Academically Adrift
Limited Learning on College Campuses

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Contents

1

College Cultures and Student Learning

"Colleges and universities, for all the benefits they bring, accomplish far less for their students than they should," the former president of Harvard University, Derek Bok, recently lamented. Many students graduate college today, according to Bok, "without being able to write well enough to satisfy their employers … reason clearly or perform competently in analyzing complex, nontechnical problems."[1] While concern over undergraduate learning in this country has longstanding roots, in recent years increased attention has been focused on this issue not only by former Ivy League presidents, but also by policy makers, practitioners, and the public. Stakeholders in the higher education system have increasingly come to raise questions about the state of collegiate learning for a diverse set of reasons. Legislators—and privately, middle-class parents as well—increasingly have expressed worry over the value and returns to their investments in higher education. Business leaders have begun to ask whether graduates have acquired the necessary skills to ensure economic competitiveness. And increasingly, educators within the system itself have begun to raise their voices questioning whether organizational changes to colleges and universities in recent decades have undermined the core educational functions of these institutions.

These diverse concerns about the state of undergraduate education have served to draw attention to measuring whether students are actually developing the capacity for critical thinking and complex reasoning at college. In a rapidly changing economy and society, there is widespread agreement that these individual capacities are the foundation for effective democratic citizenship and economic productivity. "With all the controversy over the college curriculum," Derek Bok has commented, "it is impressive to find faculty members agreeing almost unanimously that teaching students to think critically is the principal aim of undergraduate education."[2] Institutional mission statements also echo this widespread commitment to developing students' critical thinking. They typically include a pledge, for

example, that schools will work to challenge students to "think critically and intuitively," and to ensure that graduates will become adept at "critical, analytical, and logical thinking." These mission statements align with the idea that educational institutions serve to enhance students' human capital—knowledge, skills, and capacities that will be rewarded in the labor market. Economists Claudia Goldin and Lawrence Katz, for example, have recently argued that increased investment in U.S. higher education attainment is required for both economic growth and reduced economic inequality. Goldin and Katz's recommendations rest on the assumption that increased college graduation rates will likely have such desirable economic outcomes because the labor market values "the highly analytical individual who can think abstractly."[3] But what if increased educational attainment is not equivalent to enhanced individual capacity for critical thinking and complex reasoning?

While there has been a dearth of systematic longitudinal research on the topic, there are ample reasons to worry about the state of undergraduate learning in higher education. Policy makers and practitioners have increasingly become apprehensive about undergraduate education as there is growing evidence that individual and institutional interests and incentives are not closely aligned with a focus on undergraduate academic learning per se. While as social scientists we want to avoid the pitfalls of either propagating historically inaccurate sentimental accounts of a romantic collegiate past followed by a tragic "fall from grace" or, alternatively, scapegoating students, faculty, and colleges for the current state of affairs, it is imperative to provide a brief description of the historical, social, and institutional context in which the phenomenon under investigation manifests itself to illuminate its multifaceted dimensions.

Higher Education Context: Continuity and Change

Historians have noted that from the inception of U.S. colleges, many students often embraced a collegiate culture that had little to do with

academic learning. While some students who used colleges to prepare for the ministry "avoided the hedonism and violence of their rowdy classmates" and focused on academic pursuits rather than extracurricular activities, the majority of students chose another path. For many students in past decades, college was a time when one "forged a peer consciousness sharply at odds with that of the faculty and of serious students." Undergraduates as a whole historically embraced a college life—complete with fraternities, clubs, and social activities—that was produced, shaped, and defined by a peer culture oriented to nonacademic endeavors.[4]

Sociologists have long cautioned about the detrimental effects of peer cultures on an individual's commitment to academic pursuits in general and student learning in particular.[5] Many students come to college not only poorly prepared by prior schooling for highly demanding academic tasks that ideally lie in front of them, but—more troubling still—they enter college with attitudes, norms, values, and behaviors that are often at odds with academic commitment. In recent cohorts of students, Barbara Schneider and David Stevenson have described the prevalence of "drifting dreamers" with "high ambitions, but no clear life plans for reaching them." These students "have limited knowledge about their chosen occupations, about educational requirements, or about future demand for these occupations."[6] They enter college, we believe, largely academically adrift.

While prior historical scholarship reminds us that U.S. undergraduates have long been devoted to pursuing social interests at college, there is emerging empirical evidence that suggests that college students' academic effort has dramatically declined in recent decades. Labor economists Philip Babcock and Mindy Marks, for example, have recently conducted critically important empirical work that meticulously examines data from twelve individual-level surveys of student time use from the 1920s to today. They have found that full-time college students through the early 1960s spent roughly forty hours per week on academic pursuits (i.e., combined studying and class time); at which point a steady decline ensued throughout the following decades. Today, full-time college students on average report spending only twenty-seven hours per week on academic activities—that is, less time than a typical high school student spends at school. Average time

studying fell from twenty-five hours per week in 1961 to twenty hours per week in 1981 and thirteen hours per week in 2003. The trends are even more pronounced when Babcock and Marks identify the percentage of students who report studying more than twenty hours per week: in 1961, 67 percent of full-time college students reported this level of effort; by 1981, the percentage had dropped to 44 percent; today, only one in five full-time college students report devoting more than twenty hours per week on studying. Babcock and Marks carefully explored the extent to which changes in student effort simply reflect the fact that different types of individuals currently attend college and course taking patterns have changed. They found that such compositional explanations were inadequate: "Study time fell for students from all demographic subgroups, within race, gender, ability and family background, overall and within major, for students who worked in college and for those who did not, and at four-year colleges of every type, size, degree structure and level of selectivity."[7]

Students' lack of academic focus at today's colleges, however, has had little impact on their grade point averages and often only relatively modest effects on their progress towards degree completion as they have developed and acquired "the art of college management," in which success is achieved primarily not through hard work but through "controlling college by shaping schedules, taming professors and limiting workload."[8] Biostatistician Valen Johnson has taken advantage of unique data from Duke University on student course evaluations, grades, and enrollment decisions to demonstrate that students "preferentially enroll in classes (and subject areas) with instructors who grade leniently."[9] For example, an undergraduate in Mary Grigsby's recent study of collegiate culture at a Midwestern public university commented:

I hate classes with a lot of reading that is tested on. Any class where a teacher is just gonna give us notes and a worksheet or something like that is better. Something that I can study and just learn from in five [minutes] I'll usually do pretty good in. Whereas, if I'm expected to read, you know, a hundred-and-fifty-page book and then write a three-page essay on it, you know, on a test let's say, I'll probably do worse on that test because I probably wouldn't have read the book. Maybe ask the kids, what's in this

book? And I can draw my own conclusions, but I rarely actually do reading assignments or stuff like that, which is a mistake I'm sure, but it saves me a lot of time.

Grigsby's student not only saved a great deal of time with his approach to classes—hours that could be reapportioned to leisure pursuits—but also was able to do well by conventional standards of his grade point average and progress towards degree. The student observed: "You know I can get out of here with a 3.5 but it doesn't really matter if I don't remember anything … . It's one thing to get the grade in a class and it's another to actually take something from it, you know."[10]

Students' ability to navigate academic course requirements with such modest levels of individual investment and cognitive effort points to a second set of social actors responsible for growing concern over undergraduate learning on today's campuses: the college professoriate. If one is to cast aspersions on student cultures that exist on college campuses today, one would do well to focus equal attention on the faculty cultures and orientations that have flourished in U.S. higher education. Learning at college, after all, is an activity that ideally emerges from an interaction between faculty and students. "What students and teachers mean by 'taking' and 'teaching' courses is determined not by subject or levels alone, but also by the intentions of the participants," Arthur Powell and his colleagues observed two decades ago about U.S. high schools. In these settings, formal and informal "treaties" often emerged: where teaching was "perceived as an art of capturing audiences and entertaining them," and teachers and students "arrange deals or treaties that promote mutual goals or that keep the peace."[11] Higher education researcher George Kuh has extended this insight to colleges and universities, arguing that a "disengagement compact" has been struck on many contemporary campuses between faculty and students. This compact is described by Kuh as

"I'll leave you alone if you leave me alone." That is, I won't make you work too hard (read a lot, write a lot) so that I won't have to grade as many papers or explain why you are not performing well. The existence of this

bargain is suggested by the fact that at a relatively low level of effort, many students get decent grades—B's and sometimes better. There seems to be a breakdown of shared responsibility for learning—on the part of faculty members who allow students to get by with far less than maximum effort, and on the part of students who are not taking full advantage of the resources institutions provide.[12]

If students are able to receive high marks and make steady progress towards their college degrees with such limited academic effort, must not faculty bare some responsibility for the low standards that exist in these settings?

When discussing the extent to which faculty are implicated in condoning and accommodating low levels of student commitment to academic coursework, it is important to acknowledge how varied faculty work lives are given the differentiated structure of U.S. higher education. In many lower-tier public colleges and universities that in recent years have faced growing resource constraints, traditional forms of faculty direct instruction have themselves been undermined by the replacement of full-time tenure track faculty with adjunct, graduate student, and other alternative forms of instruction. Recent government reports indicate that the percentage of full-time instructional faculty in degree-granting institutions declined from 78 percent in 1970 to 52 percent by 2005.[13] The changes in lower-tiered public institutions have often been even more pronounced. Full-time faculty in resource-poor institutions likely feel increasingly overwhelmed and demoralized by the growing institutional demands placed on them and their inability to identify sufficient resources to maintain traditional levels of support for undergraduate education.

In other settings where the costs of higher education have increased at roughly twice the rate of inflation for several decades and resources are therefore less constrained, faculty are nevertheless often distracted by institutional demands and individual incentives to devote increased attention to research productivity. Christopher Jencks and David Riesman, for example, astutely noted four decades ago that "large numbers of Ph.D.s now

regard themselves almost as independent professionals like doctors or lawyers, responsible primarily to themselves and their colleagues rather than their employers, and committed to the advancement of knowledge rather than of any particular institutions."[14] Throughout the higher education system, faculty are increasingly expected to focus on producing scholarship rather than simply concentrating on teaching and institutional service. This faculty orientation is deep-seated, as graduate training programs that prepare the next generation of faculty are housed primarily at research universities and offer little focus or guidance on developing instructional skills. As Derek Bok observed, "in the eyes of most faculty members in research universities, teaching is an art that is either too simple to require formal preparation, too personal to be taught to others, or too innate to be conveyed to anyone lacking the necessary gift."[15]

Ernest Boyer's work in the late 1980s highlighted the changing "priorities of the professoriate" as well as the institutional diffusion of the university research model to faculty at institutions throughout the system. Boyer noted that while 21 percent of faculty in 1969 strongly agreed with the statement that "in my department it is difficult for a person to achieve tenure if he or she does not publish," two decades later the percentage of faculty agreeing with that statement had doubled to 42 percent.[16] By 1989, faculty at four-year colleges overwhelmingly reported that scholarship was more important than teaching for tenure decisions in their departments. For example, in terms of the significance of teaching related assessments for tenure, only 13 percent of faculty at four-year colleges reported classroom observations as very important, 5 percent reported course syllabi as very important, 5 percent reported academic advisement as very important, and 9 percent reported student recommendations as very important. Interestingly, the only form of instructional assessment that more than one in eight faculty considered as critical for tenure was student course evaluations: 25 percent of four-year college faculty reported these instruments as very important for tenure decisions. To the extent that teaching mattered in tenure decisions at all, student satisfaction with courses was the primary measure that faculty considered relevant: a measure that partially encourages individual faculty to game the system by replacing rigorous and demanding classroom

instruction with entertaining classroom activities, lower academic standards, and a generous distribution of high course marks. Research on course evaluations by Valen Johnson has convincingly demonstrated that "higher grades do lead to better course evaluations" and "student course evaluations are not very good indicators of how much students have learned."[17]

Faculty also reported in Boyer's study that institutional service within the university community was relatively inconsequential for tenure decisions: only 11 percent of faculty at four-year colleges reported this factor as being very important. While faculty widely reported that teaching and university service were generally not very important for tenure, 41 percent reported the number of publications as very important, 28 percent reported the reputation of the presses and journals publishing the books or articles as very important, 28 percent reported research grants as very important, and 29 percent reported recommendations from outside scholars (which are primarily based on evaluation of faculty members' published research records) as very important. The significance of external recommendations can be contrasted with recommendations from other faculty within the institution, which only 18 percent of four-year college faculty considered as very important.[18] For Boyer, what was particularly troubling about these findings was the fact that this faculty orientation had spread widely beyond the research university to a much larger set of otherwise institutionally diverse four-year colleges. Boyer worried that at many college campuses, "the focus had moved from the student to the professoriate, from general to specialized education, and from loyalty to the campus to loyalty to the profession."[19]

While some have argued, and indeed it is possible, that faculty research and teaching can be complementary, the empirical evidence unfortunately suggests that this tends not to be the case on most of today's campuses. In *What Matters in College?* Alexander Astin constructed two scales: one of the faculty's research orientation (defined primarily in terms of publication rate, time spent on research, and personal commitment to research and scholarship) and one of the faculty's student orientation (reflecting primarily the extent to which faculty believed that their colleagues were interested in and focused on student development). The two scales were strongly

negatively correlated, and ironically, if not surprisingly, the faculty's student orientation was negatively related to salary compensation.[20] After examining a range of student outcomes from academic to affective, Astin concluded that "there is a significant institutional price to be paid, in terms of student development, for a very strong faculty emphasis on research."[21]

By the turn of the century, however, incentives for faculty throughout the four-year college system increasingly had come to emphasize and encourage professors to focus on pursuing their own scholarship and professional research interests. While recent faculty time-use studies have shown only modest changes in time devoted to research, teaching, and advisement (with the former two categories showing slight increases between the early 1970s and the early 1990s, and the latter category moderately declining), the time-use data does show that four-year college professors spend only limited time on preparing instruction, teaching classes, and advising students. On average, faculty spend approximately eleven hours per week on advisement and instructional preparation and delivery. The time-use data also indicates that faculty report directly engaging in research activities only from two hours per week in liberal arts colleges to five hours per week at research universities.[22] The remainder of time during a typical academic work week is consumed with a host of other professional and quasi-administrative functions including committee meetings, e-mail correspondence, review of professional manuscripts, and external consulting.

While some of these additional noninstructional obligations are mandated by the institutions that employ faculty—as in the university and department committee meetings that professors often complain about—many of these additional activities likely advance faculty careers, but are largely unrelated or only indirectly related to undergraduate instruction. Massy and Zemsky have referred to the process whereby faculty gain increased discretionary time to pursue professional and personal goals, while undergraduate education is devalued, as an "academic ratchet." Massy and Zemsky note:

Put simply, those hours not used for teaching courses, for grading papers, or for meeting with students become available for research and

scholarship, for consulting and other professional activities, and in most research universities, for specialized teaching at the graduate level. Institutional rhetoric about the importance of teaching notwithstanding, we believe that the reductions in discretionary time associated with more and better teaching usually are not compensated by additional salary or other rewards, whereas success or failure with regard to other obligations carries significant rewards and penalties … Even when most faculty use their time to meet professional and institutional obligations, the academic ratchet still shifts output from undergraduate education toward research, scholarship, professional service, and similar activities—a process that we have termed "output creep."[23]

Christopher Jencks and David Riesman several decades earlier provided a similar account of faculty movement away from undergraduate instruction at research universities in *The Academic Revolution.* They noted that the availability of external funding gave successful researchers significant leverage over the colleges and universities that employed them:

Since the amount of research support has grown much faster than the number of competent researchers, talented men have been in very short supply and command rapidly rising salaries. They are also increasingly free to set their own working conditions. The result has been a rapid decline in teaching loads for productive scholars, an increase in the ratio of graduate to undergraduate students at the institutions where scholars are concentrated, the gradual elimination of unscholarly undergraduates from these institutions, and the parallel elimination of unscholarly faculty.[24]

In recent decades the allure of external funding for research has been greatly enhanced by the growth of commercial opportunities associated with research activities in higher education. Federal government legislation, such as the Bayh-Dole Act of 1980, allowed colleges and universities to patent discoveries that had been developed with federal research support and facilitated the growth of university collaborations "with the private sector in

the development of the commercialization of new technologies."[25] Colleges and universities—institutions that, according to Derek Bok, share with compulsive gamblers the trait that "there is never enough money to satisfy their desires"—eagerly embraced these new opportunities to acquire new sources of funding.[26] Universities also engaged in these emerging corporate ventures to acquire the symbolic resources that the collaborations conferred. Sociologists Walter Powell and Jason Owen-Smith have astutely observed that "the commercialization of university-based knowledge signals the university's role as a driver of the economy. Such a lofty status has much more legitimacy and cachet, and makes it possible for universities, especially public universities, to boast their success in creating employment opportunities."[27]

Whether one focuses on "output creep" occurring as a result of an "academic ratchet" that individual faculty engage in to expand their professional discretionary time, on the "academic revolution" produced by the expanding power of the faculty researcher that Christopher Jencks and David Riesman described in the late 1960s, or on the "commercialization of higher education" following the Bayh-Dole Act of 1980 that Walter Powell and Jason Owen-Smith examined, one thing is clear: undergraduate education in many colleges and universities is only a limited component of a much broader set of faculty professional interests, and one that generally is not perceived as being significantly rewarded. And if there is any doubt that college professors are less likely than other individuals to focus on material incentives, recent surveys of students and faculty have found that faculty are more likely than students to report that being well off financially is an essential or a very important goal to them.[28] We do not believe, however, that financial incentives are primarily responsible for faculty commitment to research. Rather, we believe that given the transformation of higher education, one of the few remaining moral bases for academic life is a quasi-religious commitment to embracing research as a "vocational calling." As Anthony Kronman recently observed, "the equation of scholarly specialization with duty and honor … makes the development of one's place in the division of intellectual labor a spiritually meaningful goal and not just an economic or organizational necessity."[29] For many faculty, commitment

to their own individual research programs is thus understood not as an act of self-aggrandizement or personal selfishness, but rather as a moral imperative that one must pursue and struggle to achieve regardless of institutional obstacles.

While faculty distracted by professional interests other than undergraduate instruction share responsibility for the current state of undergraduate learning occurring on U.S. campuses, it is worth emphasizing again that the professoriate respond to incentives established not only by their larger professional fields of scholarship, but also more specifically by higher-education institutions and the administrators who oversee the colleges and universities where they are employed. While many U.S. colleges follow governance policies that cede formal control over curriculum and instruction to the faculty as a whole, administrators have the institutional authority and responsibility to determine work loads and ensure that faculty are spending sufficient effort on undergraduate instruction as opposed to other legitimate professional activities (e.g., graduate instruction, academic scholarship, and professional service).

If faculty at U.S. colleges can be described as being distracted by professional interests other than undergraduate instruction, it is likely even more the case that contemporary higher education administrators experience institutional interests and incentives that focus their attention elsewhere. As former Harvard University President Derek Bok has noted:

While (academic) leaders have considerable leverage and influence of their own, they are often reluctant to employ these assets for fear of arousing opposition from the faculty that could attract unfavorable publicity, worry potential donors, and even threaten their jobs. After all, success in increasing student learning is seldom rewarded, and its benefits are usually hard to demonstrate, far more so than success in lifting the SAT scores of the entering class or in raising the money to build new laboratories or libraries.[30]

We believe that administrators are likely even more distracted than faculty from a focus on undergraduate instruction due to the simple fact that their professional lives (with the possible exception of administrators

working in the area of student services) tend to reduce and limit their amount of interpersonal contact with students. After all, faculty on average spend eleven hours per week on teaching and advisement activities that to some extent must remind them of the significance of student learning.

One empirical way to highlight the extent to which administrators have allowed higher-education institutions to drift away from an undergraduate instructional focus is to identify the staffing and employment changes that those institutions have implemented in recent decades. While administrators at colleges and universities with strong traditions of faculty governance can legitimately claim that curriculum and instruction are appropriately considered faculty matters and not administrative responsibilities, decisions around employment structure and staffing are universally considered to be under the purview of administrators. In colleges and universities across the country, not only have part-time instructors increasingly replaced full-time professors, but resources have increasingly been diverted towards nonacademic functions. Sociologist Gary Rhoades has documented that over the past three decades, "this group [of non-faculty support professionals] has become the fastest growing category of professional employment in higher education."[31] While some of these individuals have been hired for administrative functions such as human relations, accounting, and regulatory compliance, Rhoades has observed that the most significant increase has occurred in the broad area of student services including admissions, financial aid, career placement, counseling, and academic services such as advising and tutoring that have been reassigned to non-faculty professionals. These "managerial professionals," as Rhoades has termed them, have come to comprise "nearly 30 percent of the professional positions on campus and more than three times the number of administrative positions." In related changes, the percentage of professional employees in higher education comprised of faculty has decreased from approximately two-thirds in 1970 to 53 percent by 2000.[32]

This internal transformation of higher education, while often focused on elevating student services as broadly defined, has implicitly deemphasized the role of faculty and faculty instruction per se at these institutions. The nonacademic professionalization of higher education can

also be observed in appointments to college and university leadership positions, as well as their compensation packages. While the vast majority of higher-education leaders continue to emerge from earlier positions in the college professoriate, in recent decades individuals increasingly have been drawn from nonacademic backgrounds and hired through a process dependent on professional search consultants. About one in seven college and university presidents now comes from outside academia; the role of external professional search consultants in the selection process has grown from 12 percent in 1984 to more than half today.[33] In addition, administrative positions in higher education have become increasingly well compensated.[34] On average, college and university presidents' compensation in the private sector is approximately $500,000, with many making over a million dollars per year. "When you have college presidents making $1 million, you're going to have $800,000 provosts and $500,000 deans," Patrick M. Callan, president of the National Center for Public Policy and Higher Education has noted. "It reflects a set of values that is not the way most Americans think of higher education."[35] While there is nothing inherently wrong with well-paid higher education administrative personnel, the nonacademic professionalization of higher education leadership, and the process whereby it is identified, our concern here is simply about how these changes might affect institutional attention to academic instruction. As the sociologist Steven Brint has noted, "we know that the backgrounds of top executives can influence the climate of the firms they lead … If this is true in corporations, is it not likely to be true a fortiori in colleges and universities?"[36] Arguably, shifts in the character of administrative leadership are associated with the phenomenon of colleges and universities today becoming much more interested in the fulfillment of nonacademic services and functions, while focusing less on traditional academic instruction.

Indeed, as sociologist Mitchell Stevens noted in his recent ethnography of a selective private residential college: "The College is an academic institution, and a justly proud one, but it also is proud of its twenty-eight varsity sports teams, its budding artists and musicians, its community service projects, diverse student body, spectacular campus, and loyal alumni."[37] Colleges and universities have secured their centrality in our

society not only by providing credentials that "serve as ever more important cues about worker capability and character," but also by "making college life more athletic, more masculine, and more fun."[38] Colleges and universities are not just "sieves" that sort and train students, but also "incubators," "temples," and "hubs"—i.e., settings for the development of cultural dispositions, network formation, knowledge production, and institutional relationships.[39]

Changes in Institutional Functions and Identities

Traditionally, U.S. colleges and universities had embraced both academic and moral education as primary institutional functions and rationales. While Harvard historian Julie Reuben has shown how colleges and universities over time shifted the approach whereby moral education was inculcated in students—with "the religious stage, falling roughly between 1880 and 1910; the scientific, from about 1900 to 1920; and the humanistic and extracurricular, roughly 1915–1930"—these institutions defined their organizational missions in large part by embracing the responsibility of providing academic and moral guidance to young adults in their charge.[40] Following World War II, however, colleges and universities that were enrolling increasing numbers of students turned away from these functions and embraced more narrowly defined technocratic ends, such as the generation of scientific knowledge and the production of graduates to fill professional and managerial positions. Some observers have largely celebrated these organizational changes. For example, Clark Kerr, former chancellor at the University of California, Berkeley, observed that in these transformed institutions "there is less sense of purpose" but "there are more ways to excel. There are also more refuges of anonymity—both for the creative person and the drifter."[41] Other scholars, however, have lamented this transformation, worrying that U.S. higher education does not have "an adequate basis for establishing a consensus of moral values"—other than support for "diversity and mutual tolerance"—and thus is "in the midst of a

moral crisis."[42]

Since the student rebellions of the 1960s, the extent to which collegiate life has embraced nonacademic pursuits has likely been aided and abetted by college administrators and staff who have "largely withdrawn from oversight of manners and morals."[43] While colleges once assumed a quasi-parental role and struggled with mixed success to ensure "the enforcement of academic and social rules," educators and administrators have grown "less certain than they once were as to what students *ought* to be or become, and are reluctant to go to the mat with the young for principles in which they themselves only half believe." Even if a consensus was reached on the definition of an appropriate and desirable code of student conduct, college administrators and faculty have often found it "politically expedient to avoid collective regulation of student behavior."[44] Although administrators in recent years on some college campuses have implemented policies to limit and control alcohol and drug use, in most secular colleges there has been little institutional responsibility taken for the moral development or social regulation of students. It is thus not particularly surprising that behaviors at odds with academic values, such as cheating on exams, have been demonstrated to have increased significantly in recent decades. In a longitudinal comparison of nine colleges, for example, college students who admitted that they copied from other students on tests or exams increased from 26 percent in 1963 to 52 percent in 1993. Rates of student cheating were particularly high in colleges that had no honor code governing student conduct.[45]

These developments are not unique to higher education; they have occurred concurrent with broad-based cultural changes in the relationship between youth and education. They occurred, for example, during an historic period where elementary and secondary students had begun to enjoy a wide range of new legal rights and entitlements that undermined students' sense of traditional forms of authority relationships in education.[46] Concurrently, legally mandated supplementary student services in special education programs increased dramatically, redefining earlier assumptions of individual and institutional responsibility for managing students' academic and social difficulties. Middle-class parents increasingly saw

themselves less as collaborative partners with school authorities who were believed to possess legitimate authority in loco parentis and more as "advocates" for their children's educational needs. Educators became progressively more reluctant to require students to master certain forms of knowledge over other less culturally privileged ones. Students in K–12, and particularly in higher education, increasingly became defined as "consumers" and "clients." In this context, schools are expected not to provide quasi-parental guidance and social regulation, but instead to meet client needs through delivery of elaborate and ever-expanding services.

The effects of these broad-based cultural changes on higher education were enhanced by federal and state policies that shifted financial support from institutions to individuals. As higher-education researchers Sheila Slaughter and Larry Leslie have documented, in the early 1970s the federal government began formulating internal policy papers calling for "a freer play of market forces" that would "give individuals the general power of choice in the education marketplace" as well as specifying "levels and types of student support which will make most institutional aid programs unnecessary."[47] At the federal and state level, institutional aid programs were increasingly replaced by "high tuition–high aid policy through which government gave aid to students rather than institutions, thus making student consumers in the tertiary marketplace. Institutions competed with each other to attract students and their Pell grants."[48] Student aid was essentially structured as an educational voucher. While the G.I. Bill of 1944 provided portable scholarship support for veterans to use at accredited institutions, the higher-education reauthorization legislation passed in 1972 provided portable financial aid to large numbers of students who were defined as qualified based on income levels. In recent years, this market-based logic has only been further extended by federal policies that have facilitated the growth of college finance models that rely on tax credits and student loans.[49]

Personal financial investment in higher education has significantly grown with increases in the cost of higher education and an expanded reliance on private credit-based financing. Specifically, from 1978 to 2008, tuition and fees (not including room and board) increased from $9,903 to $25,143 in private four-year colleges and from $2,303 to $6,585 in public

four-year colleges in constant 2008 dollars.[50] Family and student sources of financing also shifted, with the fastest-growing source of funding being private-sector loans. From 1997 to 2007, private-sector student loans in constant dollars increased almost seven times, from $2.5 billion to $17.6 billion.[51] Approximately 60 percent of students graduating four-year colleges have taken out student loans; from 2000 to 2007 the average student-loan debt per borrower increased 18 percent, from $19,300 to $22,700 in constant 2007 dollars.[52] In addition to student-loan debts, students during this period also increasingly used credit cards to support themselves and their educational expenses while in college. Undergraduates in their senior year in 2008 on average had $4,100 in credit card debt, with one-fifth of seniors carrying credit card balances greater than $7,000. Moreover, 30 percent of students reported putting tuition costs on their credit cards.[53] The assumption of significant debt during college became typical, as did the hours many students spent in paid employment while attempting to complete their degrees.

Social scientists are just beginning to explore the implications of this shift for how students are understanding and experiencing their college years. The increased debt burden could potentially serve to impose a new sense of self-discipline on students, and a refocused attention on academic activities. Alternatively, it might lead students to become distracted from their coursework by the importance of paid employment, or it might produce other unanticipated consequences. Full-time college students on average today spend five hours more per week working than in the early 1960s, although national data suggests that fewer than one in six full-time students at four-year colleges work more than twenty hours per week.[54] In terms of increased debt, an intriguing recent study of students at one selective southern Californian institution found that undergraduates had little worry about their ability to find high-paying jobs after college to repay their student loans. Students reported that they defined the purpose of these loans as serving not just as an investment in the future but also as a means to experience fully a collegiate life—a personal objective that included a commitment to a student culture characterized by frequent socializing, travel, and entertainment.[55] Regardless of how rising costs and increased reliance

on loans affect student academic and social behavior, changes in the character of higher-education financing are potentially related to the deepening of consumerist orientations within higher education.

A market-based logic of education encourages students to focus on its instrumental value—that is, as a credential—and to ignore its academic meaning and moral character. The historical sociologist David Labaree has argued that "we have credentialism to thank for aversion to learning that, to a great extent, lies at the heart of our educational system."[56] Many students' lack of commitment to substantive academic learning is consistent with their definition of the situation: "It is only rational for students to try to acquire the greatest exchange value for the smallest investment of time and energy."[57] Faculty also do not have much incentive to challenge this emerging reward structure, as conflicts with students over these matters potentially can distract from research, lower teacher or course evaluations, and generate administrative problems associated with student resistance.

Private colleges and universities, of course have always to some extent adopted market-based orientations and competed for students—just as students have competed for access to elite private education. In recent decades, however, as the market-based logic of higher education has been extended, public colleges and universities have begun to share more in common with their counterparts in the private sector. There are likely many positive consequences associated with defining students as consumers and clients as schools become more responsive to articulated individual student needs. Our point here, however, is that there is no guarantee that students will prioritize academic learning at the core of their institutional demands. There are many reasons instead to expect students as consumers to focus on receiving services that will allow them, as effortlessly and comfortably as possible, to attain valuable educational credentials that can be exchanged for later labor market success. As historical sociologist David Labaree has noted:

The payoff for a particular credential is the same no matter how it was acquired, so it is rational behavior to try to strike a good bargain, to work at getting a diploma, like a car, at a substantial discount. The effect on education is to emphasize form over content—to promote an educational

system that is willing to reward students for formal compliance with modest performance requirements rather than for demonstrating operational mastery of skills deemed politically and socially useful.[58]

While colleges and universities have always in part been businesses that have competed to attract students and cater to their individual needs, they also have traditionally seen themselves as enterprises with quasi-parental authority and the responsibility to define appropriate educational goals with regard to academic content, social behavior, and moral development. The balance between these competing institutional functions has noticeably shifted in recent decades.

Measuring Learning in Higher Education

Organizational inertia, the assumption that students are meeting the academic goals espoused in mission statements, and a lack of external pressure to demonstrate learning have all contributed to a failure systematically to measure and evaluate students' gains in higher education. The tide is shifting, however, as concerns about turning out productive workers and not wasting resources become paramount in an era of globalization and fiscal constraints. Learning in higher education was recently placed in the national spotlight by a report of the Secretary of Education's Commission on the Future of Higher Education entitled *A Test of Leadership*. Reminiscent of the critique in *A Nation at Risk* of elementary and secondary education in the 1980s, *A Test of Leadership* placed the responsibility for the nation's competitiveness in the global economy on the doorsteps of educational institutions. With respect to student performance, the commission noted that "the quality of student learning at U.S. colleges and universities is inadequate, and in some cases, declining."[59] Supporting this claim, it reported on sobering statistics from the National Assessment of Adult Literacy. Specifically, from 1992 to 2003 the percentage of college graduates judged proficient by various literacy measures was relatively low, and by two of those three indicators competency declined (prose, 40 to 31

percent; document, 37 to 25 percent; and quantitative, 31 percent at both time points).[60] While a debate has since ensued on the definition of proficiency, the commission nevertheless used the results from this study to urge improvement and increased accountability to monitor student learning in higher education.[61]

The commission also identified a lack of transparency and accountability with respect to institutional performance in general and student learning in particular. "Despite increased attention to student learning results by colleges and universities and accreditation agencies, parents and students have no solid evidence, comparable across institutions, of how much students learn in colleges or whether they learn more at one college than another," its report noted. "Similarly, policymakers need more comprehensive data to help them decide whether the national investment in higher education is paying off and how taxpayer dollars could be used more effectively."[62]

From our standpoint, the evidence of student and organizational cultures' inattention to learning and high levels of societal investment makes discussion of higher education's accountability both largely inevitable and in certain respects warranted. We are deeply skeptical, however, that *externally* imposed accountability systems will yield desirable changes in educational practices—for reasons that we will discuss in the concluding chapter of this book. More immediately, as social scientists we raise two additional core reservations regarding such endeavors. First, it is not clear that the state of knowledge in the field is adequate to the task. Specifically, as we will discuss in detail below, there is only a very limited tradition of social scientific efforts to measure learning rigorously across individuals and institutions in higher education, and even less of a scholarly research corpus that attempts to identify individual and institutional factors associated with improved postsecondary student performance. Given these limitations, it is doubtful that the implementation of an externally imposed accountability system would yield outcomes that would be either meaningful or productive.

Second, while the question of how much students in particular colleges are learning—or, whether they are learning anything associated with academic knowledge at all—is worth pondering at a societal and regulatory

level, in terms of applied social science research designed to improve institutional policy and practice, it is the wrong question. Rather than asking whether students are learning anything at college and designing accountability regimes to address the absence of measurable gains at underperforming schools, we need first to identify the specific factors associated with variation in student learning across and within institutions. Such an empirical analysis requires that large numbers of students in multiple institutions are tracked over time as they progress through college. Longitudinal measurement of test score performance, coursework, institutional characteristics, social background, and college experience is needed to build our knowledge of the processes and mechanisms associated with student learning. Datasets of this character in elementary and secondary education have existed for several decades and have enabled researchers to address these questions adequately.

To date, however, longitudinal datasets with these features have not existed in the field of U.S. higher education. As social scientists we were tired of waiting on the U.S. government to muster the political will to overcome institutional resistance and begin collecting longitudinal data tracking student learning in higher education over time. Our frustration was so great that when an opportunity arose to join a group of innovative practitioners to collect independent data on this topic, we began building our own dataset that could for the first time systematically identify the relevant individual and institutional factors associated with student learning in higher education. Our research addresses the critical absence of similar studies by tracking students through a large and representative sample of higher-education institutions with objective measures of their learning as well as of their coursework, social background, and experience of life on today's college campuses.

The Determinants of College Learning Dataset

Our research was made possible by a collaborative partnership with the

Council for Aid to Education,[63] an organization that brought together leading national psychometricians at the end of the twentieth century to develop a state-of-the-art assessment instrument to measure undergraduate learning, and twenty-four four-year colleges and universities that granted us access to students who were scheduled to take the Collegiate Learning Assessment (CLA) in their first semester (Fall 2005) and at the end of their sophomore year (Spring 2007).[64] Students who consented to participate in our study not only completed the CLA at multiple points in their college careers, but also responded to surveys on their social and educational backgrounds and experiences. In addition, we collected course transcript data and institutional information on high schools and colleges that the students attended. The research in this book is based on longitudinal data of 2,322 students enrolled across a diverse range of campuses. Colleges in our sample include schools of varying size, selectivity, and missions. The sample includes liberal arts colleges and large research institutions, as well as a number of historically black colleges and universities (HBCUs) and Hispanic-serving institutions (HSIs). The schools are dispersed nationally across all four regions of the country. We refer to this multifaceted data as the Determinants of College Learning (DCL) dataset.

Logistical and resource constraints required our reliance on participating institutions to implement appropriate random sampling and retention strategies. We thoroughly investigated the extent to which students in our sample were indeed representative of students from these institutions as well as of U.S. higher education more broadly (this book's methodological appendix provides detailed comparisons with data from the Integrated Postsecondary Education Data System and the Beginning Postsecondary Students Longitudinal Study). On most measures, students in the DCL dataset appeared reasonably representative of traditional-age undergraduates in four-year institutions, and the colleges and universities they attended resembled four-year institutions nationwide. The DCL students' racial, ethnic, and family backgrounds as well as their English-language backgrounds and high school grades also tracked well with national statistics. For example, 65 percent of DCL students had college-educated parents, as compared to 59 percent of a national sample of

traditional-age students in four-year institutions. Half of students in both the DCL and national samples earned A or A– in high school. Moreover, the four-year colleges and universities in the DCL sample have a proportion of white students and a level of academic preparation similar to those of four-year institutions in general. Indeed, the 25th and 75th SAT percentiles of entering students at the DCL institutions and four-year institutions nationwide are virtually identical. As a likely result of the voluntary participation required in our study, however, our sample did have fewer men, as well as fewer students of lower scholastic ability as measured by standardized tests— for example, students' combined scores at the 25th percentile of the SAT were lower in our sample than at DCL institutions or four-year institutions nationwide. Consequently, we believe that any biases introduced into our analysis by the sampling procedures used are likely to be in the direction of leading us toward overestimating students' *positive* educational experiences and institutional success.

The Collegiate Learning Assessment

The Collegiate Learning Assessment (CLA) consists of three open-ended, as opposed to multiple-choice, assessment components: a performance task and two analytical writing tasks (i.e., to make an argument and to break an argument). According to its developers, the CLA was designed to assess "core outcomes espoused by all of higher education—critical thinking, analytical reasoning, problem solving and writing."[65] These *general skills* are "the broad competencies that are mentioned in college and university mission statements."[66] Rather than testing for *specific content knowledge* gained in particular courses or majors, the intent was to assess "the collective and cumulative result of what takes place or does not take place over the four to six years of undergraduate education in and out of the classroom."[67] The developers of the CLA argue that it assesses abilities distinct from those measured in general education tests such as the Scholastic Aptitude Test (SAT) and the American College

Testing (ACT) program. “Consequently, an SAT prep course would not help a student on the CLA and instruction aimed at improving CLA scores is unlikely to have much impact on SAT or ACT scores.”[68]

While the CLA as a whole is considered by some as state-of-the-art, the performance task component is its most well-developed and sophisticated part. Our analysis, which follows in this book, will focus on that component. The performance task allows students ninety minutes to respond to a writing prompt that is associated with a set of background documents. The testing materials, including the documents, are accessed through a computer. The Council for Aid to Education has published several examples of representative performance tasks that are worth describing here in detail.

The “DynaTech” performance task asks students to generate a memo advising an employer about the desirability of purchasing a type of airplane that has recently crashed. Students are informed: “You are the assistant to Pat Williams, the president of DynaTech, a company that makes precision electronic instruments and navigational equipment. Sally Evans, a member of DynaTech’s sales force, recommended that DynaTech buy a small private plane (a SwiftAir 235) that she and other members of the sales force could use to visit customers. Pat was about to approve the purchase when there was an accident involving a SwiftAir 235.” Students are provided with the following set of documents for this activity: newspaper articles about the accident, a federal accident report on in-flight breakups in single engine planes, Pat Williams’s e-mail to her assistant and Sally Evans’s e-mail to Pat Williams, charts on SwiftAir’s performance characteristics, an article from *Amateur Pilot* magazine comparing SwiftAir 235 to similar planes, and pictures and descriptions of SwiftAir models 180 and 235. Students are then instructed to “prepare a memo that addresses several questions, including what data support or refute the claim that the type of wing on the SwiftAir 235 leads to more in-flight breakups, what other factors might have contributed to the accident and should be taken into account, and your overall recommendation about whether or not DynaTech should purchase the plane.”[69]

A second performance task that the Council for Aid to Education has

circulated is related to crime reduction. The test instructs students that "Jamie Eager is a candidate who is opposing Pat Stone for reelection. Eager critiques the mayor's solution to reducing crime by increasing the number of police officers. Eager proposes the city support a drug education program for addicts because, according to Eager, addicts are the major source of the city's crime problem." Students again are provided with a set of documents including newspaper articles, crime and drug statistics, research briefs, and internal administrative memos. The CLA requires that students should specifically address the following: "Mayor Pat Stone asks you to do two things: (1) evaluate the validity of Eager's proposal and (2) assess the validity of Eager's criticism of the mayor's plan to increase the number of officers." [70]

The Council for Aid to Education has also published a detailed scoring rubric on the criteria that it defines as critical thinking, analytical reasoning, and problem solving—including how well the student assesses the quality and relevance of evidence, analyzes and synthesizes data and information, draws conclusions from his or her analysis, and considers alternative perspectives. In addition, the scoring rubric with respect to written communication requires that the presentation is clear and concise, the structure of the argument is well-developed and effective, the work is persuasive, the written mechanics are proper and correct, and reader interest is maintained.[71]

The design of the prompts and the criteria applied for evaluation follow "a criterion sampling approach to measurement" that "assumes that the whole is greater than the sum of its parts and that complex tasks require an integration of abilities that cannot be captured when divided into and measured as individual components."[72] The philosophy behind the approach is to "sample tasks from the domain in which that person is to act, observe her performance, and infer competence and learning."[73] The CLA thus attempts to identify "real-world tasks that are holistic and drawn from life situations." Given that the performance tasks involve solving "complex, holistic, real-world problems," college institutions that attempt to "teach to the test" will be schools that teach students "to think critically, reason analytically, solve problems, and communicate clearly."[74]

The CLA has been lauded by many. For example, the Commission on the Future of Higher Education noted that it "promotes a culture of evidence-based assessment in higher education" and is "among the most comprehensive national efforts to measure how much students actually learn at different campuses."[75] The former program director of higher education for the Carnegie Corporation of New York, Daniel Fallon, noted that the CLA "rose from the field" as "the best creative thinking of the academic research and psychometric community" focused on measuring student learning in higher education.[76] Even testing skeptics, such as James Traub, have noted that the "C.L.A. is light years ahead of the fill-in-the-blanks format of most standardized tests."[77]

Nevertheless, the CLA also has its fair share of critics. The criticism falls into several broad categories. First, there are those who resist any increased encroachment of testing and assessment in education in general and higher education in particular. Resistance to standardized assessment of student learning in U.S. higher education has been historically broad and deep amongst educators. As Patrick Callan, president of the National Center for Public Policy and Higher Education, notes: "Higher education has deflected the idea for the past quarter-century by arguing the kinds of things we want undergraduate education to teach are not really measurable."[78] Resistance has been particularly pronounced at private colleges, which are not responsive to public officials. "Trying to create an uber-instrument … will be a grave disservice to the individuals, institutions, and the country," the president of the National Association of Independent Colleges and Universities, David Warren, has commented. "We will get a meaningless outcome at a great cost."[79]

These critics of increased standardized learning assessment argue that such efforts are also unnecessary given the successes of a U.S. higher education system that already inherently ensures accountability through market forces. As Princeton professor and former president of the American Council of Learned Societies, Stanley Katz, has noted: "the public is quite satisfied with what higher education is doing on the whole. This is a market system, and the customers are buying. We have by a considerable measure the finest system of higher education in the world. And if that's the case, this

is an ‘ain’t broke, don’t fix it’ situation.”[80] While we share Katz’s sentimental attachment to a U.S. higher education system that has generously provided us with both training and employment, we are skeptical of most of the assumptions inherent in this argument. The “market” system for higher education in the U.S. is characterized by a limited number of selective institutions that share many features in common, that control access to scarce goods (i.e., prestigious credentials) and that are heavily subsidized by public sources of support such as college grant provisions, loan guarantees, tax exemptions, and research grants.

In recent decades, the U.S. higher education system has fallen behind many other countries in terms of the percentage of individuals it graduates.[81] Moreover, whether college students are more effectively educated in the U.S. than abroad is today an open empirical question, but will perhaps not remain so for much longer. The Organisation of Economic Co-operation and Development (OECD) is currently launching a feasibility study for the international Assessment of Higher Education Learning Outcomes (AHELO) that will parallel its earlier efforts that have successfully assessed academic performance of fifteen-year-olds from a comparative international perspective since 2000 with the Programme for International Student Assessment (PISA). The OECD efforts are designed to develop a “direct assessment of learning outcomes in higher education” that “could provide member governments with a powerful instrument to judge the effectiveness and international competitiveness of their higher education institutions, systems and policies in the light of other countries’ performance, in ways that better reflect the multiple aims and contributions of tertiary education to society.”[82] It is worth noting here that AHELO decided to embrace and adapt the CLA “to an international context with a view to provide a proof of concept” for its assessment of generic skills that “can be measured across diverse institutions, languages and cultures.” In particular, students in multiple countries in 2016 “will complete an online assessment, using their critical skills along with data provided for each task. The questions are not specialized so that they can be answered by most undergraduates, whatever their field of study.”[83]

A second line of criticism is not necessarily opposed to testing itself,

but questions the validity of general, broad-based assessments that do not focus on the specific knowledge taught in particular courses and majors (e.g., life sciences, mathematics, physical sciences, and social sciences). Catherine Hoffman Breyer at the University of Washington, for example, has argued that "a standardized test, such as the CLA, with its focus on generic skills and knowledge, could not detect the specialized information and skills each student had worked to master."[84] In a similar fashion, Steve Chatman at the University of California at Berkeley's Center for Studies in Higher Education has asserted that "because of the differences in undergraduate experiences across majors within an institution, any attempt to capture an overall measure of performance across all of a college or university's students 'will necessarily be biased' by the makeup of its programs."[85] These critics are unclear, however, on why one should not consider a college's curricular composition itself to be an institutional policy associated with student learning or why one could not easily control for these differences when modeling results.

Third, skeptics of the CLA in the past have raised questions about the instrumental validity of the indicator. Some of these concerns, however, have now been addressed by a recent test validity study organized by the Fund for the Improvement of Postsecondary Education (FIPSE). This study brought together researchers from the Council for Aid to Education (CAE), the Educational Testing Service (ETS), and the American College Testing (ACT) program. It examined the instrumental construct validity of the CLA, the ACT's Collegiate Assessment of Academic Proficiency (CAAP) and the ETS's Measure of Academic Proficiency and Progress (MAPP) by administering all three tests in thirteen schools with more than 1,100 students participating. While CAAP and MAPP rely on a multiple choice format, score reliability with the CLA was high when considered at the aggregate school level (correlations of 0.75 to 0.84). In addition, at the individual level, correlations were higher across CLA open-ended and CAAP / MAPP multiple choice tests of critical thinking ($r = 0.53$) than CLA-CAAP / MAPP tests of different constructs ($r = 0.45$). While the results indicate that these tests should not be used as a basis to make institutional decisions about students as individuals (e.g., promotion or

course placement), when aggregated in larger samples they can provide reliable estimates of institutional or group-level differences in performance on these tasks.[86]

Fourth, some higher-education practitioners have questioned not the CLA itself, but the modeling approach that the Council for Aid to Education and individual colleges and universities have used to identify institutional effects with this assessment instrument. CLA has generally been used in a value-added framework, which entails comparing test scores of enrolled freshmen and seniors at an institution in a given year, after controlling for student performance on a prior test such as the SAT or ACT. These comparisons have not typically tracked specific students through college, nor have they accounted for other non-school factors that might be associated with differential rates of learning. Higher-education practitioners, such as Chancellor Howard Cohen of Purdue University Calumet, has questioned whether one "can measure the 'value added' in college generally, when so much of the experience of students is beyond the control of colleges."[87] If one longitudinally tracked students over time, however, and adequately accounted for a full set of non-school factors—as we will do in this project—even CLA critics such as Wheaton College Dean Gary N. Larson concede that the measurement approach would approximate a "gold standard" for assessing student outcomes.[88]

Although there are significant methodological challenges to our project (including issues of sampling, attrition, and selection that are discussed at length in a methodological appendix), the study generates significant new knowledge to guide future research, policy, and practice. While well short of an experimental research "gold standard," descriptive findings based on tracking many students enrolled in diverse institutions, with careful longitudinal measurement of a wide range of factors and outcomes over time, yields quite illuminating results on the nature and character of collegiate experiences and variation in student learning that can significantly increase our understanding of the phenomenon.

Other Studies of Learning and Student Trajectories through College

In spite of the increasing attention of policy makers on measuring student learning in higher education, and an extensive tradition of research on academic performance in elementary and secondary education, efforts to directly measure development of general cognitive skills in college have been limited. Over the past decade the most widely used assessment of student learning and personal development in higher education has been the National Survey of Student Engagement (NSSE), which presents students with a questionnaire in multiple-choice format that gauges students' self-assessment of their learning during college. Since the inception of the NSSE in 2000, more than 1,300 colleges and universities in the United States and Canada have used it to survey students about their learning.

It is unclear, however, whether students can accurately self-report an assessment of the degree to which they have actually learned general skills. As young adults, are they aware of what they do not know? If students cannot identify or define learning and critical thinking skills, how will they know whether they have obtained them? Self-reported assessments are also well known to be susceptible to inflated perceptions of one's own performance. For example, as the economists Robert Frank and Philip Cook have noted, "some 80 percent of us think we are better-than-average drivers" and "more than 90 percent of workers consider themselves more productive than their average colleague."[89] In addition, while George Kuh and others have used NSSE results to identify associations between self-reported student learning and self-reported college engagement, it has not yet been systematically demonstrated that all forms of college engagement are consistently associated with growth on objective measures of learning.

Instead of relying on students' self-reports of their cognitive gains, two large-scale national projects have aimed to measure student learning directly by relying on different modules of the CAAP, an assessment tool developed by the ACT program to measure general college skills including critical thinking, reading, and writing. The National Study of Student Learning

(NSSL) followed approximately 4,000 students at twenty-three institutions through their first three years in college, beginning in the fall of 1992. While this project is no longer ongoing, it has provided important insights about the relationship between students' college experiences and their improvement in general skills such as reading, writing, and critical thinking. In 2006, Charles Blaich at the Center of Inquiry in the Liberal Arts at Wabash College launched the Wabash National Study of Liberal Arts Education. Starting with nineteen institutions, the study has since been expanded to include a diverse set of forty-nine institutions including liberal arts colleges, regional universities, research universities, and community colleges. Students participating in the study are surveyed and tested at their entry into higher education, at the end of their first year, and at the end of their senior year. This study assesses a range of college outcomes, from academic motivation and attitudes toward reading and writing to leadership, moral reasoning, and attitudes about diversity, as well as critical thinking (evaluated using the CAAP critical thinking test). Although the multiple-choice framework to assessing college learning can be criticized for its reductionist character, the Wabash and earlier NSSL studies are among the few large-scale efforts to assess how academic as well as nonacademic experiences are associated with student learning, and how those experiences are shaped by student backgrounds. By collecting information on students' demographic characteristics, pre-college attributes, and college experiences, as well as by conducting in-depth interviews with a subsample of students, the Wabash study in particular promises to provide crucial insights into factors shaping student development over four years of college.[90]

In addition to these studies, which directly measure students' experiences and performance during college, some studies have used standardized test scores, such as SAT and ACT pre-college measures and GRE post-college measures, to approximate a repeated indicator longitudinal assessment design.[91] Moreover, recent reports from the *Measuring Up* initiative have used professional exams and licensures as a proxy for learning. While these endeavors, which aim to approximate but not directly measure students' progress through college, present important

steps in the measurement of student outcomes, they are limited to students who take specific tests, and thus miss a large proportion of students who do not pursue specific educational or occupational paths affected by graduate school or licensure exams immediately after college.

Although scant attention has been dedicated to measuring student learning with objective performance assessment across institutions and over time, several large projects have recently focused on tracking students through college and into the labor force. While ignoring the measurement and modeling of student learning, these endeavors provide useful models for thinking about student experiences and outcomes in higher education. William Bowen and Derek Bok in *The Shape of the River* examined outcomes of minority students admitted to selective colleges under race-sensitive policies relative to the outcomes of their white peers in the 1979 and 1989 entering freshmen cohorts. Non-white students at twenty-eight academically selective and predominantly private colleges "have, overall, performed very well" on a wide range of indications—including graduation rate, fields of study, advanced degree attainment, earnings, and civic engagement.[92] The one major exception to this pattern was observed in student academic outcomes measured by college grade point averages. Specifically, Bowen and Bok demonstrated that "black students with the same SAT scores as whites tend to earn lower grades."[93] James Shulman and William Bowen found in subsequent work that while college athletes graduate at relatively high rates from these selective college settings, their grades in college are lower than expected after controlling for prior preparation, and have been deteriorating over time.[94]

In more recent work, Douglas Massey and his colleagues have tracked a large number of students entering college in the fall of 1999 at a similar set of twenty-eight selective colleges and universities "essentially following the cohort of freshmen entering Bowen and Bok's sample of schools as they became sophomores, juniors, and ultimately for most, graduating seniors."[95] In a series of articles and books, Massey and his colleagues focused attention in particular on racial differences in student outcomes. In results similar to Bowen and Bok's earlier work, the lower grades of

African-American students were highlighted (net of extensive controls for social background and academic preparation). Massey and his colleagues also identified the extent to which African-American students faced greater economic pressures while at college, and the extent to which students regardless of race who were engaged in many campus activities (other than membership in a fraternity or sorority) earned higher grades.[96]

These endeavors provide invaluable information about students' experiences during their college years. However, they have failed to measure student learning or link student experiences to growth in learning. Among other outcomes, Bowen and Bok as well as Massey et al. report analyses of college grades, the traditional and long-relied-upon method of measuring learning in higher education. Grades are an effective way of measuring student learning within a particular class, since most institutions have a scaled grading system already in place. They are an unreliable comparative measure across classes or schools, however, since inconsistencies exist across teachers within schools and there are discrepancies in scale and grade definition between schools and over time as grade inflation has occurred. Although grades serve a valuable purpose within classrooms and are worth collecting as a component of a larger evaluation strategy, on their own they provide only a very limited and inadequate assessment of student learning.

Moreover, past endeavors examining college students' experiences and outcomes have often focused on selective colleges and the experience of non-white students attending these schools. While selective institutions tend to garner much scholarly attention, most students do not have the privilege of attending such schools. Students attending selective institutions differ from those attending the rest of higher education on a number of individual characteristics as well as outcomes. The median SAT score for institutions participating in the National Longitudinal Survey of Freshmen (used by Massey at al.) was 1,243 and the majority of those students had parents who had graduated from college, leading the authors to conclude that "by any criteria, the twenty-eight institutions constitute an elite sample."[97] Similarly, students in the College and Beyond (C & B) dataset studied by Bowen and Bok were more academically prepared than the national average and, not

surprisingly, had much higher graduation rates: 85 percent of C&B students graduated from the *same institution* within six years, compared to the national average of just over 50 percent.[98] Thus, knowing the patterns and consequences of specific activities at elite institutions does not necessarily extend to the majority of students who are attending nonselective colleges and universities. Questions about the growth in student learning over time and the patterns and consequences of different collegiate experiences on average U.S. campuses still remain to be answered.

Outline of our Presentation

In this book we will highlight four core "important lessons" from our research. First, in terms of undergraduate learning, four-year colleges and universities and students attending them are too often "academically adrift." While U.S. higher education is expected to accomplish many tasks, we draw on students' reports of their collegiate experiences to demonstrate that undergraduate learning is rarely adequately prioritized. Second, gains in student performance are disturbingly low; a pattern of limited learning is prevalent on contemporary college campuses. Third, individual learning in higher education is characterized by persistent and / or growing inequality. Fourth, while the overall level of learning is low, there is notable variation both within and across institutions that is associated with measurable differences in students' educational experiences.

In chapter 2 we continue to describe the 2,322 students in our study as they begin their college careers. We focus in particular on the extent to which they are improving their skills in critical thinking, complex reasoning, and writing as measured by the CLA during the first two years in college. Moreover, while inequalities in access persist, higher-education institutions today enroll an increasingly diverse set of students from a variety of backgrounds. We thus examine whether CLA performance at entry into higher education as well as gains over time vary across students from different social backgrounds, focusing in particular on different racial /

ethnic groups and students from more or less educated families. This chapter reveals that American higher education is characterized by limited or no learning for a large proportion of students, and persistent or growing inequalities over time.

Chapter 3 examines how students navigate and experience contemporary college cultures. How distinctive are these cultures? Do students' academic attitudes, behaviors, and values simply reflect their divergent social backgrounds and academic abilities? Or do colleges differ in the extent to which they successfully promote student academic orientations and practices? We find disturbing evidence that many contemporary college academic programs are not particularly rigorous or demanding. Moreover, students rarely seem to focus on academic pursuits; many appear to be academically adrift in today's colleges and universities. We show, however, that colleges vary in the extent to which they support academically oriented student behaviors.

How are students' experiences in college related to their development of critical thinking, complex reasoning, and writing skills as measured by the CLA? We address this question in chapter 4, by exploring how academic and social integration—with the latter being promoted by many colleges to improve student retention—are related to student learning. The importance of rigorous coursework requirements, faculty expectations, and time spent studying is highlighted. In addition, we discuss whether student employment and extracurricular activities can become a distraction to student learning, as well as how various college majors and types of coursework are associated with improvement in CLA performance. While overall levels of learning are low, we identify specific experiences and higher-education contexts that are associated with improvement in critical thinking, complex reasoning, and writing skills during the first two years of college.

In our concluding chapter, we argue that the patterns identified in our study highlight the extent to which institutional reform is required in U.S. higher education. Specifically, while others have applied the metaphor of a river to the journey through college of today's students, our findings call attention to the fact that many undergraduate students are academically adrift on contemporary campuses. Educational reform requires improved

measurement and understanding of the processes and factors associated with student learning. In an increasingly globalized competitive economy, the consequences of policy inattention are profound. Regardless of economic competitiveness, the future of a democratic society depends upon educating a generation of young adults who can think critically, reason deeply, and communicate effectively. Only with the individual mastery of such competencies can today’s complex and competitive world be successfully understood and navigated by the next generation of college graduates.