Beyond One-Size-Fits-All College Dreams

Alternative Pathways to Desirable Careers

By James E. Rosenbaum, Jennifer L. Stephan, and Janet E. Rosenbaum



sk middle and high school students if they plan to graduate from college and the vast majority will likely answer yes. Even students whose grades are below average or downright abysmal will nod their heads and

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A four-year college degree has long been an aspiration for the nation's highest-achieving students. But over the past couple of decades, two dramatic changes have occurred: most of society became convinced that a bachelor's degree is necessary to land a good job, and many educators responded by encouraging all students to go to college. Today, most high school graduates are going to college, but that's not necessarily good news. The fact is, few are earning four-year (or even two-year) degrees.

While we laud the college-for-all ideal, we believe that unless students are better informed, the movement will be self-defeating.

With thousands of higher education institutions offering open admissions, it is true that virtually all students can go to college. Yet less than half of high school seniors planning to get bachelor's degrees succeed in this goal, and completion rates are less than 20 percent for low-achieving students. Those who are poorly prepared end up in remedial courses—many drop out without earning a single college credit. Meanwhile, they have wasted precious time and money that could have been spent on career-focused certificates or associate's degrees that have better outcomes than are generally recognized.

In short, with our good intentions, we actually mislead the youth who most need our guidance. And, with our imprecise language, we actually mislead each other too. In everyday language and in formal policy discussions, the word "college" is used as a synonym for "bachelor's degree." Colleges have much more to offer than just four-year degrees—and recognizing that fact would

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go a long way toward rescuing the college-for-all movement. Although the policy rhetoric now includes "college- and careerready" goals, that hasn't had much impact. Too many four-year colleges still make exaggerated claims about students' future earnings, too many community colleges advise nearly all young students to enroll in BA-transfer programs (regardless of how many remedial courses they will need), and most students and parents only consider BA plans, without any awareness of tradeoffs or alternatives.

Before diving into the research, we'd like to note that withholding potentially discouraging information from youth appears to be a widespread societal problem-not a problem limited to the education field. We conduct research in both the health and education fields, and we often see adults' idealism getting in the way of better outcomes for youth. For example, just last year one of us (Janet Rosenbaum) completed a study of programs to encourage abstinence among teenagers. Like other research, this study found that such programs tend to be ineffective in their goal to promote abstinence. More disturbingly, condom use among abstinence program participants was drastically lower. Likely, the lower condom use is due to three ways in which many abstinence advocates implemented their deeply felt ideals: (1) they encouraged students to follow a narrow, idealized course of action (i.e., abstinence only); (2) they withheld information from students about the extremely high (80 percent) failure rates of abstinence programs, and some gave inaccurate information about condom effectiveness; and (3) they persisted with their idealized programs instead of alternative sex education programs with better outcomes (such as the Centers for Disease Control and Prevention's Programs That Work, some of which result in greater sexual abstinence than abstinence-only programs).1 Some observers simply ridicule these abstinence advocates and their tightly held beliefs,

but we do not. We are mystified by what we are increasingly seeing as idealism that prevents optimal outcomes across youth-related fields. We think our society's tendency to advocate BAs for all is a good example of this problem. Somehow, across fields, we must find a way of being honest with our youth without crushing their dreams. Short term, the truth about college might be disheartening. Long term, knowing the truth is the only way to accomplish one's goals.

This paper aims to identify three elements of the BA-for-all movement that are potentially harmful: (1) the idealization of the BA degree, which results in ignoring excellent options like an applied associate's degree in mechanical design technology, graphic communication technologies, dental hygiene, or computer networking; (2) the promise of college access, which results in high school students seeing their slightly older peers go off to college, but not seeing the trouble many have once on campus;

> and (3) the cultivation of stigma-free remediation, which results in many "college" students not even knowing that they are in remedial, noncredit courses. In discussing each of these issues below, we call for three simple remedies: realizing that many good jobs do not require a BA, fully informing students about their options, and, as students select goals, honestly telling them what it will take to succeed.

1. Idealization of the BA Degree

The BA-for-all movement presents an oversimplified, idealized goal: everyone should strive for a BA. This goal is based on several misleading assumptions:

- BAs have a million-dollar payoff.
- BAs guarantee higher earnings.
- High earnings signal good jobs.
- BAs lead to better jobs than AAs.
- Alternative degrees prevent BAs.
- People with BAs would never return to college to get AAs.

In addition to being misleading, each of these assumptions discourages considering alternative backup options. Let's briefly examine each assumption.

Assumption: BAs have a million-dollar payoff.

Far too often, the message in public service ads, the educational reform literature, and guidance counselors' advice is that BA degrees have a million-dollar payoff in lifetime earnings.² This message is simple and powerful—and students have gotten it to an impressive extent. Over recent decades, the proportion of high school students planning to get a BA has steadily increased.³ For example, in 2004, 89 percent of high school graduates planned to earn a BA; 6.5 percent planned to attend college but did not expect to graduate from a four-year college; 3.5 percent did not have plans; and *less than 1 percent (0.54 percent) planned not to attend college.*⁴ In other words, nearly all high school graduates, regardless of academic achievement, planned to attend college, and 89 percent planned to get bachelor's degrees. In interviews, many

students explain that they want a BA because of its earnings payoffs. ${}^{\scriptscriptstyle 5}$

Assumption: BAs guarantee higher earnings.

While the million-dollar lifetime payoff may be accurate, *on average*, earnings vary greatly within educational levels, and there is substantial overlap in the earnings distributions of different educational levels. As shown in the first table on page 6, it is true that people with BAs have higher median earnings than those with AAs, but 25 percent of people with BAs have earnings below the median earnings of those with AAs, and even substantially below the earnings of the top 25 percent of people who did not go beyond high school.⁶ In addition to the fact that not all jobs that require a BA pay more than jobs that require an AA or a high school diploma, many BA graduates have jobs that don't use their four-year-degree-level skills.⁷

Of students with BAs, we can predict who will be in that bottom earnings quartile. Among BA graduates, those who were in the bottom 25 percent of high school achievement tend to have lower earnings than students with average achievement.⁸ Even 30 years after high school, the average annual payoff for low-achieving BAs is less than \$3,000,⁹ which isn't likely to add up to anywhere near a milliondollar payoff over a 40-, 50-, or even 60-year career. Students are rarely told this, and some low-achieving students believe a bachelor's degree will guarantee a million-dollar payoff *even if they only do the minimum necessary to graduate*.¹⁰

Similarly, students who attend less selective colleges also get a lower-than-average payoff for a bachelor's degree.¹¹

Another way to predict students' future earnings is by what they are studying: some majors have a big payoff. The median annual earnings of young adults with BAs in a science, technology, engineering, or mathematics (STEM) field is \$12,500 (37 percent) higher than for those with BAs in the humanities.¹² As shown in the second table on page 6, at age 26 the earnings difference between those with a BA and those with a certificate or AA is not necessarily very large. In fact, those with a certificate or AA in a health-related field earn about the same as those with a BA in a health-related field.¹³ Only in the STEM fields do we see a large difference of about \$15,000 per year. Although these findings only apply to age 26, for the students who have limited time, interest, and funds for college, these quick payoffs of certificates and AAs are likely to be valued, and they influence income at a time when many people are starting families.

When we stop and think about it, these numbers are not really a surprise. We all know that many people with jobs that require a BA (e.g., teachers, social workers, etc.) are paid less than some people with jobs that require an AA (e.g., computer specialists, engineering technicians, mechanics, heating/air conditioner repairers, dental and medical assistants, insurance appraisers, and funeral directors). Moreover, there are indications that the BA payoff has declined in recent years.¹⁴ Of course, we also know that earnings is not the only criterion by which students should select their career. However, most of us don't know about the other rewards in associate's degree jobs, so let's turn to those now.

Assumption: High earnings signal good jobs.

Our society's emphasis on the million-dollar payoff is also mis-

leading in suggesting that earnings should be the primary criterion for choosing one's education and occupation. While economic theory recognizes that high pay is sometimes offered to offset disagreeable job conditions, this is rarely considered by policymakers or students. However, job-placement specialists are well aware of these issues. In a study of colleges offering AA degrees, job-placement staff report that they urge their AA graduates to *avoid* the highest-paying jobs¹⁵ because of the five Ds: they tend to be dirty, demanding, dangerous, dead-end (meaning they don't lead to long-term payoffs), or deceptive (such as promising high commissions that rarely occur). These job-placement staff are responsible for helping their graduates get jobs that are allaround good; they urge graduates to take jobs that use the skills they've learned, and that provide job training and future promotions. Although these concerns were expressed about the AA-

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degree labor market, we suspect they apply to some of the BA-degree market as well. Focus on high pay in starting jobs is self-defeating if there is no potential for advancement.

Assumption: BAs lead to better jobs than AAs.

Although BAs lead to higher average earnings than AA degrees, a focus on high pay can be self-defeating across one's entire career if it means ignoring the many other factors that make for rewarding work. Although researchers and policymakers tend to focus on earnings, working adults evaluate their jobs on many other dimensions. In a recent national survey, working adults reported that their jobs vary on eight conditions: feedback, autonomy, skill variety, say in decisions, workload, safety, stress, and the fairness of pay.¹⁶ *All eight of these job conditions are more strongly related to job satisfaction than actual earnings*. Moreover, we find that BAs are not the only way to get a job that offers good conditions. Associate's degrees are just as strongly related to these job conditions as BAs are.

Assumption: Alternative degrees prevent BAs.

The focus on BAs not only suggests that associate's degrees are inferior, it also suggests that one must choose one or the other. Some community college counselors discourage associate's degrees because they will lead to "settling" for an inferior degree and divert students from higher degrees.

While low degree-completion rates are a concern at two-year colleges, many of the students who complete associate's degrees go on to further degrees, including bachelor's degrees. In a national survey of the high school class of 1992, by the year 2000, 10 percent of high school graduates had earned an AA. Of these AA recipients, 78 percent also got further education, and 34 percent earned a BA.¹⁷

In a small local survey we conducted that focused only on associate's degree recipients in occupational (i.e., business, health, and technical) fields, we found a similar pattern. While this sample may not be representative of the larger population, it provides one of the few sources that allows seven years of follow-up after the associate's degree. In this sample of 80 occupational associate's degree recipients from community colleges, 54 percent got further education, and 35 percent earned a BA or higher degree. Compared with the national percentages reported above, this sample shows fewer pursuing further education, but almost exactly the same proportion earning BA or higher degrees. In addition, 6 percent of our respondents earned master's degrees (often MBAs).



Assumption: People with BAs would never return to college to get AAs.

Associate's degrees have become much more common over the last several decades, and they have become a formal requirement for certain skilled jobs. In our local survey, we found four BA graduates who returned to college to earn associate's degrees. Some students wanted jobs that are more satisfying or allow them to help other people. Others wanted more technical skills or more practical skills. One reported that an AA in radiography led to a higher-paying job (over \$80,000 a year) than her prior teaching job. These individuals clearly did not believe that people with BAs get better jobs than those with AAs. We have not found any nationally representative research to indicate how often this happens, but the fact that it happens at all indicates that our nation's preconceptions about twoand four-year degrees are too simplistic.

n summary, the million-dollar lifetime payoff makes a compelling message, and it may be the best way to get students' attention, but this simple message is incomplete and far too narrow. Failing to elaborate on and clarify the message can lead to serious problems. First, this oversimplified message does not warn students that some of them will receive lower earnings from a BA than most associate's degree recipients, despite the fact that these lower earnings are predictable from students' achievement, college, and major. Second, it encourages a focus on earnings in choosing college majors and first jobs, when other job conditions are at least as important for life and work satisfaction. Third, it encourages students to pursue the bachelor's degree without regard to risks of interruption. For students at great risk of having their college careers interrupted by work or family concerns, planning a degree sequence (certificate, associate's degree, and then bachelor's degree) might provide backup options. Indeed, some colleges have designed their curriculum to encourage students to get certificates and associate's degrees along the way, before getting bachelor's degrees. Fourth, low-achieving students are rarely warned that they have a low probability of attaining a BA (a point we discuss further below). The million-

> dollar payoff makes a compelling message, but it provides poor guidance for helping students make good career choices. While skill demands have increased in many jobs, many of these are mid-skill jobs that require more education than high school, but not a BA.¹⁸

2. The Promise of College Access

In the 1960s and '70s, high school guidance counselors typically acted as gatekeepers. They discouraged low-achieving students from attending college.¹⁹ While some counselors may still do some gatekeeping today, many high school guidance counselors now report that they don't like the idea of being gatekeepers and don't function that way.²⁰

Unlike prior counselors, today's counselors do not have to discourage low-achieving students from attending college: many two- and four-year colleges now have open admissions. Since the 1960s, while enrollment at four-year colleges has doubled, enrollment at community colleges has

increased fivefold. Today, nearly half of all new college students attend community colleges, and counselors can promise virtually all students they will be able to attend college, since open admissions offers access for nearly anyone.

However, although no one will regret a reduction in the old model of gatekeeping (especially since far too many students were discouraged from attending college on the basis of their family income, skin color, or gender, not because of their academic achievement), all is not well when it comes to counseling in today's high schools. A serious problem is the lack of counselors a problem that may be getting much worse as the nation's economic troubles affect school districts' budgets. Data from 2001 reveal that, on average, the ratio of counselors to students is 1 to 284.²¹ In some high schools, the workload for counselors is truly inconceivable, with the ratio exceeding 1 to 700.²²

Possibly as a result of these workload issues, today's typical counselor tends to present an oversimplified picture of open admissions. Counselors often say that students can enter college even with low achievement in high school, but they rarely warn that low-achieving students cannot enter college-credit classes or certain programs.²³ Avoiding these details keeps students optimistic and encourages their college plans. However, it also gives students insufficient information to make sound decisions (including deciding to work harder in high school).

Although open admissions has provided much-needed second

chances to many, those of us in the education world tend to focus on its benefits while ignoring its costs. In a national longitudinal survey conducted in 1992, high school seniors who planned on getting a college degree but had poor grades (Cs or lower) had less than a 20 percent chance of completing any degree in the 10 years after high school;²⁴ similar results were found in a study conducted in 2000. More recent research using data collected in Florida in 2007 shows remarkably similar results: for students with a C average in high school, only 19 percent earned any credential (certificate, AA, or BA) in the six years after high school.²⁵ Open admissions is truly a wonderful second chance for the nearly 20 percent who succeed. However, the vast majority of students who were low achieving in high school fail to get any college degree, and *many don't get a single college credit.*²⁶

How many of these students would have made other plans at the end of high school if they had known their chances of success in college were so slim? How many would have planned to earn a certificate and/or a two-year degree on their way to earning a BA? How many would have tried harder and gotten better grades in high school if they had known that it would make a difference?

Although these examples seem to blame counselors, counselors often don't have a choice. Setting aside the counselor-tostudent ratio problem already mentioned, they face three structural influences that limit their actions. First, most counselors cannot get authoritative information about their graduates' college outcomes. Data on colleges' graduation rates are rarely provided, and whatever numbers are available usually do not apply to the graduates of any one particular high school, since several high schools usually feed into each community college. Second, even if counselors had good information, their many noncounseling duties (like copious paperwork) mean that most of them spend less than 20 percent of their time on college counseling.²⁷ Third, and most important, counselors feel limited in what they can say. The BA-for-all norm prevents counselors from providing candid information. Many counselors report that they would receive complaints from parents and principals if they informed students that their poor high school grades suggest they aren't prepared for college courses. Some counselors report they would lose their jobs if they gave such advice.28

Like the million-dollar payoff, the promise of "open admissions" is accurate but incomplete. Open admissions lets students into classes on college campuses, but not necessarily into collegecredit classes, and noncredit classes (e.g., basic skills, remedial, and avocational) don't lead to degrees.²⁹

The result of all this oversimplified information is that seniors

Earnings of Full-Time, Year-Round Workers Ages 25 and Older, by Gender and Education Level, 2008

	Females			Males		
	25th Percentile	Median	75th Percentile	25th Percentile	Median	75th Percentile
High School Graduate	\$20,800	\$28,400	\$38,000	\$26,900	\$39,000	\$53,200
Associate's Degree	\$26,800	\$36,800	\$51,100	\$35,700	\$50,100	\$68,000
Bachelor's Degree	\$33,900	\$47,000	\$65,500	\$43,800	\$65,800	\$96,800

SOURCE: SANDY BAUM, JENNIFER MA, AND KATHLEEN PAYEA, EDUCATION PAYS 2010: THE BENEFITS OF HIGHER EDUCATION FOR INDIVIDUALS AND SOCIETY (NEW YORK: COLLEGE BOARD, 2010).

Median Earnings of Workers at Age 26 by Field of Concentration

	Workers with a BA degree	Workers with a highest credential of certificate or AA degree
Science, Technology, Engineering, and Mathematics (STEM)	\$46,052	\$30,922
Health-Related	\$45,680	\$45,968
Professional	\$39,912	\$35,188
Vocational-Technical	\$39,360	\$33,476
Social Science	\$38,212	\$28,528
Humanities	\$33,552	\$26,812

SOURCE: LOUIS JACOBSON AND CHRISTINE MOKHER, PATHWAYS TO BOOSTING THE EARNINGS OF LOW-INCOME STUDENTS BY

INCREASING THEIR EDUCATIONAL ATTAINMENT (WASHINGTON, DC: HUDSON INSTITUTE AND CNA, 2009), WWW.HUDSON.ORG.

Socioeconomic Status Quartile among Two-Year College Students

	Public	Private
Low SES	21%	26%
Low-Mid SES	23%	24%
High-Mid SES	27%	16%
High SES	28%	33%

SOURCE: AUTHORS' CALCULATIONS BASED ON THE NATIONAL EDUCATION LONGITUDINAL STUDY.

High School Grades Quartile among Two-Year College Students

	Public	Private
Low Grades	26%	31%
Low-Mid Grades	12%	18%
High-Mid Grades	18%	18%
High Grades	44%	33%

SOURCE: AUTHORS' CALCULATIONS BASED ON THE NATIONAL EDUCATION LONGITUDINAL STUDY.

are misled about their future prospects and younger students are not informed about what they ought to be doing in high school. When counselors encourage students to attend college despite their low achievement, students infer that college is a place where previous low achievement doesn't matter. Just as they managed to graduate from high school despite low achievement and minimal efforts, they expect the same in college. Indeed, while we are trying to protect students, we are actually preventing students from seeing what actions they could take to improve their outcomes. In interviews we conducted in Chicago public schools, seniors reported that they will be able to enter community college even with an easy senior year.³⁰ They claimed they don't have to take difficult courses in senior year (such as mathematics and sciences), they don't have to work hard in class, they don't have to think about college in advance, and senior year can be a time to "rest" before seriously thinking about college.

indicated college-readiness levels, even if those levels were not required for graduation. Even earlier testing might be better for giving students more time to prepare. For example, the Dayton Early College Academy (a high school in Ohio) gives the college placement test to ninth-grade students to identify skill needs very early. Unfortunately, only a few experiments have been done along these lines. Until such steps are taken in all high schools, most students will not know if they are prepared for college, and may not see any reason to take difficult, college-prep courses that would reduce their college costs and the years they need to complete a degree. A simple first step would be to make students aware



Students should be aware of the downside of open admissions: it allows access to college, but not necessarily to college-credit courses.

These student reports are consistent with findings from national surveys. While most high school seniors plan to get a BA, many don't take the demanding courses that would prepare them for college-level coursework.³¹ Moreover, many seniors do very little homework.³²

While some critics observe these patterns and blame students for refusing to prepare for college, this criticism assumes that students know they are not prepared for college, know what they need to do to prepare for college, and refuse to take those steps. These assumptions are probably wrong. High school students are rarely given good information about what college requires, how prepared they are, and what steps would prepare them. Especially in low-income communities where few adults have completed college and the public schools are badly under-resourced, students may have no one to turn to for information or support.

Worse, students are often given misleading information. For instance, many states require exit exams to certify mastery in order to graduate from high school. Yet the standards for these exams vary greatly. Many states are concerned that low pass rates will lead to criticism, and so these tests usually certify mastery far below the 12th-grade level. Consequently, just one summer after passing these exams of high school competency, many students fail their college placement exams. *Students are understandably surprised to learn that "high school competency" does not indicate "college readiness."*

Students could get more useful information about their college prospects if they took college placement tests at the end of their junior year of high school* (when they still had time to take some college-preparatory courses), or if high school competency exams of the downside of open admissions: it allows access to college, but not necessarily to college-credit courses.³³

3. Stigma-Free Remediation

Just as high school counselors typically encourage everyone to attend college, staff in some community colleges encourage everyone to enter traditional BA-transfer programs. Community colleges offer a variety of certificates and associate's degrees (e.g., Associate of Arts, Associate of Science, Associate of Applied Science, and Associate of General Studies). Many have fewer requirements and shorter timetables than BAs and, as we have seen, lead to good jobs with desirable working conditions—sometimes they even offer better pay than jobs that require a BA. Nonetheless, some community colleges focus only on BAs, particularly for students under the age of 22, who are the traditional college-age students.³⁴

Unfortunately, this ambitious goal conflicts with many students' poor academic skills. There are two logical responses to this mismatch: lower the goals or raise students' achievement. Just as

^{*}New York City's recent policy of reporting graduates' remedial placements by high school is an acknowledgment of the problem, but contains no remedy unless one believes stigma leads to constructive action. Students and teachers could take constructive action to address students' remedial needs if the college placement test were given in high school, ideally with subscales identifying areas for improvement. Moreover, the test would put younger students on notice that these are important skills to learn. Instead, high schools give a multitude of standardized tests that indicate percentile ranks but make no clear predictions about academic knowledge and skill needed to avoid remedial coursework.

high school counselors used to act as gatekeepers, community college counselors used to encourage students to settle for lower goals.³⁵ And, just like high school counselors, community college counselors now tend to actively encourage BA plans.³⁶ Analyses of national survey data find that many students raise their expectations after entering community college. Examining this issue more closely, a study of seven community colleges found that many students report that their faculty and advisers strongly encourage them to increase their degree plans.³⁷

Of course, BA plans require some further adjustment, since most community college students' academic achievement is too low for college-credit classes. Over two-thirds of community college students are directed into remedial courses intended to bring their academic achievement up to the level required by BA-transfer pro-

grams.³⁸ *In some urban areas, the remediation rate is over 90 percent.*³⁹ Remedial classes do not give credit toward a college degree; they are high-school-level courses designed to get students up to college level. Unfortunately, many students do not successfully complete these remedial courses.⁴⁰ While research evidence is mixed about whether remedial courses help students who are close to college-ready, there is overwhelming evidence that students who have large deficiencies or deficiencies in several subjects often fail to complete the remedial sequence and often drop out of college without completing any degree or even earning a single college credit.⁴¹ One

recent study found that only 29 percent of students referred to the lowest levels of reading remediation, and just 17 percent of those referred to the lowest levels of mathematics remediation, success-fully completed their sequence of remedial courses.⁴² In effect, staff recommend remedial sequences because they appear to be a pathway to a degree, but it turns into a dead-end for the vast majority (71 to 83 percent) of low-achieving students.

With two-thirds of students in at least one remedial course, institutions have had a strong incentive to reduce the stigma that was once associated with such courses. Currently, many course catalogs and staff don't use the term "remedial;" they use the euphemism "developmental."⁴³ In interviews, faculty and counselors report that they "communicate their high expectations of students in order to combat their students' tendency to lack academic self-confidence," and they tell students that developmental courses are "a positive and necessary step in fulfilling their ultimate goals."⁴⁴

Impressively, these efforts have the intended consequence: students typically don't feel stigmatized or demoralized when they learn of their developmental placements. Referring to English 101, the *lowest* college-credit English course, one student reported, "they told me that my test scores were pretty high, but I didn't test in the high end, which is 101."⁴⁵ This unstigmatized approach has clear advantages. It avoids discouraging students by labeling them as deficient or giving them the impression they don't belong in college. But, like the idealization of the BA and open admissions, it too has many costs that tend to be ignored and end up hurting most students.

While we certainly are not calling for students to feel stigmatized, we do see a need for students to be better informed about placement tests and remedial courses. A placement test is required for all students who enter community college with degree goals. Typically, students are not warned about this test or its importance. They are merely told what courses they should take based on the results.⁴⁶

Because many college staff, catalogs, and websites tend to downplay the placement test, students rarely prepare for this test before arriving at college. In our research, community college students in the Chicago vicinity reported that they didn't realize they had to take this test when they entered college, so they didn't use senior year as a time to prepare for it, nor did they refresh their knowledge before the test, taken after a long summer vacation away from academics.⁴⁷ For some students, a few days of review might have saved 4 to 12 months of additional college time and tuition. For others, knowing about the test while in high school

Many certificates and AAs lead to good jobs with desirable working conditions—sometimes they even offer better pay than jobs that require a BA.

> may have radically altered their approach to high school academics. For students who are serious about earning an AA or BA, the placement test could provide a strong incentive to take difficult courses and work hard senior year, and to review tested subjects before starting college. Unfortunately, the incentive is totally ineffective because few students know about it.

> College staff also typically say very little about remedial courses. Colleges not only remove the stigma about remediation, they also remove clarity. Far too many college staff, catalogs, and websites do not clearly state that remedial—or "developmental"— courses do not give college credits, or that they prolong degree timetables. Remedial classes that are several levels below college-credit classes can add one or more terms of remedial study before students can enroll in college-credit classes, but community colleges usually make it difficult for students to understand this. On many campuses, no one explains remedial courses, their hierarchy, or their implications.

Many students believe that a "two-year associate's degree" will take two years, but *it actually averages 3.5 years* in many community colleges, even for full-time students.⁴⁸ Of course, students could infer how much their degrees will be delayed if counselors explained their remedial placements—but that is rarely done.

Indeed, research indicates that most students do not understand that remedial courses are noncredit and delay degree timetables. In a survey of students in seven community colleges, students were asked if they had taken any of a list of courses, all of which were remedial. Of students reporting they had taken any of these courses, 39 percent wrongly believed these courses counted toward their degrees, and another 35 percent were not sure.⁴⁹ Among students taking three or more remedial courses, *(Continued on page 10)*

What Message Does College for All Send?

BY CHRIS MYERS ASCH

Several years ago, I took a group of low-income middle school students to a motivational talk at a local university. A dynamic young professor encouraged them not to settle for anything but the best. After the presentation, he asked the students what they wanted to be when they grew up. One of our girls (I will call her Shanika) answered excitedly, "Nurse!"

"Nurse?" the professor asked, disappointed. "How about doctor? Don't you want to shoot high?"

Shanika's face fell. Though I sympathized with the professor's intended message, I was incensed.

Not only was he wrong on a practical level—this country faces a serious nurse shortage—but he exemplified the haughty disdain with which many educators and policymakers view careers that do not require a bachelor's or advanced degree. Shanika did not need to hear that her dreams were not up to snuff. Unfortunately, that is a message students hear all too often in our college-obsessed culture.

As someone who founded and ran a college-prep enrichment program for at-risk secondary school students, I appreciate efforts to raise expectations and encourage students to go to college. But I also recognize the potentially distorting effects that our college obsession can create. "College- and career-ready" may be the new catch phrase, but the emphasis is all on the "college" part—most policymakers and educators seem to ignore alternatives to college.

This is shortsighted because, simply put, some students should not go to



college, or at least not a four-year college.

I know, I know. Writing that sentence can incite the wrath of the "achievement police," the legions of self-appointed guardians of high expectations (and, I confess, I have at times been an officer in this force myself). To even broach the idea that some students may not be suited for a four-year college degree can invite scornful accusations that one is perpetuating, in George W. Bush's memorable phrase, "the soft bigotry of low expectations."

We have so effectively pushed the notion that "success equals college" that other options, such as vocational education, seem horribly limiting and even discriminatory. But college prep has become a one-size-fits-all approach to secondary education, and some students simply do not fit. Though it may be difficult to conceive for the highly educated professionals who devise curricula and policies, college is not always the best choice for students whose interests and skills lend themselves to trades rather than a college degree.

As noted in the main article, the emphasis on attending college leaves many high school students woefully unaware of how many alternatives to the four-year college degree there are. Some students may feel that college is the only "good" option, and so they may enroll in a university or community college even though they are neither well prepared nor particularly interested in the subject matter.

Worse, some kids who are frustrated or bored within a college-prep curriculum may wind up dropping out of high school. Once they drop out, their chances of future economic stability decrease markedly. The Center for Labor Market Studies estimates that dropouts earn less than half as much annually as high school graduates do.*

Young people should have a variety of good options. Along-

side a challenging college-prep curriculum—and extensive information on what success in college requires—our schools should offer more rigorous and relevant vocational education programs and apprenticeships that build on students' interests and help them develop real-world skills that will give them an economic foothold after graduation. We should bolster partnerships with nonprofit organizations and businesses that agree to provide training and development while students earn their high school diplomas. And we should not discourage students from pursuing military careers.

As a nation, we need young people to become skilled carpenters, electricians, lab technicians, nurse practitioners, and drill sergeants. By pushing college to the exclusion of other options, we indulge in what might be called "the inadvertent bigotry of inappropriate expectations." If we are not careful, we can send a subtle message to students who fail to live up to those expectations or who choose other goals for themselves: "You're not good enough." And that can be as dispiriting and discouraging as "You're no good."

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^{*}Center for Labor Market Studies, *Left Behind in America: The Nation's Dropout Crisis* (Boston: Center for Labor Market Studies, 2009).

(Continued from page 8)

the misconception was slightly lower (36 percent), but the "not sure" rate was higher (44 percent). In other words, more than 70 percent of students were wrong or not sure about these courses.

Most seriously, remedial coursework is strongly negatively related to degree completion, but students don't realize it. In a national survey, as the number of remedial subjects increased from one to three (or more), students' perceived chances of achieving their degree goals declined only slightly (from 94.4 percent to 91.0 percent),⁵⁰ but students' actual degree completion declined severely (from 25.5 percent to 15.3 percent).

Finally, students are also not well informed when it comes to degree selection. Different degrees and programs have different academic prerequisites, so students could use placement test scores when setting their goals. For example, students with low

Youth should have dreams, but if school staff feel compelled to withhold crucial information to preserve those dreams, that is not a kindness; it is deception that does great harm.

placement test scores in writing might choose a program with lower prerequisites in writing (such as computer networking), and students with low scores in math might choose a program with lower prerequisites in math (such as medical coding or court reporting). These occupations are in strong demand, with desirable job conditions and decent pay, and they don't close off the option to go on for a bachelor's degree. Yet placement test results are rarely used to assist students' program choices.

A Better Plan: Degree Ladders

If we stopped idealizing the BA, what other options might we see? Most students enter community college with the aim of quickly improving their job prospects. That may be even more true for low-achieving students, who generally have acquired a distaste for schooling, but have been persuaded that community college will improve their labor-market prospects. Raising their academic skills a little by taking some remedial courses isn't likely to improve their job opportunities—only credentials do that.⁵¹ Indeed, recent research suggests that students can "increase their earnings substantially by completing the courses needed to obtain a certificate."⁵²

Here we can learn a valuable lesson from some exemplary private occupational colleges. While research has documented that the private sector has some colleges with dubious and even fraudulent practices,⁵³ it also includes some colleges that have devised innovative and effective procedures. Instead of pushing BAs for all and extensive remedial coursework, the better private occupational colleges carefully match low-achieving students with appropriate occupational programs that do not require college-level achievement in math or writing. These programs require fewer remedial courses and lead to preparation in highdemand fields. These colleges also use other innovative, successful procedures: they motivate students by offering a series of credentials with frequent milestones, and they hire job-placement staff who help students land desirable mid-skill jobs.⁵⁴

These procedures seem to have benefits: analyses of national longitudinal data find that, on average, private occupational colleges have much higher degree-completion rates than community colleges (56 percent versus 37 percent), although both kinds of colleges enroll similar students. Indeed, as the third and fourth tables on page 6 show, private colleges enroll slightly more stu-



dents who are low achieving and have low socioeconomic status.⁵⁵ Our point is not to advocate for these colleges, but to learn from them. Regardless of what other practices the worst colleges in this sector are using, exemplary private colleges have devised innovative procedures that could be used by community colleges to get similar successful results.

Community colleges already offer certificates and applied associate's degrees in a wide variety of occupational fields that lead to good jobs with strong growth prospects. Many of these programs allow students to enter credit-bearing courses despite lower academic achievement in one or more subjects, so students with academic deficiencies would need fewer remedial courses to enter these programs. Moreover, these programs can create degree ladders, which some community colleges are already doing. For instance, at Henry Ford Community College in Michigan, programs in Cisco Systems networking, renewable energy, and several health careers provide certificates that are stacked to lead to associate's degrees. Expanding such offerings is a major goal of the Michigan Occupational Deans Administrative Council.

The BA-for-all movement provides a positive goal for youth. But in implicitly disparaging middle-level attainments, it inevitably creates disappointment. Moreover, it conveys an unnecessarily narrow vision of success, which inadvertently fails to identify intervening degrees that lead to desirable careers with fewer

Higher Education and the Economy

BY GROVER J. "RUSS" WHITEHURST

Just before the school year started, President Obama renewed his call for America to regain the world lead in college graduates by 2020. He tied doing so to our future economic competitiveness.

The statistical backdrop for the president's remarks is that we have fallen from 1st to 12th place internationally in the percentage of young adults with postsecondary degrees. This is not because our rates have gone down (they have been rising), but because other countries have leapfrogged us. Improving the education of our citizens is a worthy goal, and the president is to be applauded for using his bully pulpit to push our aspirations higher.

A presidential address is not the place to address subtleties, but policymakers and practitioners in higher education will need to do so if our increased emphasis on attaining college degrees is to pay the expected dividends. In that sense, focusing on the horserace may be counterproductive.

The relationship between years of schooling and economic output at the national level is complex, to say the least. A small but consistently positive relationship between long-term growth and years of schooling is found in econometric studies, but there are many caveats and exceptions that are relevant to designing higher education policy in the United States. For one thing, there is tremendous variability in the relationship. For example, Germany has a stronger economy than France but half the percentage of young adults with college degrees. Further, France has increased its percentage of young adults with college degrees by 13 percentage points in the last 10 years, whereas Germany's output of college graduates has hardly budged—yet the economic growth rate of Germany has exceeded that of France over this same period. Obviously, increasing educational attainment is not a magic bullet for economic growth. Education credentials operate within boundaries and possibilities that are set by other characteristics of national economies. We must attend to these if more education is to translate into more jobs.

A growing body of research suggests that policymakers should pay more attention to the link between job opportunities and what people know and can do, rather than focusing on the blunt instrument of years of schooling or degrees obtained. In international comparisons, for example, scores on tests of cognitive skills in literacy and mathematics are stronger predictors of economic output than years of schooling. Within the United States, there is evidence (which is described in the main article) that for many young adults, the receipt of an occupational certificate in a trade that is in demand will yield greater economic returns than the pursuit of a baccalaureate degree in the arts and sciences.

A single-minded pursuit of regaining the world's lead in college graduates may blind us to the fact that one size does not fit all nations or all young adults. One of the distinctive feathers of the U.S. higher education system is its diversity. We have more than 6,000 institutions of all manner and stripe, serving students of many ages and needs. In contrast, the higher education systems in most of the countries with which we compete are centrally managed and homogenous. We should make diversity our strength by establishing national policies that encourage institutions to adjust guickly to changing needs in the marketplace for learning. A good place to start would be creating much better information on the graduation rates and employment outcomes associated with particular degree and certificate programs at particular institutions. If we're to win the international horserace, we will need to create the conditions for postsecondary institutions in this country to focus on the important finish lines: productivity and employment.

obstacles, shorter timetables, and a greater likelihood of success. Indeed, often these intervening credentials can be part of a degree ladder that leads to conventional bachelor's or applied bachelor's degrees. 56

We are not saying that high school counselors and teachers are aware that so many students are failing when they enter college. The poor information about student outcomes (and high student mobility among colleges) means that even many college counselors and teachers don't realize the extent of the troubles students encounter. Some high school counselors suspect that BA goals are unrealistic for some students, but high school staff can't be sure because they don't get systematic information about student outcomes. Researchers could play a powerful role in informing high school staff about their graduates' college outcomes, which could free them to give authoritative advice with confidence. This could improve students' incentives in high school and improve their college, degree, and career choices. It may even help high schools improve their college-preparatory courses. Colleges could also promote a broader conception of desirable jobs and desirable degrees. As we've shown, working adults value many job conditions, and associate's degrees lead to those conditions as much as bachelor's degrees do. Colleges could better portray a wider variety of career options and the pathways to them.

Of course, youth should have dreams, but if school staff feel compelled to withhold crucial information to preserve those dreams, that is not a kindness; it is deception that does great harm. Far too many high schools and community colleges allow students to retain their dreams about becoming doctors and lawyers without telling these students the truth about what being a doctor or lawyer takes. As a result, some students may not be working hard and pushing themselves to live up to their potential simply because they don't realize they are not on track to meet their goals. Meanwhile, other students who are already working hard are not getting any help in determining if their doctor and lawyer goals are realistic. If not, they would benefit from learning about other, similar jobs, such as radiography technicians and court reporters,

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that have good pay and working conditions.

Because society idealizes the BA, far too many "college" students never even take a college-credit course; they remain stuck in remedial courses until they drop out. Could this be one of the reasons for the rockiness of the transition to adulthood? If we gave students better advice, could we reduce the floundering of young adults through age 30? High schools and community colleges must guide students, not let their good intentions prevent them from helping students find realistic goals that fit their interests and achievements.

or the 89 percent of high school graduates with BA goals, we are not saying to reduce those plans, but we do suggest broadening them. While counselors should not say "don't seek a BA," we should let counselors warn students with low achievement that they have only a 20 percent chance of getting a BA, and we should encourage counselors to help students make backup plans. Since less than half of high school seniors with BA aspirations attain a BA, and only 20 percent of low-achieving seniors do so, many students should consider earning intervening credentials, like a certificate and an AA, along the way. If students had realistic short-term plans, they would face fewer immediate academic requirements and could make more rapid progress toward credentials that lead to desirable careers-with decent pay, good working conditions, and advancement opportunities. These are outcomes worth pursuing, and much better than what is typically available to those with only a high school diploma. Simultaneously, students could stay on a ladder to a bachelor's degree. Adding intervening credentials may take more time than directly pursuing a bachelor's degree, but it also provides a form of insurance. If students do have to drop out of their BA program, they will be in a much better position if they have already earned an AA. The intervening credential also gives students access to better jobs during college, improving their earnings (and thus their ability to keep taking classes), job skills, and job experience for later careers.

Some readers will correctly note that it is unfair to focus exclusively on community colleges or even high schools; the problems of low achievement begin much earlier. Indeed, poverty creates disadvantages before young children even begin school that strongly predict academic disadvantages in later years.⁵⁷ Yet, until society addresses these larger problems, we still need ways to help today's youth. Withholding crucial information may make youth feel good, but it seriously harms their careers.

For most students, but especially for low-achieving students, transferring into a BA program is a long slog—it entails many remedial courses, low probabilities of success, and a long time-table: the "four-year BA" could take six to eight years even if students are full time. It also offers no short-term credentials along the way. In contrast, a quick-win strategy gives a valued credential in a short time, with few academic requirements and few remedial

Some students may not be working hard and living up to their potential simply because they don't realize they are not on track to meet their goals.

courses. Although, in theory, students who fail at one option can shift to another, 50 percent of students who drop out in their first year don't return over the next five years (and over half of those who do return drop out again without earning a credential). While this research doesn't say what happens in later years, at best this indicates wasted time.⁵⁸ In contrast, quick-win certificates can be the first step on a degree ladder to associate's and bachelor's degrees. Like an insurance policy, quick wins may have extra costs (in time and money), but they may also give students confidence, practical skills, potentially better jobs while in college, as well as experiences to inform their career choices. If students were informed about both options and their likely implications, they could choose which one best fits their needs. But if we let our BA ideals keep us from providing information, students can't make informed choices.

Note that in order to be a good insurance plan, students' midlevel credential should not be the traditional Associate of Arts degree: it has little payoff in the labor market for most majors.⁵⁹ More lucrative are applied associate's degrees in fields with labormarket demand. Applied associate's degrees may not be a direct route to a career as a doctor, but they can lead to many good jobs. For example, some radiographers earn over \$80,000 a year,⁶⁰ health information technicians play a crucial role in the medical world, and medical office managers report that physicians respect their advice. Likewise, technicians in computer networking and other fields rescue many of us from computer disasters. These are high-demand fields, and our society will have increasing difficulty finding enough individuals with these skills for the foreseeable future. While most community colleges offer these applied associate's degree options, they could do more to build clear degree ladders so that students could see how to combine intervening credentials and BA goals. They could also make their degree ladders easier to climb by reducing the number of courses required for one degree that don't count for the next.

The new labor market may seem an abstraction, but it reflects a powerful reality. We recently heard about a small townemblematic of small towns all across the country-that lost its main employer 10 years ago when a factory closed, and has suffered since. Recently, a new factory decided to locate there, but its jobs require technical skills that few townspeople have. The local community college has created applied associate's degree programs to provide those skills. Together, this new factory and these new programs have the potential to save this town. Hopefully, the local high schools are joining in by encouraging their counselors to make students aware of this new opportunity, and what it will take to seize it.

The more than 20 states that have joined Complete College America (a new nonprofit organization) have pledged to increase the number of young adults who have college degrees or credentials of value. This goal will help students gain access to good jobs and help our society fill the new job requirements in the current labor market. Improving BA-degree completion rates is part of this goal, but our society also needs more people with certificates and associate's degrees.

If they were given good information and authorized to do so, high school counselors and teachers could do more to alert students who are unlikely to earn a bachelor's degree to the perilous road ahead, and to provide information about certificates and associate's degrees that lead to desirable jobs, and also lead to bachelor's degrees. We can be honest with our youth. There are many desirable options that present fewer obstacles and offer good pathways to further advancement.

Endnotes

 Janet E. Rosenbaum, "Patient Teenagers? A Comparison of the Sexual Behavior of Virginity Pledgers and Matched Nonpledgers," *Pediatrics* 123, no. 1 (2009): e110–e120; and U.S. Government Accountability Office, *Abstinence Education: Efforts to Assess the Accuracy and Effectiveness of Federally Funded Programs*, GAO-07-87 (Washington, DC: GAO, October 2006), www.gao.gov/cgi-bin/ getrpt?GAO-07-87.

 James E. Rosenbaum, Beyond College for All: Paths for the Forgotten Half (New York: Russell Sage Foundation, 2001); and Lisa Smith, "Invest in Yourself with a College Education," Forbes Magazine, 2009, www.investopedia. com/articles/younginvestors/06/investineducation.asp.

3. Barbara Schneider and David Stevenson, *The Ambitious* Generation: America's Teenagers Motivated but Directionless (New Haven, CT: Yale University Press, 1999).

4. Authors' calculations on January 15, 2010, based on the Education Longitudinal Study of 2002.

5. James E. Rosenbaum, Pam Schuetz, and Amy Foran, "How Students Make College Plans and Ways Schools and Colleges Could Help" (working paper, Institute for Policy Research, Northwestern University, July 15, 2010).

 Sandy Baum, Jennifer Ma, and Kathleen Payea, Education Pays 2010: The Benefits of Higher Education for Individuals and Society (New York: College Board, 2010).

7. Mark Mittelhauser, "The Outlook for College Graduates, 1996–2006: Prepare Yourself," *Occupational Outlook Quarterly* 42, no. 2 (1998); and Paul E. Barton and Richard J. Coley, *Windows on Achievement and Inequality* (Princeton, NJ: Educational Testing Service, 2008).

8. Rosenbaum, Beyond College for All.

9. Paul Attewell and David E. Lavin, *Passing the Torch: Does Higher Education for the Disadvantaged Pay Off Across the Generations?* (New York: Russell Sage Foundation, 2007).

10. Rosenbaum, Schuetz, and Foran, "How Students Make College Plans."

11. W. Norton Grubb, Working in the Middle: Strengthening Education and Training for the Mid-Skilled Labor Force (San Francisco: Jossey-Bass, 1996); and Anthony Carnevale, "Postsecondary Education Goes to Work," Inside Higher Ed, May 15, 2009).

12. Louis Jacobson and Christine Mokher, Pathways to Boosting the Farnings of Low-Income Students by Increasing Their Educational Attainment (Washington, DC: Hudson Institute and CNA, 2009), www.hudson.org/files/ publications/Pathways%20to%20Boosting.pdf.

13. Jacobson and Mokher, Pathways to Boosting Earnings.

14. Francesca Di Meglio, "College: Big Investment, Paltry Return," *Businessweek*, June 28, 2010.

15. Julie E. Redline and James E. Rosenbaum, "School Job Placement: Can It Avoid Reproducing Social Inequalities?" *Teachers College Record* 112, no. 3 (2010): 843–875.

16. James E. Rosenbaum, Julie Redline Bruch, and Lisbeth Goble, "What Is a Good Job and Is There Only One Path to Good Jobs" (working paper, Institute for Policy Research, Northwestern University, March 15, 2010).

17. Jennifer L. Stephan, unpublished analyses, 2010.

 David B. Bills, The Sociology of Education and Work (London: Blackwell Publishers, 2004); Grubb, Working in the Middle; and Dixie Sommers, "National Labor Market Projections for Community College Students," New Directions for Community 146 (Summer 2009): 33–52.

19. Aaron V. Cicourel and John I. Kitsuse, *The Educational Decision-Makers* (Indianapolis: Bobbs-Merrill, 1963); and James E. Rosenbaum, *Making Inequality: The Hidden Curriculum of High School Tracking* (New York: John Wiley and Sons, 1976).

20. Rosenbaum, Beyond College for All.

21. Basmat Parsad, Debbie Alexander, Elizabeth Farris, Lisa Hudson, and Bernard Greene, *High School Guidance Counseling*, NCES 2003-015 (Washington, DC: U.S. Department of Education, National Center for Education Statistics, 2003).

22. Patricia M. McDonough, "Counseling Matters: Knowledge, Assistance, and Organizational Commitment in College Preparation," in *Preparing for College*, ed. William Tierney, Zoe Corwin, and Juliet Colyar (Albany, NY: SUNY Press, 2005).

23. Rosenbaum, Schuetz, and Foran, "How Students Make College Plans."

24. Rosenbaum, Beyond College for All.

25. Jacobson and Mokher, Pathways to Boosting Earnings.

26. Rosenbaum, Beyond College for All.

27. Oliver C. Moles, "Guidance Programs in American High Schools: A Descriptive Portrait," *School Counselor* 38, no. 3 (1991): 163–177; Parsad et al., *High School Guidance Counseling*; and McDonough, "Counseling Matters."

28. Rosenbaum, Beyond College for All.

29. James E. Rosenbaum, Regina Deil-Amen, and Ann E. Person, *After Admission: From College Access to College Success* (New York: Russell Sage Foundation, 2006).

30. Rosenbaum, Schuetz, and Foran, "How Students Make College Plans."

31. National Commission on the High School Senior Year, Student Transitions: The Senior Year of High School (briefing paper, 2001), www.wtcsystem.edu/pk16/goals/pdf/ student_transitions.pdf.

32. Stefanie Deluca and James E. Rosenbaum, "Individual Agency and the Life Course: Do Low-SES Students Get Less Long-Term Payoff for Their School Efforts?" Sociological Focus 34, no. 4 (2001): 357–376.

33. Rosenbaum, Beyond College for All; Michael W. Kirst and Andrea Venezia, eds., From High School to College: Improving Opportunities for Success in Postsecondary Education (San Francisco: Jossey-Bass, 2004); and Tracy A. Huebner and Grace Calisi Corbett, Rethinking High School: Five Profiles of Innovative Models for Student Success (San Francisco: WestEd, 2005).

34. Rosenbaum, Schuetz, and Foran, "How Students Make College Plans."

 Burton R. Clark, "The 'Cooling-Out' Function in Higher Education," American Journal of Sociology 65, no. 6 (May 1960): 569–576.

 Rosenbaum, Deil-Amen, and Person, After Admission.
Rosenbaum, Deil-Amen, and Person, After Admission, 63–64.

38. Thomas Bailey, "Addressing the Needs of Underprepared Students," *CCRC Currents*, April 2009.

39. Rosenbaum, Deil-Amen, and Person, After Admission.

40. Rosenbaum, Deil-Amen, and Person, After Admission.

41. Rosenbaum, Deil-Amen, and Person, After Admission.

42. Thomas Bailey, Dong Wook Jeong, and Sung-Woo Cho, "Referral, Enrollment, and Completion in Developmental Education Sequences in Community Colleges," *Economics* of Education Review 29, no. 2 (2010): 259.

43. Rosenbaum, Deil-Amen, and Person, After Admission, 73.

44. Rosenbaum, Deil-Amen, and Person, *After Admission*, 73–74.

45. Rosenbaum, Deil-Amen, and Person, *After Admission*, 75. 46. Rosenbaum, Schuetz, and Foran, "How Students Make College Plans."

47. Rosenbaum, Schuetz, and Foran, "How Students Make College Plans."

48. Rosenbaum, Deil-Amen, and Person, After Admission.

49. Rosenbaum, Deil-Amen, and Person, After Admission, 84.

50. Rosenbaum, Deil-Amen, and Person, *After Admission*, 85.

51. Dave E. Marcotte, Thomas Bailey, Carey Borkoski, and Greg S. Kienzl, "The Returns of a Community College Education: Evidence from the National Education Longitudinal Survey," *Educational Evaluation and Policy Analysis* 27, no. 2 (2005): 157–175.

52. Jacobson and Mokher, Pathways to Boosting Earnings.

53. Gregory D. Kutz, For-Profit Colleges: Undercover Testing Finds Colleges Encouraged Fraud and Engaged in Deceptive and Questionable Marketing Practices, GAO-10-948T (Washington, DC: U.S. Government Accountability Office, August 2010), www.gao.gov/new.items/d10948t.pdf.

54. Rosenbaum, Deil-Amen, and Person, After Admission.

55. Jennifer L. Stephan, James E. Rosenbaum, and Ann E. Person, "Stratification in College Entry and Completion," *Social Science Research* 38, no. 3 (2009): 572–593.

56. Rosenbaum, Schuetz, and Foran, "How Students Make College Plans."

57. George Farkas, "Closing Achievement Gaps," in Handbook of Education Policy Research, ed. Gary Sykes, Barbara Schneider, and David N. Plank (New York: American Educational Research Association, 2009), 661–670; and David J. Armor, "Can NCLB Close Achievement Gaps," in No Child Left Behind and the Reduction of the Achievement Gap, ed. Alan R. Sadovnik, Jennifer A. O'Day, George W. Bohrnstedt, and Kathryn M. Borman (New York: Routledge, 2008).

58. Laura J. Horn, *Stopouts or Stayouts?* NCES 1999-087 (Washington, DC: U.S. Department of Education, National Center for Education Statistics, 1998).

59. Grubb, Working in the Middle

60. American Medical Association, "Careers in Health Care: Health Care Income Ranges," 2010, www.ama-assn.org/ ama/pub/education-careers/careers-health-care/health-careincome.shtml (accessed June 29, 2010).