NGLC MyWays

5 Decisions in Navigating the Work/Learn Landscape

Report 3 of the MyWays Student Success Series

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for Next Generation Learning Challenges

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The MyWays™ Student Success Series

All reports in the series are available for download at myways.nextgenlearning.org/report.

Visual Summary

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Summarizes specific real-world realities and conditions confronting today's young people.

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About this report

Report 3, ***5 Decisions in Navigating the Work/Learn Landscape***, examines how an age of accelerations is transforming postsecondary education, with a tripling in the number of career fields, a doubling in colleges and universities, and a five-fold increase in postsecondary programs of study. Costs and student debt are skyrocketing. Most students are working learners and most need to build social capital to gird their work/learn journey.

Report 3 is the third of five reports in Part A of the MyWays Student Success Series. **Part A, "Adolescence in an Age of Accelerations,"** analyzes the real-world changes and conditions that are most acutely impacting young people and outlines key developmental tasks of the adolescent years.

The ***MyWays Student Success Series*** examines the through-line of four essential questions for next generation learning and provides research and practice-based support to help school designers and educators to answer these questions. The series consists of 12 reports organized into three parts, plus a Visual Summary and Introduction and Overview.

The **primary researchers and authors** of the *MyWays Student Success Series* are Dave Lash, Principal at Dave Lash & Company, and Grace Belfiore, D.Phil., Principal Consultant at Belfiore Education Consulting.

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REPORT 3

5 Decisions in Navigating the Work/Learn Landscape

> *Whether college pays off **on average** is not that comforting to someone about to roll the dice with the family nest egg on an investment that is hard to assess, that many things can go wrong with, and that even in the best of circumstances may not really pay off for a decade or more. [emphasis added]*
>
> —Peter Cappelli, *Will College Pay Off?*

Just as technological and economic accelerations have created new challenges for young people in the labor market, significant new challenges are also arising in the rapidly evolving *work/learn landscape* —the challenging mix of postsecondary education, training, and early work experience that every high school student confronts after graduating (or leaving) high school. As in the previous report, we focus on five key challenges — in this case, the "5 Decisions." In truth, each of these decisions is part of a mega-decision about how to embark on the wayfinding journey after high school and use those follow-on years to acquire the foundations for a successful career and life. The 5 Decisions are as follows:

Key reading

Education Pays 2016 from the College Board

Will College Pay Off? by Peter Cappelli

Learning While Earning
from Georgetown University Center on Education and the Workforce

When Working Works from Ready by 21

The Start-up of You
by Reid Hoffman & Ben Casnocha

1. **Plotting a path to entry and advantage:** What path will take to enter the work/learn landscape and pursue my longer-term goals? How will I refine that path over time to hone my competitive advantage?
2. **Calibrating the work/learn mix:** Given my interests, academic record, and financial means, what are my working and learning options? What is the optimal work/learn mix initially, and over time?
3. **Vetting postsecondary providers:** Which postsecondary education and training providers offer the highest quality experiences, a high return on my investment (financial and otherwise), and promising springboards to new opportunities?
4. **Figuring finances and risk:** How can I finance my education and training, avoid crippling debt, and mitigate risk?
5. **Cultivating social capital:** How can I cultivate my social capital during these formative years, especially if I lack family connections that can open doors?

As in the earlier Report 2, *5 Roadblocks to Bootstrapping a Career*, this current report summarizes our research as it relates to each of these Decisions individually and then discusses key takeaways for next generation educators. Given the importance of more closely aligning K-12 and postsecondary education

for student success, we produced a separate compilation of our postsecondary research, *Understanding the Postsecondary Years: A Data Digest of Today's Evolving Work/Learn Landscape*, located, for those who want to go deeper, on the Reports page of the MyWays website.

Before looking at the 5 Decisions individually, it is valuable to first consider the postsecondary experience in its totality. We do this in the next three sections:

- **Leaving high school in an age of accelerations**
  Increasing uncertainty and risk. Growing diversity of postsecondary offerings. The wayfinding decade. The role of the MyWays competencies. A closer look at the opportunity engine.
- **Work/learn readiness and the 5 Decisions**
  The 5 Decisions as a general model. The center of the 5-5-5 Realities. Impacts on the least advantaged young people.
- **Getting smart about the low rate of academic preparedness**
  Three levels of academic preparedness. The demographics of preparedness. The road ahead for each group.

Leaving high school in an age of accelerations

With a troublesome labor market, escalating college costs, and general uncertainty about future opportunity, most young people find that figuring out what to do after high school borders on being a *wicked problem* — that is, a problem that is novel and complex, with high uncertainty and risk. One indication of their quandary: despite a rising college enrollment rate, the Organisation for Economic Co-operation and Development (OECD) reports that "the United States now has the highest college dropout rate in the industrialized world."[1] *Pathways to Prosperity* summarizes our poor throughput results:

> ***The United States now has the highest college dropout rate in the industrialized world.***
>
> Organisation for Economic Cooperation and Development

> Our fundamental problem is that our system has not evolved to serve young adults in this radically different world. Behaving as though four-year college is the only acceptable route to success clearly still works well for many young adults, especially students fortunate enough to attend highly selective colleges and universities. It also works well for affluent students, who can often draw on family and social connections to find their way in the adult world. But it clearly does not work well for many, especially young men. In recent years, a yawning gender gap has opened up in American higher education. Men now account for just 43 percent of enrollment in our nation's colleges, and earn only 43 percent of bachelor's degrees. Not surprisingly, women also account for 60 percent of the nation's graduate students. Similarly, among the low-income and young people of color who will make up an increasing portion of the workforce of the future, this single route does not work well either. Many of these students are frustrated by an education they often find irrelevant and removed from the world of work. And given the barriers — including weak or nonexistent career counseling, rising college costs, inadequate

> financial aid, and the frequent need to balance their courses with jobs that are often totally disconnected from their programs of study — it is a minor miracle that so many still manage to complete a degree.[2]

Historically, society has placed most of the blame for these poor outcomes on the lack of college readiness, on poverty and family dysfunction, or on a perceived lack of drive and discipline within the students themselves. Our research suggests that what we call the 5-5-5 Realities play an enormous role: the 5 Roadblocks in the labor market that make it difficult to bootstrap a career (see Report 2), the 5 Decisions required to navigate the postsecondary work/learn landscape (discussed in this report), and the 5 Essentials in building social capital made increasingly important by society's growing economic and social polarization (see Report 4). In each case, conditions for high schoolers are dramatically more complex due to the persistent accelerations that Thomas Friedman describes in *Thank You for Being Late* — accelerations in technological change, globalization, and climate and the environment.

To help explain what is driving "the new normal" of "working learners" at the postsecondary level, *Working While Learning,* a study by the Georgetown University Center on Education and the Workforce, highlights "the growing diversity among postsecondary programs of study, credentials, and modes of delivery that are aligned with an increasingly complex set of career pathways": [3]

- Between 1950 and 2010, the number of career fields identified by the US Census Bureau increased from 270 to 840.
- From 1950 to 2014, the number of colleges and universities grew from 1,850 to 4,720.
- Between 1985 and 2010, the number of programs of study offered by postsecondary education and training institutions grew from 410 to 2,260.

Students are also experiencing shifts in instruction via blended learning, distance learning, personalized learning, and more hands-on learning. New competency-based programs are being planned at more than 500 colleges and universities.[4] There is a vocationalization movement in higher education. The proliferation of credentials, certificates, badges, boot camps, subscription learning, MOOCs, and noncredit programs is exploding and likely to be one of the most significant industry trends over the next decade. The for-profit sector is making major inroads and now accounts for 17% of four-year enrollment and 50% of skill credentials.[5] Meanwhile, students are hit with ever-rising costs and student loans have now become the largest share of consumer debt. The bottom line: lots of potential opportunity for students… *if* they can sort out the options and find programs and pathways that fit. (See Decision 1 below.)

As *Working While Learning* notes, "[there are] growing differences in cost and value among an expanding array of programs," often leaving students, workers, and employers equally confused. However, it is the student/worker (the consumer) who bares the bulk of the risk. Students are trying to make prudent investments to advance their career prospects, yet their choices often lack transparency and few reliable resources exist to guide them. Meanwhile, students are working of necessity — to support themselves and their education economically, and to garner work experience and contacts to further their career prospects. This dizzying dual commitment to learning and working needs a name and, consistent with the notion of a

student's arduous journey from high school to the workplace, we are calling the journey the *wayfinding decade* and the wild (and getting wilder) environment of postsecondary learning and early employment, the *work/learn landscape*. About this journey, *Learning While Earning* makes this profound point:

> Many young adults are taking longer to launch their careers: the shift from a high school-centered economy to a postsecondary-centered economy has added **a new phase to the lifecycle**. [emphasis added][6]

Cappelli emphasizes that "a career is a marathon, not a sprint."[7] Either way, it is a race, and good preparation and training are essential.

In response to this confusion, chaos, and opportunity, a chorus of voices support the idea that young people need to be more nimble, entrepreneurial, innovative, and improvisational. As Thomas Friedman warns them, "More will be on you."[8] Reid Hoffman and Ben Casnocha, in *The Start-up of You*, draw a tight parallel between starting a career today and starting a business:

> Why the *start-up* of you? When you start a company, you make decisions in an information-poor, time-compressed, resource-constrained environment. There are no guarantees or safety nets, so you take on a certain amount of risk.[9]

Contrary to the common image of entrepreneurs as risk-takers, successful entrepreneurs are exceedingly skilled at mitigating risk by making small bets that test hunches ("affordable loss"), leveraging the expertise and resources of others through well-cultivated social networks, investing in their competitive advantage, and adapting to market changes ("opportunistic adaptation").[10] Young people need the competencies to be entrepreneurial and improvisational, but also resilient and secure. No one solution meets this need; every student has his or her own set of competencies, assets, contexts, and aspirations.

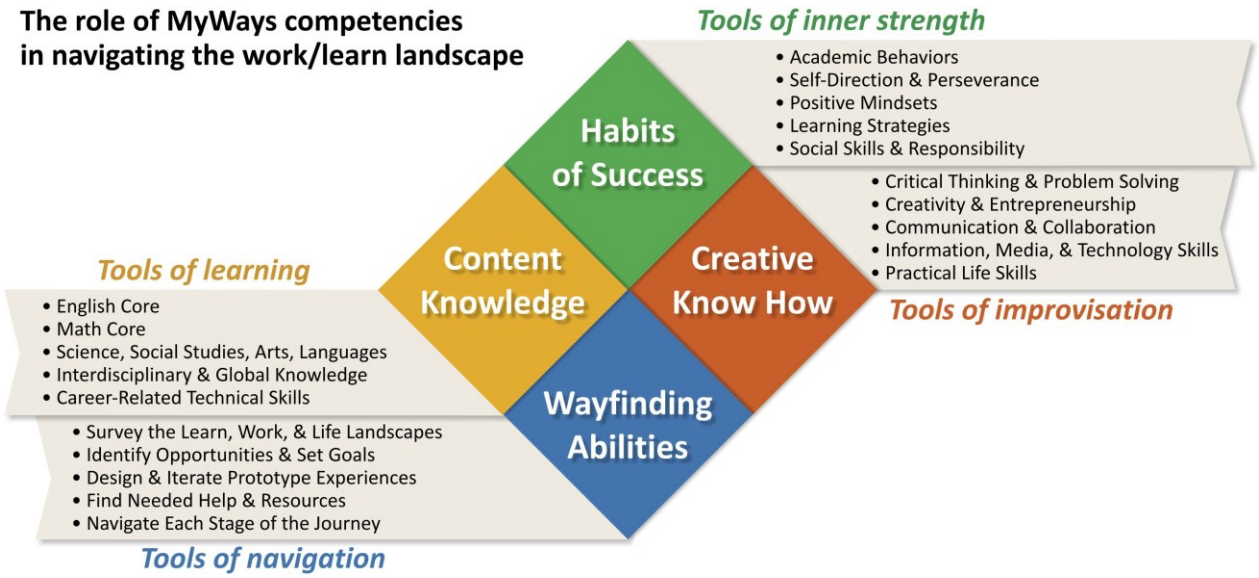
The role of MyWays competencies in the work/learn landscape

There are two ways the MyWays competencies can help students navigate the work/learn landscape. First, the MyWays domains provide the four kinds of competencies that students require to explore and problem solve as they pursue postsecondary education and their first employment opportunities. Second, the competencies help students invest in their own development and the "power" of their opportunity engines.

We begin by reintroducing the MyWays Student Success Framework and showing how it directly applies to the challenges of navigating the work/learn landscape.

Establishing a career has three stages: arrive, survive, and thrive. *Arrive* is like the first foothold in the work/learn landscape: the first meaningful job, initial enrollment in a postsecondary credential program, or (commonly these days) a combination of the two. *Survive* is the second stage where young people gain their bearings and begin to "get the job done" satisfactorily in academics or in the workplace. *Thrive* is the third stage, where they build on a foundation and leverage it to be more resilient, secure, and effective while pursuing new and better opportunities.

Through this three-stage process, a person's competencies are like multi-purpose tools. At the *arrive* stage, Wayfinding Abilities (the "tools of navigation") take the lead, helping young people evaluate postsecondary options and search for a job. For most affluent students, this effort centers primarily on getting accepted at the "best possible" four-year school and accumulating enriching experiences through work or travel. For all other students, however, the calculus is far more complex. College or work or both? Four-year or two-year? Technical program or liberal arts? Minimal debt or bet the farm? Residence or commute? This calculus is impossible without the Habits of Success competencies (the "tools of inner strength") and Content Knowledge (the "tools of learning") — these tools help young people know themselves, understand the world and workplace, collect and evaluate college and career information, and run the numbers on options. Further: interviewing, seeking information, negotiating, and persuading others regarding college applications, finances, and employment all require Creative Know How (the "tools of improvisation").



At the *survive* stage, Wayfinding Abilities help young people evaluate their situation, juggle competing activities, adjust plans where appropriate, and begin identifying new opportunities. Habits of Success, Content Knowledge, and Creative Know How are now all geared to being consistent, meeting obligations, becoming a better student and worker, and avoiding setbacks. This is the "*conscious incompetence*"[11] stage of becoming an adult when honing the competencies and learning to apply them is the focus.

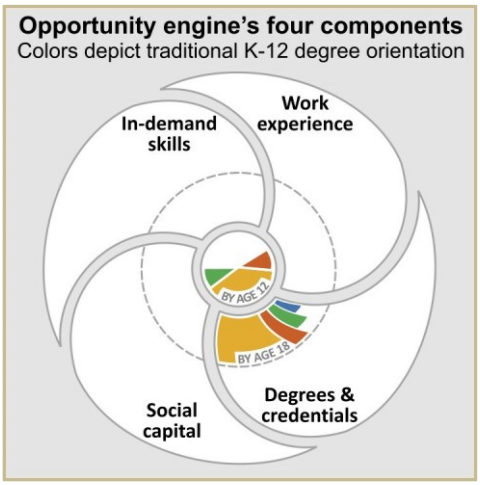
At the *thrive* stage, Wayfinding Abilities shift again, this time toward growth and future opportunities and choices. Habits of Success are deepening as young people assume new responsibilities, manage stress, and begin applying greater self-awareness toward learning, work, and life choices. Content Knowledge and Creative Know How competencies deepen with experience and specialize around career and job responsibilities; this is true for high-, middle-, and low-skill jobs, albeit to varying degrees.

Through each stage, broader, deeper competencies are the fuel powering a young person's opportunity engine. (For a full description of the MyWays Student Success Framework, see the five reports in Part B.)

Building an opportunity engine with the MyWays competencies

Young adults change jobs 6.3 times, on average, between the ages of 18 and 25.[12] If each job builds constructively on the one before with meaningful learning along the way, the odds are good that 6.3 jobs will put a young person on a healthy career path even if the initial job is relatively modest. All too often, however, the progression is horizontal from one low-paying job to another with little career gain. In this case, the personal opportunity engine is not developing and future prospects are bleak.

To review, the *opportunity engine* is a simple, conceptual construct for career development that reflects two important trends in employment. First, today's employers are evaluating *work experience*, *in-demand skills*, and *social capital,* along with *degrees and credentials* for young applicants just as they are for seasoned workers.



Second, for the vast majority of under-30s, a meaningful job in a career of their choosing is now a long, arduous struggle. Many calculations and work/ learn moves may be necessary before "making it." Accordingly, investing and developing one's opportunity engine is now a crucial life skill.

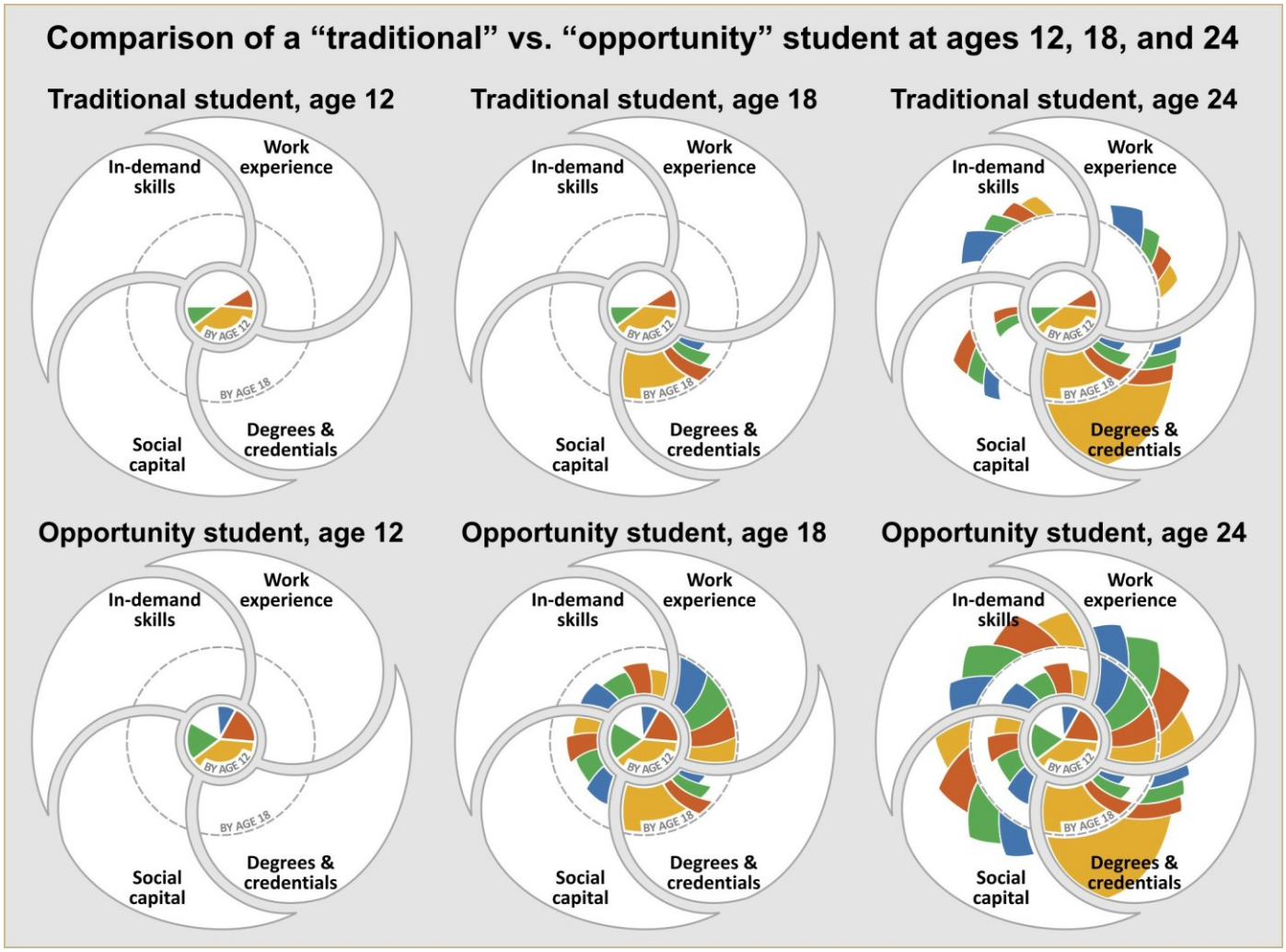
Having briefly sketched out how the MyWays competencies are applied in the *arrive*, *survive*, *thrive* stages of the wayfinding decade — and noting that the competencies are the fuel that powers the engine — questions arise: How and when are those competencies acquired? How can we reimagine high school to equip students with better competence for tackling the complex decisions about what to do after high school, including making, in many cases, what Peter Cappelli calls "the biggest financial decision" (the college investment) that many people will ever make?[13] How can students, colleges, and advocates reimagine the postsecondary experience so that college graduates (and non-graduates) can optimize all four parts of their personal opportunity engines to compete in the labor market? Innovative schools at both the K-12 and postsecondary level are showing the way; we discuss the attainment of competencies much more in Parts B and C. That said, two principles appear paramount:

1. **Competencies build over time, so starting early is vital.** One of David Conley's earliest contributions to the study of college readiness was the application of backmapping: first, by parsing the knowledge and skills that students need in order to be accepted at college and successfully complete college work, and then by creating year-by-year learning experiences that build toward those required competency levels. This same backmapping principle applies to all MyWays competencies as well as to the development of a personal opportunity engine. New opportunities translate with time into sought after skills, greater work experience and social capital, and, in some cases, additional degrees and credentials. The return on investment compounds over time.

2. **There is no substitute for real-world immersion and authentic learning.** As the takeaways in Report 2 note, most of the competencies in the MyWays Student Success Framework require an integration of higher thinking skills and real-world abilities. This principle is continued in the Part B reports as well as Report 11, *Learning Design for Broader, Deeper Competencies*.

Despite many obstacles, many college-age students are aware of these principles, and, accordingly, they strive where possible to gain meaningful authentic learning and work experience, and to enhance their resumes (and personal opportunity engines). Let's consider two approaches. Compare a student pursuing a traditional "bachelor's or bust" strategy with another student pursuing an "opportunity engine" approach. The graphic below provides snapshots of each student's opportunity engine at ages 12, 18, and 24, using the MyWays domain colors to illustrate both the development of the associated domain competencies and measurable progress in the four engine components.

The "traditional" student follows a standard, fairly rigid academic curriculum through age 12, with a focus on developing Content Knowledge competencies. While some related Creative Know How and Habits of Success are acquired along the way, there is very little opportunity for Wayfinding Abilities to grow. With scant authentic learning happening in middle and high school, by age 18, the opportunity engine focus remains on degrees and credentials. In the years between age 18 and 24, the traditional student has, hopefully, earned a degree but is just beginning to make material progress in the other three parts of the engine. Lacking in work experience, in-demand skills, and social capital, many traditional students end up underemployed or in jobs not closely related to their field of study — progressing horizontally for a time from modest job to modest job despite their degree.



The "opportunity" student, in contrast, follows a broader, whole-child, next generation learning curriculum through age 12, developing not only "college bound" Content Knowledge competencies but also strong Habits of Success and Creative Know How, while also gaining some early college/career exposure. By age 18, with much more authentic learning and work-related experience integrated with the academic curriculum, the "opportunity student" is already applying newly acquired competencies to develop all four blades of the opportunity engine. Building on this early foundation, in the years between age 18 and 24, the student is working not only on earning a degree but also on expanding and "banking" work experience, in-demand skills, and social capital connections.

There are as many ways to be an opportunity student as there are students. Some students do it on their own like Jacob (see box), who resolved to earn a degree without taking on debt. Students at the Cesar Chavez Public Charter Schools for Public Policy in Washington, DC, participate in Advocacy Projects at every grade level (middle and high school) that often help develop an area of passion and a balanced opportunity engine at an early age. Other students leverage a wide variety of career pathways programs: career and technical education (CTE), internships, community service, work co-ops, and many other forms of "leaving to learn" that can contribute to an opportunity engine. (See more on these options in the Wider Learning Ecosystem section of Report 11.)

Opportunity students are not only much better positioned for competing in employment, they are also developing *career resilience* through a portfolio of skills, credentials, work experiences, and social capital connections that they can reconfigure and retarget in multiple directions as the labor market shifts and new opportunities appear. In contrast,

What's an Opportunity Student?
The long, successful path of Jacob L.

The sixth of 11 children, Jacob received no tuition assistance from his family. He resolved to try to get through college without taking on debt.

He earned an associate's degree (Liberal Arts) from Northern Virginia Community College in three years while teaching piano independently and doing volunteer youth work with his church.

Over the next six years, Jacob worked toward a bachelor's degree at George Mason University. A working learner throughout this period, his work experiences teaching piano and voice, and directing choral groups, influenced an evolution in his declared field of study:

Initial: English Literature major, with a minor in Theater

Next: English major, with minors in Theater and Music

Next: Dual English and Music major, with a minor in Theater

Final: Music Education major, with a teaching license and minors in English and Theater

During this six-year period, Jacob's course load and work load (work/learn mix) varied, based on course scheduling, work opportunities, and financial needs. In his final year, he took an $8,000 student loan (his only debt throughout these years) to finish in six years instead of seven.

Active throughout the entire nine-year period of teaching and theater/music productions, Jacob cultivated robust social networks with advocates who not only helped guide and influence his education and internships, but also his selection for a coveted music educator and choral director position in the Prince William County Public Schools.

Reflecting on his experience as an opportunity student, Jacob believes that the work/learn synergies were far more valuable to him than the avoidance of debt, although that was also important. The chance to apply what he was learning immediately in his work and volunteer activities made him a much more effective and durable learner. In addition, he was able to turn a general (and largely ill-defined) English Literature major into a Music Education field of study that perfectly matched his emerging sense of self, strengths, and competitive advantage.

many traditional students invest so single-mindedly on earning a degree that they have very low career resilience. And, as we will see later in this report, the number of students with "some college but no degree" is at an epidemic level. Often these students end up in low-paying jobs, no better off than high school graduates with no college, despite being saddled with significant debt. And, because most some-college/no-degree students are from poor and low-income families; they are casualties of the widening opportunity gap.

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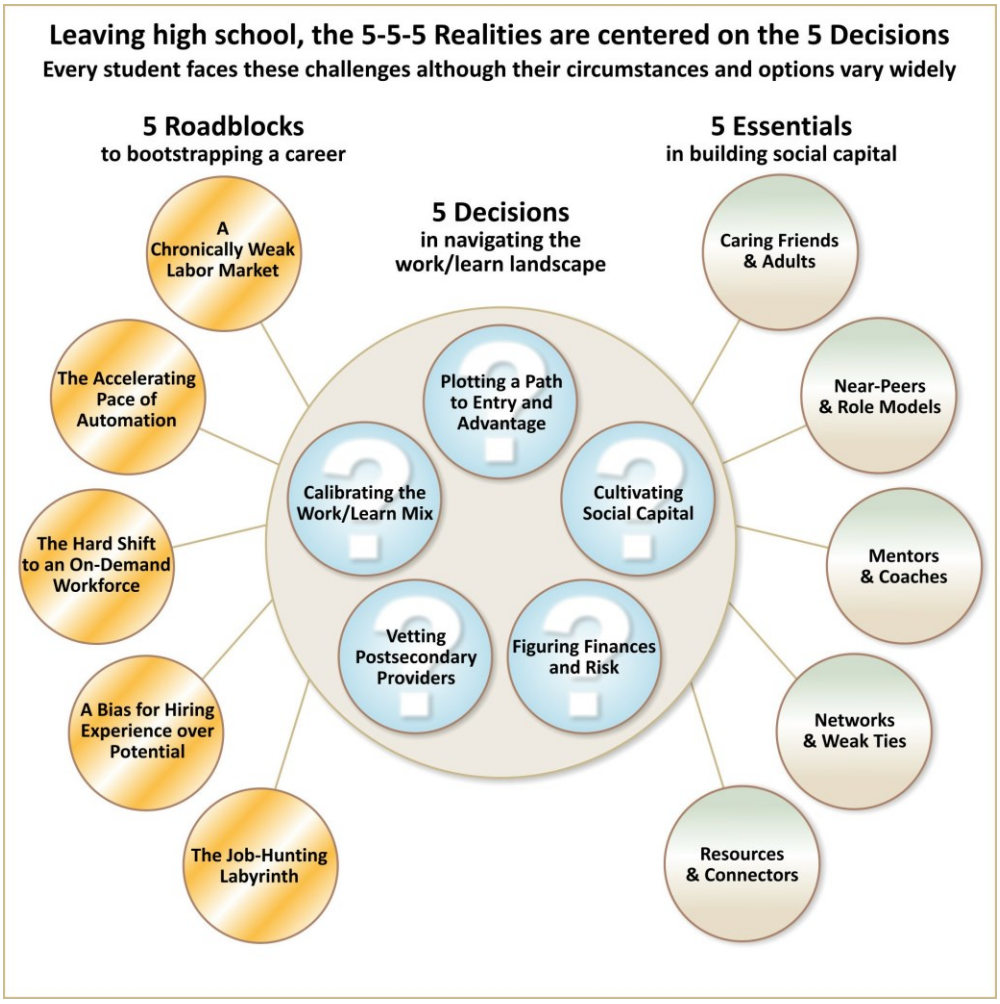
Work/learn readiness and the 5 Decisions

To date, our education system has not adjusted to the new level of work/learn readiness these new dynamics demand (Report 1). As a result, in an era where a postsecondary degree or credential is increasingly important, nearly three-quarters of those from the most advantaged families earn one while only about one-third from the least advantaged families do so.[14]

Later in this report, we look more closely at the 5 Decisions in navigating the work/learn landscape and their relationship to the opportunity gap. While each decision or question applies broadly to every student, the options and opportunities available to individual students reflect not only their personal effort and accomplishments but also their geographic, socioeconomic, and racial circumstances. As students work on the Decisions, the results of those decisions accumulate and compound in their opportunity engines, shaping future opportunities. Academic preparedness remains an important factor today as we explore in the following section, but it is no longer sufficient. Today, every young person requires the capability and agency — across a wide set of competencies — to make well-informed, smart Decisions.

As the graphic on the following page illustrates, the 5 Decisions sit at the center of the 5-5-5 Realities described in Reports 2–4. Like the 5 Decisions, the 5 Roadblocks to bootstrapping a career and the 5 Essentials in building social capital apply to all young people from those who have not completed their high school requirements to high school grads entering the workforce directly without immediate postsecondary education to college-goers. As young people leave high school (with or without a degree), the 5 Decisions should be at the center of their attention as they make plans for postsecondary education and work, and the varied personal, financial, and social resources they will need to be successful.

Applicability aside, the impact of these Realities is most severe on the least advantaged young people. With that in mind, we hope this research will aid next generation educators in reimagining traditional college and career preparation and thinking holistically about the competencies and supports that students need to overcome these 5-5-5 challenges and successfully navigate the work/learn landscape on their way to rewarding careers.



Getting smart about the low rate of academic preparedness

Only one-third of US high schoolers are academically prepared for college, according to college readiness analysis from *Closing the College Gap*.[15] If, as educators, we strive to help every student make savvy work/learn Decisions, we need to begin by unpacking statistics like this one and tracing the longitudinal patterns connecting postsecondary outcomes back to high school academic, family, or social characteristics — are there high school "inputs," for example, that help explain these outcomes?

- Three-quarters of high school graduates enroll in some form of postsecondary program within a year or two of graduating; however, *Pathways to Prosperity* notes that "only about 4 in 10 Americans have obtained either an associate's or bachelor's degree by their mid-twenties."[16]
- Just 56% of students at four-year colleges earn a bachelor's degree within six years and, at community colleges, "fewer than 30 percent of students manage to earn an associate's degree 'on time' (meaning within three years)."[17]
- Nearly half of community college students fail to earn any credential, falling into the some-college/no-degree group who rack up debt with little or no added income to show for it, according to a study by the William T. Grant Foundation.[18]

These dismal outcomes mask "important differences among various populations of students"[19] when segmented by level of academic preparedness. Within each high school cohort are three groups of students of approximately equal size with dramatically different high school performance, demographic characteristics, and prospects for the future:[20]

Academically prepared[21]

Just over one-third of students have the grade point average and completion of a college-ready curriculum to successfully complete college work without remedial (developmental) courses. This group is overwhelmingly white and from higher SES families. Only about 1 in 10 are from poor families living below the federal poverty level, compared to over 4 in 10 in the general population. Students of color represent 48% of all students, but only 15% of academically prepared students. The vast majority of academically prepared students go to college but, as discussed below, their college choices and degree attainment rates vary by family SES.[22]

Not fully prepared

While the bulk of this middle group enroll in a postsecondary program, there are warning signs that they may struggle to succeed with college-level work. Many have a C (or D) grade point average[23] and few complete a rigorous college-ready curriculum.[24] When they get to college, more than two-thirds will require remedial courses.[25] A disproportionate number of low-income students and students of color are represented in this group, with significant work and financial pressures that add to their challenge to earn a degree. Despite their struggles, these students are "in the game" — striving to improve their prospects through education.

Not academically prepared

This final group includes students dropping out of high school (17% in 2015) and high school graduates with low GPAs who have not completed a college-ready curriculum. The vast majority of these students do not enroll in a postsecondary program following high school and are at risk of being unemployed or trapped in low-skill, low-paying jobs. More than two-thirds of this group are low-income students or students of color.[26]

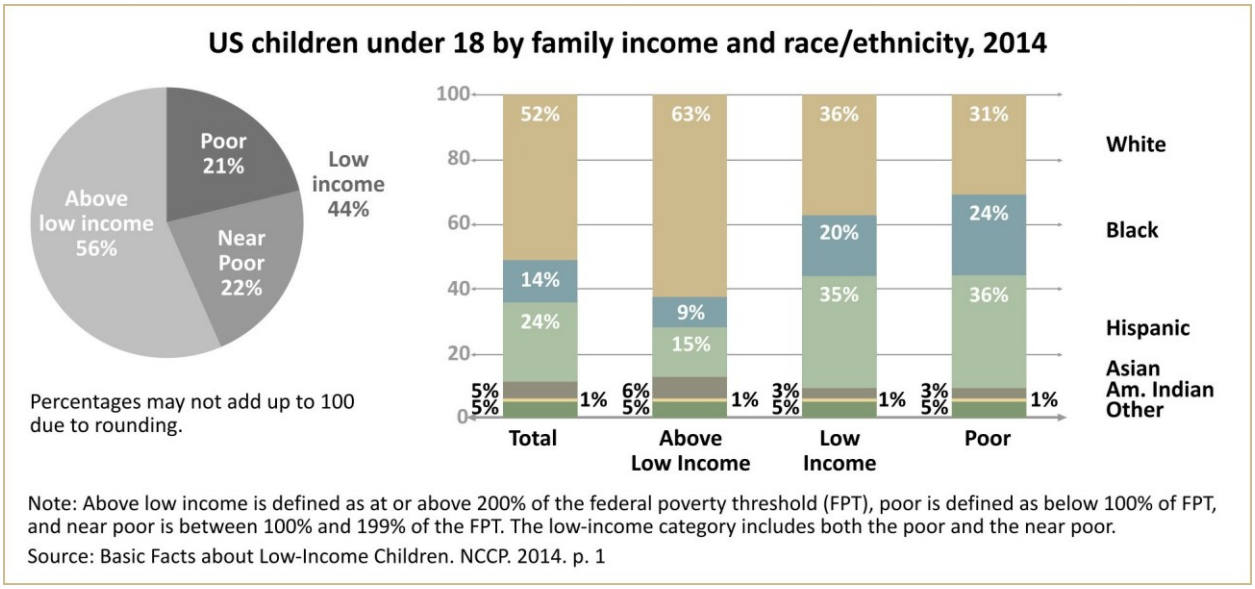
The epicenter of the widening opportunity gap are these three clusters, or starting positions, from which high schoolers take their first steps into the work/learn landscape — with profoundly different probabilities for postsecondary degree attainment, employment, and economic mobility. Academic preparedness is not destiny but, without doing more to equip students to build a future through sound work/learn choices, it is more deterministic than it could and should be. Furthermore, the labor market shifts described in the 5 Roadblocks favor young people who invest in their skills and work experience while leaving others behind. There are many paths to opportunity and while postsecondary degrees and credentials play an important part, few students —fewer than a quarter — make a clean, straight transition from high school to college to gainful employment. Instead, the majority experience one twist and turn

after another as they wrestle with the 5 Decisions and attempt to arrive, survive, and thrive in the work/learn landscape.

(For a discussion of the difference between college readiness and work/learn readiness, see Report 1.)

With the bulk of low-income students and students of color among the not fully prepared and not academically prepared groups, one national priority should be to increase the number who are academically prepared and college ready. Modest progress has been made since the enactment of No Child Left Behind in raising high school graduation rates and college readiness among these groups, despite what many educators see as an excessive and distorting focus on standardized testing and resulting narrowed curricula. Nevertheless, increasing academic preparedness is not the same as work/learn readiness (see Report 1) and there is ample evidence that proficiency on state exams in high school does not signal adequate preparation to persist and succeed in college.[27] With two-thirds of US high schoolers not academically prepared for college work, and many of those who demonstrate academic preparation not fully ready in other respects, we need to create new learning progressions, structures, and alliances that will enable all young people, regardless of which starting gate they enter, to run the race in a way that draws on their individual aspirations and assets, and their capability for self-development and adaptation. In short, all students need to become opportunity students and schools and communities must support and empower them to do so.

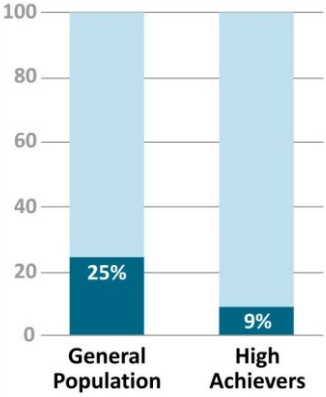
Alternatively, if we maintain the status quo approach to K-12 and postsecondary education, poverty and related racial disparities will increase and the US will solidify, as Robert Putnam fears, into a permanent two-tier society of winners and losers. (See income and ethnicity graphic below.)



Note: Above low income is defined as at or above 200% of the federal poverty threshold (FPT), poor is defined as below 100% of FPT, and near poor is between 100% and 199% of the FPT. The low-income category includes both the poor and the near poor.

Source: Basic Facts about Low-Income Children. NCCP. 2014. p. 1

The road ahead for the academically prepared



Source: *Falling Out of the Lead*, The Education Trust, 2014, Fig. 2b. Authors calculations.

While every individual student's ability and opportunity is unique, these three groups provide extraordinary insight into the types of choices and challenges each will face in navigating the work/learn landscape. Among academically prepared students, for example, a priority is to equip low-income students and students of color with the competencies and support systems to ***fully*** take advantage of their postsecondary options. Only 9% of high achieving (top quartile) high school students are from the lowest socioeconomic (SES) quartile.[28] Accordingly, achieving greater parity for low-income high achievers remains a worthy K-12 objective. However, *Falling Out of the Lead, Following High Achievers Through High School and Beyond*, a longitudinal analysis by The Education Trust, reveals that low-income high achievers need much stronger work/learn competency and more support to avoid falling behind their more well-off peers: more than 1 in 5 don't go to college at all, four times the rate of high achievers from advantaged families; when they do go, they are only half as likely to attend a moderately or high selective four-year school; and "only 16% attend… a highly selective college, compared with 46 percent, nearly half, of high-SES students."[29] Great credit should be given to the schools, colleges, states, foundations, and youth-serving organizations who currently provide a wide array of scholarship, mentoring, and academic programs exist to support low-income high achievers. Yet the shift from middle-skill to high-skill jobs is unrelenting and the stakes are ratcheting up. Low-income high achievers need a good balance of Wayfinding Abilities, Habits of Success, Creative Know How, and deeper Content Knowledge to counter the slippage occurring after high school. Our hope is that the MyWays Project helps articulate both the competencies as well as the pathways to postsecondary opportunities, employment, and social capital that these students need to succeed.

The road ahead for the not fully prepared

Percent of high school graduates with C or D grade point averages

Black	65%
Low-income	60%
Latino	57%
Male	50%
Female	37%
White	33%
High-income	21%

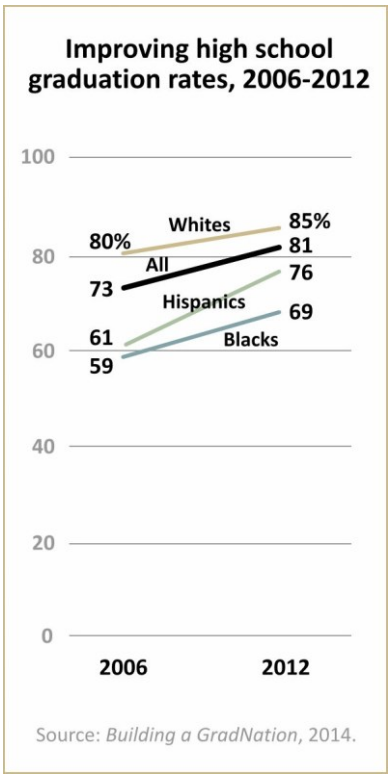
Source: 2013 data reported in *Closing the College Gap*. 2016

Students not fully prepared for postsecondary work are "in the game" but face a dizzying, and in many ways, the most complex set of work/learn choices and tradeoffs of the three groups. The largest number of some-college/no-degree students emerge from this group saddled with debt and no income benefit to offset it. Giving these students better tools (competencies, pathways, and supports) to better identify and evaluate their work/learn options is badly needed to reduce the frequent failures that are common today. Students in the not fully prepared group successfully earn a high school diploma — a critical achievement in today's labor market — but a great number have C or D grade point averages. (Over 60% of all low-income students have C or D GPAs compared to just 21% of high-income students.) In addition, few complete a college-ready high school curriculum. As a result of their GPA and curriculum weaknesses, most require remedial course work — an expense in time and money that few can afford. A large number

of these students are also working, not only for the experience but because of financial necessity. Historically, many not fully prepared students found entrees into middle-skill jobs and then, by demonstrating their ability and work ethic, they advanced to greater postsecondary degree attainment (perhaps starting with a certificate and ending with a bachelor's degree) and a higher skill job. However, today the middle-skill jobs that previously gave many of this group their start are undergoing substantial transformation: there are fewer middle-skills jobs available to young people and more education is required to secure them. (For more on this, see Report 2.) For this group especially, "more is on you" and the key to success is likely to be the ability to craft incrementally over time — through learning and working — an attractive opportunity engine of in-demand skills, work experience, degrees and certificates, and social capital.

The road ahead for the not academically prepared

Few middle-paying jobs exist today for those without some postsecondary education — at least an associate's degree or a high-quality certificate. Therefore, students who are not academically prepared when they leave high school will likely find themselves in the world of low-skill, low-paying jobs until they can develop marketable skills, either in the workplace or through some postsecondary education. About half of this group leave high school without a diploma. Fortunately, that number is dropping and in 2012, the US reached a milestone with eight out of 10 high school students graduating on time.[30] "Black and Hispanic/Latino students made the greatest gains — 9 and 15 percentage points, respectively — in high school graduation rates… between 2006 and 2012," according to *Building a GradNation, 2014*.[31] The percentage of all low-income students graduating in 2014 was 75% compared to 89% of non-low-income students.[32] This rising trend in high school graduation rate is significant because 86% of high school graduates attend college within eight years, a percentage that includes half of high school seniors who graduate without plans to attend.[33] Even among students not academically prepared, work/learn readiness is a must along with avenues to low-skill jobs that can serve as a stable, short-term beachhead for absorbing the realities of the work/learn landscape and finding a path toward higher skill, higher-paying jobs.



Source: *Building a GradNation*, 2014.

In summary, with the labor market shift toward higher skills, academic preparedness gauged at the high school level is an increasingly important as an indicator of college readiness and future success. However, it is not the determining factor. While the starting gate you are in is important, family income and education, race and ethnicity factors, and regional and cultural effects also influence who is and is not college ready and the divergent outcomes of young people within each group. For example, as *Falling Out of the Lead* concludes, low-income high achievers on average make very different choices with very different outcomes than their more advantaged peers.[34] Getting smart about academic preparedness means recognizing that all students, regardless of group, need to be empowered with work/learn readiness to

identify and plot their moves in the work/learn landscape — while educators also seek new ways to boost academic preparedness through broader, deeper competencies. *Closing the College Gap* summarizes the work ahead:

> Creating strong pathways to and through postsecondary education, especially for the students who are currently disproportionately underrepresented in higher education, is essential to breaking the cycles of poverty and disenfranchisement that plague our society and stop our nation from eliminating persistent educational, social, and economic gaps.[35]

For additional data and analysis, see the aforementioned data digest, *Understanding the Postsecondary Years*.

Regardless of which group a young person occupies, there are 5 Decisions they will face as they navigate the work/learn landscape. We summarize our research on these decisions next, starting with Decision 1, "Plotting a path to entry and advantage." Within each Decision, three key trends or issues are discussed — presented as responses to a series of questions that students might ask. Responses summarize salient information but do not provide answers, which depend on the circumstances and aspirations of individual students.

DECISION 1. Plotting a path to entry and advantage

"Students possessing fewer academic skills (no matter what their family backgrounds) or growing up in less well-to-do families and communities, often face narrow and poorly maintained pathways full of potholes, detours, and missing road signs."

—Creating Pathways to Prosperity: A Blueprint for Action
Harvard Graduate School of Education[36]

As we will see shortly, top academic students are likely to succeed in college. The far more difficult "path to entry" decision is the one confronting students who are not academically prepared or not fully prepared. *How big a bet should I make on further education? Should I strive for a two- or four-year degree, or pursue shorter-term training or self-directed learning that might help me land a middle-skill job? What are the short- and long-term benefits of attending community college or a for-profit technical school, or a school away from home where employment prospects are better? Assuming I earn a degree or certificate, how will I get employment and how can I advance? Should I work while in school, or, should I go to work first and think about college later?*

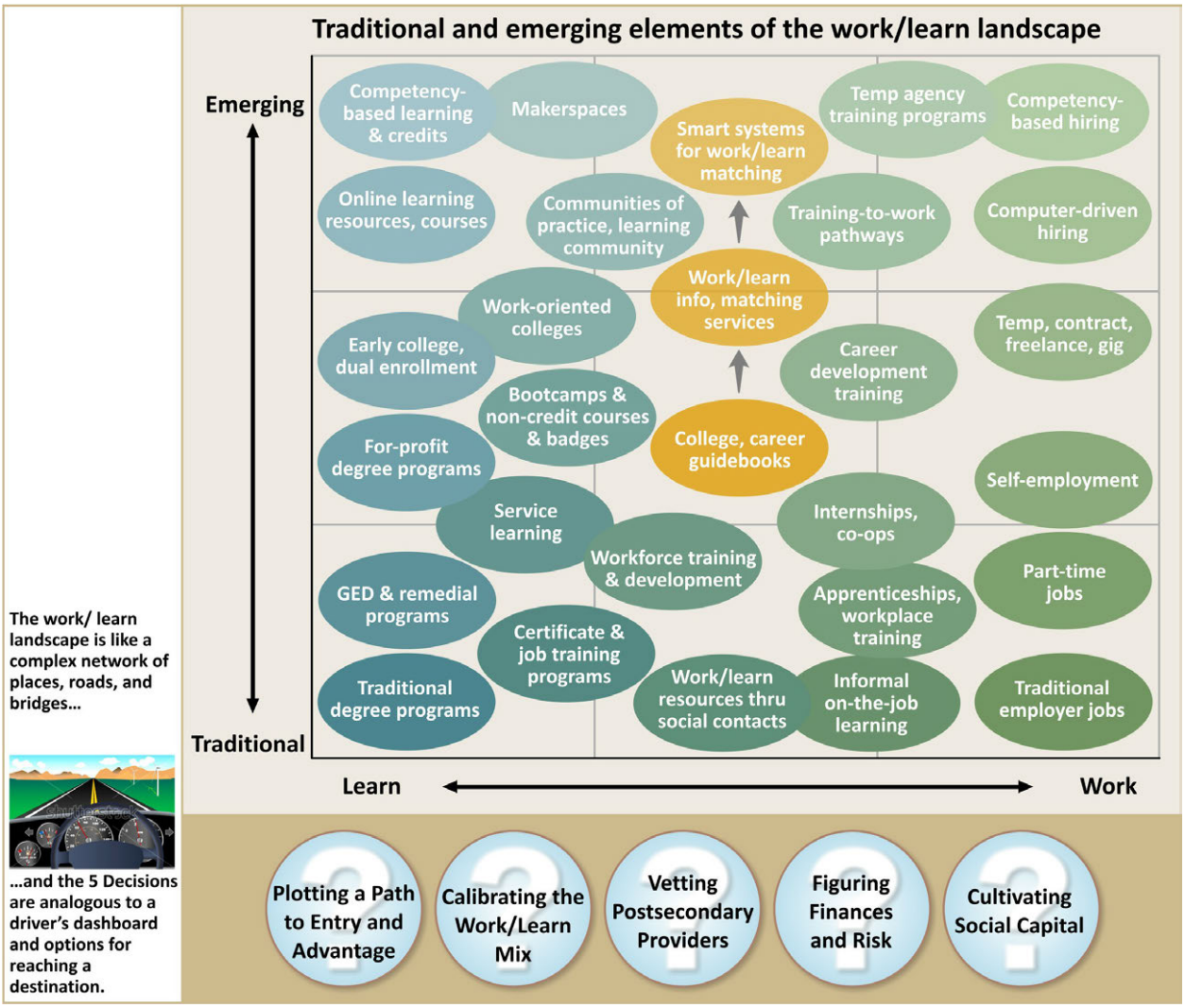
These questions are tough enough on their own, but they must be answered together with the other Decisions — *balancing the work/learn mix*, *vetting postsecondary providers*, *figuring finances and risks*, and learning how to *cultivate social capital*. Meanwhile, like the labor market, postsecondary education is evolving, offering more choices but becoming more fragmented and complex, and dramatically more expensive. The ability to make smart, mature decisions and follow through on a plan, despite being a

young person with limited experience, underscores the importance of developing broader and deeper competencies long before leaving high school.

We began this report by describing the navigation of the work/learn landscape today as a *wicked problem*, full of complexity and uncertainty. The high proportion of working learners is just one aspect of this phenomenon. Another is the growing variety of postsecondary programs and modes of delivery. Accordingly, the first question we explore pertains to the evolution of the work/learn landscape, followed by questions about degree attainment rates at various types of postsecondary institutions and the relationship between postsecondary education and future income.

What should I know about the intersection and evolution of postsecondary education and the labor market that you call the work/learn landscape?

As the graphic below conveys, there are far more fields of study, learning modes, and education providers for young people today than ever before. In addition, most young people are now working learners who have entered the workforce for financial reasons, work experience, skill building, or networking. High schoolers must now select a path to entry (and later, a path to competitive advantage) from an ever-



widening range of options and combinations. Further, throughout the wayfinding decade, Decision 1, Plotting a Path to Entry & Advantage, remains the cardinal decision within the 5 Decisions dashboard and options for navigating the work/learn landscape to reach a progression of personal destinations and goals.

The work/learn landscape includes:

- **Formal degree and certificate programs**
  Traditional two- and four-year college degree programs continue to proliferate and specialize with huge differences in program, approach, quality, and cost. For-profit and online colleges have aggressively entered the postsecondary degree market with highly variable results. Employer training programs have increasingly been replaced by a wide array of short-term industry certificate programs with costs shifting from employer to individual. Rising tuition costs have stimulated a vocationalization trend. Opportunity students will have to search harder, but can find a small number of forward-looking college options: degrees that include coop programs, are project-based, offer well-structured internships or undergraduate research work, or offer competency-based degrees, sometimes incorporating accreditation of prior learning.

- **Traditional jobs and the on-demand workforce**
  Young people's employment opportunities are influenced by the 5 Roadblocks (Report 2): an anemic labor market for under-30s, the acceleration of automation, the shift to alternative work arrangements (contract, temp, gig, and freelancing), an increasing bias to hire experience over potential, and the hiring labyrinth caused in part by computer-driven hiring systems. Middle-skill jobs that have traditionally given young people a good start are the jobs most impacted by change. As a result, many working learners are employed in the retail and food service sectors gaining less valuable work experience than is ideal.

- **Apprenticeships, internships, co-ops, and on-the-job learning**
  Apprenticeships, internships, and similar opportunities are in hot demand that far exceeds supply. Formal paid positions are fewer, replaced by unpaid positions. One apparent trend is the rise of intermediary organizations who catalyze and coordinate many internship and other work placements. Robert Putnam notes that the US once had a much larger and more vibrant vocational education system but today spends only a tenth the amount invested by other countries.[37] The US also lags behind other countries in both number of apprenticeships offered and sectors that offer such experiences but there is some uptick in parts of the country.[38]

- **An explosion of new learning and working modes**
  The Internet has helped spur the proliferation of free and low-cost learning tools and resources. Vast online treasuries of knowledge now include online courses, tutorials, instructional videos, MOOCs, learning games, as well as reading and listening material. Community-based learning networks like LRNG and Hive are organizing rich cultural and institutional assets and relationships to create learning experiences from local experts. A national maker space movement is now present in many cities. The short, intensive "bootcamp" approach to learning to code has spread to other fields and sectors, with organizations like General Assembly and Quality

Interactions addressing skills gaps in in-demand skills like design thinking, marketing, data analytics, cultural competency, and career development. For an interesting analysis of emerging work and learn options, see the ACT Foundation's *The New Learning Economy and the Rise of the Working Learner*, particularly its Work-and-Learn Framework.[39] These opportunities for meaningful individual learning, much like the related Wider Learning Ecosystem that is sprouting at the K-12 level (Report 11), has sparked a new movement in competency-based learning and credit-awarding systems geared to individual accomplishment rather than seat time.

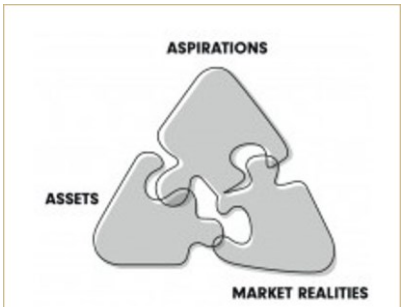
- **Increasingly vital communities of support**
  Community-based learning networks are just one example of communities of practice and pathway organizations that are fostering learning-to-work pathways for young people. Community colleges with strong industry connections, career and technical education programs, and inclusive industry associations are our oldest forms but many new permutations are taking hold: social entrepreneurs are creating training-to-work pathways; temp agencies are leveraging their knowledge of employer demand by offering their own training programs; psychologists and youth development professionals are teaming to offer high-touch pathways targeting youth re-engagement. One promising new model is Skillful, a Colorado collaboration led by the Markle Foundation to connect young people to good paying middle-skill jobs. Another is TechHire which has grown to over 70 communities. These communities of support are building bridges between young people and employers; fostering peer and mentoring relationships; and helping build social capital.[40]

- **Coming (can't be soon enough!): better tools to help young people make work/learn decisions**
  The proliferation of programs and providers in the work/learn landscape — many so new they lack proof of efficacy — has significantly increased confusion and difficulty in identifying and exploring options for a path of entry or longer-term career fits. That confusion is now partially amplified, ironically, by an explosion of guidebooks, apps, websites, and matching services dedicated to college and career planning. Yet solid, reliable data on regional labor market trends, occupational opportunities, and educational providers remains hard to find. As Georgetown outlines in *Career Pathways*, next generation initiatives are needed to analyze and project the skill requirements within regional economies; align educational programs and curricula to those needs; and build career (and retraining) pathways, counseling support; and job placement tools.[41] The report provides examples of pioneering state initiatives to improve data and advisory tools. Meanwhile, Credential Engine, a nonprofit alliance led by Lumina, George Washington University, the Business Roundtable and others, is working to tame the burgeoning credentials sector through the creation of a credential registry that will enable job seekers, students, workers, and employers to search for and compare thousands of credential programs through the Workit search app, to be launched December 2017. Hopefully, these few examples represent a trend that suggests we will see smarter systems emerge to aid young people along with much greater regional and local collaboration between K-12, postsecondary, and business organizations.

With so much change and expansion bubbling up in the work/learn landscape, it is no wonder that *Learning While Earning* observes that it takes much longer today for young adults to launch their careers,

calling what we have named the *wayfinding decade* "a new phase to the lifecycle." Accordingly, young people are urged by Peter Cappelli to think of a career as a marathon, not a sprint. *But where to start? What is the best path to entry and (later) competitive advantage?*

For most students, the question is no longer whether to "go to college" in the broadest sense — 86% of high school graduates now eventually enroll in a postsecondary program. But, as Peter Cappelli notes about rising postsecondary attendance, "how this translates into graduates is a more difficult question."[42] How big a bet to place on enrolling in a four-year institution, for example, should depend on students' level of academic preparation as well as their other competencies and assets, the clarity of their aspirations, and the future prospects and opportunities in their region. Hoffman and Casnocha use these three dimensions — *assets*, *aspirations*, and *market realities* — to frame the broad question of *where to start*. Earlier in the report, we note that young people go through three phases — *arrive*, *survive*, and *thrive* — on their way to success and that the competencies required build over time and require real-world immersion and authentic learning. A path to entry must balance short-term tactics to *arrive* (earn a credential, land a starting job) with long-term strategies to *survive* and *thrive* (grow and advance). Accordingly, we contrasted a traditional student focused primarily on earning a degree, with an opportunity student working to build a balanced, personal opportunity engine that offers the *career resilience* to reconfigure and retarget one's goals and plans as the employment market inevitably shifts and new opportunities appear.



Source: *The Start-up of You*

Figuring all this out is incredibly hard for adults, and doubly so for young people. Finding the perfect fit between aspirations, assets, and market realities is an exercise familiar to experienced entrepreneurs but, for most people, involves significant difficulty and error. Trying to do it while enrolled in college, paying tuition every semester, and tacking from here to there can be like being lost in a cab with the meter running. Or, as the quote at the beginning of Decision 1 puts it, like facing "narrow and poorly maintained pathways full of potholes, detours, and missing road signs."

Inventing and charting new pathways through the work/learn landscape

One place to begin is to provide students with real-world experiences and the opportunity to build their capability and agency through authentic learning and problem solving (See Report 11). Next generation middle school and high school learning rich in real-world experience and the development of broader, deeper competencies is the best preparation students can have as they craft their paths to entry.

A second point of emphasis should be the differing abilities and needs of the three groups of students segmented by academic preparedness. The longitudinal data suggests that:

- The third of high schoolers who are academically prepared for college have a high probability of earning a postsecondary degree or credential, even the small subset from lower income families.
- Far too few of the remaining high schoolers — those not fully prepared or not prepared, including the vast majority of low-income students and students of color — are receiving the additional

support for work/learn readiness (Report 1) to successfully pursue a path of entry that acknowledges and overcomes their lack of academic preparation.

As Report 2 makes clear, the 5 Roadblocks to the labor market challenge every student; nevertheless, one's options and hurdles are deeply impacted by academic preparedness and socioeconomic status. Students who enroll in college but end up with "some-college/no-degree," an all too common occurrence discuss below, might go farther starting down an alternative path to learning and work. Helping young people to identify promising and practical pathways around and through the potholes and detours, give their level of academic preparedness, is critical work.

Finally, given the number of students who enroll in a postsecondary program only to fail, there are times when a young person should perhaps slow down and take some smaller, incremental steps rather than going "all in" on an expensive, potentially risky multi-year degree program. Cappelli emphasizes that one of the most valuable features of the US system of postsecondary education is its fluidity — full of entry points and second chances — "one is never out of the opportunity to go to college."[43] However, our system of mapping and describing those opportunities and pathways for young people is wholly inadequate as is the level of real-world experience and work/learn readiness that students receive.

While Cappelli uses *fluidity* to characterize the formal postsecondary education system, the word is also apt with respect to the world of informal, yet rigorous, learning. The same technological and economic changes that are restructuring the labor market and college sector have sparked a revolution of self-directed, just-in-time learning that is now a core part, not only of career advancement, but of work itself. For example, Haydn Shaughnessy, a specialist on technology's impact on the economy, describes work in the digital age as a never-ending balance of pitching new work, developing new ideas to pitch, finding people to collaborate with, reading relevant insights, and delivering proposals and products.[44] Our learning paradigm has changed from periodic formal episodes to continuous, real-time learning. In an example of art imitating (and extrapolating) life, in the movie *The Matrix,* a helicopter sits on the roof of a building, the only plausible escape for our heroes. Neo asks Trinity, "*Can you fly that thing?*" "*Not yet*," she replies, then pulls out her cell phone and orders a helicopter pilot program to be instantly downloaded to her brain. We may not have the download part figured out yet, but fluid, real-time, self-directed learning is nearly as accessible today.

Young people today have free or inexpensive access to myriad online learning resources as well as local and online communities of practices through which they can acquire specific in-demand skills. While these skills do not replace a general education, they can be instrumental as stepping stones into the workplace and into professional life. To spotlight just one example: Lynda.com was founded by a graphic designer with tech skills, Lynda Weinman, to teach other graphic designers the maddeningly complex world of early web design and HTML coding. Today, it offers 6,000 online tutorials in business,

technology, and creative skills, taught by industry experts, with unlimited access for $20 per month. For a list of other similarly accessible online learning platforms including EdX, Coursera, and Khan, click here.

We look next at degree attainment patterns before exploring the link between education and future income.

Which postsecondary path gives me the best chance to earn a degree or credential?

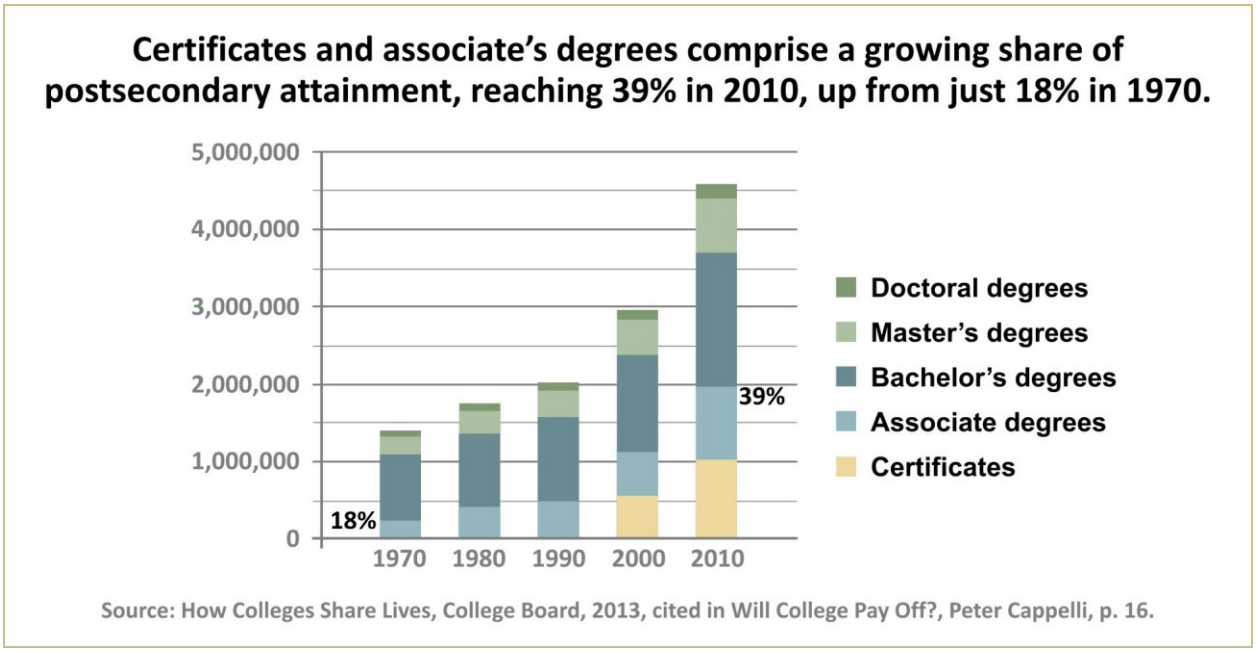
Of course, the answer to this question depends on each student's individual circumstances; however, some broad degree attainment patterns are instructive.

Closing the College Gap highlights that the US has reached an historic milestone: nearly half of today's young adults age 25 to 34 have an associate's degree or more[45] — a 50% increase since 1990.[46]

At the same time, there are an equal number of young people not attaining a postsecondary credential. Our college dropout rate is the highest of all developed countries.[47] In today's broken system, only 56% of US students enrolling in four-year colleges graduate within six years. Furthermore, according to *Pathways to Prosperity*, "at community colleges — the nation's largest post-secondary system — fewer than 30 percent of students manage to earn an [associate's degree] degree 'on time' (meaning within three years)."[48]

One important factor in these low attainment rates is an increase in postsecondary enrollment of recent low-income high school graduates which has climbed from less than 40% to nearly 60% over the past 30 years, from 1985 to 2015.[49] Growing attention on college persistence originates in this trend. By contrast: enrollment by recent high school graduates from the highest quintile of household income has remained flat since the mid-1990s, with a significant 24-percentage point gap existing in 2015 between enrollment of the most advantaged students (82%) and low-income graduates (58%).[50]

Another important pattern concerning postsecondary paths is the rise in certificates and associate's degrees which comprise a growing share of postsecondary attainment, reaching 39% in 2010, more than



double the share (18%) in 1970. In comparison: bachelor's degrees comprised 41% of the total in 2010 with advanced degrees accounting for the remaining 20%.[51]

Certificates and other stackable credentials are expected to expand dramatically over the next decade. The hopeful upside with respect to certificates is the promise of shorter, lower-cost on-ramps to middle-skill jobs — and an alternative to an all-or-nothing bet on a two-year or four-year degree, especially for students not fully prepared for college, for low-income students concerned about debt, and for young people wanting some hands-on experience or an opportunity to explore an occupation before making a total commitment. In addition, certificates may, in some cases, be the fastest path to newly created jobs in emerging industries. On the other hand, certificates entail two significant risks: uncertainty about the quality of instruction and the economic value that employers will place on certificates. Cappelli notes that many employers use credentials as signaling/screening devices to filter applicants. Ultimately, the value of a certificate is in the doors it can open, as well as the education and skills it conveys on the learner. As we discuss below in Decision 3, "Vetting Postsecondary Providers," half of all certificates are now issued by for-profit institutions[52] with very mixed results. For more on the pros and cons of stackable credentials, read "Stepping Stone or Off-Ramp?" by Paul Fain at *Insider Higher Ed*.

At one time, people had three basic options: enroll in a four-year program, attend a community college, or enter the workforce. With the explosion of certificate programs, postsecondary providers cater to a diverse student population with myriad programs theoretically designed to serve students at all levels of academic preparedness. Ideally, there is a program that fits each student, but finding and vetting programs with good academic and employment outcomes is much easier said than done. Credential Engine's Workit search app may help here, but schools and communities need to do much more to research, vet, and present these potential paths to entry. As former US labor secretary Robert Reich puts it, "We desperately need to revive a second route to the middle class for people without four-year college degrees, as manufacturing once was. We have to move toward a system that works."[53]

Meanwhile, as we examine next, the choice between a two-year and a four-year institution remains a critical one.

On average, four-year institutions have higher degree attainment than two-year institutions

Attending graduation ceremonies at the nation's best community colleges can warm the heart and restore faith in the American Dream. Families of every race and ethnicity are there. Parents of first-generation graduates beam with pride. Certificates and degrees are awarded in dozens of specialized fields aligned with local workforce needs. Bridges to four-year bachelor's programs are announced. Even students not academically prepared leaving high school may re-engage and reinvest in their education through special community college programs designed for life-changing transitions. Our best community colleges are achieving remarkable results.

The point here is that the quality and outcomes of local postsecondary institutions are more important than national statistics. That said, deciding between a two-year and a four-year school is one of the key choices in plotting a plan for entry. Numerous factors can influence the personal fit of one versus the

other, but aggregate outcomes for all two-year institutions compared to outcomes for all four-year institutions do offer lessons. One reason this choice is so important is the low overall degree attainment of low-income students and students of color:

> Only 14 percent of 2004 high school graduates from families in the lowest quartile of social and economic status earned a bachelor's degree or higher and 35 percent received a postsecondary degree or certificate. —*Closing the College Gap*[54]

In contrast, students from high SES families earned bachelor's degrees at four times the rate.[55] Only 3 in 10 black students and fewer than 1 in 5 Latino students earn an associate's degree or higher by their mid-20s.[56] Academic preparedness is certainly a large factor here, but other contributors are the choice of college — including higher rates of enrollment at open-access colleges, two-year schools, and for-profit institutions, all of which have lower degree completion rates — as well as work, financial, and family pressures.[57] Two excellent studies have attempted to inform this question using Educational Longitudinal Study (ELS) data on a representative sample of students who were tracked over the eight years that followed their 2004 high school graduation. The first study, by the College Board, is *Education Pays 2016*. The second, from the William T. Grant Foundation, is *The New Forgotten Half*. (A third report, *Closing the College Gap*, which we quote regularly, also uses data from the ELS.)

Both studies began with the same top-level question: *What proportion of high school graduates will receive a college degree or certificate* ***if they enroll first*** *in a two-year college versus a four-year college?* Across all students, 59% enrolled first in a four-year college and 37% enrolled first in a two-year college (another 4% enrolled in other postsecondary institutions and are not part of this analysis). Without controlling for academic preparedness or family SES (discussed below), the degrees earned and the overall student composition at two- and four-year institutions are as follows:

Postsecondary outcomes of high school graduates who enrolled in college immediately, tracked over eight years (2004–2012), along with their characteristics

	Initially enrolled at two-year school	Initially enrolled at four-year school
Bachelor's Degree or more	20%	67%
Associate's Degree	16%	5%
Certificate	17%	5%
Some College (no degree)	46%	22%
High academic	23%	58%
Middle academic	40%	32%
Low academic	36%	11%
High family SES	29%	55%
Middle family SES	36%	28%
Low family SES	34%	16%

Source: *The New Forgotten Half.* William T. Grant Foundation. January 2015. Table 1.

As the table shows, 67% of high school graduates enrolling immediately after high school in a four-year school earned a bachelor's degree within eight years, with 78% earning some type of postsecondary credential. Of those enrolling at a two-year school, 20% earned a bachelor's degree (perhaps after a transfer), with 53% earning some type of postsecondary credential. Many postsecondary students failed to earn any degree or certificate: 22% of students initially enrolled in a four-year institution immediately after high school fell in the some-college/no-degree category, along with an alarming 46% of those who initially enrolled at two-year schools:

> Our most striking finding is that many community college students attain no credentials…. **Although many community college students have discovered and attained sub-baccalaureate credentials, almost half (46 percent) have no credential eight years after high school.** [emphasis added] —*The New Forgotten Half*[58]

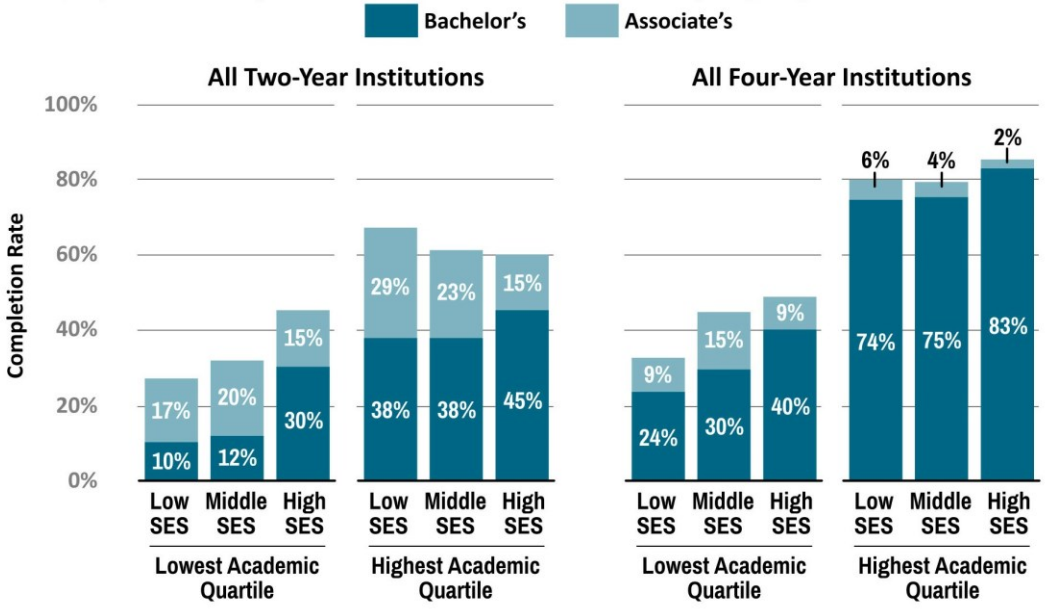
Nearly half of the some-college/no-degree group completed one year of college or less; more than a third completed two years of college; and one in five completed three or four years of college without finishing.[59] An important consideration is the extent to which better Habits of Success and Wayfinding Abilities might change these outcomes, even when academic competencies (Content Knowledge) are weak.

Of course, differences in outcomes between two- and four-year institutions are more useful when analyzing the composition of students selecting each option. According to *Closing the College Gap*, about 40% of the high school graduates enrolling in two-year institutions had college readiness profiles similar to students who enrolled in four-year colleges,[60] leaving significantly more than half that were less prepared. The College Board segmented the data by academic quartile[61], family socioeconomic status (SES), and two-year/four-year entry. The chart below reports its data for both the highest academic quartile (roughly aligned with our "academically prepared" group) and the lowest academic quartile (a portion of our "not fully prepared" group). (Because the ELS includes only those enrolling in a postsecondary program, the "not academically prepared" group is largely excluded.)

Although many community college students have discovered and attained sub-baccalaureate credentials, almost half (46 percent) have no credential eight years after high school.

—The New Forgotten Half

Highest degree earned by students who started postsecondary study at a two- or four-year institution, by academic quartile and socioeconomic status (SES), high school class of 2004



Source: *Education Pays 2016*, College Board, page 13. Academic quartiles determined by math scores.

The most striking pattern in the data is that academic preparedness influences postsecondary outcomes to a much greater degree than family SES or two-year/four-year entry (in contrast to the K-12 level where family SES and academic achievement are closely related). At two-year schools, more than 60% of students in the highest academic quartile earn an associate's degree or better regardless of family SES; at four-year institutions, that figure is 80% with almost all earning bachelor's degrees. Two-thirds of top academic students initially enrolling in two-year institutions went on to earn bachelor's degrees. It is striking and somewhat counterintuitive to note that among top academic students at both two-year and four-year schools, family SES had little effect on degree attainment.

Results are far more mixed among students in the lowest academic quartile, putting in stark relief the difficult 5 Decisions for this group of not fully prepared young people. Fewer than half of these students earned degrees, regardless of family SES or two-year/four-year entry. According to *The New Forgotten Half*, 46% of all students entering community colleges end in the some-college/no-degree category.

Measured by degree attainment alone, students in every academic and SES subgroup who started at a four-year institution had better outcomes. On the other hand, the diversity and flexibility offered by community college may be a better fit for many students — including those who want to work in a middle-skill job as soon as possible (and are, therefore, attracted initially to a one-year certificate or two-year associate's degree); students who want to spend less time in school; students who want a significantly less expensive postsecondary degree; and those who are not ready to make a four-year commitment.

Degree attainment rates varies widely among two-year institutions including community colleges and for-profit schools.[62] Many community colleges across the country offer extraordinary, innovative programs that help change lives and foster economic mobility. Because many of these community colleges have deep ties to regional employers, they can be indispensable partners to next generation schools seeking to engender more work-based and authentic learning experiences.

Overall, degree attainment was higher, on average, at four-year institutions for every academic and SES subgroup. The burning question remains however: *What is the best plan of entry and advantage for the two-thirds of high schoolers in the not fully prepared or not academically prepared groups?* This is where our most innovative postsecondary institutions are successful — and other institutions are not. Two highly respected US community colleges provide examples of the "secret sauce" it takes to address this population: at Guttman Community College in New York City all students take a year-long course in the Ethnography of Work, learning about the nature of jobs and the role of social networks, and at Lake Area Technical Institute in Watertown, South Dakota, curriculum input from more than 300 regional businesses resulted last year in 99% of its students entering the workforce or going on to four-year colleges.

To summarize these findings, for the majority of new high school graduates, "going to college" and selecting a two-year or four-year institution is the heart of their plan for entry. Academically prepared students have a good chance to earn a degree at both two-year and four-year schools; however, more than 50% of students in the lowest academic quartile will likely end up with some-college/no-degree. For these students, the quality and fit of local postsecondary institutions and programs, regional prospects for middle-skill jobs, and opportunities while in school to build a balanced, compelling opportunity engine should all be important parts of plotting a path to entry and advantage.

As we describe in the following section, there is a vast difference in terms of both the employability and income of an associate's degree earner compared to an individual with "some college but no degree." *Pathways to Prosperity* reports that, nationally, there are two "some college" individuals for every one associate's degree holder.[63] Keep your eye out for this "some college" category as we proceed.

How will my postsecondary education translate into employability and future income?

We now summarize the impact of education attainment on individual employment and income prospects. These data are historical and, given rapid changes in the labor market, the patterns may vary in the future.

Earning a degree increases prospects for employment

Degree holders enjoy much higher employment rates than high school graduates and those without diplomas, in part because more-educated workers are frequently underemployed, displacing less-educated workers when labor demand is slack. Accordingly, among young people age 16 to 24 who are not enrolled in school, 85% of bachelor's degree holders are employed (see table next page) compared to 78% of associate's degree holders (or those with some college), 65% of those with a high school diploma only, and 45% of those without high school diplomas.

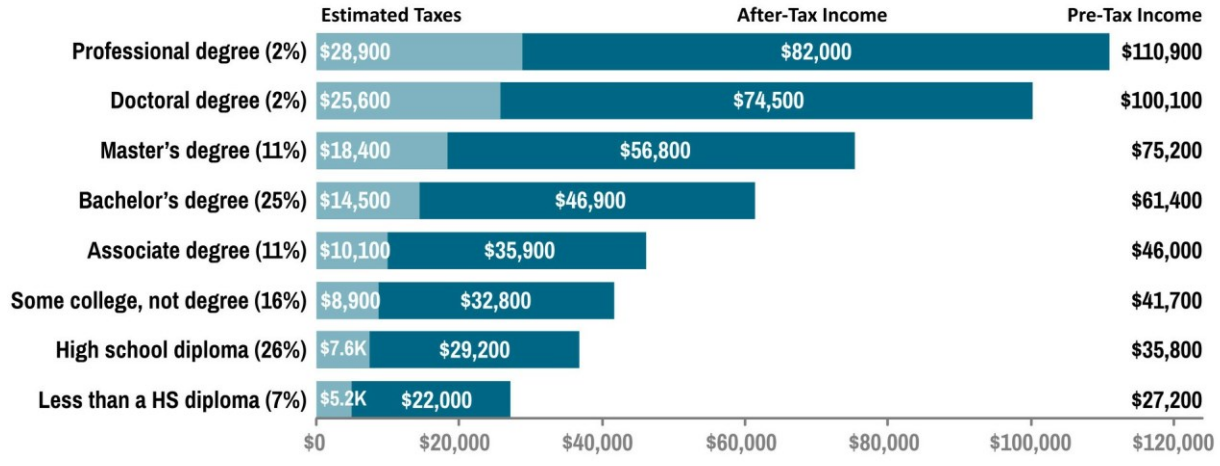
Percentage of young people (age 16–24) not enrolled in school who are employed, by educational attainment, 2014	
Bachelor's degree or higher	85%
Associate's degree or some college	78%
High school diploma only	65%
No high school diploma	45%
Source: *DataBank Youth Employment*. Child Trends. December 2016.	

During the economic recovery (2010–2016), workers with a bachelor's degree held a sizable advantage over less-educated workers. **More than 70% of all jobs — and 80% of all middle-skill jobs — created in the recovery have gone to those with bachelor's degrees or higher.** Holders of associate's degrees or some college filled another 27% of all jobs during this period, including almost half of the low-skill jobs. The number of jobs held by those with a high school diploma or less remained flat. As one study summarized, "Those with the most years of college were the last fired in the recession and the first hired in the recovery."[64]

Median income increases with education; HOWEVER, there is a wide variation at each and every level. The Brookings Institute has noted that median income increases roughly 10% for each year of postsecondary education.[65] According to the Pew Research Center, median annual earnings for bachelor's degree holders rose slowly from $42,000 in 1979 to $46,000 in 2013 (in 2012 dollars), a modest 10% increase. However, over the same period, high school graduates and those with associate's degrees or some college have seen their adjusted annual earnings fall 13% and 18%, respectively.[66] The chart below from the College Board summarizes average income levels as of 2015.

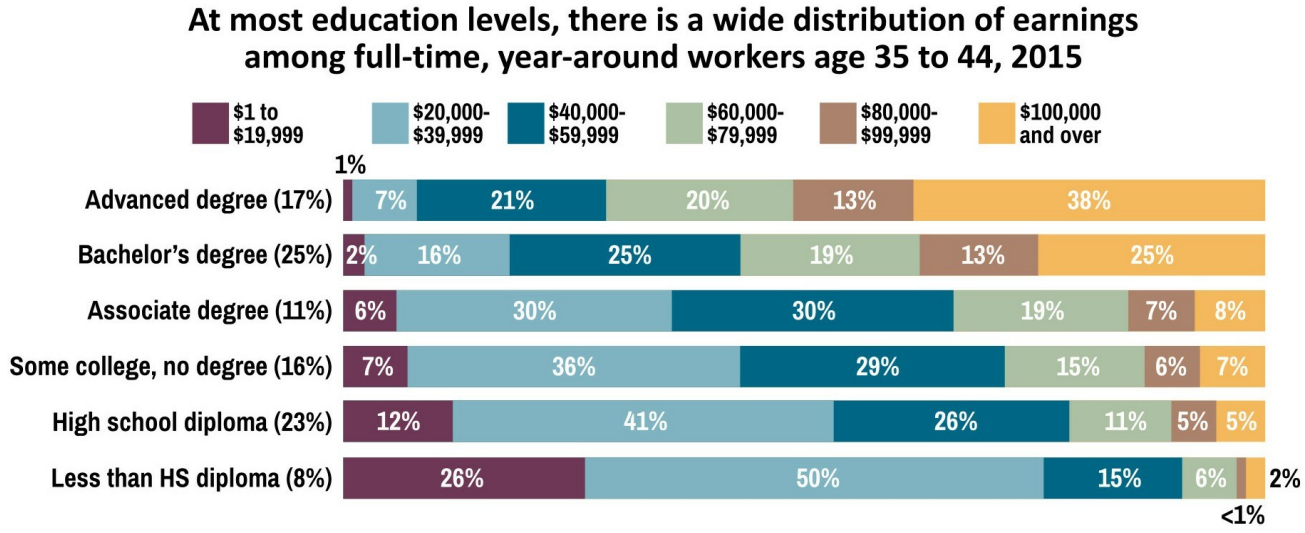
Note that it is the advanced degree earners who are the big winners. Accordingly: be aware that average and median income data is highly misleading when advanced degree holders are grouped with bachelor's degree holders in a "bachelor's or more" group.

Median earnings and tax payments of full-time year-around workers age 25 and older, by education level, 2015



Source: Redrawn from *Education Pays 2016*, College Board, based on data from the US Census Bureau and IRS.

Despite the median incomes in the chart above, income distribution varies enormously within every education level, as the following chart shows. For example, almost 40% of bachelor's degree holders earn $80,000 or more while 43% earn less than $60,000. As *Pathways to Prosperity* points out, "27 percent of people with postsecondary licenses or certificates — certificates short of an associate's degree — earn more than the average bachelor's degree recipient."[67]



Source: Redrawn from *Education Pays 2016*, College Board, page 21.

In addition, there is significant variation in income outcomes from major to major and from college to college, so much so that Cappelli says, "Students in some programs do spectacularly well after they graduate, but many others would have been better off financially by not going at all.[68]

Here are some other employability and income considerations:

- **Students gravitate to majors where employer demand is perceived, but change is so rapid in many industries that, by the time students graduate, they may miss the market.**[69] Sites such as CareerOneStop provide a wealth of information on careers, skills, and salaries, but Peter Cappelli, in *Will Colleges Pay Off?*, and Thomas Friedman, in *Thank You for Being Late*, document how quickly labor demand can change. Even high-tech fields like petroleum engineering and computer science experience boom-or-bust cycles. Rather than betting the farm on a college major, students today need to be developing *career resilience* by parsing that college major into specific in-demand skills and developing a well-balanced opportunity engine with appropriate attention on work experience and social capital, as well as degrees and credentials so that they can adapt and reconfigure those assets as the opportunity landscape changes.
- **Surprisingly, the main college-major categories have not shifted radically over time**, as this interactive graphic on the NPR Planet Money website shows.

- **Sub-baccalaureate certificate seekers are interested primarily in three fields**: health care (42%), personal/consumer services (21%), and manufacturing/construction/repair/ transportation (14%).

- **Liberal arts graduates earn a little less than other majors when they start out, but in their peak earning years, they are often earning more than those other majors.** A 2013 study by Burning Glass, a labor analytics company, examined a year's worth of job openings and found that liberal arts graduates were qualified for about one-quarter of those jobs. "Even in technical roles, you see employers shouting from the rooftops that they can't get what they need. What they're often talking about are foundational skills…. The market for what liberal arts students are accruing is as strong as ever. They just need to figure out how to acquire the job market skills to make themselves relevant right out the door."[70]

- **Passion comes later**, according to the creators of the Designing Your Life course at Stanford University: "We're not very passionate about finding your passion. We believe that people actually need to take time to develop a passion. And the research shows that, for most people, passion comes *after* they try something, discover they like it, and develop mastery — not before."[71] A clear understanding of how to build and manage one's opportunity engine and solid Wayfinding Abilities become integral to finding and pursuing a passion in a pragmatic way. Students at the Cesar Chavez schools in Washington, DC, explore social justice through a four-year service learning and internship program. Many find their passion and college major (as well as social capital advocates) through that experience.

- **The European model is more hands-on:** "In Austria, Denmark, Finland, Germany, the Netherlands, Norway, and Switzerland, after grade 9 or 10 between 40 and 70 percent of young people opt for an educational program that typically combines classroom and workplace learning over the next three years. This culminates in a diploma or certificate, a 'qualification,' as it's called, with real currency in the labor market. In virtually all of these countries, vocational education also provides a pathway into tertiary education for those who choose to take it." — *Pathways to Prosperity*[72]

- **Advanced degrees earners are the big winners.** As the chart above shows, the number of advanced degrees has increased. Researchers often make economic comparisons between groups with differing levels of educational attainment. However, it's important to be cautious when advanced degrees are grouped with bachelor's degrees and labeled something like "bachelor's or more." In 2010, advanced degrees comprised more than one-third of the "bachelor's or more" group, and because advanced degree holders are the big winners in employability and income, they skew the data when grouped with bachelor's degree holders without advanced degrees. The bottom line is that, on average, a bachelor's degree does convey an employability and income benefit over an associate's degree, but that benefit is much less than the dramatic difference when advanced degrees are included in the comparison.

These trends are deepening race-based inequities

As a result of postsecondary trends, Anthony P. Carnevale, director of the Georgetown University Center on Education and the Workforce, argues that "inequities in higher education are exacerbating racial inequality":[73]

> Since the 1990s, the number of black and Latino high school graduates who enroll in college has more than doubled. But three-quarters of that increase has been at open-access colleges. Meanwhile, white college enrollment has increased only at the nation's top 500 universities. **As a result, American higher education has evolved into a two-tiered separate and unequal system that fuels the intergenerational reproduction of white racial privilege.**
>
> …
>
> Our racially stratified postsecondary education system serves as a passive agent that mimics and magnifies the race-based inequities it inherits from the K-12 education system and projects them into the labor market. Whites educated at elite colleges go on to have successful careers, marry other whites with similar backgrounds, and buy homes in the right neighborhoods. Those neighborhoods in turn give their kids access to a top education in pre-K through high school that prepares them for selective colleges, beginning anew the self-sustaining intergenerational cycle of racial privilege.
>
> At the top 500 universities, whites comprise 70 percent of students, compared to their 57 percent share of the college-age population. Meanwhile, as blacks and Latinos have swarmed the halls of open-access colleges, whites have fled them. White students have declined from 68 percent to 49 percent of students at open-access colleges, while black and Latino students have grown from 26 percent to 45 percent.
>
> It should come as no surprise that the outcomes at the top 500 universities and the 3,000 open-access colleges are vastly different: 82 percent of students at top universities graduate, compared to 49 percent of students at open-access colleges. Unequal college outcomes then lead to unequal career success and differential access to graduate school, which is especially important because it is only at the graduate degree level that we see race-based earnings gaps converge.

Final thoughts on plotting a path to entry and advantage

Racial and economic inequality will continue to worsen until K-12 and postsecondary systems are more closely aligned to support individual interests and abilities with options, pathways, and supportive social capital that help offset the natural advantages of family background and wealth.

The "path to entry and advantage' decision that each young person must make is, paradoxically, full of options and opportunities — as well as a hundred ways to err and cripple one's chances in life. The American system of higher education is, arguably, the most flexible in the world, with an abundance of entry points and avenues to advance. At the same time, we have the highest college dropout rate in the

industrialized world. As Cappelli argues, "the ability to always go back to school and complete college over a period of decades" is a unique strength of the US model, and one we need to learn to harness in a more efficient and effective way.[74] We give the last word on plotting a path to entry and advantage to *Pathways to Prosperity*:

> **Given these dismal attainment numbers, a narrowly defined "college for all" goal — one that does not include a much stronger focus on career-oriented programs that lead to occupational credentials — seems doomed to fail.** The College Board has set a goal of raising our college completion rate to 55 percent by 2025. This would require an annual increase of 1 percent for the next 15 years, a much faster rate of progress than our experience over the last 15 years would suggest is possible. But even if this campaign were to succeed — something we should all be rooting for — it would still leave us with a very troubling question: **what about the other 45 percent of young Americans?** These are the same 45 percent of students who say they were bored in high school, who dropped out or never got past remedial courses in community college, and might say wistfully a few years after high school that they wished they had applied themselves more. They are the young people most likely to hit the wall after high school, running smack into the harsh realities of unemployment or dead-end, sub-living wage jobs. What is our strategy for equipping them with the credentials they need to be full participants in American society?[75] [original emphasis]

DECISION 2. Calibrating the work/learn mix

"I knew that I would end up having to work, because my parents weren't in a position to support me. It kind of impacts you mentally because you really don't have too much social interaction — you know you can't go out and have fun. But the only reason I even kept doing it is because I didn't have anything else to fall back on."

—Thierry Pierre-Charles
young working learner, Miramar, FL[76]

This section will not repeat the statistics on the youth employment crisis described in Report 1 or the labor market roadblocks described in Report 2. The focus here is on a young person's second Decision: the mix between working and learning, and the factors that postsecondary students and career seekers must consider as they strive to gain education, work experience, in-demand skills, and social capital (the four blades of their opportunity engine).

What should I know about working while in college?

As Report 1 summarizes, *Learning While Earning: The New Normal* documents the ubiquity of work among college students today. Currently, 70–80% of college students work; about 40% of undergraduates work at least 30 hours a week.[77] A Ready by 21 report, *When Working Works,* focuses on how to make the work/learn mix work for students. The report begins by noting that, "For most of these students,

having a job while in school is not a choice; the majority of community college students say they would not be able to afford college if they did not work."[78]

There are many, many different kinds of working learners, with many types of working arrangements and intensities. That said, working your way through college in the sense of paying as you go is all but gone due to escalating college costs and fewer employment opportunities. Most students are working ***and*** taking out loans. As *Learning While Earning* states, "The nation has yet to figure out how to pay for this new stage in the transition from youth dependency to adult independence and family."[79]

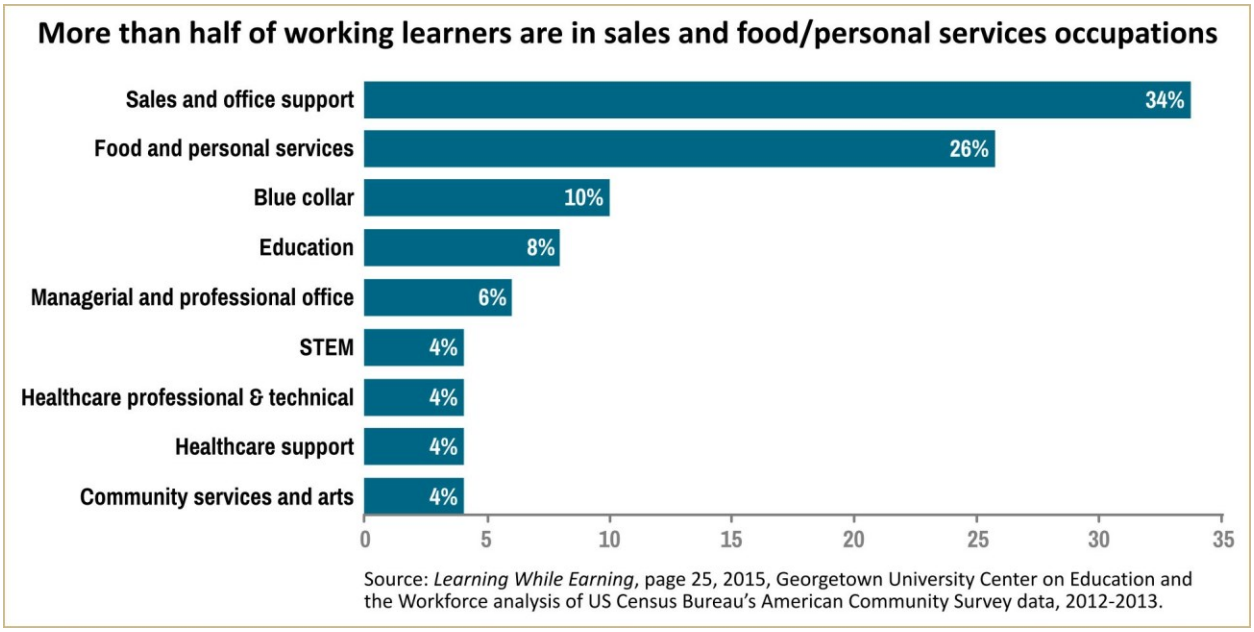
Often working is a necessity, but *Learning While Earning* emphasizes that "early work experience forms good habits and helps students make career connections"[80]:

> In general, work — even menial work — promotes skills such as time management, communications, and conflict resolution, as well as many other soft skills necessary for success in the workforce. Work can also be a meaningful alternative entry into the adult world, providing an escape into relevance from the abstract grinding rigors of schooling. Work can also be a personal and occupational exploration connecting individual interests, values, and personality with academic fields of study leading to particular careers. But the effects of work differ by student characteristics both in high school and even more so in college. Low-income students, especially low-income African Americans and Hispanics, tend to experience the more negative effects of working on their educational achievement and educational attainment. This appears to be the result of a lack of counseling, social capital, and other supports that are typically associated with a higher socioeconomic status or more selective colleges.[81]

When Working Works outlines four key benefits of working: hiring edge, greater engagement in learning, better work skills, and better college persistence.[82] However, as we describe below, there are also downsides to working.

What type of jobs are most beneficial to my future career?

The greatest benefits of working come when a job is closely related to one's field of study — something that happens much too infrequently. It is notable that "almost two-thirds of recent [college] graduates report that they do not have a job closely related to their field of study."[83] Unfortunately, the same pattern holds true for most working learners; for example, *Learning While Earning* reports that more than half of working learners are in sales and food/personal services occupations (chart):



Unfortunately, too few postsecondary institutions foster the kind of work that most benefits students which are jobs closely related to their field of study that provide work experience that can accelerate their transition into full-time careers.[84] In addition, *When Working Works* offers a set of characteristics of good jobs for college students that includes a "school comes first" environment, opportunities for skill-building, and constructive feedback (see sidebar).[85]

Characteristics of Good Jobs for College Students

- Flexible hours (no more than 20 hours a week)
- "School comes first" environment
- Opportunities for skill-building
- Hands-on training, supervision and mentorship
- Connection to classroom content
- Career-related learning and networking
- Professional work environment (e.g. business dress, deadlines, effective communication)
- Clear, consistent and constructive feedback
- Academic credit

Source: When Working Works, Ready by 21

Unfortunately, by the time most students reach college, they are time-starved and cash-strapped, often resorting to a string of minimum-wage jobs with little skill- or career-building value. Few colleges create on-campus work experiences like the University of Maine Farmington's Student Work Initiative (see profile in *When Working Works*) or the Work Learning program at Warren Wilson College in Asheville, North Carolina.

The alternative might be to arrive at college with some in-demand skills developed in high school, that are related to one's field of interest or are capable of earning more than minimum wage (or both). Examples within reach of many high schoolers include computer help desk, simple Web development, QuickBooks posting, Excel analysis, teaching piano, coaching younger children, house painting, simple construction or landscaping skills, basic project management, and sales.

With encouragement and support from educators and parents, these types of marketable skills might be outgrowths of extracurricular activities, paid or unpaid internships, or career exploration activities.

At what point does working hurt academic performance?

When Working Works underscores the risks, "Studies have shown that students who work more than 20 hours a week often have lower grades, take more time to complete their degrees, and have more mental health problems."[86] Nonetheless, about 4 in 10 undergraduates work at least 30 hours per week.[87]

Cappelli believes heavy work schedules are prolonging college completion:

> Less than 40 percent of full-time students entering four-year colleges in recent years have been graduating in four years. The percentage of students who graduate in six years is surprisingly low as well, less than 60 percent. Those six-year figures are slightly better for private schools (65 percent) and considerably worse at for-profit colleges (42 percent).[88]

Students need to strike a balanace. *When Working Works* emphasizes that, in pursuing ways to decrease student stress and increase college completion rates:

> …we should be careful not to lose sight of the potential benefits of student employment. For many students, a positive work experience can facilitate, rather than derail, educational and vocational progress. We need to understand and appreciate what it looks like when working works, so that we can make a concerted effort to transform employment opportunities into drivers of student success.[89]

From the standpoint of the 5 Decisions and navigating the work/learn landscape, getting the right work/learn mix is important on many levels. Career-related, student-friendly work with high learning content is the win-win solution that all students should be trying to find.

DECISION 3. Vetting postsecondary providers

"If and when our society stops valuing only a narrow range of occupations, roles, and accomplishments, it will help young people learn to enjoy who they are and to see what they can do."

—Robert Halpern
Youth, Education, and the Role of Society[90]

There are whole libraries full of resources for young people on finding and vetting colleges. We will not try to summarize that process here. Instead, we focus on three issues and trends that next generation educators should be informed about and should discuss with their students:

- **Undermatching:** when low-income, high-achieving students apply to "easy" schools nearby rather than selective schools that match their academic potential.

- **Finding good certificate programs:** the rapidly growing certificate field is just beginning to develop central cataloging systems, and does not yet have a comprehensive, trusted evaluation system.
- **The growing for-profit sector's dismal results:** for-profits are playing an increasingly larger role in postsecondary education, but their tuition, completion, and loan default rates for longer term certificates and degrees are often alarming.

What is "undermatching" by low-income high-achieving students?

Only about one-third of students have the grade point average, test scores, and college-ready course completions needed to successfully tackle college work without remedial (developmental) courses. This one-third is overwhelmingly white and from higher SES families. These students typically follow experts' advice and apply to a range of "peer," "reach," and "safety" colleges. However, for low-income high-achievers, that is often not the pattern.[91]

Only about 1 in 10 academically prepared students are from poor families living below the federal poverty level. Students of color represent 48% of all students, but only 15% of academically prepared students. Despite the receptivity of selective colleges and universities to high-achieving low-income and minority applicants, many of these students instead choose local, more familiar institutions with median academic achievement far below their own — a practice called *undermatching*. Given the importance of narrowing the opportunity gap, addressing this system inefficiency should be a priority.

Caroline Hoxby at Stanford and Christopher Avery at the Harvard Kennedy School are leading researchers on undermatching. They state the problem at the beginning of one of their papers:

> In this study we show that a large number — probably the vast majority — of very high-achieving students from low-income families do not apply to a selective college or university. This is in contrast to students with the same test scores and grades who come from high-income backgrounds: they are overwhelmingly likely to apply to a college whose median student has achievement much like their own. This gap is puzzling because we find that the subset of high-achieving, low-income students who do apply to selective institutions are just as likely to enroll and progress toward a degree at the same pace as high-income students with equivalent test scores and grades. Added to the puzzle is the fact that very selective institutions not only offer students much richer instructional, extracurricular, and other resources, but also offer high-achieving, low-income students so much financial aid that these students would often pay less to attend a selective institution than the far less selective or nonselective postsecondary institutions that most of them do attend.[92]

Hoxby and Avery study high-achieving students who score at or above the 90th percentile on the ACT or SAT and who have a GPA of A- or better. This is approximately 4% of US high school students. Using individual-level data on every student who takes the ACT or SAT, the researchers created a database of

high-achievers and studied their college application process. Some low-income high-achievers use the same application process as high-achievers from higher-income families. But many others, "probably the vast majority," do not. This second group exhibited what the researchers call "income-typical" behavior: applying to the same community colleges and local open-access institutions as more average students from similar low-income families in their region. Beating the "social capital drum" that we return to in Report 4, Hoxby and Avery conclude:

> We find that income-typical students are fairly isolated from other high achievers, both in terms of geography and in terms of the high schools they attend. In fact, their lack of concentration is such that many traditional strategies for informing high-achieving students about college — for instance, college admissions staff visiting high schools, or after-school programs that provide mentoring — would be prohibitively expensive. We also show that income-typical students have a negligible probability of meeting a teacher, high school counselor, or schoolmate from an older cohort who attended a selective college.[93]

It is a shortage of social capital, not a shortage of money, at the heart of the problem. Undermatching seems like a fixable problem. While finding isolated high-achievers may not be within the mission of many next generation educators today, this research is a reminder that, in every community, isolation and communication gaps are inhibiting low-income, high-achieving students from reaching the potential they have worked for and deserve. Next generation educators can help ensure that all high-achieving students within their sphere of influence are properly matched with colleges or postsecondary programs that fit their abilities.

How do I find a high-quality certificate program given the constant proliferation?

In the US, there are more than 4,600 degree-granting institutions and myriad additional schools and organizations that provide certificates and badges. Nearly a third of the institutions granting two- and four-year degrees are for-profit institutions established since 1980; their share of total postsecondary enrollment is approximately 12%.[94] Cappelli describes the sector:

> Under the broad heading of "postsecondary" — after high school — there is now an array of college-like options that did not exist a generation ago, including for-profit colleges, vocational schools that provide all kinds of skill certificates, community colleges and junior colleges with associate degrees, and traditional four-year colleges offering bachelor's degrees in highly specific fields such as health care finance or casino administration.[95]

The rise of industry certificates, newer types of micro-credentials like recognized bootcamp course completions and competency-based badges should be a good thing for students and workers: providing new ways to gain skills and document their qualifications, especially for middle-skill jobs. Indeed, badges, other micro-credentials, and certificates could be a perfect opportunity for students in the not fully prepared group and for opportunity students looking for an early on-ramp to the working world

while they continue to build their opportunity engine. However, certificate programs present three basic challenges that students and the schools supporting them need to overcome:

- First is the "haystack" problem: Options have proliferated, but central repositories or catalogues to access and filter programs for study and consideration are just developing. (The Credential Engine, mentioned earlier, is a multi-party initiative working to build a central, accessible registry and search app.)
- Second is the "quality and fit" problem: How good is the training and education associated with a certificate or badge? Is it a proper fit with an individual's qualifications, competencies, and aspirations? Over the decades, various services have emerged to profile college and university degree programs, but we are in the infancy of doing the same for sub-baccalaureate credentials.
- Finally, we have the "screening/signaling" problem (aka the "employer" problem): In today's world of algorithmic employment screening, will a particular certificate get past the automated filter? What value will employers place on a particular certificate and the granting institution? Is the grantor local and, if so, does the certificate have any value in other regions? These may not be fatal questions; a few employers are starting to respond to a certificate with enthusiasm and competency-based hiring is emerging in pockets. However, students should be considering these questions before enrolling.

How cautious should I be about enrolling at a for-profit institution?

Students vetting postsecondary providers have more variety and choice than ever. However, finding a program that fits their educational and occupational interests, learning preferences, work/learn priorities, and financial resources also entails more risk of a mismatch than ever, as well as the risk of poor degree attainment outcomes and employment results. We typically interpret *caveat emptor* as "buyer beware," but a more accurate definition is that the buyer alone is responsible for checking the quality and suitability of a purchase. So it is for high schoolers making postsecondary choices, especially with regard to the expanding for-profit sector.

The National Center for Education Statistics quantifies the scope of the for-profit sector today in relation to certificate, associates, and bachelor programs[96]:

- The share of all undergraduates attending for-profit institutions more than doubled between 1995 and 2011, from 5% to 13% overall and from 1% to 17% at four-year institutions.
- Compared with their counterparts at public institutions, undergraduates attending for-profit institutions enrolled in certificate programs at a higher rate (5% vs. 29%, respectively) and enrolled in associate's degree programs at a lower rate (52% vs. 31%, respectively).
- In addition, at for-profit institutions, 22–27% of students were black, compared with 13–16% at public and nonprofit institutions.

About the phenomenon, the Center writes, "The rapid growth of the for-profit sector has renewed public scrutiny and concern about the historically poor labor market outcomes of students at many of these institutions and the amount of debt students in these institutions often take on."[97] Here is the sector's performance in the aggregate:

- **Poor graduation rates and high loan default rates.** On average, for-profits have six-year graduation rate of just 23%, far below public (59%) and nonprofit (66%) institutions.[98] The for-profit share of loan defaults was 44% in 2013 despite an enrollment share of just 12%.[99]
- **Poor labor market outcomes.** "On average, employment and earnings are higher for students who attend public or nonprofit institutions. Six years after beginning their programs, students who ever attended for-profit institutions were more likely than students who attended only public and nonprofit institutions to be unemployed or out of the labor market, and they earned less than students with similar student characteristics and school completion rates did."[100]

Despite these poor outcomes, for-profits are carving out a niche — particularly among lower-income students and students less academically prepared, where they have a 20% enrollment share.[101] Some students at some for-profits are converting their investment into meaningful employment, but a great many others are maxing out their Pell Grants and student loans and ending up in the unfortunate some-college/no-degree category.

Although the best for-profits fill a need in this country, the odds of students getting scalped is often high (see the "For-profit Colleges in the News" sidebar below). Cappelli explains how we got here:

> The United States is at the moment the only country in the world where the notion that employers are simply the consumers of skills is seriously considered. That may help explain why we are also the world leader in the creation of a for-profit training industry that meets the skill demand, where individuals pay close to the full cost of getting the skills they need. **Indeed, for-profits now provide 50 percent of all skills credentials.**[102]

It is also important to note, on the flip side, that some for-profit providers who offer shorter workshops, bootcamps, online, or part-time skill development opportunities (rather than the more expensive online degrees and longer certificates that attract Pell grants) are gaining trust for delivering value, as well as developing the kind of reputation and intentionally fostering the kind of social capital networks once associated only with more traditional or academic learning experiences. Stephanie Krauss from Jobs for the Future notes that General Assembly, in her view one of the best "bootcamp" credentials, actively supports a learner and "alumni" network that provides what she calls a "social capital halo" to continue to add value.[103]

Given the importance of training and pathways to middle-skill jobs, students exploring that portion of the labor market cannot ignore for-profit offerings; however, they need much more transparency and counseling from third-parties about the quality and performance of for-profit programs. Hopefully, the forthcoming Credential Engine initiative will, help fill the gap; meanwhile, some aggregate institutional performance data can be found at College Results Online and College Reality Check. Nevertheless, there is no substitute for local student advocates who know their region's economy and employers and can

organize and vet data on all postsecondary providers, and help students with the challenging decision of selecting an appropriate match.

In all three of the questions explored in this Decision 3, "Vetting Postsecondary Providers," the high cost of college is deeply intertwined in student thinking. We turn to the financial cost and risk next.

For-Profit Colleges in the News

Excerpts from four recent articles provide context to the shady practices of some for-profit institutions and the efforts to rein them in.

"How For-Profit Colleges Sell 'Risky Education' to the Most Vulnerable"
National Public Radio, March 27, 2017
"For-profit colleges have faced federal and state investigations in recent years for their aggressive recruiting tactics — accusations that come as no surprise to author Tressie McMillan Cottom. Cottom worked as an enrollment officer at two different for-profit colleges, but quit because she felt uncomfortable selling students an education they couldn't afford. Her new book, *Lower Ed*, argues that for-profit colleges exploit racial, gender, and economic inequality. Cottom tells *Fresh Air*'s Terry Gross that for-profit institutions tend to focus their recruiting on students who qualify for the maximum amount of student aid. "That happens to be the poorest among us," she says. "And because of how our society is set up, the poorest among us tend to be women and people of color."

"This is the Way the College 'Bubble' Ends"
The Atlantic, July 26, 2017
"The for-profit implosion has been as dramatic as its rise. Between the 2010 peak and 2015, enrollment at private for-profit colleges decreased by about 40 percent, or 600,000 annual students. (In the same period, enrollment at public colleges and universities only decreased by 4 percent.) Federal loans for undergraduates attending for-profit colleges have also declined by 40 percent."

"Dozens of For-Profit Colleges Could Soon Close"
The Atlantic, January 11, 2017
"More than 800 vocational programs the department reviewed (at for-profit schools, private nonprofit schools, and public community colleges) failed to show that their graduates were able to find decent jobs…. Not insignificantly, virtually all—98 percent—of the programs that do not meet that bar are for-profit schools. Not a single community college appears on the list. If schools…don't begin to turn things around within several years, they stand to lose aid, and, in many cases, would likely shutter as a result….

"Right now, for-profits can get up to 90 percent of their revenue from federal aid, and the working paper cites studies that have shown that when the schools have access to federal aid, they charge significantly more than similar programs without access to aid….

"Secretary King also said… that higher education is still a wise investment. It's just important to understand which programs are worth the money, and which are, as he put it, a 'liability.'"

"If Trump Pulls Back, Can States Do More to Regulate For-Profit Colleges?"
Chronicle of Higher Education, July 13, 2017
"Even if Betsy DeVos, the education secretary, gets rid of or weakens the rules, for-profits can expect to face oversight. States, particularly those with Democrats in office, will seek to fill the void left by the Trump administration.

DECISION 4. Figuring finances and risk

"I can't afford for her to have a 53% chance of success in six years. I need for her to have a 100% chance of success in four years."

—A parent, upon hearing college completion rates[104]

The fourth of the 5 Decisions concerns the cost of college. Today, the average college student will assume $25,000 in debt. Student loan debt has skyrocketed to the largest consumer loan category, and 25% of student loan borrowers are delinquent on their loans.[105] Inflation and public policy have turned postsecondary education into a high-stakes gamble. The quote from Wharton's Peter Cappelli in Report 1 bears repeating here: "Everyone should be concerned about this new environment where college appears to be necessary for a child's future, increasingly expensive, but also increasingly risky in terms of career prospects."[106] That alone is a powerful argument for acquiring broader, deeper competencies and a different, more resilient approach to navigating the work/learn landscape.

For purposes of this discussion, we accept the high, rising cost of college as a given. Here, we briefly examine three more-solvable issues, each of which relates to the competence and experience levels that students have as they exit high school: over-paying and over-borrowing, the financial burden of "extra" years of college, and the financial burden of ending up with some college but no degree.

How can I compare college costs and avoid over-paying and over-borrowing?

In *Will College Pay Off?*, Cappelli emphasizes that, for many families, college has become a "high-stakes bet" — often the largest financial investment they will ever make.[107] Like the parent above, each family is concerned not only by the cost but the chance of success — both the probability of their child graduating in a timely manner and the odds of earning a commensurate income (as well as leading a fulfilling life). In short, comparing college costs requires projecting a return on investment ("ROI") and Cappelli's answer to "*Will college pay off?*" is "*It depends*." The first variable in any college ROI projection is the cost of attendance at various institutions. The table below compares costs for five different categories. Note that the cost increases from 2003-04 to 2011-12 are in constant 2012 dollars and, therefore, after inflation!

Average total price of attendance by type of postsecondary institution, 2003-2011 (in constant 2012 dollars)

	2003-04	2007-08	2011-12
All students	**$13,600**	**$14,700**	**$16,500**
Type of institution			
Public 2-year	7,400	7,300	8,700
Public 4-year	15,000	16,200	17,900
Private nonprofit 4-year	22,400	30,400	34,400
For-profit less-than-2-year	16,600	17,900	21,700
For-profit 2-year-or-more	18,100	22,400	19,900

Source: *Use of Private Loans by Postsecondary Students*, National Center for Education Statistics, 2016, p. 9, using National Postsecondary Student Aid Studies. Total price of attendance includes tuition, room and board, books and supplies, transportation, and personal expenses.

It is also worth noting that two categories have experienced the most dramatic rising costs: private four-year nonprofits (54% from 2003 to 2011) and for-profit certificate programs under two-years (31%).

We are not suggesting that families will sit down to make a formal ROI calculation, but regardless, they are assessing their options with considerable care. And, the other variables in their thinking include:

- Financial aid and projected student debt
- Expected time to completion and likelihood of completion
- Concurrent work hours and income
- Expected employability and career income, and risk of failure
- Student's maturity and likelihood of postsecondary success

Because the financial upside of postsecondary education is so pivotal, and the downside so devastating, the MyWays Project places enormous priority, first on the last of the variables and the broader, deeper competencies that support maturity and success, and second on the pathways and support structures that help young people and their families achieve their upside and mitigate the downside risks.

One place schools and communities need to do a better job of informing and supporting young people and families concerns predatory for-profits and other high-cost postsecondary providers. On average, for-profit schools are more than double the cost of public two-year schools. In some cases, specialized certificate programs with proven prospects for meaningful employment may justify the added cost. However, too often such excellence is not present and these schools seek out the students eligible for maximum federal financial aid, then sell them on the promise of high-paying jobs to pay off the loans.

Other forms of over-paying include failing to maximize the financial aid package, selecting a college or a major with insufficient research or for the wrong reasons (a "party school" for instance), working too many hours to receive a quality education, or paying for extra years (discussed separately below).

On the borrowing side, a study of federal student borrowing sums up the financial trends and burden:

> As college costs continue to rise, students and their families increasingly rely on federal loans to help pay for college expenses. In 2011–12, over half of all undergraduates (52 percent) had borrowed money from the federal government to fund their education, compared with just over one-quarter (27 percent) in 1989–90, some 2 decades earlier. Not only were students more likely to take out loans, they also borrowed larger amounts, even after adjusting for inflation. For example, the average cumulative amount borrowed by undergraduate recipients of Stafford Loans (the primary federal loan program) was $14,300 in 2011–12, compared with just over half that sum, $7,700 in 2012 dollars, in 1989–90. Student debt has been increasing so rapidly over the past 2 decades that, in 2012, national student debt levels surpassed $1 trillion, making student debt a widely cited national economic issue.[108]

The debt summary above pertains to only the federal portion of total student debt problem. As the cost of college continues to rise, it creates an ever-greater burden on students and their families and greater risk of failure. One practical small step that can be taken is better information and coaching about avoiding over-paying and over-borrowing.

How can I avoid the financial pitfall of "extra" years of college?

Just 56% of students at four-year colleges earn a bachelor's degree within six years and, at community colleges, "fewer than 30 percent of students manage to earn an associate's degree 'on time' (meaning within three years)."[109] Sometimes, as in the earlier case of opportunity student Jacob L., this extended duration is a matter of pacing: paying four years of college tuition over a longer period to avoid debt. But too often, the extension translates into extra tuition costs, extra room and board, and extra debt.

Obviously, the ideal solution where possible, is to ensure that students are academically prepared so they can avoid paying for remedial courses in terms of both money and time. College consultant Donald Asher describes six other reasons college students don't graduate in four years:

- Their parents let them take longer
- They don't go to school every day
- They change their majors too often and too late
- They go to too many schools or they transfer once or twice and lose credits
- They work too much (and, if they are working class, they work way too much)
- Universities make it difficult to get required classes

Each of these reasons is interconnected with the competencies and experience that students require to successfully make the 5 Decisions in navigating the work/learn landscape well and managing the college financial investment expertly.

How can I avoid the financial penalties of some-college/no-degree?

Throughout this report, we have emphasized the crippling impact of attending college but leaving without a degree. *The New Forgotten Half* analyzes these some-college/no-degree individuals:

> We implicitly assume that dropouts lack academic skills or motivation, although, as stated above, they don't appear much different than their peers who attain sub-baccalaureate credentials. These findings indicate that students with no credentials have no payoff, and that they waste scarce time and money, incurring substantial college debt — nearly as much as students who got certificates ($15,664 v $15,995). Our college for all ideals are well-intentioned and benefit many youth, but there is more that can be done to help those who enter college but fail to complete a credential. Research can help us understand how to help these young people move beyond 'some college,' attain a credential, and achieve workforce success.[110]

The same study, conducted for the William T. Grant Foundation, concluded that some-college/no-degree conveyed no increase in employability or income compared to those with high school diplomas but no college.[111]

To avoid the current epidemic of some-college/no-degree, students need to be fortified with the right competencies and real-world experiences to dramatically improve their prospects for attaining a degree or credential the first time through — not after an expensive failure. Indeed, in our view, some-college/no-degree (including "no certificate") indicates system failure. Continuing to push students who are not fully prepared toward "all or nothing" degree programs, without proper supports and safeguards, is likely to produce increasingly worse results as the 5 Roadblocks to bootstrapping a career, the 5 Decisions in navigating the work/learn landscape, and the 5 Essentials in building social capital continue to become more complex and challenging, especially for low-income students and students of color. The antidote to some-college/no-degree and to figuring finances and risk generally involves Wayfinding Abilities to survey college options and develop a sound plan; Content Knowledge to research college and career information and make real-world financial calculations; Creative Know How to problem solve and communicate; and Habits of Success to handle the stress and keep a steady hand on the rudder.

Next, we briefly discuss social capital (which we cover in more depth in Report 4) before wrapping up this report with several key takeaways.

DECISION 5. Cultivating social capital

"In the end, success is more about who you know than what you know. Because everyone teaches you something. You listen to everyone, and bit by bit, you figure things out."

—Bill Belichick
Head coach, New England Patriots[112]

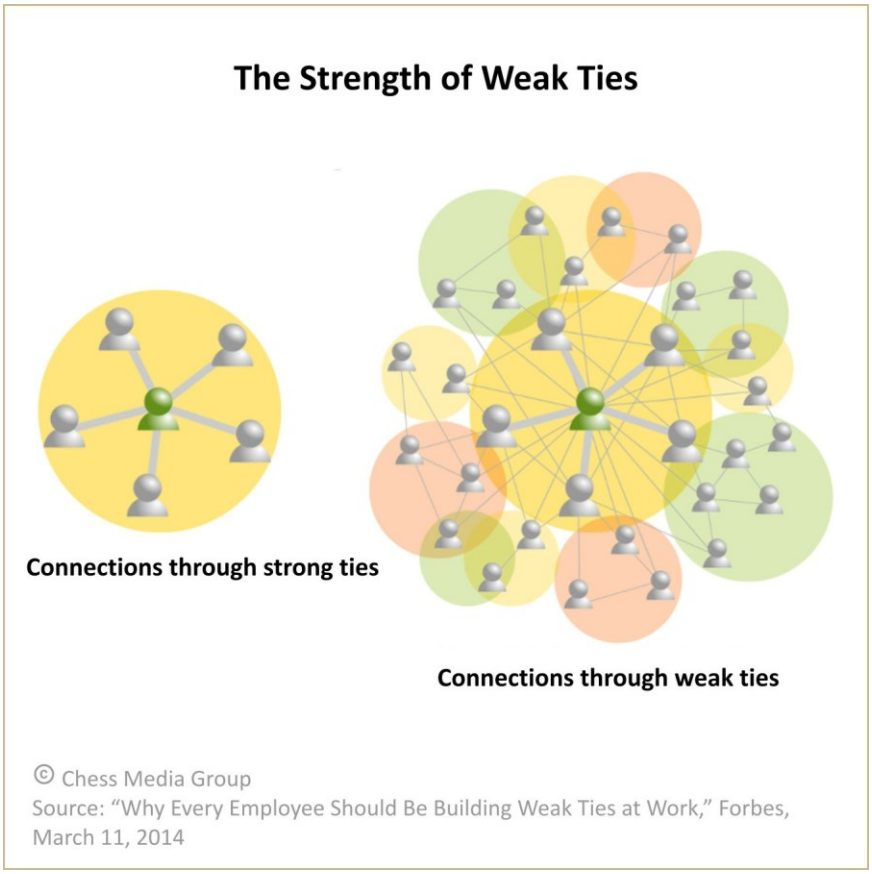
One of the outcomes designed into the MyWays competencies is the ability to cultivate relationships and social capital, through which students obtain the information, support, resources, and access needed to navigate the work/learn landscape and formulate and implement a plan for college and career. We cover this topic fully in Report 4, including the five types of social capital that every young person needs, as well as the gaps and adversities that confront young people in general and low-income students and students of color in particular.

5 Essential forms of social capital

- **Caring friends & adults**
- **Near-peers & role models**
- **Mentors & coaches**
- **Networks & weak ties**
- **Resources & connectors**

"Cultivating social capital" is Decision 5 for two reasons. First, it takes many allies, proponents, advisors, and contacts to successfully make it through a college career or into a good job. High schoolers need to know this and practice it; all too often they don't. In this regard, the 4-H motto, "Learn to do by doing" is apt. Second, for those students attending college, these postsecondary years are critically important to cultivating the new relationships and networks that will comprise their personal opportunity engine's

social capital blade and serve as the basis of the next phase of their careers. Some young people have a knack for this. For others, more reserved or shy, it is hard work. All students should be deliberately meeting people, building connections, and learning the art of "weak ties."



Sociologists now know that it is breadth of your "weak ties" network that uniquely serves as a portal of information and opportunity, as Hoffman and Casnocha explain:

> Weak ties in a career context were formally researched in 1973, when sociologist Mark Granovetter asked a random sample of Boston professionals who had just switched jobs how they found their new job. Of those who said they found their job through a contact, Granovetter then asked how frequently they saw the contact. He asked participants to mark whether they saw the person often (twice a week), occasionally (more than once a year but less than twice a week), or rarely (once a year or less). About 16% of the recipients said they found their job through a contact they saw often. The rest found their job through a contact they saw occasionally (55%) or rarely (27%). In other words, the contacts who referred jobs were 'weak ties.' He summed up his conclusions in a paper appropriately called 'The Strength of Weak Ties': *the friends you don't know very well are the ones who refer winning jobs*.[113]

The secret to weak ties, Granovetter found, was that no endorsement or obligation was implied in a weak tie communication; therefore, information, advice, and job leads move more freely than when strong tie relationships are involved. Accordingly, weak ties, and the cultivation of all forms of social capital, are vital to advancing in work and in life. As Hoffman and Casnocha state, "World-class professionals build networks to help them navigate the world,"[114] and they dedicate 60 pages of their book, *The Start-Up of You*, to network building.

Networks & weak ties are just one of the five types of social capital described in Report 4 which introduces the MyWays Developmental Framework for Social Capital. However, cultivating weak ties and other forms of social capital is a vital part of navigating the work/learn landscape and, therefore, deserves attention as one of the 5 Decisions here in Report 3. Continuing the organization of the 5 Decisions, three key questions about cultivating social capital might be:

- How can I break out of the traditional high school box and begin building relationships and social capital to help me advance in the work/learn landscape?
- How can I leverage my learning and working experiences in the years following high school to build additional relationships and join adult networks?
- How can I become more practiced and skilled at calling on my social capital to guide me in my work/learn decisions now and in the future?

Rather than discuss these questions individually as we did in the earlier Decisions, we refer readers to Report 4, *5 Essentials in Building Social Capital*.

Before we close out Report 3 with key takeaways for next generation educators, we remind readers that we have created a data digest of additional information on each of the 5 Decisions:

Understanding the Postsecondary Years: A Data Digest of Today's Evolving Work/Learn Landscape

Key takeaways for next generation educators on the work/learn landscape

> *"In this environment, all young people, not just those from low-income families or with weak academic preparation, need more information about careers, more structure in their school-to-postsecondary pathways, and much more experience of the workplace than ever before."*
>
> —Nancy Hoffman
> *Let's Get Real: Deeper Learning and the Power of the Workplace*[115]

Despite a rising college enrollment rate, the US has the highest college dropout rate in the industrialized world. With a troublesome labor market, escalating college costs, and general uncertainty about future opportunity, young people leaving high school face a *wicked problem* — that is, a problem that is novel and complex, with high uncertainty and incompatibility with trial-and-error.

We began this report summarizing the accelerations that are transforming higher education and "the growing diversity among postsecondary programs of study, credentials, and modes of delivery that are aligned with an increasingly complex set of career pathways." Amid the chaos, there are new possibilities for young people to align their aspirations and assets with the market realities of the workforce and economy today. To this end, we reintroduced the MyWays Student Success Framework and described how the competencies are like multi-purpose tools to help young people through the three stages of establishing a career: *arrive*, *survive*, and *thrive*. We then used the opportunity engine construct to compare and contrast a "traditional" student approach, focused narrowly on earning a degree before progressing to a job, with an "opportunity" student approach of developing a balanced, personal opportunity engine of *in-demand skills*, *work experience*, and *social capital* along with *degrees and credentials*.

Next, we examined students' academic preparation today, concluding that each cohort is comprised of three approximately equal groups: those who are academically prepared, those who are not fully prepared, and those who are not academically prepared. By and large, the academically prepared succeed in college; however, only 1 in 10 students in this group are from poor families and only 15% are students of color. The big problem today: the bleak outcomes for students enrolling in college who are either not academically prepared or are not fully prepared. As a result, the opportunity gap continues to widen at an alarming rate.

As we did with the 5 Roadblocks in Report 2, this report organizes our research on today's *work/learn landscape* into 5 Decisions, each actionable for next generation educators as they prepare their students for the future. To review, the 5 Decisions are:

Recapping the 5 Decisions in Navigating the Work/Learn Landscape

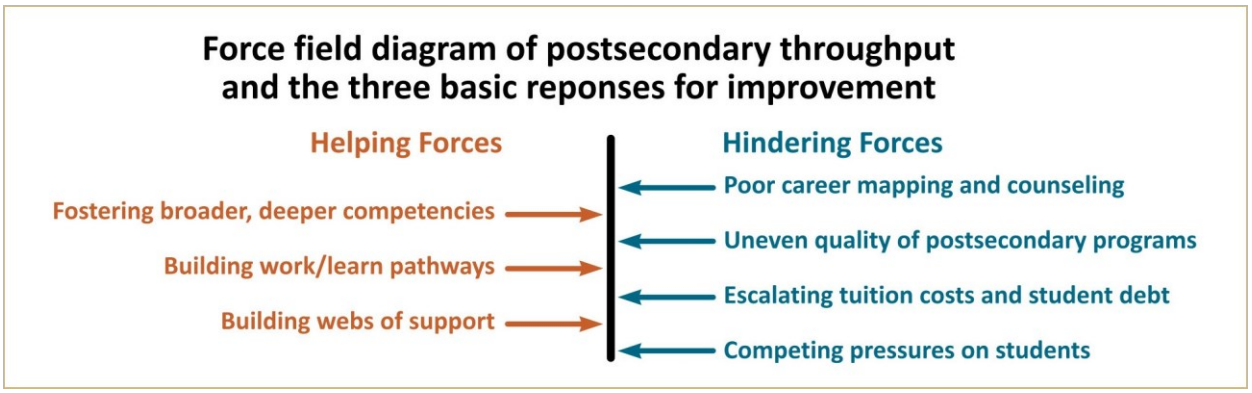
1. **Plotting a path to entry and advantage**
   Top academic students are likely to succeed in college. The far more difficult "path to entry" decision is the one confronting students who are not academically prepared or not fully prepared. Approximately half of young people earn a degree or certificate, but another half top out with a high school diploma — at a time when prospects for low-skill workers are at historic lows. On average, four-year institutions demonstrate better degree completion results while community colleges, particularly the best ones, offer flexibility and a wide variety of academic and degree programs. On average, bachelor's degree recipients enjoy economic advantages, but 27% of people who have only licenses or certificates earn more than the average bachelor's degree recipient.
2. **Calibrating the work/learn mix**
   The vast majority of college students work, which dramatically alters the postsecondary experience. Despite the important potential benefits of working, most students are working too many hours (and hurting their learning), and forced to do so in fields such as sales and food services rather than in jobs closely related to their fields of study. Characteristics of good jobs for college students include those with a "school comes first" environment, opportunities for skill-building, and constructive feedback.
3. **Vetting postsecondary providers**
   The ability to find and evaluate colleges and certificate-granting institutions is a crucial and troublesome part

of the biggest financial decision most people will ever make. Three key issues are discussed. The first is "undermatching" — that is, the failure of many low-income high-achieving students to find and apply to selective schools that match their ability and potential. The second is the proliferation of certificate programs: with few cataloging and rating services available, the vetting effort is haphazard and fraught with risk. Finally, many for-profit institutions practice predatory behavior, preying on the poor and vulnerable.

4. **Figuring finances and risk**
   Against the relentless rise in the cost of higher education, this section examines three more-solvable financial issues: over-paying and over-borrowing, including the abuses of many for-profits; the financial burden of "extra" years of college at a time when only 56% of students at four-year institutions earn a bachelor's degree within ***six*** years; and the financial burden of ending up with "some college and no degree." That latter is a chronic problem impacting almost 25% of those initially enrolling in a bachelor's program and nearly half of those who initially enroll in community college.

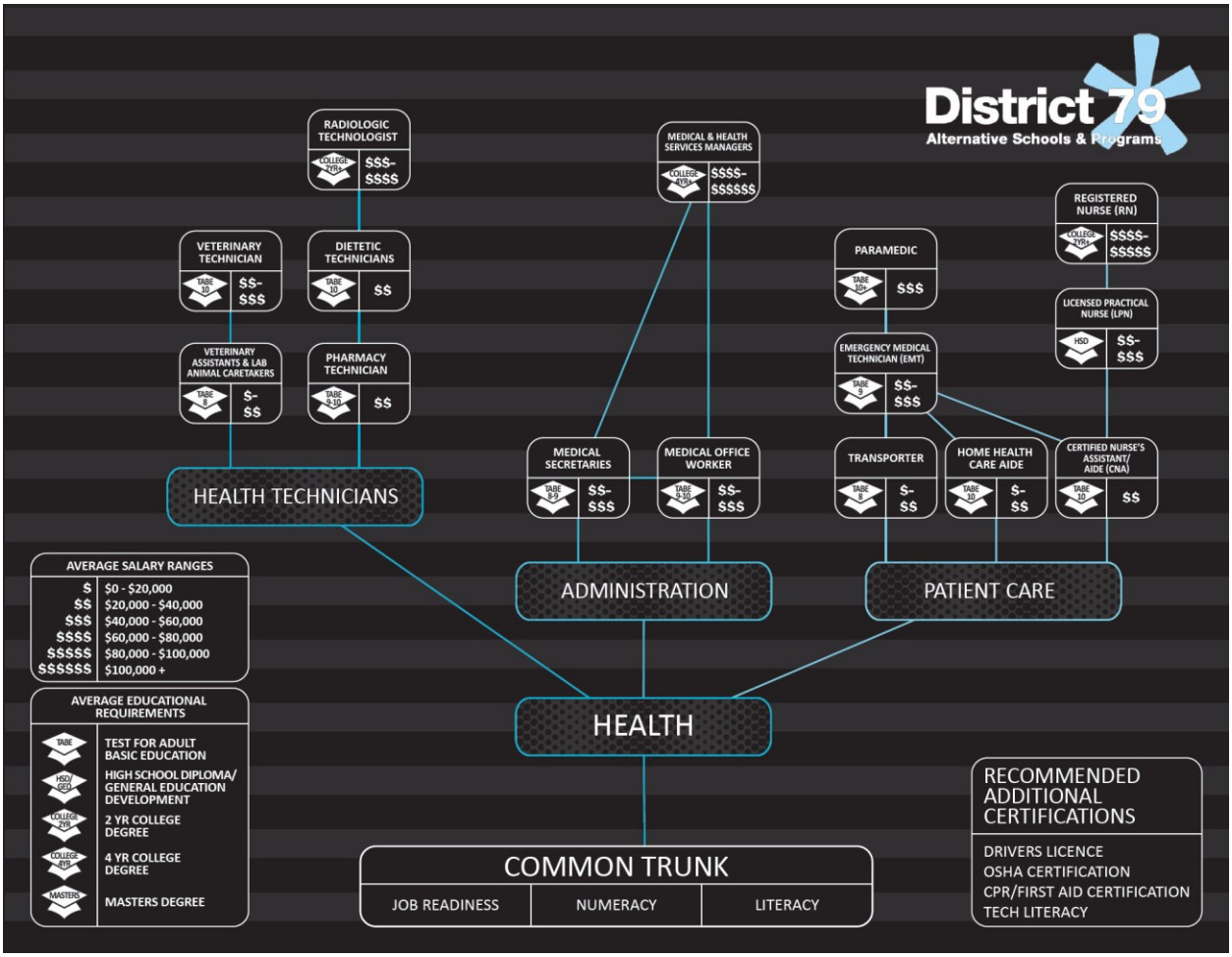
5. **Cultivating social capital**
   One of the outcomes designed into the MyWays competencies is the ability to cultivate the relationships and social capital needed to navigate the work/learn landscape. It takes many allies, proponents, advisors, and contacts to make it through a college career successfully. Furthermore, students should be actively using their college years to meet people and build connections, which is increasingly essential to securing employment and advancing a career. Shortage of social capital is particularly problematic for low-income students and students of color (see Report 4).

Takeaway 1: The first takeaway for next generation educators is that the opportunity gap will continue to worsen until we both improve academic preparedness for college and create new systems to facilitate student success in the work/learn landscape. Currently, only one-third of students are academically prepared for college and half of all young people are failing to earn a postsecondary degree or certificate. As educators and advocates for youth, we must examine the wider system holistically and ask the central question: *How can we improve young people's ability to successfully navigate an increasingly complex work/learn landscape?* As the graphic below shows, our research suggests that there are four hindering forces at work, and three potential beneficial forces that need attention. The remaining takeaways will explore these forces.



Takeaway 2: The postsecondary system has four hindering forces that are suppressing outcomes: poor career mapping and counseling, uneven quality of postsecondary programs, escalating tuition costs and student debt, and competing pressures on students. Mitigation of these forces will improve outcomes, yet high schools and communities are very slow to take up this work. To effectively address these forces, we need cross-sector collaboration at the state, regional, and local level.

Part of this collective action should aim at improving how we integrate and present information to students (both mapping and counseling). For example, 2Revolutions has worked with schools and communities to more clearly map career options in fields such as health care, weaving together potential positions, salary ranges, and education requirements (see the "District 79" graphic). In Report 4, we describe how Earlham College is mapping its entire alum community, along with their college majors and occupations, for the benefit and use of current students.



Source: 2Revolutions

Takeaway 3: As a nation, we need to foster the broader, deeper competencies to do college-level work *and* navigate the work/learn landscape. This is the first helping force in the force field diagram above.

Although it is common to think of academic preparedness narrowly in terms of math, ELA, and other Content Knowledge competencies discussed in Report 7, David Conley's readiness research underscores the related importance of Habits of Success (the "tools of inner strength"), Creative Know How (the "tools of improvisation"), and the obvious importance of Wayfinding Abilities (the "tools of navigation)." Report 10 reviews why Wayfinding Abilities are so important in navigating the work/learn landscape; describes the five Wayfinding competencies in greater detail; summarizes the "state of play" today in Wayfinding learning and assessment practices; and offers links to Wayfinding resources, frameworks, and school models. The report also discusses four key principles for helping students in the Wayfinding Abilities domain: 1) start early; 2) harness the Wider Learning Ecosystem; 3) access the support necessary; and 4) address barriers to equity. The report ends with full-page primers on each Wayfinding competency, their key aspects, and where to look for inspiration and guidance.

Takeaway 4: We must build work/learn pathways that structure information, opportunities, and support for students beyond traditional K-12 education. This is the second helping force. The Harvard Graduate School of Education's *Pathways to Prosperity* powerfully articulates the need to build multiple pathways and interconnections for career exploration. The authors argue that "every high school graduate should find viable ways of pursuing both a career and a meaningful postsecondary degree or credential" and that one part of this preparation is embedded in the Career-Related Technical Skills in the Content Knowledge competency domain (Report 9). The current system "places far too much emphasis on a single pathway to success: attending and graduating from a four-year college," which only 30% of young adults achieve. Instead, pathways proponents argue for a marriage of academic and vocational education, including apprenticeships and internships, career technical education (including career academies), early certification attainment, and closer employer partnerships.[116] Not only do these experiences develop students' ability to navigate the work/learn landscape, but they also enhance motivation and academic achievement.[117] Other forms of pathway building include dual enrollment and other postsecondary experiences during high school. For more on these approaches, see Wayfinding Abilities (Report 10) and

Additional Resources on Building Career Pathways

Career Pathways: Five Ways to Connect College and Careers. Georgetown University Center on Education and the Workforce. Focus on regional alignment of workforce needs/projections with postsecondary offerings and student support.

Creating Pathways to Prosperity: A Blueprint for Action. Harvard Graduate School of Education.
This guidebook for educators and practitioners is a follow up to the school's original report.

Youth Workforce Development. Jobs for the Future.
This report surveys various programs and resources.

MDRC Research on Career Pathways. MDRC.
This issue brief describes the career pathways approach, core design elements, and profiles.

New Pathways to Careers and College: Examples, Evidence, and Prospects. MDRC.

the Wider Learning Ecosystem (Report 11). Fortunately, there is growing interest and activity in career pathways. Following are several worthwhile resources:

Takeaway 5: We must also develop webs of support, especially to help low-income students and students of color build the social capital that they are frequently missing. During these critical years, adolescent isolation — on top of the scarcity of supporters, mentors, advisors, and acquaintances — is undermining young people's preparation for the Decisions they will make attempting to navigate the work/learn landscape. This isolation from adults is a cultural fabrication not supported by biology; in fact, adolescent brain research indicates that these years are a period of great promise. Making adolescence more relevant and productive is the topic of Report 5, where we discuss key developmental tasks that educators, parents, and youth-serving partners can help facilitate.

First, however, we turn to Report 4, *5 Essentials in Building Social Capital*, where we examine how gaps in social capital inhibit economic mobility and describe ten programs that are turning around lives through social capital.

Endnotes for Report 3

[1] Organization for Economic Development and Cooperation, as cited in William C. Symonds, Robert Schwartz, and Ronald F. Ferguson, *Pathways to Prosperity: Meeting the Challenge of Preparing Young People for the 21st Century*, Harvard Graduate School of Education, February 2011, p. 10.

[2] Symonds et al., *Pathways to Prosperity*, p. 13.

[3] Anthony P. Carnevale, Nicole Smith, Michelle Melton, and Eric W. Price, *Learning While Earning: The New Normal*, Georgetown University Center on Education and the Workforce, 2015, p. 18.

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[21] To determine levels of college readiness, *Closing the College Gap* researchers applied the two metrics that have the strongest evidence – high school course taking and GPA (see Part II of their report for a detailed discussion).

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