

Research to Improve Retention

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Colleges can identify those at risk of dropping out, and then provide services and adopt policies to keep these students enrolled, writes Robert J. Sternberg.

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By

[Robert J. Sternberg](#)

One of the most serious problems facing colleges and universities today is that so many students leave before finishing their studies. When students drop out, it is bad for them because they lose huge future career and income potential; bad for the institution they leave because of lost reputation, revenue, and opportunity to make a difference in the students' lives; and bad for society because of the need for an educated work force that is able to compete in the global marketplace.

Although there are many reasons students drop out, 12 research-validated risk factors, often in various combinations, help account for why most students drop out. These risk factors apply at a wide variety of institutions of higher education. Here are the risk factors and the means to mitigate them.

1. Uneven formal academic knowledge and skills. The most obvious and frequently addressed issue behind dropout is academic background. At many institutions, large numbers of students enter with spotty academic backgrounds, especially in science and mathematics (STEM) disciplines and in writing. Institutions of higher learning need counselors and tutors who seek to remediate deficiencies but also to enrich areas of strength. To pinpoint deficiencies and ensure proper placement, institutions need to move toward tests measuring specific skills and content knowledge and away from reliance on general aptitude tests, which are not very helpful in identifying specific strengths and deficiencies in knowledge and skills. Tests of general academic aptitudes only account, at most, for 25 percent of the variation in academic success in college. It therefore is a mistake to rely on them heavily for placement (or even admissions) decisions in college. In studies my collaborators and I did while I was at Yale University and then at Tufts University, studying diverse students around the country, we found that tests of broader aptitudes (creative and practical as well as analytical) could as much as double prediction of first-year college success.

Neal Schmitt and his colleagues at Michigan State University [have found](#) that biographical data significantly enhance prediction of college success. If colleges rely too heavily on general academic aptitude scores in making placement decisions, they risk creating self-fulfilling prophecies dooming students to lesser success.

2. Lack of informal knowledge about being a college student. In any new environment, whether an academic environment or a work environment, one needs to acquire "tacit" knowledge — the informal and often unspoken keys for achieving success in that environment. For example, toward or away from which courses and advisers should one gravitate? Which kinds of student activities become unrewarding time sinks that prevent one from spending adequate time studying? How does one decide upon people with

whom to hang out? How do you study for a multiple-choice versus an essay test? In [research on college students](#), Wendy Williams and I found that acquiring informal knowledge -- "learning the ropes" -- is at least as important as learning specific formal content knowledge for success in college. Rick Wagner and I found that those with high academic abilities are not necessarily the ones with high levels of informal knowledge, and vice versa. (Put another way, academic skills are no guarantee of common sense.) Unfortunately, in many cases, the informal knowledge with which one enters college from high school actually transfers negatively to the college environment: For example, a student may believe that the meager amount of studying he did in high school will be adequate in college, when in fact it is not.

3. Inadequate development of self-regulation skills. In high school, one often has a support network to help regulate one's time and energy. Most important for many students is close supervision by parents or concerned individuals at one's high school. In college, students often find themselves largely "on their own" for the first time in their lives. Some are able to channel their newly found freedom effectively, but others are not. They may spend too much time on extracurricular activities and too little time on studying, or they simply may channel their study time in ways that are less than effective. Edward Deci and Richard Ryan of the University of Rochester have found that those who lack an [autonomous style of self-regulation](#) — who have trouble managing themselves independently — are at risk for lack of success in a number of different kinds of environments. Moreover, Teresa Amabile of Harvard [has found](#) that students and others who have been pushed very hard by their parents, teachers, or employers, and who have become used to extrinsic rewards for success, may have trouble motivating themselves intrinsically when immediate extrinsic rewards (parental approval, reward money, extra praise) are no longer readily available. A sufficient intervention should include a detailed analysis of how students spend (and do not spend) their time in order to determine whether their self-regulation is adequate to their needs as a college student. As an example, a tendency toward procrastination can lead students to underperform simply because they did not allow themselves enough time adequately to perform the assignments at hand.

4. Impaired self-efficacy and resilience. Some students come to college uncertain as to whether they have the ability to succeed in their college work. Other students come expecting to succeed, and then receive one or more low marks on college assignments or tests that lead them to question whether they are able to compete, after all. As their self-efficacy fails, their drive to succeed in college goes with it. [Studies](#) by Albert Bandura and his colleagues of Stanford University have found that self-efficacy is one of the best positive predictors of success in any working environment. Counselors thus need to ensure not only that students have the knowledge and skills to succeed, but also a mindset whereby they believe in their own potential to succeed. The students need further to understand that many of their peers who have an initial failure end up successful in their fields.

In my own case, I ignominiously failed my first psychology test freshman year (with a score of 3 out of 10 points); nevertheless, 35 years later I served as president of the American Psychological Association. The resilience to get beyond disappointing setbacks is key not only in college but also in work and in life, in general. In my long career as a psychology professor, dean, and provost, I have noticed that many of my graduate-school classmates and later colleagues who never achieved the success for which they hoped lacked not ability to achieve, but rather the resilience to believe in their ability to succeed in the face of disappointing setbacks.

5. A mindset believing in fixed rather than flexible abilities. [Carol Dweck of Stanford University](#) has found that students (and others) typically have one of two mindsets — or folk conceptions — regarding their abilities. What she calls "entity theorists" believe that abilities are largely fixed; on this view, when a student makes a mistake, the student shows a lack of abilities that is potentially very embarrassing. What Dweck calls "incremental theorists," in contrast, believe that abilities are modifiable and flexible and that making mistakes is useful because it helps one to learn and, in general, to grow. Dweck has found that although both kinds of students perform roughly equally well in easy or modestly difficult courses,

incremental theorists excel in challenging courses because they are unafraid of extending their skills and making mistakes along the way. Students therefore need to understand that abilities are modifiable, that people learn through their mistakes, and that difficult but manageable challenges are good because they enable one to move ahead in one's learning.

6. Inability to delay gratification. In many college courses, students do not find out until the end whether they have achieved the level of success for which they hoped. They do not find out for four or even more years whether they will indeed get the diploma they hope for. Often, success in a particular course or in college generally seems far off, whereas there are many gratifications to be had instantly, especially in the social domain.

Some students just cannot wait that long. Walter Mischel of Columbia University, when he was at Stanford, [performed experiments](#) with young children on their ability to delay gratification — to wait for a larger reward instead of receiving an immediate smaller reward. He found that those individuals who were able to delay gratification performed better academically, many years later when they were of college age, than did children who were unable to delay gratification. In other words, parents and teachers need to work with students to help them realize that many of the best rewards in life are not immediate.

7. Impaired ethical judgment. Many students today do not have the ethical judgment that we who teach in institutions of higher learning would have hoped we would have been able to take for granted. In [my own work on ethical reasoning](#), I have found that many of today's students do not even view as ethical issues such behaviors as cheating on tests or plagiarizing in papers. For many students, it just has become too easy to take the low road, and given the temptation, they do so. They get caught, with disastrous results for their success and sometimes longevity in college. It therefore is essential that students learn, as soon as they arrive in college, the ethical expectations of the institution. It should not be assumed that they have been taught, or at least, have learned these expectations.

8. Disengagement from the university environment. For many students, a precursor to dropping out is a progressive disengagement from, or failure ever to become engaged in, the university environment. The students simply never connect with, or become disconnected from, the environment, and hence become more and more psychologically distant and even alienated from it. Disengagement, or a failure to engage in the first place, may result from what French sociologist Emile Durkheim and later Harvard sociologist David Reisman referred to as anomie, or a breakdown in the social bonds between the individual and the community. Anomie can be a particular challenge for students whose sociocultural background is distant from that of many others in the college or university. When anomie develops, students may become more and more withdrawn until they literally withdraw from the college or university. Students should be strongly urged to actively engage in at least one extracurricular activity in order to enhance engagement with the university at large. Advisers also need to try to make sure that students stay "connected" and do not start to withdraw from the life of the university.

9. Lack of interest in courses. Often, students enter college and are eager to get on with their required courses. They may load up on distribution requirements or other courses that they need to get out of their way. But Richard Light of Harvard University has found that one of the best predictors of academic adjustment is taking, during the freshman year, at least one course solely because it is interesting, regardless of whether it is required. Students who load up too much on courses that are required but that do not interest them are at greater risk of dropping out simply because they are bored and find no relief.

10. Issues in academic trajectory. Issues in academic trajectory include either uncertain trajectory or a trajectory that is ill-matched to one's interests or skills. The late Paul Pintrich of the University of Michigan [pointed out how important conscious, well-chosen goals are to motivating students](#) to succeed. Students are likely to perform at a higher level when they feel they have some kind of academic "destination" in mind — or at least when they feel that what they are doing will lead to such a trajectory. In some cases, students

simply made a poor choice, perhaps because their interests do not match their skills, or perhaps because parents or other authority figures have pushed them into a direction that does not well fit them.

11. Psychological issues. Psychological issues include a diverse range of challenges, such as substance-abuse problems, interpersonal problems with important others, and untreated or nonaccommodated psychological problems, such as learning disabilities, attentional/hyperactivity disorders, autism-spectrum disorders, and so forth. Students entering with such problems should immediately be referred to appropriate counselors and programs. Appropriate programs work. Waiting can be fatal. Such problems are always best handled, obviously, by individuals trained in the diagnosis and treatment of the problems at hand.

12. Financial concerns. I have saved for last the most challenging of the problems we all face when students are at risk for nonretention, namely, financial concerns or anxieties about financial concerns. In the end, some students drop out just because they cannot make college work for themselves financially. The financial needs of students make it imperative that colleges and universities [calculate aid needs correctly](#). Although we know that student debt is a major problem in our society, students who graduate from college will earn, on average, [84 percent more than students who do not](#), so sometimes avoiding debt is penny-wise but pound-foolish.

At Oklahoma State University, we have attempted systematically to address the problem of dropping out, especially after the first year of college, and to devise solutions that would keep students on track to earn their degrees. We have created a new center — the Learning and Student Success Opportunity (LASSO) Center — which targets students who are at risk for dropping out. All students are eligible for LASSO services, although our particular focus is on students in the first year, where the risk of nonretention is greatest.

Students are identified for LASSO services in one of several ways: (a) self-referral; (b) referral by a professor (easily done through electronic means); or (c) automatic referral either through low G.P.A., uncertainty about career trajectory, or an at-risk admissions profile. We also have other resources, such as a Mathematics Learning Success Center, a Writing Center, and college-based student-success centers, which seek to help students reach their maximum potential. Research-based efforts such as ours can help large numbers of students stay in college who might otherwise drop out.

For the most part, colleges do and should try to retain students rather than usher them out. But there truly are some students who are better counseled out. It may be that college is not, in the end, a good match for them, or that their particular college does not offer them the academic or extracurricular programs they need in order to be a good fit. In my "theory of successful intelligence," I argue that people who are successfully intelligent in their lives often first try to adapt to the environments in which they find themselves; that failing, they may try to shape the environments better to meet their needs; but if that fails as well, they may find their best option is to select another environment that is a better fit to their interests, skills, values, or needs. In the end, whatever our goals as an institution of higher learning, we ought always to be serving the students who entrust their academic careers to us.

Bio

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