

E-Learning at a Crossroads—What Price Quality?

For distance learning to flourish, higher education must address several challenges, including volume versus quality

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Can the e-learning juggernaut continue at its current rapid pace? Courses at a distance already reach close to 20 percent of college students in the United States, and growth rates are significantly higher than those of traditionally taught programs. New offerings seem to be springing up everywhere, and some existing ones are bursting at the seams. Will the number of students taking college courses at a distance double or triple by 2010? What barriers or obstacles might slow this rapid growth?

We briefly examine five issues that seem pivotal, either spurring dramatic gains or slowing them:

- Rationalizing the role of part-time instructors
- Quality of e-learning programs
- Incentives and disincentives for teaching online
- Faculty productivity
- Willingness of the academy to consider institutional innovation

Demographics

The demographics are straightforward. Over 17 million students participate in the U.S. postsecondary education system at all levels: certificate,

associate, bachelor's, master's, and PhD programs. Over 3 million of them, primarily undergraduates, are currently enrolled in e-learning programs taught by about 100,000 faculty members—approximately 10 percent of all college faculty, full-time and part-time.¹ About half the e-learning enrollments are in associate degree programs at community colleges, and another third are in doctoral/research and master's-granting institutions, with smaller enrollments in baccalaureate-only and specialized colleges. Between fall 2004 and fall 2005, the enrollment of online students increased 35 percent, or 850,000 additional students, and there are no indications that an e-learning enrollment plateau has been reached.²

At community colleges, about one-fifth of the full-time faculty have doctoral degrees, and at doctorate-granting institutions, about one-fifth do not.³ Close to two-thirds of the faculty (face-to-face and online combined) at community colleges are part-time.⁴ Although many institutions aim for half their online courses to be taught by permanent faculty, many notable exceptions—including University of Phoenix (187,712 e-learning enrollments in the 2006–2007

academic year), University of Maryland University College (40,009), Baker College (17,633), Central Texas College (22,723), Walden University (22,168), and Capella University (13,907)—have fewer than 15 percent of full-time faculty teaching online courses.⁵

Rationalizing the Role of Part-Time Instructors

A major factor for e-learning's growth potential is the part-time or adjunct instructor. Each adjunct costs about 20 percent (or less) of a full-time counterpart on a per-class basis.⁶ An adjunct professor often receives no office, phone, mailbox, computer, health benefits, and so forth, and needs another full-time job to survive.

For distance-learning enrollments to increase significantly during the next few years, the biggest problem could be finding and integrating tens of thousands of new adjunct professors as partners in the academy. The growth of part-time faculty has been significant: according to the American Association of University Professors (AAUP), during the period 1975 to 2003, full-time tenure-track positions increased by 18 percent while full-time non-tenure-



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track and part-time positions grew at 10 times that rate.⁷ Are there enough qualified men and women available to teach for \$1,000–\$3,000 per course or less and to accept working conditions that differentiate and isolate them from their full-time colleagues, financially and socially?

Considerable evidence exists that many adjunct faculty members double or even triple their course load. Some function as online teachers at different colleges, often in different disciplines at

the same time. One report describes an adjunct online professor who teaches a prodigious course load—so many classes, in fact, that she did not want to be specific for fear that one of her many college employers would become concerned.⁸

A study by AAUP described the range of earnings of a hypothetical part-time college faculty member in the context of the 2003 poverty line in the United States:

According to the poverty thresholds

computed by the U.S. Census Bureau, one person living alone in 2003 with an annual income of \$9,573 or less would have been classified as living in poverty. Using the median per-course pay rate...and assuming an eight-course annual load, a part-time professor at a public associate college would have earned 140 percent...at a public master's university would have earned 150 percent...[and] at a private baccalaureate college or master's university would have

earned between 163 and 178 percent of it. The highest-paid part-time faculty members—those teaching at doctoral universities—would have earned between 245 and 251 percent of the poverty level for a household of one in 2003 if they had taught full time at their part-time rate of pay. Part-time faculty members with families to support would find their incomes closer to, or even below, the poverty level, which was \$12,015 for a family of two in 2003 and \$14,680 for a family of three.⁹

It's possible, of course, that tens of thousands of additional qualified adjunct professors are ready to work for low wages as new e-learning programs spring up, especially instructors already working in the areas of specialization they teach. But there is a point at which using all these adjuncts could cause quality to suffer. That point might already have been reached.

Quality of E-Learning Programs

Extensive use of part-time faculty has a negative effect on an important mea-

sure of quality: graduation rate. One multi-institution study concluded that for each 10 percent increase in part-time faculty, there is a 2.65 percent decrease in graduation rates.¹⁰ Professor Dan Jacoby's recent analysis using summary data from all U.S. public community colleges shows a highly significant negative relationship between net graduation rates and part-time faculty ratios.¹¹ This relationship points to added costs for society as increasing numbers of students fail to graduate—lower salaries in the work force, leading to a lower standard of living for more people; reduced skill levels among workers, hampering productivity; and potentially more jobless benefits paid out.

Where does accreditation fit into the discussion of quality? Nearly all college distance-learning courses are regionally accredited, but accreditation from a professional body, such as the Association for Advancement in Collegiate Schools of Business (AACSB), is much less common. The most recent annual study by *U.S. News & World Report*¹² indicates that the majority of online graduate students take courses not accredited by profes-

sional bodies; Table 1 shows a summary of these data. Of the 50,000-plus online MBA students, the largest five enrollments are at University of Phoenix, University of Maryland University College, Walden University, Capella University, and Touro University, totaling well over half the MBA enrollments. None of these MBA programs is professionally accredited¹³; in fact, only one of the 10 highest-enrollment online MBA programs is accredited by AACSB.

Master's programs in education, representing over 42 percent of all graduate online learning enrollment, fared better, with 64 percent professionally accredited. Nursing and library science online programs show high percentages of professional accreditation—97 and 80 percent, respectively—but account for less than 10 percent of total online program enrollments, even if online public health programs are included.

The Sloan Consortium certification standards for full-scale distance-learning programs at colleges and universities are also useful in determining program quality. Over 900 online programs are included in the Sloan-C list, ranging

Table 1

Professional Accreditation of E-Learning Programs

Program	Total	Accredited	Nonaccredited	Top Three in Enrollment
Business	94 (49,611)	48 (9,762)	46 (39,849)	U. Phoenix (13,232)**; UMUC (6,570)**; Walden (3,415)**
Education	121 (68,517)	78 (29,039)	43 (39,478)	Walden (12,412)**; U. Phoenix (9,874)**; West Texas A&M (5,218)*
Engineering	64 (10,036)	32 (5,080)	32 (4,956)	USC (1,222)**; Columbia (547)*; Georgia Tech (525)*
Library Sciences	20 (5,899)	16 (4,915)	4 (984)	San Jose State U. (1,440)*; U. South Florida (750)*; U. Wisconsin–Milwaukee (550)*
Nursing	67 (9,142)	65 (9,116)	2 (26)	U. Phoenix (3,377)*; Regis U. (513)*; SUNY Stonybrook (358)*
Public Health	18 (6,292)	9 (1,288)	9 (5,004)	U. Phoenix (2,359)**; Touro (1,068)**; Walden (1,007)**
Grand Total	384 (149,497)	248 (59,200)	136 (90,297)	

* Accredited by professional accrediting body

** Not accredited by professional accrediting body

from elite universities like MIT and Carnegie Mellon to rural community colleges. Sloan has established peer-review programs that continually evaluate and update the list.¹⁴ In terms of master's programs, a miniscule number have achieved both professional accreditation and Sloan-C certification.

More than half of online enrollments are in two-year community college programs, for which professional accreditation may not be an appropriate indicator. Some of these programs offer valuable professional training accredited by an industry group and result in a completion certificate, not a degree. Of the more than 1,000 community colleges in the United States, only about a dozen appear on the Sloan-C list; nevertheless, some of the largest and most comprehensive programs are represented—the Northern Virginia Community College system, Central Texas College, Rio Salado Community College in Arizona, and University of Phoenix's online associate degree courses.

An additional quality-related issue in predicting the future direction of distance learning in postsecondary education is the status of the offering institution. The several hundred top-tier universities in the United States seem to have aimed more for individual courses than for full-scale programs. There are exceptions, of course, such as Penn State, the University of Florida, and the University of Massachusetts, which have relatively large online programs. Stanford University, the University of Southern California (USC), Columbia University, and Georgia Tech are enrollment leaders in online engineering master's programs. Not coincidentally, they also are leaders in cost per semester hour, electing to invest the needed resources to develop high-quality programs.

Are status and institutional prestige predictors for quality online programs? Perhaps. But the majority of top-tier institutions have found that full-scale online programs may not be in their strategic interest, unless they generously fund and staff those programs. The cost-versus-quality debate will probably play

out in community colleges and non-elite institutions, where most distance-learning enrollment occurs.

Incentives and Disincentives for Teaching Online

If an adjunct e-learning professor's per-class stipend is a small fraction of a full-time counterpart's and can even be classified in the context of U.S. poverty measurements, pay would seem to be a significant disincentive for part-time faculty. But full-timers also worry about disincentives. Many are reluctant to teach at distance. Among the extensive literature on this subject appear permanent faculty's concerns about perceived loss of productive time for other academic pursuits,¹⁵ added workload for preparing distance courses,¹⁶ insufficient development time,¹⁷ lack of technical support,¹⁸ lower opportunity for gaining tenure,¹⁹ and many more. Also, the recently released Sloan Consortium report on a survey of 5,000 institutions found that in response to the question "Do faculty accept the value and legitimacy of online education?" the percentage who disagreed has risen from 2.7 percent to 8.8 percent for doctoral-granting, 12.2 percent to 19.2 percent for private nonprofit, and 7.8 percent to 17.6 percent for profit institutions from 2003 to 2006.²⁰ So as use of e-learning increases, its perceived legitimacy among faculty is decreasing. Non-tenure-track professor Julie Chisholm commented on the frustration that results from tenured colleagues' unwillingness to teach online:

Senior faculty who have job security can usually choose not to teach asynchronously if they so desire, but younger teachers are especially vulnerable to the trap, especially when their job descriptions include the phrase "teaching online courses."²¹

Since many full-time faculty seem unwilling to teach in distance-learning format, a major increase in online classes probably would rely mostly on adjunct faculty—if current pay scales can attract them. Remembering that over half of online teaching

occurs at junior colleges, the incentive/disincentive balance would be particularly worrisome given relative inflexibility in trading full-time faculty positions for longer-term or "permatemp" slots. If, in fact, graduation rates are negatively affected by higher levels of part-timers, why not trade even greater numbers of budget lines formerly allocated to permanent positions—which cost four to five times as much as adjuncts for the same teaching work—and foster longer-term, nonpermanent agreements with highly qualified adjuncts? Many institutions are unwilling to trade permanent lines in this way, but the advantage would be a larger number of qualified teachers under multiyear contracts. Under this arrangement, the overall cost per class for full-time faculty would drop (the contract employees would have salaries below permanent personnel, but drastically above the wages in their former adjunct jobs). At one stroke, this approach removes several disincentives:

- Fewer permanent employees have to teach online, since the new permatemps are more qualified and more willing to do so—that would be a basis of their hiring.
- Current adjunct faculty might be more satisfied with their admittedly poor wages if they saw a path to a multi-year contract and improved status and benefits with the institution.

At the University of Colorado, a formal plan for granting tenure to long-term lecturers was recently proposed.²² Incidentally, some evidence exists that significant numbers of the current adjunct population would be willing to drop their regular jobs and work full-time in academia. A Washington State study determined that over half of community college part-time instructors would willingly join the college's full-time ranks under a several-year contract.²³

Faculty Productivity

The steeply rising cost of postsecondary education has prompted frequent discussions on improving the productivity of college teaching. Occasionally, e-learning is suggested as an efficiency-enhancing approach. The educational

process is labor-intensive, and productivity improvements are not as easy to effect as in industries like manufacturing and retailing. Economist William Baumol noted long ago that classical music, education, law enforcement, and car repair are examples of activities that have lower potential for productivity improvements, since they must be so labor-intensive. And when productivity growth lags, prices go up.²⁴ It may be that significant year-to-year reductions in the unit cost of teaching are impossible—victims of “Baumol’s cost disease.” Even with large increases in the number of low-cost adjunct professors, university costs continue to rise.

Some interesting approaches seem to make a significant dent in unit costs. Rio Solado Community College in Arizona, for example, teaches extensively at distance and has a student body of over 50,000, and the college employs 37 adjuncts for every full-time professor. For most junior colleges in the same region, the ratio is one part-timer for one full-timer—a dramatic difference. Rio Solado claims that its per-class expense is almost 40 percent below the average for other Maricopa County community colleges.²⁵

The high-volume distance-learning programs—the University of Phoenix, the University of Maryland University College, Central Texas College, Baker College, Walden University—report full-time to part-time ratios of 15 percent or less. In fact, the University of Phoenix, the volume leader with a faculty of 6,000, reports only 0.3 percent as full-time professors.²⁶

Can many institutions follow the Rio Solado or University of Phoenix model? Obviously not—most would consider such dramatic change beyond their strategic interests or goals. For an institution to increase productivity and possibly improve its revenue stream through distance-learning programs, a major strategic decision about full-time to part-time ratios is required, along with many other strategic choices (discussed below). This in turn could lead to a rethinking of the role of the part-time professor as a valued long-term asset, perhaps with some significant improvements in sta-



tus, perquisites, and salary. In community colleges, where nearly two-thirds of faculty are non-full-time already, this approach is being used with some success, and it could transfer directly to four-year schools.

Institutional Innovation

For distance learning to continue its dramatic growth over the next few years, a number of issues must be considered at all institutions, from prestigious top-tier universities to two-year community colleges. These fall under two headings: strategic and administrative/financial.

Strategic Issues

Strategic issues include planning for new construction, double- and triple-booking of existing classrooms through blended learning programs,²⁷ making state and regional alliances, and revising legislative agendas. Every time a college plans a new building, it makes a statement of long-term educational strategy—a 40–50 year forecast. For example, if the construction design emphasizes technology outreach—television studios, e-learning workstations, round-the-clock wireless centers for distribution of course lectures, Wi-Max connections—and focuses less on traditional classrooms, the opportunity exists for significant increases in high-quality distance-learning activities, rather than relegating them to a redesign later.

The same logic applies when an institution chooses to double- or triple-book classroom space, aiming for blended learning classes that require a fraction (one-half or one-third) the face time with students because of high-quality

technological interventions such as lecture downloads and online exercises.²⁸

Another example of strategic innovation is the willingness of states and regional coalitions to make distance-learning courses and programs easily accessible across traditional geographical and administrative boundaries. This could take the form of serious revenue sharing across states or regions for approved programs not necessarily associated with the online learner’s institution. For example, an acclaimed online MBA program at one state university, accredited by the AACSB and on the Sloan-C list, should be easily available to matriculants at all state schools. It should receive appropriate financial offsets, even if this would lead to reduction or cancellation of lower-quality programs and some revenue loss to other MBA programs. Similarly, some courses in engineering, education, history, math, economics, or nursing could be deployed across the region, with only the highest-quality offerings selected, again with funding offsets to the offering institution and possible reductions or loss of lower-quality online programs at other regional institutions.

This market model is painful for the institution that loses revenues from departmental budgets to a higher-quality virtual program, possibly in the same city or state. In economic terms, this is a balance-of-trade approach, with some institutions net exporters and others net importers. Most universities require students to obtain at least half of their credits at the home institution, so presumably no dramatic loss of revenues would ensue, although there might eventually be a restructuring of traditional sacrosanct boundaries in schools and departments.

The fourth strategic innovation has to do with legislation. In some cases ideas like double-booking classrooms or revenue sharing cannot be worked out in negotiations, even though they can result in significant savings to taxpayers. Legislative action may be needed to assure the implementation of such plans, at least at public universities. If the student base for distance learning were to double or triple in the next few

years, such strategic changes might have to be mandated in order to lock in the benefits statewide or region-wide. Students and taxpayers would be the beneficiaries.

Financial/Administrative Issues

Financial/administrative innovation could take several forms. Intrinsic motivations for both full-time and part-time professors are useful, but an increase in one's paycheck is often more appreciated than a pat on the back. So if in fact distance learning is more difficult and time-consuming for the teacher, the reward structure needs to reflect this on a continuing basis. Nonetheless, Catherine Schifter found that incremental salaries for distance learning were decreasing,²⁹ not increasing.

Another financial innovation could use the Rio Solado case as a model. It demonstrates that productivity can actually be measured and that unusual mixes of full-time and part-time personnel can have a high yield—but only under certain conditions. Productivity targets, and excellent rewards for meeting or exceeding them, could pay dividends. Incidentally, the Rio Solado student body is almost entirely working adults. An institution with a more varied clientele would have different costs, and productivity norms would be adjusted appropriately.

The most significant and also the most difficult administrative/financial innovation would be a complete rethinking of the pay structure of adjunct faculty. If a teacher is asked to do the same job for 20 percent or less of a counterpart's salary while enduring difficult working conditions and ostracism from the academic unit's decision-making apparatus, it should not be surprising to find a tipping point that leads to lower quality. The obvious answer would be to improve the pay and working conditions of these part-time faculty, including a generous increase in longer-term contracts. This would be balanced by a corresponding reduction in full-time faculty lines, phased over a period of time. How many institutions like the idea of reducing full-time faculty? Not many, and that poses the challenge.

The AAUP recently proposed three

steps to reach this result for part-timers:³⁰

- Written terms of appointment and right to rehearing
- Notice of reappointment or non-reappointment a month before term's end
- For those who have served 7 years and taught at least 12 courses, "comprehensive review with a view toward (1) appointment with part-time tenure where such exists, (2) appointment with part-time continuing service, or (3) non-reappointment"

As another financial/administrative innovation, consider the idea that distance learning for relatively small student populations might be more expensive than traditional, classroom instruction if all costs are counted and quality considerations weighed rationally. Rather than cutting corners and trying to make online courses both available and inexpensive, it would be realistic simply to budget for the full cost while limiting online programs to the best ones in the region, as suggested above. Why not fund the premier program and force others to gradually migrate toward it? Such a solution involves sacrificing prerogatives—financial, organizational, and regional—but would benefit students and taxpayers.

Any discussion of financial innovation must recognize that postsecondary distance learning has several tiers. The top several hundred universities in the United States are not proportionately the largest purveyors of e-learning services, representing only about 10 percent of total online enrollment. When they do provide online learning (as in the case of Stanford, USC, Georgia Tech, and Columbia), they usually fund the program handsomely. Adjuncts are paid two to four times more than the average. A different tier is the high-volume online graduate programs, only a third of which are accredited by professional bodies. For these, the \$1,000–\$2,000 per class pay scale for adjuncts often applies. The group with a majority of e-learning enrollment consists of undergraduate programs at junior colleges and lower-tier colleges and universities. Realistically, members of each tier would need

to examine different financial strategies. The elite universities have already made a strategic statement by offering fewer and higher-quality courses.

Administrative innovations could also focus on treating part-time faculty as valuable resources deserving of special status, greater visibility in the public-relations activities of the institution, more facilities to make them feel welcome, open invitations to faculty meetings, and so forth. These actions cost almost nothing. Additional office facilities, pay enhancements, special signing bonuses, and the like could also be established at relatively low cost when compared with the overhead of a full-time employee.

Conclusion

Will distance learning continue to flourish and have the double-digit annual growth that has been projected? To achieve this, all institutions—particularly those that look upon distance learning as a crucial element of revenue growth—must address several challenges. The top-tier universities as a group constitute a small segment of e-learning total enrollment revenues and will continue to pick and choose courses and programs strategically, emphasizing quality over volume. The community colleges and non-top-tier schools, with the lion's share of e-learning enrollments, are on the verge of a major growth surge. If the general demand for online learning continues, especially in junior colleges, at some point the issue of volume versus quality must be faced squarely. This was exacerbated by the removal in 2006 of the 50-50 restriction by Congress, which means there is no longer a barrier to allocating federal scholarship funds to schools that offer over half their credits online.

We have suggested four areas of focus:

- First, institutions offering online programs must attend to part-time faculty, a group that constitutes nearly half of all instructors in higher education. The inequities of pay, for example, can be reduced by exchanging full-time slots for longer-term contract personnel.

- Second, existing and planned facilities require institutional innovation in providing technological support for online programs.
- Third, the incentives and disincentives that currently characterize online teaching demand attention.
- Fourth and most important, all institutions of higher learning would benefit from a greater openness to strategic innovation.

Since new construction is the most obvious statement of strategic direction, innovative approaches to building design can easily facilitate more effective deployment of online learning. Similarly, existing buildings can easily increase classroom efficiency through blended learning by double- and triple-booking of classrooms. Cost savings would be available for other crucial university programs. Other innovations, such as sharing revenues across regions for the premier e-learning offerings, could also make a big difference.

Whatever major changes take place in postsecondary distance learning will need careful monitoring with respect to quality standards that are more comprehensive than regional accreditation procedures. If the number of online students were to increase quickly from 3 to 6 million, for example, all the major issues mentioned would require significant, immediate attention, but especially productivity and quality norms. Large-scale, for-profit programs like the University of Phoenix will not automatically seize this market. Problems with their growth are reported frequently.³¹

These are exciting times in postsecondary education, and there's probably no issue more significant than the dramatic proliferation of e-learning. The foresight and innovative spirit of academic administrators will determine whether the next few years of e-learning are characterized by discipline, efficiency, and attention to quality—or unbridled growth, decreases in graduation rates, and fragmented service.

A new study of the demographics of online programs found that many future students will be 35–55 years old. As the study's director commented,

While online programs are touted as a

convenient alternative to traditional instruction, potential students are beginning to judge programs on quality, cost, accreditation, and the technology being used. If colleges don't distinguish themselves, students will look elsewhere.³² *E*

Endnotes

1. A. F. Mayadas, "Sloan Foundation Addresses Education Commission on Future of Higher Education," The Sloan Consortium, <<http://www.sloan-c.org/news/pr/pr060501.asp>> (retrieved January 31, 2007).
2. "Digest of Education Statistics: 2005," Institute of Education Sciences, National Center for Education Statistics, 2006, <<http://nces.ed.gov/programs/digest/d05/>> (retrieved February 1, 2007); and I. E. Allen and J. Seaman, *Making the Grade: Online Education in the United States 2006* (Needham, Mass.: The Sloan Consortium, 2006).
3. E. Benjamin, "Reappraisal and Implications for Policy and Research," *New Directions for Higher Education*, Vol. 123, 2003, p. 82.
4. D. Wallin, "Valuing and Motivating Part-Time Faculty," in *Adjunct Faculty in Community Colleges*, D. Wallin, ed. (Bolton, Mass.: Anker Publishing, 2005), p. 3.
5. "E-Learning Guide," *U.S. News & World Report*, 2006, <<http://www.usnews.com/usnews/edu/elearning/elhome.htm>> (retrieved February 1, 2007).
6. S. Ruth, "E-Learning—A Financial and Strategic Perspective," *EDUCAUSE Quarterly*, Vol. 29, No. 1, 2006, pp. 22–30, see p. 25, <<http://www.educause.edu/apps/eq/eqm06/eqm061.asp>>.
7. "Trends in Faculty Status, 1975–2003," American Association of University Professors, <<http://www.aap.org/AAUP/pubsres/research/trends1975-2003.htm>> (retrieved February 1, 2007).
8. D. Carnevale, "For Online Adjuncts, a Seller's Market: Part-Time Professors, in Demand, Fill Many Distance-Education Faculties," *Chronicle of Higher Education*, Vol. 50, No. 34, 2004, p. A31, <<http://chronicle.com/free/v50/i34/34a03101.htm>> (retrieved February 14, 2007).
9. S. Thornton, "The Devaluing of Higher Education: The Annual Report on the Economic Status of the Profession 2005–2006" (Washington, D.C.: American Association of University Professors, 2006), pp. 24–34.
10. R. G. Ehrenberg and L. Zhang, "Do Tenured and Tenure Track Faculty Matter?" *Journal of Human Resources*, Vol. 40, No. 3, 2005, pp. 647–659.
11. D. Jacoby, "Effects of Part-Time Faculty Employment on Community College Graduation Rates," *Journal of Higher Education*, Vol. 77, No. 6, 2006, p. 1081.
12. *U.S. News and World Report*, op. cit.
13. The United States Sports Academy (<http://www.ussa.edu/accredited-college.asp>), ranked second by *U.S. News & World Report* "E-Learning Guide" in terms of online MBA program size (11,000 students), has been omitted because the school's degrees are in sports management rather than business administration.
14. "The Sloan Consortium Homepage," The Sloan Consortium, 2006, <<http://www.sloan-c.org/>> (accessed February 1, 2007).
15. M. M. Thompson, "Faculty Self-Study Research Project: Examining the Online Workload," *Journal of Asynchronous Learning Networks*, Vol. 8, No. 3, June 2004, <http://www.sloan-c.org/publications/jaln/v8n3/v8n3_thompson.asp> (retrieved February 1, 2007).
16. K. J. Thoms, "Kicking and Screaming: Overcoming Faculty Resistance to Teaching Online Courses," paper presented at the 10th Mid-South Annual Instructional Technology Conference "Building Communities of Learners," Middle Tennessee State University, Murfreesboro, April 3–5 2005; and S. Sharpe, "Why Online Teaching Turned Me Off: A Web Enthusiast's Journey into Skepticism," *Washington Post*, Sunday ed., April 3, 2005, p. W31.
17. S. Jones and C. Johnson-Yale, "Professors Online: The Internet's Impact on College Faculty," *First Monday*, Vol. 10, No. 9, September 2005, <http://www.firstmonday.org/issues/issue10_9/jones/index.html> (retrieved February 1, 2007).
18. P. Shea, A. Pickett, and C. S. Li, "Increasing Access to Higher Education: A Study of the Diffusion of Online Teaching Among 913 College Faculty," *International Review of Research in Open and Distance Learning*, Vol. 6, No. 2, 2005, <<http://www.irrodl.org/index.php/irrodl/article/view/238/493>> (retrieved February 14, 2007); and Z. L. Berge and L. Muijenburg, "Obstacles Faced at Various Stages of Capability Regarding Distance Education in Institutions of Higher Education: Survey Results," *eModerators.com*, March 9, 2003, <http://www.emoderators.com/barriers/hghred_stgs.shtml> (retrieved February 1, 2007).
19. G. P. Schell, "Universities Marginalize Online Courses: Why Should Faculty Members Develop Online Courses If the Effort May Be Detrimental to Their Promotion or Tenure?" *Communications of the ACM*, Vol. 47, No. 7, 2004, pp. 53–56.

20. Allen and Seaman, op. cit., p. 14.
21. J. K. Chisholm, "Pleasure and Danger in Online Teaching and Learning," *Academe OnLine*, November/December 2006, <<http://www.aaup.org/AAUP/pubsres/academe/2006/ND/Feat/chis.htm>> (retrieved February 1, 2007).
22. B. Anas, "Instructors Propose Tenure Plan," *Daily Camera*, February 26, 2007, <<http://www.dailycamera.com/news/2007/feb/26/instructors-propose-tenure-plan-long-term-faculty-/>> (retrieved March 9, 2007).
23. D. Jacoby, "Part-Time Community College Faculty and the Desire for Full-Time Tenure Track Positions: Results of a Single Institution Case Study," *Community College Journal of Research and Practice*, Vol. 29, No. 2, 2005, pp. 137–152.
24. J. Surowiecki, "The Financial Page: What Ails Us," The Talk of the Town column in *The New Yorker*, July 7, 2003, <http://www.newyorker.com/talk/content/articles/030707ta_talk_surowiecki?030707ta_talk_surowiecki> (retrieved February 1, 2007).
25. E. Ashburn, "The Few, the Proud, the Professors," *Chronicle of Higher Education*, Vol. 53, No. 7, 2006, p. A10.
26. "Peterson's Planner," *Peterson's*, 2006, <<http://www.petersons.com/>> (accessed February 14, 2007).
27. Blended learning refers to a middle ground between all content online and all in the classroom—blended classes typically have significant technical intervention, so that the actual face time with a professor is reduced by half or even more, thereby freeing classrooms.
28. A. G. Picciano, "Blended Learning: Implications for Growth and Access," *Journal of Asynchronous Learning Networks*, Vol. 10, No. 3, July 2006 <http://www.sloan-c.org/publications/jaln/v10n3/v10n3_8picciano.asp> (retrieved February 1, 2007).
29. C. C. Schifter, "Compensation Models in Distance Education," *Online Journal of Distance Learning Administration*, Vol. 3, No. 1, 2000, <<http://www.westga.edu/~distance/schifter31.html>> (retrieved February 14, 2007).
30. S. Jaschik, "More Rights for Adjuncts," *Inside Higher Ed*, September 13, 2006, <<http://insidehighered.com/news/2006/09/13/aaup>> (retrieved February 1, 2007).
31. S. Dillon, "Troubles Grow for a University Built on Profits," *New York Times*, February 11, 2007, Section 1, p. 1, <<http://select.nytimes.com/gst/abstract.html?res=F40B15F6355B0C728DDAB0894DF404482>> (accessed through Lexis/Nexis Academic February 13, 2007).
32. "Company's Survey Suggests Strong Growth Potential for Online Education," *Chronicle of Higher Education*, Vol. 53, No. 13, 2006, p. A35, <<http://chronicle.com/weekly/v53/i13/13a03502.htm>> (retrieved February 14, 2007).

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