate, and implementing tougher standards, standardized tests, and accountability systems. This approach suggests that college readiness is contingent on whether students master content knowledge and academic skills through the courses they take and the curriculum they are taught.

There is ample evidence to suggest that if students enter college with weak skills in math, writing, and especially reading, they will have a very difficult time making progress toward a degree (Adelman 1999 & 2006; Ferguson 2006). However, there is little to no empirical evidence to suggest that efforts to ramp up high school standards and course-taking requirements will, on their own, lead to better performance in college (Allensworth, Nomi, Montgomery, & Lee 2008; Klopfenstein & Thomas 2009; Lee & Ready 2009). While some researchers have found an association between high school course-taking patterns and later college outcomes (e.g., Adelman 2006), they have relied on data sets that do not include other variables—such as student motivation or the quality of the teachers who taught those courses—that could also bear upon the given outcomes.

Nor is there evidence to suggest that students' performance on standardized tests is the best predictor of college performance. For example, students' level of engagement in their high school classes (as measured by grades) better predicts their college outcomes (Bowen, Chingos, and McPherson 2009; Geiser & Santelices 2007; Roderick, Nagaoka & Allensworth 2006).

In turn, the predictive value of high school grades calls attention to noncognitive factors, since grades reflect many things other than academic knowledge and skills alone. For example, they often depend on whether students attend class regularly, complete their homework, actively participate in discussions, and perform well on assignments and tests. That is, grades have much to do with student behavior, motivation, engagement in learning, and the noncognitive factors that support these things. Further, these factors tend to serve students well when they get to college, regardless of their level of content knowledge.

COLLEGE KNOWLEDGE IS NOT ENOUGH

It is one thing for 11th and 12th graders to say that they intend to go to college, but it is something else entirely to make concrete plans to do so, and then to follow through on the long and complex process that leads to admissions, enrollment, and a successful transition to college. For example, students must learn about the many different kinds of colleges that exist, learn about the specific colleges they might want to attend, gather their academic records, write personal essays, ask for references, complete their applications, learn about and obtain financial aid, select a school to attend, choose an appropriate course of study, pick individual classes, find an advisor, and so on. Each of these steps can present a significant hurdle. And for first-generation college students especially, the whole process can seem mysterious and daunting, not to mention expensive and time consuming (Turner & Patrick 2004; Alon & Tienda 2005; Pallais & Turner 2006).

In order to get through all of these steps, students require not just literacy skills, knowledge about the college world, and an understanding of the application and enrollment process but also a number of important noncognitive factors. For example, they will need to be able to manage their time and regulate their behavior effectively, balancing these tasks with schoolwork and other responsibilities, such as jobs and family obligations.

Research suggests that most students also struggle to manage their own anxieties about their ability to

College students must take a much more active role than high school students in deciding what to study, when, and why.

fit in at college and adapt to its institutional norms and culture (Bean & Eaton 2000). Whereas the typical American high school is a self-contained and

highly structured environment, colleges tend to be diverse, complex, and bureaucratic organizations, which students are expected to navigate largely on their own, without much direction or support. To succeed, they will have to take on a much more active role in deciding what to study, when, and why, as well as to pick up new ways of talking and behaving in class, and advocating for themselves in college offices and lecture halls. For many students, this will also be their first time leaving home, interacting with people from different backgrounds and cultures, and building a social network from scratch.

Likewise, the research literature about student departure from college often focuses on the extent to which students are involved with campus life, both academically and socially (Astin 1984; Tinto 1975 & 1993). And for those whose personal and cultural identities don't seem to match the normative standards of the campus, it can be especially difficult to feel integrated into college life at all.

TOWARD AN IDENTITY AS A COLLEGE STUDENT

For many students, grade 12 and the subsequent transition to college present not just a challenge but also an unprecedented opportunity to “reset” their identities and decide on new ways in which to present

themselves to peers, family members, and the faculty and staff of their institutions.

The transition to college presents an unprecedented opportunity for young people to “reset” their identities.

Developmentally, as they enter late adolescence, they become likely to form an independent sense of who they are and who they want to become. Their higher level of cognitive functioning gives them greater capacity to identify and reflect on what they value about themselves, their peers and family members, and the world writ large (Steinberg & Morris 2001). They are able to set their own goals and invest in their learning experiences in new ways (Halpern, Heckman, & Larson 2013), and they can begin to envision themselves as college students.

The precise nature of the challenges students will face as they enter college cannot be fully anticipated in grade 12. But what practitioners who work with 12th graders can do is arm them with the competencies and mindsets that will help them build the sense of agency needed to carve their own path through college. If they can develop a clear sense of their own academic potential, they will be well positioned to enter the unfamiliar terrain of college. If they internalize a college-going identity—viewing themselves as someone who belongs in college socially and academically—and if they believe that their success will depend on their own ability, choices, and actions rather than external force, then they will be well equipped to make the transition from high school to higher education.

In the next section, we discuss how providing opportunities to experience and learn about the academic and social environments of college can promote the development of noncognitive factors and students' identity as future college students.

OPPORTUNITIES TO DEVELOP NONCOGNITIVE FACTORS

Even as the recognition of the importance of paying attention to noncognitive factors in developing college readiness grows, the core question remains: what can high schools and colleges do to help students develop these skills?

In recent decades, we've learned much about how people learn. Technological advances have enabled us to see the human brain at work and understand that learning is not an injection of knowledge or a trained behavioral response to stimuli. Rather, learning operates at a neurological level, with changes in the complex neural interconnections in the brain, which are perceived as changes in understanding. Reinforcing a theory that dates back to John Dewey, cognitive science now suggests that learning and development are fundamentally experiential processes (Bransford, Brown, & Cocking 2000; Ericsson & Charness 1994; Kolb 1984; Lally, Van Jaarsveld, Potts, & Wardle 2010).

We have learned that classroom learning tends to be much more powerful when students are not just exposed to new information but also given opportunities to process and make meaning of it, both intellectually and personally (Nagaoka, Farrington, Ehrlich, & Heath, 2015). And we have learned that cognitive and noncognitive factors are inextricably connected, with new knowledge always interacting with a

How to Build Noncognitive Factors for College Success

Models with the Most Evidence of Success:

- > Dual enrollment
- > Early college

Promising Practices:

- > Recent graduates coach high school seniors through the college application process
- > Introducing high school students to college, community, and cultural resources
- > “Capstone” research and writing courses for high school seniors, linked with guidance through the college application process
- > Structured internships and apprenticeships
- > Extracurricular activities and “expanded learning opportunities” that engage students in a collective endeavor

combination of existing knowledge, beliefs, behaviors, emotions, motivation, and the ability to manage and reflect on new information and experiences.

But in most schools, grade 12 does not provide many opportunities for students to have rich intellectual experiences or to reflect on those experiences and their contributions to the formation of a mature identity—a sense of who one is, who one is not, and who one might become. Rather, grade 12 instruction typically emphasizes the learning of academic knowledge and skills, with much less attention given to students’ engagement in learning or their noncognitive development.

What sorts of experiences can help 12th graders to build the kinds of noncognitive factors needed to make a successful transition to college, such as a strong sense of agency and independence, the ability to advocate for themselves, the ability to navigate the norms and expectations of college life, and the capacity to manage their own schedules and workloads? In the broadest sense, what 12th graders

need most are experiences that are in fact college-like—or, even better, that actually put them on a college campus, allowing them to experience firsthand what it is like to be a college student and do college-level coursework.

MODELS WITH THE MOST EVIDENCE OF SUCCESS

Dual enrollment and early college are probably the best-known exemplars of this approach and, to date, they have the greatest evidence of success.

Dual enrollment

“Dual enrollment” refers not to a single program or institutional model but to the opportunity for students to take college courses—for college credit—while still enrolled in high school. These may include taking a class taught by visiting college faculty, taking an online college class, or taking a class on a nearby college campus. Today, dual enrollment is growing increasingly popular across much of the country, in part because—like Advanced Placement courses—it allows students to start college having already accumulated course credit, which tends to mean a shorter and less expensive path to a degree. And for college aspirants from low-income backgrounds especially, dual enrollment has been found to have strong benefits, leading to higher college enrollment and completion rates (Karp & Hughes 2008; An 2012; Karp et al. 2007).

To the extent that it promotes noncognitive development, however, the power of dual enrollment arises mainly from the exposure it gives young people to the norms, expectations, and responsibilities of college participation. At a time when students are just beginning to consider and/or plan for life after high school, it allows them to demystify higher education, showing them that it’s not such a stretch to identify themselves as “college material.”

Taking college courses in high school helps to demystify higher education, showing young people they can be “college material.”

Early college

“Early college” refers to a more specific institutional model, with dual enrollment serving as one of its core strategies. Popularized in the early 2000s, early college high schools—which now number in the hundreds—depend upon a formal partnership between the school district and a nearby college, allowing students to take courses tuition free. It also requires a commitment by both institutions to align the secondary and postsecondary curricula and to provide students with personalized guidance and support to help them choose a course of study, adjust to college demands, and so on. And, in many cases, the explicit goal of the partnership is to enable students to complete a two-year associate’s degree at roughly the same time they receive their high school diploma. Like broader dual enrollment, early college models are designed to give students a gradual and positive introduction to higher education, so that they avoid the sudden shock that many students experience when they arrive on campus unsure of what to do, how to behave, or whether they even belong there. And, to date, the evidence strongly suggests that this approach is working: compared with similar students who did not attend such programs, early college students—particularly women, students of color, and students from low-income backgrounds—have had much greater success in completing both high school and college degrees (Berger & Cole 2009; Garet et al. 2014).

PROMISING PROGRAMS AND PRACTICES

In addition to dual enrollment and early college high schools, a number of other programs and practices are also quite promising—if not yet validated by empirical studies. They provide young people with precisely the sorts of experiences that are highlighted by the research into the development of noncognitive factors.

Recent graduates coach high school seniors through the college application process

For example, these include programs designed to introduce high school students—particularly first-generation college aspirants—to college institutions and resources that they may not be familiar with. Since the 1990s, for example, College Summit has set up peer networks among high school students and recent graduates to provide coaching on choosing a college and completing applications, as well as to go on visits to local campuses.³

Introducing high school students to college, community, and cultural resources

Another intriguing model is Chicago’s Embarc program, which started as a classroom project but has expanded to nine schools.⁴ Embarc arranges “journeys” for high school students, taking them out of their home neighborhoods to visit parts of Chicago that many have never been to, including college campuses, cultural institutions, and local landmarks. What separates these from the typical school field trip is that these are highly structured activities, guiding students through a process of reflecting on their beliefs about citizenship and their own participation in the wider life of the city. There are also many programs that assist high school youth to search for and apply to colleges. With an expansion of focus, this search and selection process can be another means for helping students reflect on who they are, what is important to them, and to build a college-going identity.

“Capstone” 12th-grade research and writing courses, paired with college application guidance

Also promising are 12th-grade capstone courses that require independent research and intensive writing projects along the lines of what would be assigned in a first-year college composition course. So far, little is known about the effectiveness of these courses and, to the degree that they have been studied, they show mixed results on measures of college readiness

and success in targeted subject areas (Barnett et al. 2016). Notably, however, one program that has shown quite positive results on college enrollment and academic proficiency, the LINCT to Success program (formerly At Home in College) sponsored by the City University of New York, is designed to support noncognitive development (Grady 2016).⁵ It includes both a 12th-grade English transition course built around content from sociology and psychology, as well as a focus on preparing students to navigate the college transition process, with guidance from recent graduates from their high schools who are currently attending a CUNY college.

Structured internships and apprenticeships

Structured internships and apprenticeships can also engage students in the kinds of experiences required to succeed in college, such as managing their own schedules and presenting themselves

Research shows that internship participants graduate high school and persist in college at higher rates.

appropriately in adult settings. For example, the After School Matters program in Chicago provides high school students with paid internships with

local organizations, conditioned on their school attendance.⁶ Research has found that participants have higher rates of high school graduation and lower rates of failure in courses (George et al. 2007). Further, the program reports that graduates enroll and persist in college at higher rates than other graduates of Chicago Public Schools.

“Expanded learning opportunities” that engage students in a collective endeavor

Finally, extracurricular activities and other “expanded learning opportunities” outside of school offer fertile ground for noncognitive development, particularly when they encourage young people to become reliable, engaged participants in a collective endeavor. In a 2009 review of the research in this field, the American Youth Policy Forum was able to identify 16 studies that found such programs to have positive effects on academic achievement, college-

going, and health outcomes (Bowles and Brand 2009). Further, they found that the most successful programs shared a number of key traits (p. 8), creating environments in which:

- > *“Youth feel a sense of independence as part of their participation in the program, particularly financial independence through earning wages or a stipend.”*
- > *“Youth voices are listened to and incorporated into decision making.”*
- > *“Youth learn skills that have a clear connection to job training and employment.”*
- > *“Youth have opportunities to interact with community and business leaders.”*
- > *“Schools and principals are active partners.”*
- > *“Participation includes receiving assistance in navigating the post-high school experience.”*
- > *“Youth are introduced to the world outside their local neighborhood (Hall, Israel, & Shortt 2004).”*

HIGHER EDUCATION’S ROLE

Thus far, we have focused on what high schools can do to help students develop the noncognitive factors they will need to make a smooth and successful transition to college. But let’s not forget that higher education also has a responsibility—many would argue an even greater responsibility—to provide the kinds of experiences that enable new students to succeed.

Twenty-five years ago, Vincent Tinto (1993) argued persuasively that students’ success in postsecondary education is highly dependent on the institutional characteristics of the college they attend, including the extent to which that institution provides formal and informal supports to incorporate students into the intellectual and social life of the campus. Tinto is particularly critical of colleges and universities that admit students and subsequently show little or no institutional commitment to their education and welfare, leaving them to sink or swim on their own.

Since that time, the higher education sector has made some significant efforts to meet its responsibility to help students make successful transitions. On many campuses, for example, new

students have opportunities to enroll in summer “bridge-to-college” programs and first-year seminars, as well as to visit writing centers and take advantage of drop-in tutoring services. Students with dyslexia or other learning disabilities can access specialized supports.

Recent research by MDRC found that the practice of putting first-year community college students into “learning communities”—cohorts of students taking common courses to build their connections to peers and faculty and integrate them into the college environment—resulted in greater progress through college and completion of college degrees (Weiss et al. 2015). Likewise, the Center for Community College Student Engagement found a positive relationship between many practices designed to acclimate new students to the college environment and expectations—including learning communities, orientation programs, and college success courses—and indicators of student engagement (Center for Community College Student Engagement 2013). However, while such evidence is promising, there is still the need for more information about how prevalent these services are, how many students they serve, the quality of the services they provide, and what impact they have on student retention and graduation.

Moreover, we have only limited research findings describing the possible effects that institutional type and context may have on students’ transitions. Half a century ago, Feldman and Newcombe (1969) pointed to differences in college culture and norms as important factors explaining variations in student outcomes. More recently, researchers such as Terenzini and Reason (2005) and Berger and Milem (2000) have identified specific institutional factors that seem to influence student success, including faculty and peer culture, academic policies and emphases, patterns of bureaucracy and collegiality, and institutional mission and priorities. And comprehensive reviews of literature on the impact of college on students have found that such institutional characteristics have significant effects on virtually every measure of college success (Mayhew et al. 2016; Pascarella & Terenzini 1991 & 2005).

This suggests that students will face different obstacles and challenges depending on the college they choose to attend, requiring them to draw upon different noncognitive strengths. For a broad example, a student may have to call on her academic tenacity and grit in a different way at a highly selective college where she takes small seminar-style classes than she would at a large university, where most first-year classes are large lecture classes and many students need extensive remediation. Developing a sense of belonging will take different skills at a large public flagship university where most first-year students live in residence halls than it will at a commuter college. Finding external relevance in course material may be easier in a vocationally focused technical college than it is at a liberal arts college with a Great Books curriculum. And at a school where it is seen as “normal” to struggle with coursework, it may be less essential for a student to have a strong academic growth mindset than at a college where that struggle is typically hidden. Successful transition efforts will prepare students not for these specific situations, but rather help them develop the tools to navigate the wide range of potential contexts and experiences that may greet them when they begin college.

CONCLUSION

The responsibility to address the role of noncognitive factors in college readiness ought to be viewed as the joint responsibility of high schools and colleges. The development of the noncognitive factors needed for a successful transition cannot be done in isolation. Rather, it will require a co-designed, co-delivered, and co-validated approach. High schools have a responsibility to position young people so that they can make a successful transition, and colleges have a responsibility to ensure that the campus climate is welcoming to young people who are still very much in the process of developing important noncognitive factors.

The responsibility to address the role of noncognitive factors in college readiness should be viewed as the joint responsibility of high schools and colleges.

Colleges are complex organizations that students must navigate in ways that are novel to them. In addition to academic challenges, most students face new social realities and new levels of freedom. They also must find ways to navigate the bureaucracy of their colleges and learn ways to address issues with course registration, financial aid, housing difficulties, and myriad other obstacles to learning and success. Any one of these challenges can have serious consequences. Understanding the ways that students can develop the agency to navigate the college context, and the ways that using noncognitive factors do and do not contribute to success, will allow high schools to start developing these skills in their 12th-grade students and colleges to create environments and processes that are accessible to all, not simply those who enter the institution with the “right” combination of noncognitive factors.

Colleges must also take an active role in the continuing development of students’ noncognitive factors over the course of the undergraduate years, both to improve students’ success on campus and to ready them for the rest of their lives. The goal of college must be not only to compile a body of academic content knowledge—though that is important—but also to develop the skills and aptitudes that will help graduates succeed in an ever-changing world. Like high schools, colleges cannot predict precisely which kinds of knowledge and skills their graduates will need, but they can provide them with a strong foundation on which to build.

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ENDNOTES

- ¹ Over the past decade, college completion rates have shown no improvement at all (and have even declined slightly among some student populations). Currently, among students enrolled full time in four-year postsecondary institutions, only 54 percent earn a diploma within six years; for full-time students at two-year institutions, the six-year graduation rate stands at just under 31 percent. For part-time students, the rates tend to be even lower (U.S. Department of Education, National Center for Education Statistics, Integrated Postsecondary Education Data System).
- ² “Noncognitive” is an unfortunate term, in that it appears to reinforce false dichotomies between “hard” and “soft skills,” reason and emotion, thinking and feeling, and so on. (In fact, it is difficult to find examples of so-called “noncognitive” factors that lack a cognitive element.) Thus, researchers have suggested a number of alternatives, such as to refer to them as “metacognitive” factors or “interpersonal and intrapersonal” skills. In spite of its shortcomings, however, “noncognitive” remains the most widely used term, and so we have chosen to rely on it in this paper.
- ³ See: <https://www.collegesummit.org/>
- ⁴ See: <http://embarcchicago.org/>
- ⁵ See: <http://lincttosuccess.cuny.edu/about-us/our-model>
- ⁶ See: <http://www.afterschoolmatters.org/>



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