Teaching Trends

A Guide for the Perturbed

Michael Ostling

"The purpose of education is to turn tangible resources into intangible resources. If we cannot measure what is valuable, we will come to value what is measurable, so that passion for measurement can distort organizational efforts by prizing and overproducing what can be measured and neglecting what cannot."

—Robert Birnbaum

Management Fads in Higher Education

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expressed herein are the author's own and do not necessarily
reflect the views of that department or university.

Who's Perturbed?

Most teachers teach well, but we could teach even better. So we re-jig our syllabi, attend workshops and round-tables and conferences, trade ideas with colleagues, browse selectively in the vast fields of research on teaching and learning. However, our limited resources of time and energy are already over-taxed with research, with service—and of course with teaching. It sometimes seems that we are too busy teaching to learn how to improve.

Meanwhile, we find ourselves under pressure from departments, from administrators, from legislators and parents to adopt ever new approaches and techniques. Some of these seem like good ideas (but might not be), others we eye (perhaps wrongly) with suspicion: many appear to reinvent the wheel. The blogosphere broils with talk of revolutions in higher education—revolutions proclaimed with evangelical zeal or decried in apocalyptic tones. Teachers can find it difficult to engage (or to resist) bodies of research at least as vast and as fractious as our own areas of research expertise. We don't have time to become experts in the scholarship on teaching and learning (SoTL), and yet its findings are lastingly relevant to our professional lives.

This Guide is written for ordinary teachers like myself who wish to understand recent trends in teaching on a limited budget of time. It is written for all of us who are perturbed—both excited and worried—by the promise or the threat of the hottest fad, the latest revolution, the newest teaching technology. And it is intended to help give a voice to teachers—but also to departments, faculty associations, unions, and grass-roots movements—who suspect that many changes to higher education are less beneficial and less inevitable than their media presentation suggest, but who lack the language to critique such change without appearing hide-bound or reactionary. We want to innovate cautiously, taking what is best from the newest trends while avoiding potential pitfalls.

Teaching Trends does not attempt original scholarship. Instead, it provides a window onto the vast and quick-changing field of SoTL—a window that, inevitably, implies a specific viewpoint. I have tried to be fair and dispassionate in surveying this contentious field, but have not found it useful to suppress my own opinions. Instead, the writing of this report has furnished me the opportunity to attempt the discernment of good change: adopting what Robert Birnbaum calls a "skeptical curiosity" toward innovations in higher education, resisting fads while taking from them whatever is useful. Readers who wish to indulge their own skeptical curiosity are referred to the References and Resources section, with its thematically arranged list of readings and links.

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1. What's Going On?

We teach in an age of academic apocalyptic. Universities are in crisis. Economic, political, administrative, generational, and intellectual factors have come together in what Thomas H. Benton calls a "perfect storm" for higher education (Benton 2011). Though I will want to question some of the supposed factors contributing to this alleged storm in the pages below, it might be useful to start by cataloguing the more prevalent complaints:

- Students arrive at college full of confidence but short on ability, woefully unprepared for college-level work. Kids these days are multitaskers, digitized web-surfers, plugged in but tuned out. They don't read.

- An emphasis on retention renders teachers nearly powerless to enforce high standards of reading, writing, or analysis. Student evaluations of teaching (SET) encourage the disengagement compact between students and teachers. We "expect little, smile a lot, gesture freely [...]. Professors pretend to teach, students pretend to learn" (Benton 2011).

- Contingent or adjunct teachers, who now comprise over half the teachers at US colleges, are especially vulnerable to SET scores, driving up grade inflation. Adjunct faculty are also buried under course loads that make rigorous instruction impossible (Deresiewicz 2011).

- Students (and their parents) approach college as consumers: they understand themselves to be purchasing a passing grade and a diploma. Learning is incidental to this project.

- The price of a diploma has, however, risen precipitously. Despite the cost-savings represented by contingent faculty, large class sizes, and online education, tuition continues to soar: for *public* universities it has risen from about 18% of a median-income family's annual budget in 1999 to 25% in 2007 (Deresiewicz 2011). Meanwhile state funding of public education has decreased from about 75% of college budgets in the 1970s to 25% or less today (Fish 2008: 155).

- To pay for this, student loan debt has reached an astonishing $830 billion nationally, exceeding credit-card debt and placing many students under crushing financial burdens (Gillen 2010). But the degrees so dearly bought no longer guarantee a good job—they don't even guarantee that graduates will be prepared for entry-level skilled work of any kind (Casner-Lotto, Barrington, & Wright 2006).

One could continue, touching on bloated athletic programs, the deleterious effects for teaching of the "publish or perish" culture, administrative centralization and over-reach (or, conversely, faculty recalcitrance in the face of much needed teaching reforms). Not everyone agrees on what is wrong with college, but everyone seems to agree that a great deal is indeed wrong. Book-length critiques of American colleges have been a publishing staple for decades, but the last five years have seen a bumper crop, from every political position and from both inside and outside the ivory tower: *Crisis on Campus*, *Unmaking the Public University*, *How Colleges Are Wasting Our Money and Failing Our Kids, Losing Our Minds*, *Why You Won't Get the College Education You Paid For*, *Academically Adrift* (Deresiewicz 2011 provides a balanced review of several of these; see also Rhode 2006 for a historical survey of the genre). All of these books find college today to be in a state of unprecedented crisis. Most also propose solutions, tinged golden with nostalgia for an imagined perfect past or with rapturous visions of future potential.

The calls for reform which characterize this vast and contentious literature are both useful and dangerous. Useful in demonstrating that the decisions of individual teachers, of departments and programs, and of whole institutions *do* make a difference: one *can* adopt approaches and policies that really help the "kids these days" learn better and more. Dangerous, in that the rhetoric of reform can easily shade over into apocalyptic tones ("disruption" in the current jargon): to a call for radical measures where "the first shall be last and the last shall be first." Institutional inattention to substantial learning outcomes "makes discussion of higher education's accountability both largely inevitable and in certain respects warranted" (Arum & Roksa 2011: 18-19). Although Arum and Roksa are themselves skeptical of externally imposed accountability systems, their *Academically Adrift* (see also Mini-Review 1.1) has become a stick with which to beat higher education, to advocate for fast, sweeping change to academic culture, often at the expense of academic freedom and faculty autonomy (Brooks 2012; Vyse 2012). In the apocalyptic mode, it is easy to deride those who question sweeping change

Mini-Review

Richard Arum and Josipa Roksa
Academically Adrift. Chicago: University of Chicago Press, 2011.

Perhaps the most statistics-laden best-seller of 2011, *Academically Adrift* sounds a call to arms for teachers concerned about the state of learning in college today. Based on a longitudinal study of 2,322 students at 24 four-year colleges chosen for maximal institutional diversity, the book correlates student behaviors, faculty culture, and administrative policies with the "value added" of college: increased critical thinking and writing skills. Their central finding: students aren't learning much in college today.

Some of the juicier details outlining this lack of learning have garnered the bulk of media attention:

- Students spend less than 12 hours per week studying on average, and more than a third of students study less than 5 hours per week. "Study" includes all out-of-class school-work: problem sets, writing assignments, research, reading the textbook, exam review.
- Despite this lack of study, 85% of students enjoy a GPA of B- or better; 55% have a GPA of B+ or better.
- 50% of sophomores had never taken a course requiring 20 pages of writing over the semester, and about 1/3 had never been assigned 40 pages or more of reading per week.
- Using the College Learning Assessment (CLA), Arum and Roksa "observed no statistically significant gains in critical thinking, complex reasoning, and writing skills for at least 45% of the student in our study" between entering college and the end of sophomore year. 36% showed no significant improvement over *four* years (36).

Arum and Roksa's suggested solutions to the problems they outline have received less attention. Despite their gloomy findings, *Academically Adrift* is a surprisingly hopeful book. Reading assignments, writing assignments, study alone, high faculty expectations and frequent faculty contact all correlate strongly with higher CLA performance; and this remains true when adjusted for the socioeconomic background and college preparedness of incoming students. In other words: college *can* improve critical thinking and complex reasoning skills—if we make such improvement a priority.

Note: Research addenda and follow-up reports can be found at http://highered.ssrc.org/ .
For an ethnographic account of "academic drift" from the student side, see *My Freshman Year* (Nathan 2006).

as luddites, as hide-bound conservatives or knee-jerk liberals as the argument serves: as instantiations of Cornford's first law of academe, "Nothing should ever be done for the first time" (quoted after Delbanco 2012a: B8). But frustrating though such resistance can be, it is important: especially in that seemingly innovative solutions so often turn out to be trends less grounded in good research than they inevitably claim. There can be a tendency among both reformers and those who resist reform to shoot first and ask questions later. If we don't deliberate carefully about our teaching aims, we are likely to do some damage.

Two brief anecdotes might illustrate this initial problem: that we should figure out what is wrong with teaching and learning in higher education before we try to fix it:

- The "Millennial Generation" formed a recurrent theme at the Great Lakes Conference on Teaching and Learning held at Central Michigan University in May of 2012. Presentations had titles such as "Challenges of Engaging 21st Century Students," "Reaching Today's Learner," "Today's Visually Oriented Students," "Communicating with 21st Century Learners", even "Postmodern Probes about Millennial Students." All these (and several more) assumed that there exists such a thing as the Millennial Generation or the 21st-Century Learner, and that this creature requires different teaching approaches than those currently on offer. However, the jury is still out on the Millennials: whether they are the best generation (Howe & Strauss 2000) or the dumbest generation (Bauerlein 2008) or the saddest generation (Twenge 2006)—or even whether the generalizations made about them amount to more than pseudoscience (Hoover 2009). In other words, the GLC expended a great deal of pedagogic energy on approaches to teaching a "generation" whose very existence is in doubt.

- Many of these same presentations assumed that today's student is a "digital native," a tech-savvy NetGen web-surfer constantly plugged in to multiple streams of digitized text, sound, and image. And yet recent studies suggest that not every student is digitally native, that even today, many students especially at open-enrollment universities grew up with limited interaction with the Internet; that most use technology for entertainment purposes but don't necessarily know how to use it for business or educational purposes—that the "tech-savvy" student is a myth (Cowan 2011; Hargittai 2010; Tanner 2011).

I'll return to these issues in Section 3.2 below. The point for now—a central contention of this Guide—is that we should exercise caution and judgment before embracing solutions to the crisis of learning in higher education. Its causes and solutions are far from clear, and some proposed cures might be worse than the ailment. Our problem is thus one of *discernment* (as it so often is in apocalyptic situations—see Matt. 24: 10-12). The present essay does not pretend to provide that discernment, but it might help untangle at least some of the issues confronting college teachers today.

2. What is College For?

Robert Birnbaum singles out "the degradation of the narrative" as the central problem facing higher education today. Without narratives providing meaning and purpose to the academic endeavor—narratives outlining the university's role in fostering such ends as personal growth, civic participation, critical thought, or liberation from superstition and error—the university falls prey to technocratic or consumerist evaluations. The key questions come to center around cost-effectiveness, job training, or graduation rates (Birnbaum 2001: 226).

It is neither likely nor desirable that college teachers (still less their students, those students' parents, or American society as a whole) can find a consensus narrative for higher education. But without some general notions of what college ought to be for, more specific questions of teaching approach and technique lack a point: *how* one should teach, as much as *what* one should teach, are questions intimately related to such larger issues as the nature of higher education itself. This section briefly considers some of the options.

For many students, the aim of college is what you get at the end: a diploma. Such a credentialist view of college can be understood using either of two models: the "sieve" and the "ticket." If higher education is a sieve, students are understood to arrive at college with innate abilities and predispositions. School acts to detect these abilities through filtering mechanisms such as assignments and exams. School thereby sorts the sheep from the goats, the smart from the dumb, the capable from the incompetent: testing, not teaching, lies at the center of the college enterprise, and those who pass muster are rewarded with high-paying and prestigious careers (Arum & Roksa 2011: 91-92). The "ticket" model looks to such material rewards and understands the goal of college as providing access to these. A student may not have the innate abilities that college is intended to detect and reward, but this hardly matters: if he or she can game the system, trick or cajole the institution into issuing a diploma, then they will have got into the elite club that is, from this perspective, the point of college.

These two credentialist models are united in their instrumental attitude toward college: it is all about the goal, not the journey of learning. Many students, aware that they aren't learning much, nevertheless prefer "any class where a teacher is just gonna give us notes and a worksheet or something like that" (a Midwestern college undergraduate, quoted in Arum & Roksa 2011: 4). Under a credentialist model, students attempt to "acquire the greatest exchange value [good grades and a degree] for the smallest investment of time and energy" (Arum & Roksa 2011: 16). Parents often concur, advising their children to get through, get out, and begin enjoying the fruits of a degree (if not of an education) as quickly and cheaply as possible. A predictable result, especially when combined with faculty research pressures: what George Kuh calls a "disengagement compact' between teachers and students. "'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" (Kuh 2003: 28).

For anyone serious about teaching and learning, college is not about such external markers as a diploma but about internal changes in the student. The learning outcomes or "value-added" of college consists, at minimum, in knowledge gained: mastery achieved over a discipline or

Mini-Review

Andrew Delbanco
College: What It Was, Is, and Should Be.
Princeton: Princeton University Press, 2012.

In the face of political, technological, and economic threats to higher education, Delbanco worries that America's greatest invention is at risk. In his long perspective (beginning in Plato's original grove of Akademe), Delbanco rightly sees the American college as something unique—a place both democratic and elite, a site of critical thought but also for coming of age and for second chances. The "lateral learning" characteristic of American college finds its source in colonial Puritan convictions that the the elect enjoy an "aptness to edifie [one] another" (56).

Delbanco explores the democratization of this "aptness," from the Land Grant universities through the GI Bill and the influx of women and minorities into college. And he chronicles the recent dismantling of this democratic ideal: the liberal arts retreating to prohibitively expensive elite colleges; technology fragmenting the self-formation college once helped to foster; critics of every political stripe reducing college to the vocational training of a productive workforce in a knowledge economy. "It is a pipe dream to imagine that every student can have the sort of experience that our richest colleges, at their best, provide," writes Delbanco. "But it is a nightmare society that affords the chance to learn and grow only to the wealthy, brilliant, and lucky few" (7). Of the many recent defences of the liberal arts, Delbanco's is among the most clear-eyed and persuasive.

Note: a taste of Delbanco's argument can be sampled in his *CHE* article, "College at Risk" (Delbanco 2012a).

Figure 2.1
College Competencies

In addition to the content-mastery and specialized skills associated with a student's choice of discipline, students should leave college having achieved:

- **Personal competencies:** self-motivation, moral reasoning, analysis, quantitative reasoning, problem-solving
- **Communicative competencies:** writing, listening, public speaking, information technology
- **Organizational competencies**: leadership, management, interpersonal skills
- **Cultural competencies:** knowledge of other cultures, tolerance for diversity, informed civic and democratic participation
- **Substantive competencies:** a basic grounding in the natural sciences, social sciences, humanities and arts

Adapted from Rhode 2006: 65, who summarizes a rough consensus drawn from several recent books and articles.

field—a major. Beyond this minimal goal, most commentators hope students will gain new behaviors, dispositions, skills, appreciations: the range of competencies usually understood to be gained, or at least aimed for, through the liberal arts or general education curriculum. Figure 2.1 summarizes a typical list of such competencies.

Not every commentator would sign off on this full list. Against Arum and Roksa's worry that today's student "drifts" through college without aim or purpose, Andrew Delbanco considers a certain degree of drift to be both traditional and salutary for American higher education, setting our universities apart from the early specialization (and its potential for rigidity and social stratification) of European educational models. College should be above all "an aid to reflection, a place and process whereby young people take stock of their talents and passions" (Delbanco 2012b: 15-16; cf. Attewell 2011: 225). In contrast Arum and Roksa, who sometimes seem to equate "learning" with "increase in scores on the Collegiate Learning Assessment," tend to disregard the penumbra of important college outcomes not measured by the CLA: interpersonal skills, self-discovery, civic and democratic participation. Taking a provocatively extreme position, Stanley Fish would balk at both Delbanco's self-discovery and the implicit instrumentalism of *Academically Adrift*. In his *Save the World on Your Own Time*, Fish portrays a liberal arts education as gloriously useless (more precisely, he asserts that its use, like that of a poem, is self-contained: it justifies itself in its own terms). And he lampoons the language of college mission statements, with their lofty goals of "fostering an appreciation for diversity" (Wesleyan); "developing moral, civic, and creative capacities" (Yale), in order to "produce an effective and productive citizen" (MSU) (Fish 2008: 10-12, 52-53). In their place, Fish proposes a "deflationary" purpose for college teaching: it should "introduce bodies of knowledge and traditions of inquiry [and] equip students with the analytical skills necessary" to investigate these bodies of knowledge both in class and independently. Any additional mission, Fish proclaims, is inappropriate, impossible, or both (Fish 2008: 12-13; cf. Gardner 2005: 108).

And yet the distance between Fish's formulation and those of Rhode, Arum and Roksa, or Delbanco is less than it first appears. Although Fish finds the term "critical thinking" to be empty (54), his "analytical skills" would encompass any standard definition of critical thinking—as well as the complex reasoning, problem solving and writing measured by the CLA and emphasized by Arum and Roksa. And surely there is *some* overlap between the intellectual virtues Fish espouses—"thoroughness, perseverance, intellectual honesty, [...] conscientiousness in pursuit of truth" (20)—and the civic, democratic, and Socratic virtues championed by Delbanco. Indeed, despite some terminological quibbles, nearly all commentators agree that critical thinking, complex reasoning, and writing skills are central to higher education (Arum & Roksa 2011: 108; Rhode 2006: 66).

Prospective employers concur: according to several recent national surveys, today's corporation seeks a college-educated workforce proficient in critical thinking, complex problem solving, and written and oral communication (Casner-Lotto, et al. 2006: 9; AAC&U 2013; Sternberg 2013). These same surveys find that colleges are not doing their job. 93% of employers consider "written communication" to be "very important" in entry-level college-educated employees; but they find 28% of those graduates "deficient" in this skill. College graduates fair a little better in "critical thinking"—just 9% are deficient, but only 28% are excellent in this supposedly central capacity of higher education (Casner-Lotto, et al. 2006: 20-34; see also Gardner 2005: 65). The credentialist students who think they've got their career-ticket punched when they graduate often discover that employers ignore their diploma and their grades—focusing instead on the critical thinking and writing competencies these students failed to gain in their rush through college (Arum, Cho, Kim, & Roksa 2012).

Figure 2.2
What Is College For (According to Employers)?

According to a 2013 survey private businesses and non-profits, over 75% of employers seek the following in their college-educated employees:

- Critical thinking
- Complex problem-solving
- Written and oral communication
- Ethical judgment and integrity
- Intercultural skills
- A capacity for continued new learning
- Applied knowledge in real-world settings

This list of employer-desired college outcomes may be usefully compared with the "College Competencies" outlined in Figure 2.1

Adapted from AAC&U, "It Takes More than a Major," 2013.

In what follows, I will take Fish's minimal mission for higher education as the basis for evaluating teaching trends, while keeping in mind that both the substantive and analytical mastery he advocates imply those wider competencies of critical thinking and clear writing advocated by Arum, Roksa, and the employers of America.

3. Problems and Prospects

In Section 1, I suggested that critiques of higher education often resemble the genre of apocalyptic, with its characteristic polarization, black-and-white us-vs.-them thinking, and strident call for sweeping reform. In this section, I survey several examples of academic apocalyptic: teaching fads that vie for attention as solutions to our current malaise. While I find all of them wanting, I try to follow Robert Birnbaum's advice to discern in each some kernel of applicability. Birnbaum chronicles the higher education fads of the last forty years, analyzes their appeal to administrators, and assesses their high cost in cash, morale and wasted human effort (See Mini-Review, next page). But he also adduces a counter-

Figure 3.1
The Fad Test

A policy initiative or teaching approach is likely to be a fad in direct proportion to the number of statements made in its defense of the following form:

X is not a fad.

X is superior to a previous innovation, which *was* a fad.

X will lead to radical transformation of the institution.

X requires institution-wide implementation.

X will require a major change in institutional culture.

X is based on solid theory, objective data, and analysis.

X is opposed only by the ignorant or self-interested ideologues.

Adapted from Birnbaum 2001: 230-231.

Mini-Review

Robert Birnbaum
Management Fads in Higher Education: Where they Come from, What They Do, Why They Fail. San Francisco: Jossey-Bass, 2001.

This book should be required reading for administrators, for whom it might act as a salutary prophylaxis against ever new academic and managerial fads. More realistically, Birnbaum's analyses can be deployed by teachers to contextualize and resist new fads as these are pushed through by college administration: as Birnbaum notes, "knowing what has gone before and why it did not work may help readers resist unwise change" (xviii-xix).

Birnbaum outlines the attraction of fads for administrators despite persistent evidence that they don't work: implementing a new fad allows management to "take charge," to be seen to be doing something. *Management Fads* chronicles the high price—in institutional morale and effectiveness, but also in cash—of four decades of ever-new attempts to transform higher education, from PPBS and ZBB to TQM and BPR: in each case one can trace a pattern of "early enthusiasm, widespread dissemination, subsequent disappointment, and eventual decline" (Birnbaum 2001: 5, quoting R. E. Slavin). Because the administrative turnover rate tends to outpace the fad cycle, administration tends not to learn from this pattern: those who implement a new fad rarely stick around to clean up its mess (104, 125-142).

Birnbaum is highly critical of fads and emphasizes their negative effects. However, *Management Fads* also adduces an important finding: many of these fads have left legacies of positive change: shaking up universities and prodding them toward needed transformation. "A fad should never be adopted," Birnbaum concludes, "but neither should it be rejected out of hand." Instead, a "skeptical curiosity" can allow universities to manage fads as agents of positive change, prudently selecting their good components while avoiding their drawbacks (206-211 230-231).

Note: For an ethnographically rich account of a mid-sized, mid-level, Midwestern university in the grips of fad-driven transformation, see *Wannabe U* (Tuchman 2009).

intuitive finding: many of these fads, though destructive in themselves, have brought long-term positive consequences.

An example from the recent past might illustrate the issue. Everyone can agree that higher education should strive for "quality" and that teaching should be "excellent." But what do these words mean? The "Continuous Quality Improvement" fad in higher education, which peaked in the early 1990s, defined quality as whatever the customer (the student or his/her parents) says it is: providing quality means ensuring customer satisfaction. The model assumes that all customers want the same thing, so the effort to improve quality becomes an effort to "reduce variation in output." The production of educated (or at least of graduated) students is as amenable to rationalized standardization as the manufacture of cars or hotdogs. And yet in university one pays, among other things, for the tools to evaluate what goals are worth pursuing—as with architecture, psychotherapy, or the services of a sommelier, in higher education one seeks for expert opinion about ends as well as means. Ironically, CQM *reduced* quality by measuring it in terms of what customers *want* before they have acquired the tools to determine what they *need*. By the mid-1990s, administrators and faculty had come to see these problems, but not before enormous costs in time and energy had already been expended (Birnbaum 2001: 92-108). And today, some are proposing a voucher system suspiciously similar to Continuous Quality Management to cure the ills of higher education (Garland, 2009; discussed in Deresiewicz 2011). And yet CQM did have *some* use: it reminded teachers that they do, in some sense, attempt to provide a product. That is, teaching is a means, not an end, while learning is an end itself. The quality or excellence of teaching is not intrinsic but must be judged in terms of learning outcomes, in what it does to or for students.

3.1: The Learning Paradigm

Such an emphasis on learning outcomes stands at the heart of an influential trend that has lasted long enough to count now, perhaps, as the status quo. The Learning Paradigm, proclaimed in a seminal mid-nineties article, is the grandfather of many of the fads surveyed below. It also illustrates the danger of academic apocalyptic. Robert Barr and John Tagg strongly contrast their Learning Paradigm to a straw-man of the Instructional Paradigm it is intended to replace. College is not

"for" the provision of instruction but for the production of learning; students, not faculty, are the *raison d'être* of university. Whatever works to increase learning should be embraced:

> In a Learning Paradigm college, the structure of courses and lectures becomes dispensable and negotiable. Semesters and quarters, lectures, labs, syllabi—indeed, classes themselves—become options rather than received structures or mandatory activities. The Learning Paradigm prescribes no one "answer" to the question of how to organize learning environments and experiences. It supports any learning method and structure that works, where "works" is defined in terms of learning outcomes, not as the degree of conformity to an ideal classroom archetype (Barr & Tagg 1995)

As is so often the case, however, this ecstatic vision of creative chaos leads rather quickly in the direction of rationalized, centralized authority: the path from Utopia to Panopticon can be short indeed. As Barr and Tagg argue, "the Learning Paradigm necessarily incorporates the perspectives of the assessment movement" and involves university-wide tracking of "learning outcomes": not only the achievement of substantive knowledge and core competencies, but also completion rates, graduation rates, measures of student engagement and satisfaction—indeed all the measures which increasingly agglomerate around all aspect of teaching and learning today (Barr & Tagg 1995). In practice, the freewheeling non-conformist search for "whatever works" can facilitate a move from traditional faculty oversight to "research-based best practices"—and these best practices are quantified and adjudicated by central management. Teachers are right to distrust a paradigm that allocates rewards based on centralized or extra-institutional criteria of learning success. And yet there can be little doubt that a focus on learning presents a step in the right direction away from the position, still occasionally found, that teaching consists simply in the imparting of information to a passive audience of students.

3.2. The Assessment Movement

The assessment movement championed by Barr and Tagg points toward a central irony of the Learning Paradigm—its submission to the "tyranny of numbers" typical of higher-education fads more generally. As Birnbaum argues, "measurement mania can be particularly disruptive to educational organizations" since "superficial aspects of institutional output are often more easily measured than more substantive ones" (2001: 197).It is unclear, for example, what assessment tool could best quantify the learning outcomes of informal class discussion—which might nevertheless be a good pedagogic approach on intrinsic grounds (Brookfield & Preskill 2005: 276-277). One must guard against putting the cart before the horse, conforming an educational policy or a teaching approach to its assessability.

For example, we can easily measure the effects of student social experience on retention rates, and we can discover that the better that social experience, the more likely students are to persist through college (this is one of the findings of the National Survey of Student Engagement). Such a finding should be the basis for college policy *only* insofar as retention is a good in itself—something that remains to be demonstrated. True, we can't teach students who aren't enrolled (nor can the college collect their tuition dollars). On the other hand, if institutional policy favors retention strategies that interfere with academic rigor, coaxing students to hang around for four years loses its educational point. As Arum and Roksa drily note, "the simple act of staying enrolled does not ensure that students are learning much" (2011: 136). Similarly, graduation rates can be measured and policies shaped toward increasing these rates, but such policies might do little to improve education. Indeed, graduation rates

have been shown to depend largely on the characteristics of incoming freshman; in other words, this metric has less to do with anything that happens in the classroom than with decisions made by the Admissions Office before students arrive on campus (Astin 2004).

The most obviously problematic assessment of teaching and learning is also the most widespread: Student Evaluation of Teaching (SET). SET scores have been shown to correlate with irrelevant factors, such as the physical attractiveness of the teacher (Hamermesh & Parker 2003; Lang 2003). High SET correlates closely with high course GPA. This *might* indicate that students are learning more (and thus getting better grades) from good teachers—or it might just mean that easy instructors are rewarded with high scores, encouraging grade inflation (Felton, Koper, Mitchell, & Stinson 2006; V. E. Johnson 2003: 14). Students can also give low SET to punish teachers who have exposed them to unconventional, controversial, or heterodox viewpoints—as, surely, we should be doing (Fish 2005; Theall & Franklin 2001). Concerns over SET have an especially deadening effect on the teaching of temporary, contingent, or adjunct faculty, whose re-appointment often turns almost entirely on favorable SET (and who, let us recall, teach a majority of introductory classes nationally). While tenure-track faculty sometimes enact a "disengagement compact" with students to maximize time spent on research, adjunct faculty often adopt a "'no mess, no fuss' teaching approach, avoiding rigorous grading or heavy student workloads out of fear for their jobs" (Gregorian 2005: 86, quoting adjunct-faculty union activist P.D. Lesko). Despite all this, SET data often affects decisions on hiring and promotion: RateMyProfessors.com scores were even used to determine the Princeton Review's 2012 list of "the Best 300 Professors" in America (Berrett 2012b).

Needless to say, there are better and worse, more or less valid modes of assessing learning outcomes. Quantification, in itself, is no bad thing: Arum and Roksa's warning that we are failing our students is based entirely on the analysis of the statistics derived from the CLA, NSSE, and other assessment tools. Similarly, many of the critiques and most of the recommendations made in this and the next section rely on quantitative

Mini-Review

Scott E. Carrell and James E. West
"Does Professor Quality Matter?" *Journal of Political Economy* 118.3 (2010) pp. 409-432.

Carrell and West studied a large cohort of students at the US Air Force Academy. These students are randomly assigned to professors for mandatory core courses (eliminating the potential bias of "good" students selecting "good" teachers); all sections of a given course use the same syllabus and exam (eliminating most of the effects of grade inflation); finally, students are randomly assigned to intermediate courses for which the introductory courses serve as prerequisites (making possible a longitudinal evaluation). Using these data, Carrell and West make some unexpected discoveries:

- Less experienced and less prestigious teachers (contingent instructors and assistant professors) receive higher SET scores than do more experienced (tenured) teachers.
- Unsurprisingly, SET scores correlate with students' expected grades. However, the high SET also correlates with high performance on the standardized tests taken by all students in all sections: in other words, the less experienced, more popular teachers really do seem to be teaching better.
- But—and this is a very big but indeed—students of more experienced teachers do *better in subsequent classes in the same subject*. In other words, "professors who excel at promoting contemporaneous student achievement teach in ways that *improve* their student evaluations but *harm* the follow-up achievement of their students in more advanced classes" (409, emphasis added).

Carrell and West hypothesize that both the higher SET and the higher grade in the introductory class may derive from less experienced teachers sticking closely to the curriculum and teaching to the test. In contrast, the more experienced (but less popular and less successful in the short term) teachers "broaden the curriculum and produce students with a deeper understanding of the material, [… resulting in] better achievement in the follow-up courses" (430). These findings have important implications not only for the use of SET data, but also for any assessment approach that uses improved performance on final exams as an indicator of increased learning and better teaching. Carrell and West might thus have something to say, for example, to the advocates of Academic Transformation (see section 3.5).

assessment data. Yet the trend seems to be that if numbers can be generated, these will be used to justify decisions sometimes best left to qualitative judgment or just to common sense. Recent British experience should give us pause. Over the last two decades, the British higher education system has suffered from a relentlessly quantitative "invasive interest in the quality of teaching." Detailed data on learning outcomes are centrally accumulated and assessed. Centrally determined and enforced requirements abrogate faculty discretion in the classroom, demanding for example that teachers make "appropriate use of technologies available through the Centre for the Enhancement of Teaching and Learning." Not surprisingly, some British teachers think this centralized system is destroying the British educational system (Tuchman 2009: 184-187, see also 142-152). American colleges have not yet reached this level of assessment, despite the best efforts of the Spellings Commission. I return to this issue in Section 5.

3.3. Accommodating Digital Natives

In Section 1, I suggested that there are surprisingly few good data about the nature and habits of the "millennial generation," despite strident claims to the contrary (Hoover 2009). Millennials, we are told, are plugged-in multitaskers, "accustomed to dealing with multiple information streams in short bursts" (Louis Menand, quoted after Delbanco 2012b: 21). To stay relevant, universities must exploit the potential of new digital media in education (Ito et al. 2008). The digital native cannot be expected to sit through an hour of lecture or to read a full-length book. A decade ago, a colleague of mine extolled PowerPoint as the only way to teach, since "the kids love it." Today, of course, PowerPoint is old-school: to stay relevant it must be updated with more movement, music and video, creating "'Thriller' PowerPoint presentations [...] to grab and maintain students' attention and foster deep learning" (Berk 2012).

Kids these days indubitably do harbor different expectations, exhibit different behaviors, express themselves otherwise than do even the youngest of their professors. Jim Therrell notes that whereas earlier generations tended to play actively together in self-started, self-structured, collaborative games which they made up and revised as they went along, today's college student grew up consuming pre-packaged, pre-structured recreational activities such as videogames or organized sport (Therrell 2011).

Therrell is not wrong, but he leaves two issues unexamined. First—to what degree is this generalization true across all students? Certainly my own children (for example) have engaged in considerable self-started free-form play; in the other direction, Eszter Hargittai has shown that digital fluency is far from uniform, and is distributed in the population of young adults according to the education-level and wealth of their parents (Hargittai 2010).

Secondly: supposing that millennial students *do* have some of the characteristics attributed to them, should we adapt our teaching to those characteristics or should students adapt to the habits of higher education? If students are used to highly structured, prepackaged environments, should we provide these—or should we push students out of their comfort zones? Linguistics professor Naomi S. Baron puts the issue bluntly: "It is very common to hear people say, Here's the Millennial or the digital generation, and we have to figure out how they learn. Poppycock. We get to mold how they learn" (quoted in Carlson 2005).

Others make a similar point more circumspectly. Brian Cowan, a self-described technophile, asks whether we should use Twitter in the classroom because "the kids are using it." He argues that we

should not. Making class notes easily accessible by iPhone will not render those materials more attractive: that same iPhone will always include many apps more immediately attractive than even the most technically advanced teaching materials. Cowan urges that we keep in mind the monastic origins of higher education: classes should provide a "cloistering [of] student and teacher away from the distractions of everyday life" (Cowan 2011; cf. Bauerlein 2012). Perhaps the biggest favor a teacher can do for his or her millennial students is to give them permission to sit in quiet contemplation of an idea, away from the digital distractions of the rest of their lives (for further discussion, see section 4.2 below).

Of course we should use digital media in our teaching and assignments, wherever appropriate. José Antonio Bowen, a bestselling advocate of "teaching naked" without technology in the classroom, is also a pioneer of podcasting and the creation of "virtual classrooms" (Bowen 2012; cf. Young 2009). Blogging, discussion boards, GoogleDoc collaborations can be wonderful teaching tools. YouTube has, by now, a well-established and I think largely salutary place in the classroom. Moreover, as Ron Tanner reminds us, many of our students aren't really digital natives at all, and could use some instruction on how to navigate the digital landscape (Tanner 2011). But the "Digital Native" trend goes too far, mistaking a useful tool for an end in itself.

3.4. Flipping the Lecture

In its weaker sense, "flipping" provides a trendy new buzz-word for a series of active and collaborative techniques of venerable pedigree—discussion groups, problem-solving sessions, debates, concept-mapping activities in the classroom (possibly abetted with "clickers"—see Figure 3.2). In its stronger sense, "flipping" gets rid of in-class lecture entirely, replacing it with podcasts, TED talks; audio-visual materials from firms such as Coursera or the Harvard/MIT collaboration EdX; or with grass-roots tutorials such as Salman Khan's YouTube-based Khan Academy (Berrett 2012a; Bowen 2012;

Mini-Review

Clickers

Clickers or "classroom response systems"—these are the small remote-control-like devices increasingly ubiquitous in large lecture classes—provide a good example of a trendy tool that *can* be useful but comes with sometimes unexamined costs. Clickers allow students to quickly and anonymously respond to multiple choice questions posed by the teacher: results then appear on-screen, usually as bar-graphs.

Clickers have all sorts of good uses. They allow teachers to get immediate real-time feedback on what students think about what they are learning; they can be used to quickly get opinions on-screen which can then become a basis for discussion; they can facilitate "background knowledge probes" to assess what students already know (or think they know) about a topic before it is covered in class; they can be used for exam review. (These examples come from the blog of click-evangelist Derek Bruff (http://derekbruff.org/; see also Bruff 2009).

Disadvantages are less immediately obvious. Installing the proprietary technology to use clickers can be expensive for institutions. They are also expensive for students—as much as $40 each—and since some clickers are bundled with textbooks, a single student might have to pay for two or three different clickers to be lugged around between classes. (The increasingly popular alternative—using smart-phone apps in place of clickers—rests on unexamined and unjustifiable assumptions about student finances and personal-technology choices.) The expense of clickers can deaden spontaneity as well: if you've required your students to buy clickers, you had better put them to frequent use. This ties the teacher to a particular technology and pedagogy: since the clickers only work with presentation software, the screen needs to be on all the time. More insidiously, clickers work best with multiple-choice questions, reinforcing an assumption many liberal arts teachers would prefer to undermine, that most questions have a determinate, known, single correct answer (God is: a. transcendent, b. immanent, c. non-existent, d. seriously angry…).

Luckily one can get most of the benefits of clickers without the cost and associated tech-driven rigidity. For example: cheap, reusable color-coded flashcards (or even fingers of raised hands) can be used to answer multiple choice questions that need not be pre-programed—you can write these as they occur to you, on the board, in chalk (Whitney 2011).

Young 2010, 2012a; 2013). Students watch these on their own time outside of class, freeing up class-time for application, discussion, and "unpacking" of content imparted before class begins. Some enthusiastic flippers report great learning outcomes: increased attendance, better test scores, "problem" students suddenly flourishing in the flipped environment (Neshyba 2013).

Skeptics note that students tend to dislike flipped classes, with their demand for lots of outside preparation and in-class participation. Advocates such as Harvard's Eric Mazur note rightly that student satisfaction "is not the goal of education": flipping should be used because it works (Berrett 2012a). However, not all flipped classes are created equal, nor do all negative reactions come from students who don't want to think or work. On the contrary, "flipping" can become code for cost-saving approaches with online lectures, online computer-graded exercises, and optional face-to-face class-time with faculty. As Ben Rudolph, a Stanford student enrolled in a flipped computer-science course, complained: "these new classes are getting rid of in-person lectures completely. I met barely anyone in my CS229a class. Everything was done alone in my room, which is kind of crappy especially when there is such a nice campus right outside" (quoted in Parry 2012a). As Rudolph's experience shows, an approach intended to increase student engagement, peer-teaching, and community learning can have the opposite effect, sending students off to their dorm-rooms to be alone with their computers.

As "flipping" gains traction, one may expect the term to be applied to much of what many of us already do. Indeed the cynical reader might note strong similarities between the new "flipped" classroom and that oldest of old-school teaching formats: the seminar. Both rest on a central premise that the bulk of learning occurs outside the classroom—whether through reading and research or through the watching of podcasts—and that class-time is best spent on application, discussion, and clarification. To the degree that it remains an option, a tool among others, flipping should be understood as a good teaching practice to be used where appropriate. There is no problem—and much promise—with the flipping approach as such. But the term can function as a pedagogical Trojan Horse for more central administrative (or off-campus) control of course-content. In a plausible worst-case scenario, curriculum is outsourced to proprietary online providers, with in-class teaching relegated to optional student-led discussion forums. Ironically and unintentionally, the intense participation "flipping" is designed to foster can itself flip into its opposite: passively watching talking heads on a screen.

3.5: MOOCs and Similar

The "worst-case scenario" outlined above has already become a reality at some institutes of higher education. Massive Open Online Courses (MOOCs) function as flipped classrooms on a gigantic scale, with Harvard or MIT or Stanford professors providing podcast lectures backed up with automatically graded online quizzes and exercises (Bousquet 2012; Kolowich 2013a). MOOCs became national news in the spring of 2013 when the Philosophy Department at San José State University refused to incorporate a Harvard MOOC into their curriculum. In an open letter to the MOOC's creator, the San José philosophers highlighted this problem of outsourcing, centralization, and uniformity: "The thought of the exact same social justice course being taught in various philosophy departments across the country is downright scary—something out of a dystopian novel. … Diversity in schools of thought and plurality of points of view are at the heart of liberal education" (Department of Philosophy 2013; Kolowich 2013b). Moreover, a sufficient critique of the MOOC model might be furnished by its own most ardent boosters: a *Chronicle* survey found that 66% of professors who had taught a MOOC considered them to be "worth the hype." However, just 28% agreed that "students who succeed in your

MOOC deserve formal credit from your home institution" (Kolowich 2013c). In other words, a Harvard-produced MOOC might be good enough for the proles at SJSU, but not for Harvard students.

Meanwhile, a variety of related organizations have combined many of the trends outlined above—an avowedly learner-centered approach, ubiquitous multifaceted assessment, accommodation of the perceived needs of the millennial generation, a "flipped" classroom—to radically reconfigure both the university experience and the balance of power between administration and faculty within institutions. Academic Transformation, the best-established of several similar models, can be treated as the exemplar—the Open Learning Initiative is its main rival. Both have received a great deal of interest from the media, government, and investors including the Pew Charitable Trusts and the Bill and Melinda Gates Foundation. The model at play here is most honestly expressed by Candace Thille, who describes her Open Learning Initiative as the "the educational equivalent of Super Bowl ads": expensively designed but cheaply available (Parry 2012b). Consolidation and uniformity lie at the heart of Academic Transformation. Multiple sections of a large introductory course, taught by multiple faculty members, are reduced to a single, standardized, very large class. This single class is delivered largely through online modules, webcasts, and computer-graded tutorials and quizzes. Classes, meanwhile, become rarer but smaller—seminar-style discussion sections, or collaborative groups visited by the professor on a rotating basis (Nemko 2008; Twigg & Stoll 2005). Academic Transformation claims impressive results: improved student learning, higher retention rates—and cost savings to the university of as much as 77% (Twigg 2012).

Only 28% of professors who have taught a MOOC think students who pass a MOOC course deserve formal credit from the professor's home institution

Cheerleaders for Academic Transformation hail it as a "major success" that improves student learning at lower cost, and accuse institutions which have not yet adopted it of acting in bad faith (Carey 2010 (and see Figure 3.1 above)). And yet there are worries, not all of them motivated by job security. Both Twigg and Thille consistently contrast their approach to large, disengaged, "sage on the stage" style lectures—and who likes those? But an actual consequence of these initiatives is the consolidation of "lecture" into very large classes, supplemented by seminar-like work accomplished on-line, through automated quizzes, or with undergraduate peer facilitators. In other words, the real target for Academic Transformation, as Twigg makes inadvertently clear (Twigg & Stoll 2005) would likely be classes of 30-50 students—the sort in which a good teacher can accomplish a great deal of active collaborative learning, albeit at relatively high labor costs. Moreover, the model relies on software to guide students through problem-sets with instant feedback, an approach that might increase completion but discourages free-form exploration or reflection. As one critic puts it, software is "very good at prompting students to go step by step, and 'do this' and 'do that' and all these bells and whistles with hints. But the problem is, in my classroom they're not prompted step by step" (Parry 2012b). As the findings of Carrell and West suggest, such step-by-step teaching might increase short-term learning but leave students poorly prepared for more advanced courses (see Mini-Review 3.2). We now turn to teaching approaches that do facilitate such deep, long-term learning.

4. What Can Teachers Do?

There is too much teaching advice available. A teacher who set out to master even that small fraction of such advice as is actually tested or useful would never have any time to teach (or to do research, or eat, or sleep). This advice, broadly speaking, comes in two genres. The "Stand and Deliver" genre inspires but also intimidates with its accounts of the often inimitable achievements of extraordinary teachers. In

contrast, the "Nitty-Gritty" genre gives very specific, very detailed, hands-on practical advice—it may not inspire, but it instructs. (For examples of each genre, see Mini-Review at right). This section seeks to fly a middle route between the clouds and the ground, surveying select teaching approaches and methods—and some study approaches we can encourage in our students—that are generally applicable and do not require large inputs of time, money, or structural institutional change.

4.1. Learn from the Psychology of Education

This is a necessary but frustrating task. Rather a lot of this scholarship takes for granted the data-driven, assessment-based approaches critiqued elsewhere in this report, while paying scant attention to issues of critical pedagogy or the question "what is college for," addressed in Section 2 above. In addition, the psychology of pedagogy, like any field, has its own fads and factions among which outsiders can easily get lost, picking up approaches that have not yet been tested or are already debunked. For example, many teachers today still use the VARK model of learning styles: visual, aural, read/write, and kinesthetic (Fleming & Mills 1992). However, more recent research finds little evidence to support the notion of learning styles or its benefit to course-design (Coffield, Moseley, Hall, & Ecclestone 2004; Pashler, McDaniel, Rohrer, & Bjork 2008). Nevertheless and with some trepidation, I present here a few findings from the recent research.

Spacing and Interleaving

The *spacing effect* suggests that material is retained better if studied repeatedly; however this repetition must be spread out or spaced. In other words, one should study a given concept or skill long enough to learn it well, but immediate additional studying is inefficient. Instead, one should return to the material after some days or weeks have passed. Concepts learnt in just one session and never repeated are unlikely to be retained, while concepts returned to several times throughout the semester are likely to sink in (Lang 2011; Rohrer & Pashler 2007). Spacing can be incorporated easily into course design; one can also advise students to space their own study for maximal retention.

Mini-Review

Ken Bain
What the Best College Teachers Do. Cambridge: Harvard University Press; 2004

and

Barbara Gross Davis
Tools for Teaching, 2nd ed. San Francisco: Jossey-Bass, 2009

Ken Bain's jaunt through the classrooms of "the best college teachers" exhilarates and exasperates in about equal measure. Bain observes star teachers and attempts to distil their essence, which, as presented here, includes both bland platitudes (good teachers have a masterful understanding of the subjects they teach) and provocative findings (good teachers allow more-or-less unlimited revision of written work before grading). Bain's best teachers are demanding but flexible, highly prepared but spontaneous. The book is inspiring but somewhat short on socioeconomic context—most of the "best" benefit from the low course-loads, small classes, and highly motivated students of the elite colleges in which they teach. (For a sample of Bain's findings, see also his brief "What Makes Great Teachers Great?" (2004).)

If *What the Best Teachers Do* is like a tour through the kitchens of Michelin-starred restaurants, *Tools for Teaching* is more like *The Joy of Cooking*: exhaustive, detail-oriented, user-friendly, and long. Some of its suggestions are thoroughly pedestrian, and some a bit old-fashioned, but all are kitchen-tested. No normal cook would attempt to make every dish listed in *Joy*, nor should a teacher use every technique listed in *Tools*. Its 592 pages, meticulously organized into 61 chapters, cover everything from grading and rubrics to games and role-play, from lecturing to learning in groups. As a reference manual for practical tips and techniques, Davis' tome is without peer.

Note: Blogs and newsletters provide the best way to keep abreast of teaching tips and approaches, without drowning in the flood of materials available. Among the best of these: *The Teaching Professor*, edited by Maryellen Weimer, provides a steady diet of practical user-tested teaching techniques.

Interleaving is related to spacing. It involves teaching or studying a variety of different skills or concepts in "interleaved" bits rather than in big chunks. A musician doesn't practice scales for a week and then arpeggios for a week and then chord-progressions, but is likely to interleave all three into each practice session: classes should be similarly structured. In itself, such interleaving creates a spacing effect. But it also increases learning because students get used to figuring out and applying the right concept to the right task or issue: they learn to "pair each problem with the appropriate procedure" and thus avoid formulaic application of skills (Rohrer & Taylor 2010). Although interleaving has been most applied (and is perhaps most appropriate) to mathematics and science, it could be used in the humanities as well—interleaving different sorts of writing or poem analysis, for example, rather than teaching each kind in blocks.

Effortful Retrieval and the Testing Effect

Tried and true methods such as re-reading, making outlines, writing out your notes are all good. However, according to recent studies by Mark A. McDaniel, Jeffrey D. Karpicke and others (as reported in Glenn 2009) standard study habits such as re-reading or writing out one's notes can create a false sense of confidence. Such habits never require a student to transfer information to active memory: the book, or the notes, or the study-guide are always there to be consulted. Instead one should put one's books and notes away and attempt, in writing or speech, to recall as much as one can. Such *effortful retrieval* in self-testing provides a more accurate measure of one's mastery of the material, and requires the same sort of active reconstruction of knowledge as would be required in a well-designed test or a real-life application. To encourage effortful retrieval, we can ask students to use the "Teach it to a Fifth Grader" technique—explaining class concepts to a dorm-mate or friend who isn't in the class (Lemuel 2011). If they can't get a roommate to understand the material, they may not understand it so very well themselves.

Re-reading or writing out one's notes can create a false sense of confidence.

We can encourage our students to use effortful retrieval in their own study. We can also design it into our courses through frequent low-stakes classroom quizzes, which, according to advocates of the *testing effect*, dramatically improve recall of course material (Glenn 2007; Roediger & Karpicke 2006). There is a potential tension here: given faculty and student time-constraints, such quizzes can tend toward multiple-choice assessment, encouraging the atomistic notion of knowledge criticized in Section 4.2 below. However, according to the experiments reported on by Glenn (2007), frequent or immediate short-answer quizzing improves recall far more than does multiple choice. Glenn also reports tentative findings that frequent quizzing encourages the absorption of "a broad range of material not directly included in the quizzes" as students, in attempting to answer the quiz question, recall related concepts from the lecture or reading. Ideally one would want to balance such frequent quizzes against longer-term open-ended work, such as the classic essay with its complex marshalling of fact and argument.

Disfluency

Among the more counterintuitive findings of the psychology of learning, the notion of *disfluency* suggests that people retain information better when they find it initially difficult to acquire (Lang 2012). The brain processes easily acquired information as less important or less worthy of attention than information gained with effort. For example, students remembered an article written in a difficult gray-scale font better than a control group reading the same article in easy-to-read Arial. Similarly, students who had to supply missing information to make sense of a text remembered its information better than

did students for whom all information was supplied. Compare "She was deeply angry with him. The next day his body was covered in bruises" to "She was deeply angry with him. She punched him repeatedly. The next day his body was covered in bruises." In the first set of sentences, students must supply the causal inference and therefore think more deeply about the information—leading to higher retention.

Should we force our students to read the smudged and faded 5th-generation mimeographs that many of us remember from our own undergraduate days? Maybe not. But disfluency can be achieved through many of the practices many of us already use—some of which practices are decidedly old-school. Primary texts and scholarly articles, for example, tend to be disfluent in comparison to the pre-digested, pre-packaged, schematized materials found in textbooks. Students may legitimately complain about the difficulty of such undigested readings (and they might elect not to read them at all—a serious concern). But the knowledge laboriously extracted with effort from a difficult article might stay with students longer than the same knowledge presented in simplified point form in a textbook or study-guide (Lang 2012).

One can promote disfluency in fun ways as well. Make students translate material into unfamiliar forms—Descartes explained in limericks, a data-set transposed into dialogue form. The popular technique, standard in many classes, of asking students to defend positions they oppose or to attack positions they hold dear is also (in addition to its other virtues), an exercise in disfluency.

4.2. Change Student Metacognition

Students have opinions, usually tacit, often mistaken, about their own ability to learn. Presenting students with the research on learning can motivate them to change their ideas about themselves and their own behaviors, and thus to learn better. Below, I present some of the common student misconceptions about learning, together with suggestions about how to change these misconceptions and move toward better study habits. The section is based on Stephen Chew's excellent "Improving Classroom Performance by Challenging Student Misconceptions about Learning" (Chew 2010), but I have not hesitated to expand on Chew's suggestions.

Misconception 1: Talent is Innate

This is largely untrue. Moreover, *merely believing that it is true* can interfere with learning. Those who think talent is inborn avoid failure by avoiding hard work: they give up easily, get discouraged, blame externalities. Students who believe that learning is primarily a matter of effort, that "genius is 1% inspiration and 99% perspiration," tend to make

Mini-Review

Carol Dweck
Mindset: The New Psychology of Success.
New York: Ballantine Books, 2007.

Mindset presents strong evidence relating self-image to learning. Briefly: those who see intelligence as an innate, unchanging disposition (a "fixed mindset" in Dweck's terms) tend to avoid activities which might put their self-image at risk. They are not motivated to work hard (since hard work makes little difference); and their self-image is fragile—a fixed-mindset student who has been told throughout high-school that he or she is smart can have that belief shattered by a single poor test result. In contrast, people with a "growth mindset" believe that intelligence and talent can increase through hard work; accordingly they welcome challenge and treat negative outcomes as learning opportunities.

Dweck argues that mindset itself is *not* innate—fixed-mindset students can learn to develop the growth mindset and to enjoy its benefits. Teachers can encourage a growth mindset by praising *effort* ("You really put a lot of time and care into that essay, and it shows") rather than *disposition* ("You're a great writer"). By emphasizing time-on-task and perseverance over intelligence, we can help our students acquire these qualities and move toward the resilience and confidence characteristic of the growth mindset. Some readers (including myself) may find Dweck's contrast between the fixed and growth mindsets overdrawn and oversimplified, while still gaining good teaching tips from this engaging book.

Note: Reviews, interviews and related articles can be found at Dweck's website: mindsetonline.com.

Adaptable Assignment: Relationships

In my introductory World Religions course I use "key terms"—core concepts, categories, or examples. To counteract some students' tendency to memorize these terms atomistically, I ask students to argue and give evidence for relationships between two or more key terms; these are posted on the Blackboard Discussion Board for their own and other students' use. Relations can be of several kinds:

comparison: "monotheism is *like* monism insofar as..."

contrast: "monotheism *differs from* monism because..."

encompassment: "Daoism is *a kind of* monism in that..."

implication: "monism implies an immanent theory of sacred power because..."

correlation: "cosmogonies featuring a divine craftsperson tend to correlate with monotheism; for example..."

Initial results have been encouraging. Indeed, the mere *instruction to attempt to find relationships* seem, by itself, to get some students to think less atomistically and has led to more complex, more in-depth answers to exam questions.

that effort and are less discouraged when they encounter obstacles (Duckworth & Seligman 2005). This doesn't mean one must deny inborn predispositions toward poetry or geometry or history: of course some people are better at some things than at others. But a student who reframes "I'm bad at math" as "I have to work especially hard at math," is more likely to actually do the necessary hard work, rather than fulfill the prophecy of their self-definition. Perhaps more surprisingly, students who are *praised* as intelligent after succeeding on a test or paper seek to preserve this self-image by avoiding failure, taking on study habits that interfere with deep learning (see Mini-Review, previous page).

Misconception 2: Knowledge is Atomistic

One need not involve oneself in an inquiry into epistemology to show that an atomistic theory of knowledge—whatever its potential merits—results in poor learning and retention. Flashcard factoids and the bold-print definitions commonly found in textbooks encourage atomistic thinking. In contrast, "deep processing" of information is both the sort of thinking we want our students to practice, *and* is a more effective strategy for memorization than are "shallow processing" strategies of rote learning (Chew 2010). One can encourage students to focus on interrelations between concepts, asking them to look for relationships, contrasts, and implications of the concepts learned. Even note-taking and highlighting can become "deep-process" study habits if, instead of copying out "facts," they are oriented toward habits of summary (what is most important here, and why?) and relationship (how does this relate to that?). Key-terms, though potentially atomistic, can be placed into relationship through concept maps, in which terms form "nodes" which connect to other terms in relations of similarity, contrast, subordination, and so on. Such relations can also be expressed through positioning of terms, as in an essay outline, or through different colors or thicknesses of line. (Berry & Chew 2008; Davis 2009: 209; Fox & Morrison 2005).

Misconception 3: I'm Good at Multitasking

No you probably are not. Despite some students' millennialist conviction that they can study or write while checking Facebook, texting, and watching TV, they can't. According to a well-publicized Stanford study (Ophir, Nass, & Wagner 2009; summarized in Gorlick 2009), self-declared multitaskers are mostly just distracted. In fact, when given tasks that required the "tuning out" of extraneous information, "multitaskers" did considerably *worse* than those who consider themselves poor at multitasking: they couldn't ignore things, retained information less well, and had difficulty switching between tasks. Recent studies demonstrate an inverse relation between multi-tasking on laptops during class and academic performance (Kraushaar & Novak 2010); and between text-messaging, *in class our out*, and GPA (Harman & Sato 2011). The moral is pretty clear: we should discourage multitasking in our

classrooms (no texting in class) and, insofar as possible, we should discourage it outside the classroom as well (see Adaptable Assignment 4.2).

Adaptable Assignment:
Unplugging

Allegra Blake has developed an "unplugging" assignment for her intermediate composition (ENG201) courses at Central Michigan University.

First, students log their time watching TV, playing computer games, surfing the Internet, reading and sending emails, and using social media over a 96-hour (4-day) period: they also count the number of text messages sent and received. Second, students are asked to *refrain* from the above activities for another 4-day period (email and the internet can be used for job or school-related purposes only). Students log their time-use, noting any increase in other activities (sports, relationships, schoolwork); they also log any change in their mental and emotional state (anxiety, contentment, attention) using a Likert-scale questionnaire.

The assignment is designed to make students aware of their hyper-availability through social media, and to consider whether time spent using such media could be used otherwise. Allegra reports positive results, including but not limited to *long term* increases in academic performance from students who complete the assignment.

4.3. Encourage Group Work

Against the prevailing trends of the learning-centered classroom, the authors of *Academically Adrift* are equivocal at best about active and collaborative learning. They denounce group learning outright: whereas they find a very strong direct correlation between hours spent studying *alone* and improved CLA scores, time spent studying in groups correlates inversely to CLA improvement. In fact, studying in groups is almost as damaging to the growth of critical-thinking competence as is time spent in fraternity / sorority life (Arum & Roksa 2011: 101). Against this rather damning evaluation one might venture three points. First: Arum and Roksa seem to conflate "studying in groups" (an activity often indistinguishable from "hanging out") with organized in-class collaborative group-work. Secondly: CLA improvement (and the critical thinking, complex reasoning and writing skills such improvement ostensibly measures) are not the only important outcome of college. Group work might help inculcate other valuable skills (teamwork, leadership, collegiality) or might foster other substantive goods (exposure to diverse political, religious, ethical, socioeconomic, racial, sexual-orientation backgrounds). Once again, how one teaches depends on how one answers the question, "what is college for?"

Third: Group-work may be so often ineffective because it is so often poorly organized (Colbeck, Campbell, & Bjorklund 2000). Better-organized group work will, unsurprisingly, result in better outcomes. David Johnson and Roger Johnson, both of whom train teachers for group-work at the Cooperative Learning Center in the University of Minnesota, distinguish two sorts of learning group. In "traditional classroom learning groups" individuals have little incentive to help each other, teach each other, or learn from one another, while "cooperative learning groups" are more than the sum of their parts (Johnson & Johnson 1999; see also Millis 2007; Millis 2010). Such groups don't happen by accident. They require the fostering of a "positive interdependence" by which students understand that they succeed or fail as a group, that they need each other. Effective groups also require "individual accountability" to avoid free-riding and coasting. Depending on the assignment, this can be achieved in a number of ways—for example by randomly grading one student's work as representative of the whole group. Finally, effective groups need "face-to-face promotive interaction" to achieve the specifically group-centered outcomes of social support, teamwork, and camaraderie (Johnson & Johnson 1999). Successful group work may depend on what Ken Bain calls a "natural critical learning environment" (Bain 2004; cf. Palmer 1998 on the "subject-centered" classroom): groups must be called upon to think critically about subjects they have been made to care about, subjects they have realized are important to their lives.

Such well-designed cooperative group-learning might not improve CLA scores for the individuals who take part, though Johnson and Johnson claim that it should: cooperative learning results in "more higher level reasoning" and "more frequent generation of new ideas and solutions" than does work alone (Johnson & Johnson 1999). Be that as it may, such group-work does increase substantive knowledge and understanding of a course's content and can improve those "soft skills" of communication and interpersonal competence sought after by employers and necessary to a functioning democracy (Brookfield & Preskill 2005).

4.4. Encourage Reading and Writing

Arum and Roksa's approach to teaching can seem excessively mechanistic, succumbing to the very form-over-content emphasis they elsewhere disparage. Thus forty pages of reading assigned per week is equated to increased CLA scores, without regard for how the reading of those pages might be encouraged or enforced, let alone what those pages might *say*: presumably forty pages of *The Critique of Pure Reason* will have different learning outcomes than forty pages of *Twilight*. And there is a very big difference between writing a 20-page research paper over the course of a semester and writing 20 one-page reflections in the same period. Nevertheless, it seems clear that the more reading and writing students are encouraged to engage in, the better they will get at reading and writing—and also at mastery of content knowledge. According to Barbara Gross Davis, as little as *five minutes of writing per week* (or about an hour, total, over the course of a semester) improves test scores (Davis 2009: 309).

Adaptable Assignment:
Reading Questions

Merlyn Mowrey uses the reading questions below to focus her students' reading:

- What is the text about? What is its subject? Initially, most students look for the "what" while ignoring the other questions.
- Why did the author write it? What were the author's (explicit or implicit) aims, purpose, and motivations? How do these affect what has been written?
- How did the author write it? What is the author's methodology? Rhetorical strategy (irony, sarcasm, exhortation, comparison, etc.)? What counts as evidence?

Although these may seem like basic reading strategies, Merlyn reports that many students are not accustomed to reading in this way. Applying these questions results in dramatically improved comprehension of and engagement with the difficult texts for which Merlyn's courses are justly famous.

For further tips and assignments designed to inculcate good reading habits, see *From Critical Thinking to Argument* (Barnet & Bedau 2011).

Don't assume your students are writing elsewhere. Too often, writing is downloaded onto the English Department composition course. Nationally, 95% of composition courses are further downloaded onto over-worked adjuncts or an ever-rotating roster of graduate assistants. To be effective, the teaching of writing must be labor-intensive and time-consuming, demanding a great deal of both student and teacher. Although many students (70% of seniors in one recent study) recognize that writing is a uniquely effective means by which to stimulate, clarify, and extend thought, they also pick up subtle and not-so-subtle clues from teachers outside the composition program that composition classes don't matter—they're something to get through, to pass with the minimal necessary effort (Bok 2006: 83-85, 92). Meanwhile, Writing-Across-the-Curriculum programs suffer from lack of funding, from student tendencies to avoid such courses where possible, and from teachers unable or unwilling to put in the time and hard work, in class and out, to make such writing a real contribution to learning. And yet it seems clear that "undergraduates will never learn to write with clarity, precision, and grace unless they

have repeated opportunities to keep on writing and get prompt feedback from the faculty" (Bok 2006: 87).

Teaching writing in the subject areas is hard work, but it may be the most important thing we do as teachers: among other reasons, recall that the Conference Board found competence in "written communication" to be among the most important and least well-developed skill of entry-level college-educated employees. From a less instrumentalist perspective, reading and writing can be at the center of what Parker Palmer calls the "subject centered" classroom (see Mini-Review at p. 32, below). By reading primary texts—poems, scripture, philosophy, but also difficult, undigested works of scholarship—the teacher and students place something larger than themselves at the center of their study. The text becomes something more than a source of pre-packaged information for the test: instead it is appreciated and explored as a human creation full of surprises. Writing about such a text, and about the classroom discussion about the text, allows students to combine their individual voice with the group, the silence of personal reflection with the dialogue through which that reflection is developed, challenged, and refined (Palmer 1998: 78-80).

Adaptable Assignment:
Writing to Learn

"Writing to Learn" denotes a wide variety of low-stakes short writing assignments that focus less on the writing process itself than on the learning which such writing helps inculcate. Such assignments complement but should not supplant more formal, polished writing assignments such as research essays. Writing to learn can be assigned for pre-class homework or can be done as an in-class exercise.

Dialogue: Students write a 2-page dialogue between holders of divergent perspectives on an issue (a deontologist and a consequentialist on lying; a Buddhist and a Jew on the nature of the self; relativist and a quantum physicist on gravity). This exercise is good for reading comprehension and as preparation for class discussion.

Pre-Discussion Writing: Introduce a topic in class and have students write for five minutes before discussion; this will clarify their own position and give them more confidence. The writings can be the focus of small-group discussion or can be passed to another student, who must then defend the view there written whether or not it corresponds with his or her own.

End of Class Free Writing: Set aside 5 minutes at the end of class for students to synthesize and reflect on the issues raised in lecture. This will help with comprehension and retention.

QuARC blogging: Ask students to post brief QuARCs (Questions, Arguments, Reflections, and Comments) about the lecture to the online discussion board—these are due within 24 hours of the end of lecture, and the teacher can use them to see what needs to be addressed or clarified in the next lecture. Remind students that these are public (other students can read them), and encourage students to respond to or argue about each other's QuARCs.

Some of the above come from my own practice; others from a TLC presentation by Melinda Kreth and Marcy Taylor. Still others can be found in *Encouraging Student Writing* (Tollefson 2002; see also Bean 2011; Barnet & Bedau 2011, and the resources at www.bucks.edu/academics/faculty-web/bestpractices/writingtolearn/).

4.5. Inculcate Academic Self-Efficacy

This recommendation stands in tension with most of what has gone before, and indeed with most recent scholarship on teaching and learning. Both the trends critiqued in Section 3 and the teaching approaches advocated in Section 4 have tended to emphasize clearly stated expectations, repeatable and standardized assessment formulae: everything in the service of carefully conceptualized learning outcomes. One finds considerably less emphasis on self-efficacy, autonomy, student ownership of and responsibility for their own learning—and when this *is* discussed its potential tension with clear step-by-step procedure can be neglected or ignored. Thus for example Barbara Millis suggests that cooperative group-work assignments are best carried out in a context of "clearly defined goals, procedures, and expectations" *and* that such exercises help students become "autonomous, motivated, responsible, empowered learners" (Millis 2007). Millis is not alone in overlooking the disjunction here between accountability and

Adaptable Assignment: The Open Creative Project

Assignment-design usually emphasizes specific goals, clearly stated and explained. Students are told what to do, how to do it, and why it will help them achieve their learning outcomes. Such assignments are good and important: as with shooting hoops or playing scales, they focus on a specific skill and build it up. But one shoots hoops in order to play basketball; one plays scales so as to be able to jam.

By their very nature, closely structured assignments can't inculcate independence, creativity, self-efficacy, or risk-taking. We can lead our student to water but we can't make them plunge in, feel its cool exhilaration on their skin for themselves, forge ahead to the other side—and yes, possibly get swept away by the current—unless we let go of the reins.

The Open Creative Project, which I borrow and adapt from Michel Desjardins of Wilfrid Laurier University, is such an exercise in risk-taking. It involves:

- A sufficiently large course-grade for the risk to be meaningful (in my courses, 25%)
- An initial, low-grade proposal, to mitigate student anxiety and provide the opportunity to give advice
- A written appendix (about 3 pages), discussing the project and its relation to course material
- Otherwise, near-total freedom of form, length, and content

I always allow a traditional—but also quite open—research paper as an alternative, but I resist the strong urge to structure the OPC—which is intended to allow students the space to grow through creative self-efficacy.

Results are mixed. Some projects are amateurish, slap-dash, and disappointing—but then, so are so many research papers! Others go far beyond what I thought a student capable of: sculptures, video games, original songs composed and performed; one-act plays… Freed from instructions, some students create works of beauty *and* demonstrate far deeper understanding of course material than they would have done in an essay.

autonomy, clear goals and open-ended exploration: nor does she seem to recognize that self-empowerment might not be best served by a regime of rubrics and checklists.

Such disjunction need not signal incompatibility. As poets know, the constraints imposed upon their art make possible its freedoms: "Nuns fret not at their convent's narrow room," nor do the rigorous limitations of the sonnet or the haiku confine the possibilities of language. But the tension should be acknowledged more than I have found it to be, and an emphasis on clear outcomes should be counter-balanced by open-ended assignments. Self-efficacy can only be learned by taking charge; thoughtful risk-taking can't be fully developed without actually taking risks. Both student and administrative expectations push teachers toward handholding—a nurturing but not always pedagogically challenging approach. For example, Jason Bentley reports that first-semester Central Michigan University students love their newfound independence—the chance to become "responsible, independent adults." But these same students are dissatisfied with the CMU "Academic Experience," which they find lacking in "teacher support" (Bentley 2011). In other words, many students want to be independent everywhere *except* in academic experience, where they want their hands held and their feet guided.

We *should* hold our students' hands and guide their feet—after all we are pedagogues (Greek for "guides for children") and educators (people charged, in Latin, with "leading out" our students). But we should also learn to let go. Academic self-efficacy can be built into the curriculum, for example with capstone independent research papers or senior theses. But by the time students get to their senior year, some of them are so used to guidance that independent study comes as a painful shock. Wherever possible and to a reasonable degree, such independent, un-rubricized, open-ended assignments should be introduced in the lower level courses—even or especially in introductory courses.

5. What Can Institutions Do?

Perhaps the most hopeful finding of *Academically Adrift* is that institutional policies *can* make a large difference in the degree to which students improve their critical thinking and writing skills during their time in college. Variance across institutions accounts for 20% of the variance in CLA-score *growth* in the first two years of college (Arum & Roksa 2011: 115)—and this is after such factors as elite vs. open-enrollment, liberal-arts vs. research, small vs. large have been factored out. Some schools clearly do a better job fostering good teaching than do others.

Individual teachers can only accomplish so much. As the previous section suggests, teachers can and should adopt policies and methods which increase student learning. We can inspire students; we can hold students to high standards; we can get them excited about our subject matter; we can make them read and write. But without institutional support and a culture of learning, our efforts will inevitably yield meager harvests. Credentialist students will steer away from our classes, or will punish our high standards with high DEW rates and low SET scores. Central administrators intent on student retention and engagement will see such statistics, ironically, as evidence of poor teaching.

Ultimately, good teaching and good learning demand a university-wide effort. Although there is no formula for successful colleges, all the best ones have in common what Kuh calls "an unshakable focus on student learning" (Kuh, et al. 2010: 65). The point is worth emphasizing: without such commitment, nothing else will make much difference. Kuh notes that many colleges offer many of the features his research team found predictive of student success: features such as first-year seminars and senior capstone projects, student-support services, or peer tutoring. But merely "offering" such features is meaningless—wasted effort at best, window-dressing at worst—unless they are of high-quality, made available to all or most students, and are integrated into a university-wide culture of learning (Kuh, et al. 2010: 264).

Individual teachers can only do so much. Without a university-wide culture of learning, our efforts will inevitably yield meager harvests.

But one must start somewhere. This section considers institution-wide policies to arrest academic drift and to foster genuine learning. However, mindful that many university administrations declare a commitment to teaching excellence while pursuing policies that undermine teaching and learning, I emphasize policies or practices that can realistically be aimed for by departments and programs, by grass-roots organizations of faculty and students, and by organized faculty associations and unions.

5.1. Defend the Liberal Arts

In Section 2, we saw that employers seek graduates who can read, write, and think. But those same employers surveyed by the Conference Board consistently rank the "humanities" as the least important skill-set for college-graduated employees—thus exacerbating the marginalization and defunding of humanities on college campuses. College students, too, increasingly avoid the humanities and pure sciences, recognizing the still-required GenEd courses in these liberal arts as things to "get out of the way," hoops to jump through (Arum & Roksa 2011: 74). But as Arum and Roksa unsurprisingly find, liberal-arts majors perform best on value-added written-communication tests such as the CLA, while pre-professional students, especially business students, perform worst. (Arum and Roksa 2011: 104-109). We have, in other words, a bitter irony: many students and employers deride the liberal arts,

blissfully ignorant that it is in these very liberal arts that the written communication and critical thinking sought for by employers are best cultivated. (This instrumental argument may not be the best defense of the liberal arts, but it may be the defense best understood by administrators).

5.2. Limit Class Sizes

Books such as *Engaging Large Classes* (Stanley & Porter 2002) provide practical steps for making large classes work—but it might be noted that many of these amount to rendering the large class effectively small through group discussion, problem-solving teams, and other "lecture-flipping" techniques. Largely unaddressed in this otherwise useful volume—should one teach large classes at all? Individual teachers have little choice on this matter, but departments and faculty associations should actively defend small classes.

The quantitative data on this question is still sparse; nevertheless, some data do indicate that students learn better in smaller classes. Students who took large introductory classes fared worse in subsequent classes in the division than did students whose introductory classes were small (Chapman & Ludlow 2010; see Mini-Review at p. 10 for a possible explanation of this finding). The disadvantage for students from larger classes was especially pronounced at the lower end of the grade-scale; that is, well-prepared students perform well in classes of any size, but struggling students get lost in big classes (Toth & Montagna 2002: 256): accordingly, the current system of rewarding honors students with small classes while throwing at-risk students into large lectures should be reversed. In general, large classes seem to work as well as small classes for the imparting of content, but small classes are more effective at everything else: "the application of [content] to new situations, retention of information, problem solving, critical thinking" (Toth & Montagna 2002: 254). Since everyone from Arum and Roksa to the employers canvassed by the Conference Board consider critical thinking, problem solving, and application more important than content, small classes seem to be indicated.

I argued in section 3.2 above that the difficulties involved in measuring the "added value" of informal class discussion indicate problems with quantification, not with discussion itself. Similarly, the utility of small classes can best be defended on qualitative grounds. As Andrew Delbanco argues, the small

Mini-Review

Loren Pope
Colleges That Change Lives. New York: Penguin, 2006.

Colleges That Change Lives provides an engaging tour through institutions committed to undergraduate student learning. Pope highlights small liberal-arts colleges—he goes so far as to disparage any institute of higher learning with more than 5,000 students. Comparing these small undergraduate colleges to the Ivies, he perhaps unsurprisingly discovers a stronger sense of community and more hands-on education at the forty "colleges that change lives." Pope makes a point of focusing on unselective liberal-arts colleges—institutions which accept B students and transform them into scientists, medical doctors, artists, leaders. Mid-size or large state universities, while equally unselective, could not possibly implement many of the practices of these small colleges. Although places such as Hiram or St. Johns or Ursinus don't require incoming freshmen to have good high-school grades, they do require the sort of strong commitment to the academic project so signally lacking among many incoming students at non-elite public universities. Nevertheless these larger institutions can and should learn much from Pope's case-studies. For example, they could give more encouragement to study abroad, as many of Pope's colleges do; and advocates of the Writing Across the Curriculum program could look for inspiration to Pope's numerous examples of incoming C students blossoming through frequent, lengthy, rigorous writing assignments (210 and *passim.*).

Note: For another survey of schools promoting rigorous, enriching, well-supported student learning, but emphasizing mid-sized to large institutions, see *Student Success in College: Creating Conditions That Matter* (Kuh, Kinzie, Schuh, & Whitt 2010).

class "helps students learn how to qualify their initial responses to hard questions. It can help them to learn the difference between informed insight and mere opinionating. It can provide the pleasurable chastisement of discovering that others see the world differently…" (Delbanco 2012b: 57-58). Delbanco tells the moving anecdote of a student from mainland China, schooled in an academic culture where every question had a "standard correct answer," who blossomed in a first-year seminar at Bowdoin College. For the first time he found himself allowed to "question the 'prescribed answer,'" to examine for himself all doctrine, however ancient or honored—and to disagree with his teacher and classmates (Delbanco 2012a; 2012b: 56-57).

This reads like a Cold War parable: an oppressed socialist discovering free inquiry in the Free World. But as Delbanco makes plain, the story's point is quite the reverse. Too many American college students will never have this powerful experience that the foreign student found so liberating, because most students don't go to Bowdoin and rarely engage in small-class seminars. By the time students get into small specialist classes in their junior or senior year, habits of indifferent silence have often solidified—so small classes are especially important at the first-year and introductory level (where they are currently most rare). Not every class can be small, and perhaps some shouldn't be: but without wide student access to small classes something precious about American education has been lost.

Small-class discussion "helps students learn how to qualify their initial responses to hard questions" and "provides the pleasurable chastisement of discovering that others see the world differently"

5.3. Encourage Innovative Teaching

It takes courage to try something really new in our classrooms. It might not work. It might work really well, but not the first time. It might be a great idea but students still don't like it: as we've seen above in reference for example to the "flipped" classroom, many students have little interest in exciting, innovative, or engaged pedagogy, preferring a straightforward class with a clearly marked procedure for passing the test.

Innovative teaching can be encouraged in a number of ways. A student-evaluation "vacation" can allow teachers to experiment with new techniques, freed from the potentially paralyzing worry that negative SETs will go into their permanent records. Awards for teaching excellence can advertise the importance of good teaching. However, as Rhode notes, awards honor the extraordinary few. In the long term, "other forms of recognition for the many faculty who provide consistently excellent teaching but who will not receive one of the few awards available" can provide stronger incentives with a wider impact than can awards on their own. Such recognition might include "release time and appropriate course credit for collaborative teaching, service learning, and other innovative projects" (Rhode 2006: 84-85; cf. Evans 2005).

We can also open our doors (both physically and metaphorically). Parker Palmer advocates an "open-door teaching community that goes well beyond the formal, scheduled "peer review." Instead, colleagues wander into each other's classes more or less at will, observing and commenting on each other's teaching in an atmosphere de-coupled from concerns over performance review or promotion. Palmer suggests that we should also gather regularly to share and discuss our syllabi, our assignments, our strategies, but also our disappointments and perplexities: teaching moments when we were stumped or confused. Colleagues can offer advice but, perhaps more importantly, can simply listen supportively as we work out the implications of a difficult teaching moment for ourselves (Palmer 1998: 141-156). Such

a culture of open-door teaching could easily be implemented at the program or departmental level: with some political will, it could also be instituted university-wide. And the small collegial mutually mentoring groups Palmer describes could be facilitated by departments, by teaching resource centers, or by grassroots movements such as the Teaching and Learning Collective at CMU.

5.4. Reward Rigorous Teaching

Steven Brint has suggested that "active learning" has made classrooms more interesting but not more challenging. It has brought more appreciation for diversity and service learning to college students, but has not added new rigor. "Student-centered, active-learning, and community-engagement" styles of teaching *can* be rigorous, of course: Brint's point is that, in the face of "the consumerism and utilitarianism of college student life," they usually have not been rigorous in practice (Brint 2009; quoted after Arum & Roksa 2011: 132). The classroom should be innovative, exciting and engaging: but it *must* be rigorous.

Student-centered, active-learning, and community-engagement styles of teaching *can* be rigorous. But faced with the consumerism and utilitarianism of college student life, they usually have not been rigorous in practice

According to Arum and Roksa, after adjusting for a number of individual and institutional differences, high faculty expectations accounted for a 27-point increase in CLA scores—the single strongest correlation between instructor behavior and CLA improvement (Arum & Roksa 2011: 93-94). The other major variable in CLA scores is also a direct measure of rigorous workload: students taking courses requiring at least 40 pages of reading per week and at least 20 pages of writing over the semester (ibid.). High expectations need not *necessarily* result in low grades: assignments such as those advocated by Bain, in which teachers require multiple drafts of written work before it is submitted for a final grade, combine high expectations with the high final grades typical in graduate school (Bain 2004). Such a labor-intensive practice depends on institutional incentives and structures—an adjunct teaching a 5/5 load without GA support can't possibly mark multiple drafts. And rigor combined with high grades also presupposes a motivated student culture. At a typical open-enrollment institution, high expectations will at least initially correlate with student resistance: a high drop-rate, low SET, and comparatively low student GPA. Rigorous teachers must not be penalized for such an initial student reaction.

"Studying and doing homework has stronger and more widespread effects [on a range of academic, cognitive, and affective outcomes in higher education] than almost any other involvement or environmental measure" (Astin 1993: 376; quoted after Arum & Roksa 2011: 99). But such studying on our students' part requires feedback and grading from teachers, and this rigorous teaching is labor-intensive and potentially unpopular (Arum & Roksa 2011: 9; and see Massy & Zemsky 1994). We can't be rigorous on our own. Many students migrate away from difficult or heavy-workload courses, effectually punishing teachers who enforce high expectations. Rigor must be established at the departmental level, or the hard teachers will suffer low-course enrollments and feel pressure to ease up (Benton 2011). Similarly, high reading/writing requirements, if not coupled to smaller class-sizes, reduced teaching load, or the provision of TAs, will be adopted only by the most committed teachers.

5.5. Cautiously Engage the Assessment Movement

As noted near the beginning of this guide, Arum and Roksa consider "discussion of higher education's accountability both largely inevitable and in certain respects warranted" (Arum & Roksa 2011: 18-19). Assessment seems inevitable, but departments and faculty associations can have some influence on *what* gets measured and on the uses to which such measurements are put. At worst, such influence might help American colleges avoid the tragic consequences of assessment currently undermining British education (see Section 3.2 above). At best, we might turn assessment to the advantage of good teaching. Much depends on the assessment tool: not all of which are created equal.

In 2006 the Spellings Commission failed in its original intent to adopt the Collegiate Learning Assessment as a national assessment of college learning (Field 2006a). Worries about such a standardized assessment were (and are) both serious and legitimate. Many feared a "No Child Left Behind" model for universities, a fear strengthened in that Texas tycoon Charles Miller, who chaired the Spellings Commission, was also an architect of NCLB and of the test-based University of Texas accountability regime (Brooks 2012; Field 2006b). More generally, teachers worried that such an assessment reinforced models of education under which "students are consumers, and [...] the product they purchase can be evaluated by mandatory standardized tests" (Katz 2008).

Largely in response to the Spelling Commission, a consortium of more than 300 public colleges and universities formed the Voluntary System of Accountability, using the CLA and other measures to provide transparency about the learning taking place on their campuses (Glenn 2010b; and see www.voluntarysystem.org/). Perhaps because the CLA is an open-ended, qualitative, written test (see Figure 5.1), results of this *voluntary* assessment regime have been surprisingly positive (For a comprehensive evaluation of the validity of the CLA, see Klein, Benjamin, Shavelson, & Bolus 2007). Similarly, when it was administered to 7,500 students in 47 small liberal-arts colleges as part of a study by the Council of Independent Colleges, several used the results as a basis for workshops on writing and critical thinking pedagogy, or to revise weaknesses in their curricula in these areas (Berrett 2011).

Indeed "Teaching to the test" in the case of the CLA might actually be a good idea. Faculty involved in the CIC study used the open-ended questions from the CLA in their classrooms, as models of real-world problems requiring critical thinking. The University of Evansville uses "retired" CLA performance-tasks in its first-year-experience classes, while the psychology department at Pacific Lutheran University has begun incorporating discipline-specific CLA type performance tasks into its capstone course (Berrett 2011; Glenn 2010a, 2010b). Although one might pause here to wonder what sorts of in-class questions and final exams these schools were employing before the CLA came along, the point is clear—teaching to the CLA would not resemble

Figure 5.1
The CLA Performance Task

Complete the following task in 90 minutes

Scenario: You are the assistant to a provost who wants to measure the quality of your university's general-education program. Your boss is considering adopting the Collegiate Learning Assessment, or CLA, a national test that asks students to demonstrate their ability to synthesize evidence and write persuasively.

Sources: Graphs of CLA scores from the University of Texas over a four-year period;

An essay in which an assistant provost at a flagship campus describes her 'grave concerns' about using CLA scores to compare different colleges;

A report in which the CLA's creators reply to their critics.

Task: Write a two-page memorandum to your provost, describing and analyzing the major arguments for and against adopting the CLA and recommending a choice for or against.

Adapted from Glenn 2010b.

teaching to the SAT or the GRE. Klein and his colleagues offer an illuminating hypothetical: "if college instructors trained students to work through CLA tasks, they would be teaching the kind of critical thinking, analytic reasoning, and communication skills their colleges' mission statements say they are teaching" (Klein, et al. 2007: 430)

It hasn't been my intention in this section to shill for the CLA. Rather, I have wanted to argue that pressures to demonstrate the achievement of learning outcomes are not likely to go away, and some sort of assessment regime seems inevitable whether at the university, state, or national level. Faculty and departments should work hard to ensure that that assessment looks more like the CLA than like the GRE (or SET scores, or NSSE satisfaction benchmarks, or graduation rates, completion rates, etc.).

5.6. Practice "Skeptical Curiosity"

"Sage on the stage" or "guide on the side?" (King 1993). Teaching paradigm or learning paradigm? Authority or facilitator? Droning monologue or "flipped" classroom? Plugged in to every possible electronic device, or alone in a room with paper and pen (or maybe parchment and quill)? Chalk or cheese? (Ostling and Vernon 2012). These are false dichotomies. Many of the authors writing about education today seem not to have gained that finest fruit of a true education, the ability to "accommodate uncertainty, paradox, and the demands of greater complexity;" to inhabit the grey areas (L. Lee Knefelkamp, quoted in Delbanco 2012b: 46).

Sage on the stage or guide on the side? Teaching or learning? Authority or facilitator? Chalk or cheese? These are false dichotomies.

A good teaching institution would adopt any teaching tool that works, and would embrace a diversity of teaching and learning approaches. Surveying the teaching trends outlined in this essay, one finds a pattern in the consistent emphasis on certain types of approach over others, despite the evident utility of many approaches for different teaching tasks and goals.

Consider, for example, the five features of an excellent undergraduate institution as developed by Kuh and his colleagues. These are: "(1) level of academic challenge, (2) active and collaborative learning, (3) student-faculty interaction, (4) supportive campus environment, and (5) enriching educational experiences" (Kuh, et al. 2010: 174)

Most would agree that these are all goods. But items 2, 4, 5 can more easily be implemented (or be seen to be implemented) through the promotion of centers for teaching excellence, student resource centers (writing centers, math centers, tutoring centers), and enrichment programs such as Study Abroad and Alternative Breaks. In contrast, item 1 (maintaining a high level of academic challenge) potentially interferes with other institutional goals such as retention, graduation rates, or student satisfaction. Item 3, student-faculty interaction, is expensive: to become a standard feature of large public universities rather than the incidental activity of heroic teachers, heightened student/faculty interaction would require a smaller student/faculty ratio, smaller class-sizes, and reduced teaching loads—and these cost money.

In other words, it is institutionally easiest to promote active learning while honoring academic challenge largely in the breach. This does not mean that the two are incompatible. However, a perception that they compete against each other can be encouraged by institutional conditions in such a way that those who strive for academic rigor can, unfortunately, look down their noses at "active and

collaborative learning;" while active teachers can perceive rigorists as elite or out of touch. Such perceptions are particularly unfortunate, in that Kuh and his colleagues emphasize that the five features discussed are mutually interdependent. A school featuring high levels of active learning will not promote much in the way of real learning if this is not bolstered by high expectations; and rigor without active engagement is dull rote work.

Note the almost comically commonsense character of many of Arum and Roksa's findings: what I like to call their "duh" factor:

- "When faculty have high expectations and expect students to read and write reasonable amounts, students learn more" (Arum & Roksa 2011: 119). Duh!
- "Given that students are spending very little time studying or attending classes, in both absolute and relative terms, we should not be surprised that they are not learning much" (98). Duh!
- "When students are asked to read and write in their courses, when academic coursework is challenging, and when higher-order thinking is included in coursework, students perform better on tests measuring skills such as critical thinking and writing" (93). Duh!
- "Requiring that students attend to their class work has the potential to shape their actions in ways that are conducive to their intellectual development" (119). Duh!

Figure 5.2
Raising Academic Standards

Students should expect to engage in academic work for at least two hours outside class for every one contact hour in class.

Students who carry full course loads should consider their academic life to be their primary focus and responsibility. Other activities—including employment and socializing—should be considered secondary.

Departments will be adequately staffed with full-time, regular faculty members, who by the nature of their appointment will have a long-term interest in the institution and the capacity to hold high expectations for student performance. The university's reliance on part-time and temporary faculty should be examined annually.

Academic administrators will support faculty rigor in holding high expectations for student performance. Reliance on [SET] as the major determinant of teaching effectiveness should be reduced, and multiple measures of teaching effectiveness should be encouraged.

Academic administrators will strive to create an academic environment that allows faculty to hold high expectations for student performance. Teaching loads and class sizes should be designed to encourage enhanced faculty-student learning and interaction. Teaching and teaching-related activities that promote high expectations for student performance should be given prominence in the evaluation of faculty.

A commitment to high academic quality should drive the fiscal priorities of the institution.

Abridged from the CMU Academic Senate "Draft Principles for Raising Academic Standards," October 26, 2001.

This isn't rocket science. Though backed up with voluminous statistics, most of it is plain common sense (and most of it is anticipated in the Academic Standards drafted over a decade ago at CMU: see Figure 5.2). So why has Arum and Roksa's work provoked such consternation and resistance?

The answer, one suspects, relates to money—to how and on what money ought to be spent. Some good teaching of content can be achieved in large classes through various active or collaborative approaches—peer teaching, "flipping" the classroom, and so on. But the equally important gains in critical thinking and complex reasoning can only be accomplished through a high incidence of student labor outside the classroom—lots of reading, lots of writing, lots of problem-sets. And this can only be accomplished by teachers provided with the institutional support for high expectations. Students given lots of writing assignments will learn to write better, but only if many of these assignments are held to high standards and receive extensive feedback. This in turn requires some combination of low-course-load, small classes, and/or a cohort of well-trained, motivated GAs. As Murray Sperber argues, "the

"The unavoidable fact remains that teaching undergraduates in a conscientious manner is very labor intensive."

unavoidable fact remains that teaching undergraduates in a conscientious manner is very labor-intensive" (Sperber 2005: 138). And also expensive.

Moreover, prioritizing such teaching is not likely to increase a college's standings in the *US News and World Report*: in fact it is likely to reduce that standing, since rigor can lead to lower graduation rates. In contrast, elaborate student services, prestigious research, or a fancy athletic center, though equally expensive, *will* have such a positive effect on university rankings (Rhode 2006: 8). Teachers and concerned students might appreciate the conclusions of a 2001 RAND Corporation study of university investment choices: "A college may make large investments, often placing tremendous strain on its financial health, yet neglect the needs of undergraduate students and other 'customers' … who don't contribute to its prestige" (quoted in Confessore 2003). In such a rankings regime, teaching loses out.

Of course, university administrators do consistently invoke the language of teaching excellence and active learning. Too often, however, improved learning outcomes are correlated with greater administrative oversight and control. Thus a recent *Chronicle* article about improving teaching effectiveness begins by briefly outlining the usual difficulty—faculty are esteemed and rewarded by their peers on the basis of research and publication, not for good teaching—but moves quickly to criticism of a "faculty culture" that values autonomy in the classroom and resists centrally administered assessment of and control over teaching efficacy. Careful readers might note a tell-tale shift: *research* is evaluated by one's peers in a department and in the field, while *teaching*—it seems to be assumed—is best evaluated by administrators or their highly paid expert consultants (Wilson 2010). Similarly, Derek Bok complains that "research universities rarely insist on the best possible teaching or make a substantial and systematic effort to improve the quality of their educational programs" (Bok 2003: 160). One can agree fully with Bok's sour comment while worrying about possible implications: who, within the university, should spearhead such a "substantial systematic effort" toward teaching quality? Professors are rightfully leery of administrative attempts to interfere with research priorities. Faculty, not administrators (or students, or the public) must remain the arbiters of good research. Is teaching different? Should we acquiesce to centrally imposed teaching criteria—criteria which, despite their inevitable packaging as "research-based best practices" might all too often be the product of the latest jargon-fuelled fad, or worse? Too often, the rhetoric of improved learning turns out to be a thinly rationalized wedge by which administrators or legislators work toward goals ulterior to teaching excellence—cost savings, "disruption," improved graduation rates (Jenkins 2013). Any systematic push for better teaching must be a collaborative project, a product of shared governance in which teachers and concerned students have a central voice.

6. What Now?

Many accounts of teaching trends suffer from the "A Box Fallacy" (Birnbaum 2001: 174-177; and see Figure 6.1, next page). They disproportionately report examples of an approach's success (Box A), and contrast these with examples of failure where the approach was *not* adopted (Box D). Neglected in such accounts are two further categories: unsuccessful attempts to adopt the approach (C), and successful teaching *without* the approach (B). This last category, though severely under-reported, is in some ways

the most interesting: it provides evidence that teaching is a pluralistic craft—that there are many paths up the mountain of learning.

To combat this fallacy, more data on a wide range of teaching approaches is helpful, of course, and Sections 3-4 of this essay attempt to survey many such approaches. But here too, one must resist the urge to reduce good teaching to a checklist of "best practices"—any practice is only as good as its fit with a given teacher's own style, a given student-body's own predispositions, a course's goals. Such styles, predispositions, and goals are and should be diverse. Teaching approaches and techniques should encompass similar diversity.

Figure 6.1
The A-Box Fallacy

	Successful	Unsuccessful
Approach adopted	A	C
Approach not adopted	B	D

Adapted from Birnbaum 2001 p. 176

Consider the example of Michael Wesch, a cultural anthropologist whose experimental teaching methods—flipping the lecture, using collaborative Google Docs, having students make videos, teaching with Twitter—have garnered national attention and "Teacher of the Year" awards. In interviews and workshops, Wesch advocated his tech-heavy approach and disparaged "talk and chalk" teaching as obsolete. But as a recent *Chronicle* article details, Wesch has come to realize that his methods often didn't work for colleagues, and that the intangibles of teaching—passion, a sense of purpose, above all a connection with the students—are more important than any specific teaching approach (Young 2012b). He was impressed by the work of Christopher Sorensen, an "old fogy" colleague whom students love, and who has also won teaching awards despite the traditional lecture format of his classes. Wesch came to conclude that students can always "sniff out an inauthentic place of learning," no matter how innovative or traditional; they will also always respond to a teacher who strives for connection and instills a sense of wonder.

I recount this anecdote to make two concluding points:

First, students loved Wesch's course, found it stimulating, exciting, engaging, at least in part *because it was different from their other courses.* Imagine if every course were run on similar lines—the approach, excellent though it may be, would get old fast. Just as Kant's categorical imperative runs into trouble when going to the beach (if it were a universal maxim to go to the beach, everyone would go and it would be no fun: we enjoy going to the beach only when few others are doing the same) so too with innovative teaching approaches. At least part of their appeal derives from their novelty, the break they offer from "ordinary" approaches. More is not always better.

Second, and centrally: Wesch stopped proselytizing his lecture-flipping approach after he realized that the key to its success lay less in his specific technique than in his own excitement about and commitment to that technique. The point made here is eloquently argued in Parker Palmer's *Courage to Teach.* Palmer recalls his own favorite professor from his undergraduate days: a stereotypical "sage on the stage" whose monologous lectures broke every supposed rule of learner-centered teaching models—no active learning, no group work, no discussion, no writing to learn. Palmer himself would never teach this way, but it worked wonderfully for that professor and his students, who were powerfully moved by the passion and intelligence of his lectures. Accordingly, Palmer argues, it is more important to find and use the techniques appropriate to one's own personality: no formula for good teaching can be effective

except insofar as it fits the teacher. Both Palmer and his teacher place the subject at the center of their teaching, and try to bring it to life for their students, but there is otherwise nothing similar to their teaching—no shared technique (Palmer 1998: 22 135-137). Lecture (or discussion, or even PowerPoint) works for a particular teacher because it is *theirs*: it is appropriate to what Palmer calls the teacher's "integrity." There are many paths up the mountain: each teacher must find the path most appropriate to their own personality and ability. I hope this "guide for the perturbed" has provided a few path-markers, a few pointers, a few warning signs. But I especially hope it has helped colleagues realize that their own path to teaching excellence is a good one, insofar as they have the courage to pursue it conscientiously and with passion.

Mini-Review

Parker J. Palmer
The Courage to Teach. San Francisco: Jossey-Bass, 1998.

The Courage to Teach argues a radical thesis: "Good teaching comes from the identity and integrity of the teacher" (Palmer 1998: 10) Not every reader will be entirely comfortable with Palmer's insistence that good teaching requires emotional and spiritual maturity in addition to intellectual acumen; some, too, will be disappointed in his disinclination to provide specific teaching tips, tools, and techniques. At worst, Palmer sometimes comes close to asserting that good teachers must be good people—grounded, strong, at home in their skins—a frightening notion for the less evolved among us. Yet Palmer's point is not that there is one correct good teaching personality, but that each teacher must find the approaches that "reveal rather than conceal the [various, diverse kinds of] personhood from which good teaching comes" (Palmer: 24).

Palmer seeks to transcend what he (I think correctly) sees as an overdrawn dichotomy in current scholarship between "teacher-centered" and "learner-centered" approaches. He finds middle ground in a "subject-centered" approach designed to explore "a subject that transcends our self-absorption and refuses to be reduced to our claims about it" (Palmer 1998: 116-117). This approach, Palmer convincingly argues, avoids the authoritarianism of the teacher and the potential relativism of learner approaches, uniting all members of a class in a collaborative "community of truth."

In one real-life case-study, medical students encounter a real patient with a real illness on their first day, and gear part of their course-work to diagnosis and treatment of this actual case. As predicted, bedside manner and medical ethics improved. But surprisingly, *standardized test scores also improved*. Directly engaged with a specific, real subject, students cared more about their studies, studied harder, and learned more.

Despite Palmer's dismissal of technique, this book bursts with good suggestions through which teachers can explore and develop their own courage to teach well.

7. References and Resources

References are listed thematically, under the section where a given source was discussed. Occasionally, I mention a source early in the report but discuss it more fully in a later section: in such cases cross-referencing will guide the reader to the full reference in the relevant section.

1. What's Going On?

Arum, R., & Roksa, J. (2011). *Academically Adrift: Limited Learning on College Campuses.* Chicago: University of Chicago Press. For reviews and further discussion, see http://highered.ssrc.org/

Bauerlein, M. (2008). See Section 3 below.

Benton, T. H. (2011, Feb. 20 and April 2). A Perfect Storm in Higher Education, *Chronicle of Higher Education.* chronicle.com/article/A-Perfect-Storm-in/126451/

Birnbaum, R. (2001). See Section 3 below.

Casner-Lotto, J., Barrington, L., & Wright, M. (2006). See Section 2 below.

Cowan, B. (2011). See Section 3 below.

Delbanco, A. (2012a). See Section 2 below.

Deresiewicz, W. (2011, May 4). Faulty Towers: The Crisis in Higher Education, *The Nation.* www.thenation.com/article/160410/faulty-towers-crisis-higher-education#

Fish, S. (2008). See Section 2 below.

Gillen, A. (2010, June 16). The Amazing College Debt Bubble. www.mindingthecampus.com/originals/2010/09/the_amazing_college_debt_bubbl.html

Hargittai, E. (2010). See Section 3 below.

Hoover, E. (2009). See Section 3 below.

Howe, N., & Strauss, W. (2000). *Millenials Rising: The Next Great Generation.* New York: Vintage.

Nathan, R. (2006). *My Freshman Year: What a Professor Learned by Becoming a Student.* New York: Penguin.

Rhode, D. L. (2006). See Section 2 below.

Tanner, R. (2011). See Section 3 below.

Twenge, J. M. (2006). *Generation Me: Why Today's Young Americans Are More Confident, Assertive, Entitled—And More Miserable Than Ever Before.* New York: Free Press.

Vyse, D. d. (2012, March 14). Trying to Assess Learning Gives Colleges Their Own Test Anxiety, *Washington Post.* www.washingtonpost.com/local/education/trying-to-assess-learning-gives-colleges-their-own-test-anxiety/2012/02/24/gIQAyLrtCS_story_1.html

2. What is College For?

AAC&U (2013). It Takes More than a Major: Employer Priorities for College Learning and Student Success. www.aacu.org/leap/presidentstrust/compact/2013SurveySummary.cfm .

Arum, R., Cho, E., Kim, J., & Roksa, J. (2012). Documenting Uncertain Times: Postgraduate Transitions of the *Academically Adrift* Cohort. New York: Social Science Research Council. www.ssrc.org/publications/view/FCFB0E86-B346-E111-B2A8-001CC477EC84/

Arum, R., & Roksa, J. (2011). See Section 1 above.

Attewell: (2011). Riddle Remains in *Academically Adrift. Society, 48,* 225-226.

Bauerlein, M. (2012, April 16). Fleeting Attention Shortchanges the Art of Patience. *Chronicle of Higher Education.* chronicle.com/blogs/brainstorm/media-speed-the-wallingham-letter-vertigo-lavventura/45821

Casner-Lotto, J., Barrington, L., & Wright, M. (2006). Are They Really Ready to Work? Employers' Perspectives on the Basic Knowledge and Applied Skills of New Entrants to the 21st Century U.S.

Workforce. *The Conference Board.* www.p21.org/storage/documents/FINAL_REPORT_PDF09-29-06.pdf

Delbanco, A. (2012a, February 26). College at Risk, *Chronicle of Higher Education.* chronicle.com/article/College-at-Risk/130893/

Delbanco, A. (2012b). *College: What It Was, Is, and Should Be.* Princeton: Princeton University Press.

Fish, S. (2008). *Save the World On Your Own Time.* New York: Oxford University Press.

Gardner, H. (2005). Beyond Markets and Individuals: A Focus on Educational Goals. In R. H. Hersh & J. Merrow (Eds.), *Declining By Degrees: Higher Education at Risk.* New York: Palgrave Macmillan.

Kuh, G. D. (2003). What We Are Learning About Student Engagement from NSSE. *Change, 35,* 24-32.

Rhode, D. L. (2006). *In Pursuit of Knowledge: Scholars, Status and Academic Culture.* Stanford: Stanford University Press.

Sternberg, Robert J. (2013, June 17). Giving Employers What They Don't Really Want, *Chronicle of Higher Education.* chronicle.com/article/Giving-Employers-What-They/139877

3. Problems and Prospects

Astin, A. W. (2004, October 22). To Use Graduation Rates to Measure Excellence, You Have to Do Your Homework, *Chronicle of Higher Education.* chronicle.com/article/To-Use-Graduation-Rates-to/27636/

Barr, R. B., & Tagg, J. (1995). From Teaching to Learning: A New Paradigm for Undergraduate Education. *Change, 27,* 12-25.

Bauerlein, M. (2008). *The Dumbest Generation: How the Digital Age Stupefies Young Americans and Jeopardizes Our Future (Or, Don't Trust Anyone Under 30).* New York: Tarcher.

Berk, R. (2012). How to Create 'Thriller' PowerPoints in the Classroom! *Innovative Higher Education, 37* (2), 141-152.

Berrett, D. (2012a, February 19). How 'Flipping' the Classroom Can Improve the Traditional Lecture, *Chronicle of Higher Education.* chronicle.com/article/How-Flipping-the-Classroom/130857/

Berrett, D. (2012b, April 30). New Book Lists 'Best' Professors, but Skeptics Question Its Methods, *Chronicle of Higher Education.* chronicle.com/article/New-Book-Lists-Best/131422/

Birnbaum, R. (2001). *Management Fads in Higher Education: Where They Come From, What They Do, Why They Fail.* San Francisco: Jossey-Bass.

Bousquet, M. (2012, July 25). Good MOOCs, Bad MOOCs, *Chronicle of Higher Education.* chronicle.com/blogs/brainstorm/good-moocs-bad-moocs/50361

Bowen, J. R. (2012). *Teaching Naked: How Moving Technology out of your College Classroom Will Improve Student Learning.* San Francisco: Jossey-Bass. See also www.TeachingNaked.com

Brookfield, S. D., & Preskill, S. (2005). *Discussion as a Way of Teaching: Tools and Techniques for Democratic Classrooms.* San Francisco: Jossy-Bass.

Bruff, D. (2009). *Teaching with Classroom Response Systems.* San Francisco: Jossey-Bass. See also Bruff's blog on "clickers": http://derekbruff.org/

Carey, K. (2010, May 27). The Better Mousetrap Problem, *Chronicle of Higher Education.* chronicle.com/blogs/brainstorm/the-better-mousetrap-problem/24353

Carlson, S. (2005, October 7). The Net Generation Goes to College, *Chronicle of Higher Education.* chronicle.com/article/The-Net-Generation-Goes-to/12307

Carrell, S. E., & West, J. E. (2010). Does Professor Quality Matter? Evidence from Random Assignment of Students to Professors. *Journal of Political Economy, 118* (3), 409-432.

Cowan, B. (2011). Why 'Digital Natives' Aren't Necessarily Digital Learners, *Chronicle of*

Higher Education. chronicle.com/article/Why-Digital-Natives-Arent/129606/

Department of Philosophy, San José State University (2013). An Open Letter to Professor Michael Sandel. Available via *Chronicle of Higher Education.* chronicle.com/article/The-Document-an-Open-Letter/138937/

Felton, J., Koper: T., Mitchell, J. B., & Stinson, M. (2006). Attractiveness, Easiness, and Other Issues: Student Evaluations of Professors at RateMyProfessors.com. *Social Science Research Network.*

Fish, S. (2005, February 4). Who's in Charge Here?, *Chronicle of Higher Education.* chronicle.com/article/Whos-In-Charge-Here-/45097/

Garland, J. C. (2009). *Saving Alma Mater: A Rescue Plan for America's Public Universities.* Chicago: The University of Chicago Press.

Gregorian, V. (2005). Six Challenges to the American University. In R. H. Hersh & J. Merrow (Eds.), *Declining By Degrees: Higher Education at Risk.* New York: Palgrave Macmillan.

Hamermesh, D. S., & Parker, A. M. (2003). Beauty in the Classroom: Professors' Pulchritude and Putative Pedagogic Productivity *NBER working paper no. 9853.*

Hargittai, E. (2010). Digital Na (t)ives? Variation in Internet Skills and Uses among Members of the 'Net Generation'. *Sociological Inquiry, 80* (1), 92-113.

Hoover, E. (2009, Oct. 11). The Millennial Muddle: How Stereotyping Students Became an Industry, *Chronicle of Higher Education.* chronicle.com/article/The-Millennial-Muddle-How/48772/

Ito, M., Horst, H. A., Bittanti, M., boyd, d., Herr-Stephenson, B., Lange: G., et al. (2008). Living and Learning with New Media: Summary of Findings from the Digital Youth Project: The John D. and Catherine T. MacArthur Foundation Reports on Digital Media and Learning.

Johnson, V. E. (2003). *Grade Inflation: A Crisis in Higher Education.* New York: Springer-Verlag.

Kolowich, S. (2013a, May 30). In Deals with 10 Public Universities, Coursera Bids for Role in Credit Courses, *Chronicle of Higher Education.* chronicle.com/article/In-Deals-With-10-Public/139533/

Kolowich, S. (2013b, May 2). Why Professors at San Jose State Won't Use a Harvard Professor's MOOC, *Chronicle of Higher Education.* chronicle.com/article/Professors-at-San-Jose-State/138941/

Kolowich, S. (2013c, March 20). The Professors Who Make the MOOCs, *Chronicle of Higher Education.* chronicle.com/article/The-Professors-Behind-the-MOOC/137905/#id=overview

Lang, J. M. (2003, December 3). RateMyBuns.com, *Chronicle of Higher Education.* chronicle.com/article/RateMyBunscom/45280/

Nemko, M. (2008, June 13). Should Lecture Sections Be Replaced by DiversiSections?, *Chronicle of Higher Education.* chronicle.com/blogs/brainstorm/should-lecture-sections-be-replaced-by-diversisections/6030

Neshyba, S. (2013, April 4). It's a Flipping Revolution. *Chronicle of Higher Education.* chronicle.com/article/Its-a-Flipping-Revolution/138259/

Parry, M. (2012a, January 5). Debating the "Flipped Classroom" at Stanford, *Chronicle of Higher Education.* chronicle.com/blogs/wiredcampus/debating-the-flipped-classroom-at-stanford/34811

Parry, M. (2012b, February 26). Treating Higher Ed's 'Cost Disease' With Supersize Online Courses, *Chronicle of Higher Education.* chronicle.com/article/Candace-Thille/130934/

Tanner, R. (2011, November 6). The Myth of the Tech-Savvy Student, *Chronicle of Higher Education.* chronicle.com/article/The-Myth-of-the-Tech-Savvy/129607/

Theall, M., & Franklin, J. (2001). Looking for Bias in All the Wrong Places: A Search for Truth or a Witch Hunt in Student Ratings of Instruction? *New Directions for Institutional Research, 109.*

Therrell, J. (2011). *Are Your Students Learning?* Paper presented at the FaCIT workshop, Central Michigan University.

Tuchman, G. (2009). *Wannabe U: Inside the Corporate University.* Chicago: The University of Chicago Press.

Twigg, C. (2012). National Center for Academic Transformation Retrieved June 15, 2012, from http://www.thencat.org/

Twigg, C., & Stoll, C. (2005, December 9). Face-Off: Technology as Teacher?, *Chronicle of Higher Education.* chronicle.com/article/Face-Off-Technology-as/15307/

Whitney, H. M. (2011, June 23). Low-Tech Alternatives to Clickers, *Chronicle of Higher Education.* chronicle.com/blogs/profhacker/low-tech-alternatives-to-clickers/34184

Young, J. R. (2009, July 20). When Computers Leave Classrooms, So Does Boredom, *Chronicle of Higher Education.* chronicle.com/article/Teach-Naked-Effort-Strips/47398/

Young, J. R. (2010, June 6). College 2.0: A Self-Appointed Teacher Runs a One-Man 'Academy' on YouTube, *Chronicle of Higher Education.* chronicle.com/article/College-20-A-Self-Appointed/65793/

Young, J. R. (2012a, February 26). An Outsider Calls for a Teaching Revolution, *Chronicle of Higher Education.* chronicle.com/article/An-Outsider-Calls-for-a/130923/

Young, J. R. (2013, May 21). MOOC Provider EdX More Than Doubles Its University Partners, *Chronicle of Higher Education.* http://chronicle.com/blogs/wiredcampus/mooc-provider-edx-more-than-doubles-its-university-partners/43917

4. What Can Teachers Do?

Bain, K. (2004). *What the Best College Teachers Do.* Cambridge: Harvard University Press.

Bain, K. (2004, April 9). What Makes Great Teachers Great?, *Chronicle of Higher Education.* chronicle.com/article/What-Makes-Great-Teachers/31277/

Barnet, S., & Bedau, H. (2011). *From Critical Thinking to Argument: A Portable Guide* (3rd ed.): Bedford / St. Martin's.

Bean, J. C. (2011). *Engaging Ideas: The Professor's Guide to Integrating Writing, Critical Thinking, and Active Learning in the Classroom* (2nd ed.). San Francisco: Jossey-Bass. See also www.bucks.edu/academics/faculty-web/bestpractices/writingtolearn/

Bentley, J. (2011). *First-Year Student Perceptions: Findings from the 2010 Cohort.* Paper presented at the Teaching and Learning Collective Conference, Central Michigan University.

Berry, J. W., & Chew, S. (2008). Improving Learning Through Interventions of Student Generated Questions and Concept Maps. *Teaching of Psychology, 35,* 305-312.

Bok, D. (2006). *Our Underachieving Colleges: A Candid Look at How Much Students Learn and Why they Should Be Learning More.* Princeton: Princeton University Press.

Chew, S. (2010). Improving Classroom Performance by Challenging Student Misconceptions About Learning. *Observer, 23* (4). www.psychologicalscience.org/index.php/observer/archive?year=2010#2010

Coffield, F., Moseley, D., Hall, E., & Ecclestone, K. (2004). *Should we Be Using Learning Styles? What Research Has to Say to Practice.* London: Learning Skills Research Centre.

Colbeck, C. L., Campbell, S. E., & Bjorklund, S. A. (2000). Grouping in the Dark: What College Students Learn from Group Projects. *Journal of Higher Education, 71,* 60-83.

Davis, B. G. (2009). *Tools for Teaching* (2nd ed.). San Francisco: Jossey-Bass.

Duckworth, A. L., & Seligman, E. P. (2005). Self-Discipline Outdoes IQ in Predicting Academic Performance of Adolescents. *Psychological Science, 16*, 939-944.

Dweck, C. (2007). *Mindset: The New Psychology of Success.* New York: Ballantine Books. See also mindsetonline.com.

Fleming, N. D., & Mills, C. (1992). Not Another Inventory, Rather a Catalyst for Reflection. In D. Wulff & J. Nyquist (Eds.), *To Improve the Academy* (Vol. 11). San Francisco: Jossey-Bass.

Fox, J., & Morrison, D. (2005). Using Concept Maps in Learning and Teaching. In P. Hartley, A. Woods & M. Pill (Eds.), *Enhancing Teaching in Higher Education: New Approaches for Improving Student Learning.* New York: Routledge.

Glenn, D. (2007, June 8). You Will Be Tested On This, *Chronicle of Higher Education.* chronicle.com/article/You-Will-be-Tested-on-This/14732/

Glenn, D. (2009, May 1). Close the Book. Recall. Write It Down, *Chronicle of Higher Education.* chronicle.com/article/Close-the-Book-Recall-Write/31819/

Gorlick, A. (2009, August 24). Media Multitaskers Pay Mental Price, Stanford Study Shows. *Stanford Report.* http://news.stanford.edu/news/2009/august24/multitask-research-study-082409.html

Harman, B. A., & Sato, T. (2011). Cell Phone Use and Grade Point Average Among Undergraduate Students. *College Student Journal, 45* (3), 544-549.

Johnson, D. W., & Johnson, R. T. (1999). Making Cooperative Learning Work. *Theory Into Practice, 38* (2), 67-73.

Kraushaar, J. M., & Novak, D. C. (2010). Examining the Effects of Student Multitasking With Laptops During the Lecture. *Journal of Information Systems Education*, 21 (2), 241-251.

Lang, J. M. (2011, December 14). Teaching and Human Memory, Part 2, *Chronicle of Higher Education.* chronicle.com/article/TeachingHuman-Memory/130078/

Lang, J. M. (2012, June 3). The Benefits of Making It Harder to Learn, *Chronicle of Higher Education.* chronicle.com/article/The-Benefits-of-Making-It/132056/

Lemuel, J. (2011, April 27). It's Not Hard; It's Just Work, *Chronicle of Higher Education.* chronicle.com/article/Its-Not-Hard-Its-Just-Work/127252/

Millis, B. J. (2007). Structuring Complex Cooperative Learning Activities in 50-Minute Classes. In D. Reimondo & L. Nilson (Eds.), *To Improve the Academy: Resources for Faculty, Instructional, and Organizational Development* (Vol. 25). Bolton, MA: Anker Publishing Company.

Millis, B. J. (2010). Why Faculty Should Adopt Cooperative Learning Approaches. In B. J. Millis (Ed.), *Cooperative Learning in Higher Education.* Sterling, VA: Stylus.

Ophir, E., Nass, C., & Wagner, A. D. (2009). Cognitive Control in Media Multitaskers. *Proceedings of the National Academy of Sciences, 106* (37). www.pnas.org/content/106/37/15583.full?sid=50fcdd67-3dd4-47bd-a379-c1686c94a334

Palmer, J. (1998). See Section 6 below.

Pashler, H., McDaniel, M., Rohrer, D., & Bjork, R. (2008). Learning Styles: Concepts and Evidence. *Psychological Science in the Public Interest, 9*, 105-119.

Roediger, H. L., & Karpicke, J. D. (2006). Test-Enhanced Learning: Taking Memory Tests Improves Long-Term Retention. *Psychological Science, 17*, 249-255.

Rohrer, D., & Pashler, H. (2007). Increasing Retention Without Increasing Study Time. *Current Directions in Psychological Science, 16*, 183-186.

Rohrer, D., & Taylor, K. (2010). The Effects of Interleaved Practice. *Applied Cognitive Psychology, 24*, 837-848.

Tollefson, S. K. (2002). *Encouraging Student Writing.* Office of Educational Development, University of California at Berkeley. http://teaching.berkeley.edu/docs/encouraging.pdf

Weimer, Maryellen ed. *The Teaching Professor*. issuu.com/magnapubs/docs/teaching-professor-sample-newsletter/1?e=3928197/2622021

5. What Can Institutions Do?

Astin, A. W. (1993). *What Matters in College: Four Critical Years Revisited*. San Francisco: Jossey-Bass.

Berrett, D. (2011, November 14). Private-Colleges Group Says a Standardized Test Improves Teaching and Learning, *Chronicle of Higher Education*. chronicle.com/article/Private-Colleges-Group-Says-a/129774/

Bok, D. (2003). *Universities in the Marketplace*. Princeton: Princeton University Press.

Brint, S. (2009). The Academic Devolution? Movements to Reform Teaching and Learning in U.S. Colleges and Universities, 1985-2010 *Working Paper Series*: Center for Studies in Higher Education, University of California, Berkeley.

Brooks, D. (2012, April 19). Testing the Teachers, *New York Times*. www.nytimes.com/2012/04/20/opinion/brooks-testing-the-teachers.html?_r=3

Chapman, L., & Ludlow, L. (2010). Can Downsizing College Class Sizes Augment Student Outcomes? An Investigation of the Effects of Class Size on Student Learning. *The Journal of General Education, 59* (2), 105-123.

Confessore, N. (2003). What Makes a College Good? *Atlantic Monthly*. www.theatlantic.com/past/docs/issues/2003/11/confessore.htm

Evans, D. G. (2005, May 20). How Not to Reward Outstanding Teachers, *Chronicle of Higher Education*. chronicle.com/article/How-Not-to-Reward-Outstanding/19026

Field, K. (2006a, 2006). Panel to Givel Colleges 'Gentle Shove' Toward Testing, *Chronicle of Higher Education*. chronicle.com/article/Panel-to-Give-Colleges-Gentle/5471/

Field, K. (2006b, June 2). A Texas Millionaire Plots the Future of Higher Education, *Chronicle of Higher Education*. chronicle.com/article/A-Texas-Millionaire-Plots-the/3222/

Glenn, D. (2010a, September 19). An Assessment Test Inspires Tools for Teaching, *Chronicle of Higher Education*. chronicle.com/article/An-Assessment-Test-Inspires/124537/

Glenn, D. (2010b, September 19). A Measure of Education Is Put to the Test, *Chronicle of Higher Education*. chronicle.com/article/A-Measure-of-Learning-Is-Put/124519/

Jenkins, R. (2013, July 24). Who is Driving the Online Locamotive?, *Chronicle of Higher Education*. chronicle.com/article/Who-Is-Driving-the-Online/140505/

Katz, S. N. (2008, May 23). Taking the True Measure of Liberal Education, *Chronicle of Higher Education*. chronicle.com/article/Taking-the-True-Measure-of-a/4814/

King, A. (1993). From Sage on the Stage to Guide on the Side. *College Teaching, 41* (1), 30-35.

Klein, S., Benjamin, R., Shavelson, R., & Bolus, R. (2007). The Collegiate Learning Assessment. Facts and Fantasies. *Evaluation Review, 31* (5), 415-439.

Kuh, G. D., Kinzie, J., Schuh, J. H., & Whitt, E. J. (2010). *Student Success In College: Creating Conditions That Matter*. San Francisco: Jossey-Bass.

Massy, W. F., & Zemsky, R. (1994). Faculty Discretionary Time: Departments and the Academic Ratchet. *Journal of Higher Education, 65*, 1-22.

Ostling, M. & Vernon, C. (2012). Of Chalk and Cheese. Should We Adapt to Students' Expectations or Should Students Adapt to Ours?. Great Lakes Conference on Teaching and Learning, Mt. Pleasant, Michigan.

Palmer, J. (1998). See Section 6 below.

Pope, L. (2006). *Colleges That Change Lives: 40 Schools That Will Change the Way You Think About Colleges*. New York: Penguin.

Sperber, M. (2005). How Undergraduate Education Became College Lite: A Personal Apology. In R. H. Hersh & J. Merrow (Eds.), *Declining By Degrees: Higher Education at Risk*. New York: Palgrave Macmillan.

Stanley, C. A., & Porter, E. (Eds.). (2002). *Engaging Large Classes: Strategies and Techniques for College Faculty*. Bolton, MA: Anker Publishing.

Toth, L. S., & Montagna, L. G. (2002). Class Size and Achievement in Higher Education: a Summary of Current Research. *College Student Journal, 36* (2), 253-260.

Wilson, R. (2010, September 5). Why Teaching is Not Priority No. 1, *Chronicle of Higher Education*. chronicle.com/article/Why-Teaching-Is-Not-Priority/124301/

6. What Now?

Palmer: J. (1998). *The Courage to Teach: Exploring the Inner Landscape of a Teacher's Life*. San Francisco: Jossey-Bass.

Young, J. R. (2012b, Feb. 12). A Tech-Happy Professor Reboots After Hearing his Teaching Advice Isn't Working, *Chronicle of Higher Education*. chronicle.com/article/A-Tech-Happy-Professor-Reboots/130741/

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In the years 2008-2012, **Michael Ostling** taught courses in World Religions, Mythology, Christianity, Witchcraft and related subjects in the Department of Philosophy and Religion, Central Michigan University. He is currently a Research Fellow at the Centre for the History of European Discourses, University of Queensland, where he studies the history of fairies, demons, and goblins.