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Faculty Engagement AND Support IN THE New Learning Environment

By Paul R. Hagner

David G. Brown, of Wake Forest University, and Elson S. Floyd, of Western Michigan University, recently discussed their universities' "best practices" in promoting faculty development in the area of the introduction of enhanced, computer-based techniques and processes into the learning environment. The two noted that an "enabling environment" is a precondition to institutional change. Such an environment includes the following: universal student access, reliable networks, multiple opportunities for training and consulting, and "a faculty ethos which values experimentation and toleration of falterers."¹

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Without these preconditions, activity by self-starters is difficult, if not impossible. Even when these conditions are in place, transformation is neither easy nor automatic. The first stage of transformation is marked by the self-starters—the “first-wave” adopters or “entrepreneurs”—who seek out the resources and the expertise to implement their personal commitment to incorporating technology into their own learning environments. The second stage, and the one of most concern to us because it represents the earliest significant turn toward the transformation of the institution, occurs when the “second-wave” faculty—those who have strong commitments to quality learning but who are wary of the new technologies—come to perceive the national disciplinary and institutional support and reward structure as an opportunity rather than a threat.

Although united in their commitment to quality learning environments, these two groups of faculty are very different in both their technical capabilities and their attitudinal readiness to embrace these new technologies. It would be a serious mistake for administrators to make allocation decisions based solely on the characteristics of the entrepreneurs, since their needs and their motivations can differ greatly from those of the second-wave faculty.

Entrepreneurs: Resources, Incentives, and Rewards

In 1997, Yahoo developed its first list of “Most Wired Campuses.” Although the debate over the validity of the categories producing these rankings continues,² we can safely say that the schools included in the list feature environments that are more conducive to instructional technology entrepreneurs. In an attempt to better understand what these instructors are doing, David G. Brown contacted the provosts and deans of

thirty-six of these “most wired” campuses and asked for names of instructors who were using innovative technology applications in their coursework. Brown then invited these scholars to submit reports on their work, which he compiled in his book *Interactive Learning: Vignettes from America’s Most Wired Campuses*.³ The book features ninety-three case studies on the use of classroom—and out-of-classroom—technologies and is cross-indexed according to discipline area, computer tools and techniques, and educational beliefs. The book also includes data and the instructors’ impressions regarding the assessment of the impact that the innovations brought to the learning environment.

Overall, *Interactive Learning* is a very useful and informative survey of the

great variety of existing application approaches and innovations. Yet the book concentrates more on the descriptions of the techniques themselves and less on the resource and reward environments that brought them into being. Going on the assumption that the book’s instructors represent first-wave entrepreneurs, we were interested in the characteristics of the resource, incentive, and reward environments ac-

companying their “best practices.” Thus we contacted thirty of the instructors included in the book and asked them the following three questions:

1. What was the source of the resources for your innovation?
2. What were the incentives for innovation?
3. What rewards, beyond the educational benefits for your students, did you receive from implementing learning change through instructional technology?

The results from this “survey,” which should be taken as suggestive rather

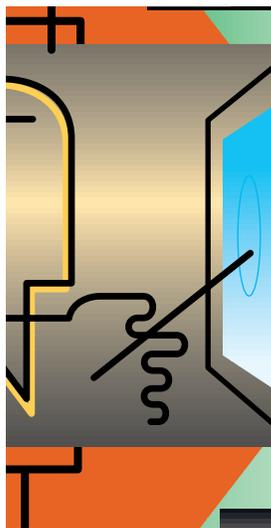
than scientific, are discussed below. This discussion was also influenced by the outcomes of the NLII Focus Session on Faculty Engagement and Support, held at the University of Washington in February 2000.

Resources

About one-third of the respondents stated that their innovations were totally self-contained and required no additional resource support. The remaining respondents cited five areas that provided the necessary resource support. *Departmental support* came mostly in terms of additional hardware and was cited by only five of the respondents. *College support*, cited by eight respondents, consisted of hardware provision and classroom renovation. *University information technology centers* were identified as important resource providers by one-third of the respondents who had received support. The centers provided resources including full funding of projects, training for students and faculty, provision of graduate assistants, and ongoing technical support. *University-level support* was noted by more than one-third of these respondents as well. This support came in the form of summer stipends, project grants, hardware and software, GAs, grants, and seed money. Finally, *outside agencies* were identified by six of the instructors. Three stated that the outside funding covered 100 percent of their resource needs. Two agencies identified were the National Science Foundation (NSF) and an alumni gift targeted toward learning innovation. Overall, this group of entrepreneurs was not concerned about a lack of resources. For those who did not have the personal resources or expertise to achieve their project goals, their environments appear to have provided the necessary training and/or equipment.

Incentives

Next the survey respondents were asked to detail the incentives offered by their universities to incorporate learning technologies into their courses. The



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overwhelming (70%) response was that no outside incentives were provided to initiate these changes. Almost to a person, the central reason given for undertaking these innovations was that it “was the right thing to do” or that “the students deserved to have the quality of their education improved.” Several respondents indicated that there were actually disincentives to their work. One wrote, “In fact, since no release time was provided and the annual merit raise procedures do not give weight to this kind of development work, you might say that there were disincentives.”⁴

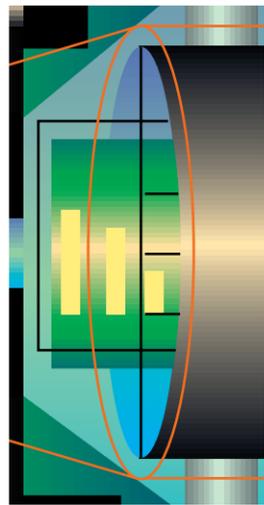
A handful of instructors did cite incentives provided by their institutions. These incentives included promises that such work would figure in the tenure process, summer salaries, and new equipment. But for the majority, innovations were pursued because the resources were there and the potential benefits for students were high. The importance of student-centered incentives was reiterated in a “best practices” study conducted by the American Productivity and Quality Center (APQC) to discover the best organizational strategies for helping faculty members integrate technology into their teaching. The study concluded: “Faculty incentives come in many forms. Among the most powerful motivators is a newfound pride in teaching.”⁵

Rewards

Finally, the survey respondents were asked to identify the rewards gained from their projects. Again, about 65 percent stated that student benefit and the attendant personal satisfaction of a job well done were the only rewards for their innovations. Reading the responses, one gets the impression that the instructors were quite disappointed in the lack of official recognition and colleague interest in their innovations. One respondent stated: “The PR Office

wrote the project up for a paragraph in the alumni magazine, but there was no official recognition. Quite the contrary, I got the impression that those evaluating me considered the project an oddity and a possible waste of my time, before they forgot about it completely.”

For those citing rewards, three cited extensive university publicity given to their projects, one stated that a salary increase was tied to the work, four believed that their receipt of a teaching award was connected to their work, and three moved into university positions dedicated to the spread of interactive learning. One of those in the last group wrote: “Partly as a consequence of [my work], I’ve shifted from my faculty role



to an administrative role split between faculty development and learning technology, and one distinctive feature of my work in that role has been a very strong prejudice against special incentives and in favor of authentic, routinizable, scalable support. In my view, this is a very pro-faculty position, since nearly everyone I know who took on technology projects under the lute of special incentives found that they ended up with large undocumented increases in workload, generally with no way to get out from under.”

From this brief examination of our sample of entrepreneurs, we can record several observations:

- Although they work in more technologically supportive environments, the impetus for their enterprise is internal.
- They share a strong interest in bettering the quality of the education delivered and the learning produced.
- They possess enough expertise to give them the confidence to proceed.
- Standard academic incentives did not play a key role in their enterprise.

- They did not receive substantial returns on their enterprise from their institutions.
- Their expressed disappointment may influence the extent to which they will continue their transformations and, perhaps more important, share their positive experiences with their colleagues.

Clearly, if faculty ranks consisted solely of the types of educators identified above, the revolution in educational transformation would be easily accomplished. These scholars are in environments that allow access to the resources necessary to transform their teaching methodologies, and they proceed to do so regardless of the fact that neither incentives nor rewards seem to be present. As evidenced in the vignettes in Brown’s book, the real incentives are rooted in the scholars’ commitment to improving the learning opportunities available to their students. The main reward, as seen in the individual “Lessons Learned” sections of their vignettes, is the satisfaction of having something valuable done right.

“Second-Wave” Faculty: Sources of Hesitancy

As we know, however, the entrepreneur educators do not represent the mainstream but are at the vanguard of higher education. Thus our next question is, Who is next? We turn here to a consideration of second-wave faculty and the possible sources of their hesitancy to incorporate new learning technologies.

Fear of the Unknown

Faculty, especially older faculty, are used to being in control of their subject matter and of the way in which they present it. Adopting new technological forms of presentation necessarily demands a learning curve, the dimensions and the length of which are unknown to them.

If It Ain’t Broke...

Many faculty who excel in face-to-face forms of learning resist the new technologies. They offer at least three rea-

sons for their attitude. First, if they are doing a superior job already, why change? Their second argument is more pragmatic: they know that they are good educators now, but there is no assurance that this success will translate across forms of presentation. Finally, some faculty fear that a failed attempt at transformation could result in an entire class of victims rather than educated students.

We’re All Alone in This Together

Unlike the entrepreneurs, potential second-wave faculty will demand more user-friendly levels of institutional support. The greater the apparent effort to adapt, the more likely it is that the first two reasons for hesitancy will come to dominate faculty members’ thinking.

Know Thyself

Adapting to new teaching environments represents a major commitment by faculty to reevaluate their personal approach to learning. Tony Bates observed, “Some basic understanding of the teaching and learning process, and in particular the different kinds of teaching approaches and the goals that they are meant to achieve, need to be

understood.”⁶ It is a basic fact that many of the best teachers possess natural communication and information management abilities that, for many of them, are simply assumed rather than are the product of intensive self-examination. Since one requirement for transformation is coming to grips with how the new technologies can enhance learning objectives, a problem results in that many successful teachers have never engaged in this form of articulation and self-evaluation and may be disinclined to do so.

It is interesting to note that the second-wave faculty described here are not hesitating due to the lack of university rewards for faculty transformation and learning innovations. They share the first-wave faculty’s commitment to quality learning but are simply more risk-averse.⁷ Perhaps as universities change their reward structures in the tenure and promotion process, a third wave of faculty will emerge—those who see adopting as a way to advance their professional careers. Second, it is important to point out that what works “best” at one institution may produce failure at another. This may have noth-

ing to do with differences in implementation strategy but may be related to the differing cultures that exist within the implementing institutions. As Jan A. Baltzer observed: “For an information technology professional, success or failure within an organization can be the direct result of the individual’s ability to analyze his/her corporate culture and then develop strategies to work within that culture.”⁸

Innovations and Institutional Cultures

Whereas the relationship between innovation and culture has been recognized, both in classic works such as *Diffusion of Innovations* by Everett M. Rogers and in newer works such as *Sustaining Innovation* by Paul C. Light,⁹ the application of culture to teaching transformation is less well developed. Table 1 presents an example of how two cultural dimensions (trust and openness to innovation), across high and low resource environments, might lead administrators to consider using different engagement options depending on the cultural “mix” present at their institution. Each one of the cell entries can be viewed as a

TABLE 1. UNIVERSITY CULTURE AND METHODS OF FACULTY ENGAGEMENT

	HIGH TRUST		LOW TRUST	
	HIGH RESOURCE	LOW RESOURCE	HIGH RESOURCE	LOW RESOURCE
HIGH INNOVATE	Centralized Support Self-Starters Administration with Maintenance Role	Centralized Grant Development Outside Funding Support	Decentralized Support Faculty-Directed Projects High Faculty Profile in Planning	Encouragement of Faculty Outside Support Activities Encouragement of Unit-Based Rewards
LOW INNOVATE	Emphasis on Technical Support Centralized Training	Outside Team Visits Benchmarks Swap and Share Contagion Effects	Decentralized Unit-Based Support Training of Unit Support Personnel	No Transformation Likely Change in One Parameter Necessary

If institutional culture is an important consideration affecting the success or failure of teaching transformation, innovators must consider the systemic characteristics rather than the “practice” characteristics prior to transformation. . . . To impose any one of the “best practices” . . . and expect it to work because it is a “good idea” would be a mistake.

process-evaluation hypothesis that begs for cross-institution testing.

The point is that if institutional culture is an important consideration affecting the success or failure of teaching transformation, innovators must consider the systemic characteristics rather than the “practice” characteristics prior to transformation. As Rogers pointed out: “Change agents seek to determine the needs of their clients, and then to recommend innovations that fulfill these needs. Discovering felt needs is not a simple matter; change agents must have a high degree of empathy and rapport with their clients in order to assess their needs accurately.”¹⁰

To impose any one of the “best practices” listed below and expect it to work because it is a “good idea” would be a mistake. Rather, after an institution has undergone a serious self-assessment regarding transformation and the identification of needs, the better route would be to produce an integrated package of “best practices” congruent with those identified needs and the institution’s culture.

Selected “Best Practices”

Based on the analysis of the needs and motivations of first- and second-wave faculty, we identified five areas that affect levels of faculty engagement: training; grants and start-up resources; technical support; assessment; and communication.

Training

This area addresses one of the sources of hesitancy for second-wave adopters:

“We’re all alone in this together.” Regardless of the form of learning technology employed (asynchronous, enhanced presentation, partially Web-based, totally Web-based), second-wave faculty, by definition, lack the expertise necessary to self-start a learning transformation. However, “best practices” institutions do not provide explicit training to faculty members in curriculum redesign but instead promote faculty acquisition of curriculum-development skills through project-oriented initiatives.¹¹ That training is delivered in a wide variety of ways. This, we believe, is due to the various institutional cultures. Getting faculty to undergo new training is difficult in and of itself; in some institutional cultures, it may be even more difficult—hence the need for numerous different approaches.

Grants and Start-up Resources

Faculty at schools with poorly developed faculty-administration interactions (what Brown and Floyd refer to as a poorly developed “ethos”) respond more positively when the administration demonstrates a commitment to transformation by offering support funds or buyouts. These practices also reflect the basic fact, as revealed by the experiences of the entrepreneurs, that course transformations demand considerable time and effort on the part of faculty. In addition to the characteristics of an “enabling environment” mentioned earlier, “best practice” institutions are also distinguished by their emphasis on the strategic investment of resources according to firm criteria for funding projects (as op-

posed to providing funding as a general “no-strings-attached” resource for all faculty and all courses). Further, these institutions “do not wait for, or depend on, external funding for their faculty instructional development initiatives.”¹²

Technical Support

Technical support also relates directly to the third concern of second-wave faculty: “We’re all alone in this together.” The programs that have the greatest levels of faculty adoption are those that approach “just-in-time” status in their technical support. Institutions vary in the manner that this support is delivered, but they generally use decentralized structures and funds for providing “just-in-time” technical support and centralized structures and funds for developing and supporting overall organizational strategies.¹³

Assessment

This area addresses what we believe to be a vital question in a second-wave faculty member’s decision to transform: “Does it work?” A finer tuning of that question is: “Does it work for people like me?” Several institutions, almost always through information technology, provide feedback and assessment reports to adopters. Many report that this practice produces a “contagion effect”: faculty innovations spread on the basis of application success (measured by such things as withdrawal rates, grades, and student satisfaction). And in many instances assessment results can, in turn, feed back into the reward structure of the institution. More and more assessment efforts are providing material for reports that faculty members can turn into professional articles. This can greatly reduce the perception of the “zero-sum” game that faculty often see between teaching innovation and research productivity.

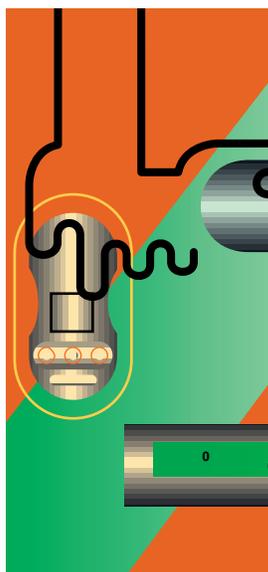


TABLE 2. FACULTY ENGAGEMENT AND SUPPORT “BEST” PRACTICES

	TRAINING	GRANTS AND START-UP RESOURCES	TECHNICAL SUPPORT	ASSESSMENT	COMMUNICATION
Auburn University	http://www.auburn.edu/img/imgsem.htm				
Bellevue Community College	http://www.nwccet.org/main.asp				
Bowdoin College		http://www.bowdoin.edu/dept/etf			
California State Polytechnic University, Pomona	http://www.csupomona.edu/~faculty_center				
California State University System				http://www.calstate.edu/special_projects/mediated_instr/	http://merlot.org
Carleton College		http://www.carleton.edu/campus/ACNS/faculty/grants/call.html	http://www.carleton.edu/campus/ACNS/faculty/support2.html		
Duke University			http://www.dunk.duke.edu/		
Duquesne University		http://www.duq.edu/cte/grants.html			
Embry-Riddle Aeronautical University	http://online.erau.edu/about/webect.html				
Emory University					http://www.emory.edu/ECIT
Faculty Connection					http://www.facultyconnection.org
IUPUI	http://www.center.iupui.edu/course_dev.html			http://www.center.iupui.edu/eval_assess.html	http://www.center.iupui.edu/conferences.html
Northern Arizona University					http://www.nau.edu/~otl/resources/
Pennsylvania State University		http://cac.psu.edu/ets/FacultyServices/fund.html	http://cac.psu.edu/ets/FacultyServices/index.html		
Raritan Valley Community College	http://rvcc2.raritanval.edu/~idc/IDC.htm				
Rensselaer Polytechnic Institute	http://www.center.rpi.edu http://www.center.rpi.edu/PewSym/mono1.html	http://www.center.rpi.edu/PewHome.html			http://www.center.rpi.edu/
Seton Hall University			http://www.cat.shu.edu/	http://www.shu.edu/depts/cat/assessment/initiative.html	
Staffordshire University					http://www.staffs.ac.uk/cital
Tufts University	http://www.tufts.edu/tccs/at/powerteams			http://tufts.edu/tccs/at/tlr	http://www.tufts.edu/tccs/at/faculty-feature
University of Arizona	http://www.u.arizona.edu/~fri				
University of California, Berkeley	http://www.itp.berkeley.edu:80/demystifying.html			http://www.itp.berkeley.edu:80/edug	
University of California, Davis			http://deas.ucdavis.edu/docs/tsp.html		
University of California, San Diego	http://libnet.ucsd.edu/se/full.html?record=501				http://webcast.ucsd.edu/

	TRAINING	GRANTS AND START-UP RESOURCES	TECHNICAL SUPPORT	ASSESSMENT	COMMUNICATION
University of Central Florida	http://reach.ucf.edu/~idl6543/	http://reach.ucf.edu/~idl6543/	http://reach.ucf.edu/~idl6543/	http://reach.ucf.edu/~coursdev/	
University of Connecticut			http://www.sp.uconn.edu/~wwfrr/main.html		http://www.sp.uconn.edu/~wwfrr/teds/ted.html http://www.sp.uconn.edu/~terry/TTFac/teachtech.html
University of Delaware	http://www.udel.edu/learn/technology/index.html	http://www.udel.edu/cte/grants.htm	http://www.udel.edu/learn/technology/index.html		http://www.udel.edu/learn/technology/index.html
University of Florida	http://grove.ufl.edu/~ctrain/Tap/about.html				
University of Georgia	http://webct.uga.edu	http://www.isd.uga.edu/instructdev/ltg.html			
University of Illinois		http://www.provost.uiuc.edu/awards/			
University of Iowa	http://www.its.uiowa.edu/its/				http://easl.its.uiowa.edu/acad/iteal.nsf
University of Kansas					http://eagle.cc.ukans.edu/~cte/EducationalSites.html
University of Maryland	http://www.inform.umd.edu/EdRes/FacRes/TeachTech/.TeachTech/III/		http://www.inform.umd.edu/TT/GeneralInfo/Support/Instructional.html		http://www.inform.umd.edu/Caprina
University of Michigan			http://www.oit.itd.umich.edu/oitweb/index.html		
University of Minnesota	http://www1.umn.edu/dmc		http://www1.umn.edu/dmc/contents/DMC-map.shtml		http://www1.umn.edu/dmc/portfolio/portfolio.shtml
University of North Carolina					http://www.unc.edu/courses/newchalk
University of Notre Dame	http://www.nd.edu/~kaneb/TWT.html	http://www.nd.edu/~edtech/funding/index.html	http://www.nd.edu/~edtech/services/equipment.html	http://www.nd.edu/~edtech/services/index.htm	
University of Oregon		http://zebu.uoregon.edu/edtech/pt.html			
University of Pittsburgh					http://www.pitt.edu/~ciddeweb
University of Southern California	http://www.usc.edu/isd/publications/adventures			http://www.usc.edu/isd/publications/adventures/instruction.html	
University of Texas, Austin	http://www.utexas.edu/cc/cit	http://www.utexas.edu/cc/cit/itap		http://www.utexas.edu/cc/cit/facweb/index.html	http://www.utexas.edu/cc/cit/facweb/index.html http://www.utexas.edu/world/lecture/index.html
University of Virginia	http://toolkit.virginia.edu	http://ti.itc.virginia.edu			
University of Washington	http://www.washington.edu/uwired				http://depts.washington.edu/catalyst/home.html
Virginia Polytechnic Institute	http://www.idi.vt.edu	http://www.edtech.vt.edu/cil/2000/XCaliber2000.html		http://www.edtech.vt.edu/cil/2000/CIL2000_rfp.html	http://www.edtech.vt.edu/cil
Wake Forest University	http://www.wfu.edu/CELL/index.html		http://www.wfu.edu/Organizations/winstonnet/backup/oldskool/runde/index.html	http://www.wfu.edu/Organizations/winstonnet/backup/oldskool/runde/index.html	http://www.wfu.edu/CELL/
Western Michigan University					http://www.wmich.edu/teachlearn/about/who.html
William Paterson University of New Jersey	http://www.wpunj.edu/irt/stac/				

The most successful institutions pay particular attention to “getting the word out” about their support services.

Communication

None of the first four “best practice” areas will have the desired impact unless this final area is managed well. An institution could have the best-possible training and technical support facilities and also have a strong cohort of entrepreneurs with a host of successful transformations and still not engage the second-wave faculty. The most successful institutions pay particular attention to “getting the word out” about their support services and have established information-exchange packages such as “swap-and-share” lunch meetings, “benchmarking” conferences with other units, and visitations to and from other institutions that either are successfully accomplishing transformation or are struggling with the same problems.

Table 2 provides a list of “best practices,”

presented by institution.¹⁴ This list by no means constitutes a complete inventory of the work being done in these areas. The practices were grouped into the five areas discussed above, yet many of the practices identified here can fall



into more than one of the categories. We encourage readers to visit the Web sites at the URLs listed with each institution.

Best Systems, Not Best Practices

Two very clear facts emerged from this attempt to develop an inventory of the “best practices” involved in the process of faculty engagement with and support of new learning technologies. First,

rather than focusing on “best practices,” an institution should instead emphasize “best systems.” We argue that the more integrated the system, the better is the chance that the institution will excel in each of the areas identified above.

These institutions offer a comprehensive and networked package of support services and engagement practices. The next step will be to outline case descriptions of these institutions.

The second fact to emerge from this overview is that communication is vital to successful institutional transformation. Support centers must be able to publicize their services to the academic

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community, and perhaps more important, faculty experiences with and opinions of transformation must be shared. Dorothy Frayer, who wrote an excellent article arguing that institutions should offer a comprehensive and integrated package of support services and engagement practices, explained the importance of faculty exchanges: “Faculty are often able to make the conceptual leap required to see how a colleague’s use of technology might apply in their own discipline. . . . For this reason, it is quite helpful to create opportunities for faculty to learn about technology use by colleagues within their discipline at other institutions.”¹⁵ The institutions that feature the “best practices” in faculty engagement with and support of new learning technologies are the ones that are making these opportunities a reality. *e*

Notes

1. David G. Brown and Elson S. Floyd, “Faculty Development: Building University Programs That Capture Faculty Enthusiasm for Computers and Learning,” *MultiVersity* (winter 1999), 17.
2. See Jeffrey R. Young, “Colleges Question Data Used by ‘Yahoo’ to Rank ‘Most Wired’ Campus,” *Chronicle of Higher Education*, May 9, 1997, A29; Florence Olsen, “Academic Technology Group Enters the Fray over What Makes a ‘Wired’ Campus,” *Chronicle of Higher Education*, March 9, 2000.
3. David G. Brown, ed., *Interactive Learning: Vignettes from America’s Most Wired Campuses* (Bolton, Mass.: Anker Publishing Co., 2000).
4. These findings are in line with those recently reported by Catherine Schifter, “Faculty Participation in Asynchronous Learning Networks: A Case Study of Motivating and Inhibiting Factors,” *Journal of Asynchronous Learning Networks* 4, no. 1 (June 2000) (<<http://www.aln.org/alnweb/journal/jaln-vol4issue1.htm>>).
5. APQC, “Today’s Teaching and Learning: Leveraging Technology.” For the executive summary of this report, see <<http://www.store.apqc.org/cgi-bin/vsc.exe/Jacket/CMTEACHFID.htm?E+Bookstore>>.
6. Tony Bates, *Managing Technological Change: Strategies for College and University Leaders* (San Francisco: Jossey-Bass, 2000), 102–3.
7. See William Geoghegan, “Instructional Technology and the Mainstream: The Risks of Success,” in Diana

- Oblinger and Sean Rush, eds., *The Future Compatible Campus* (Bolton, Mass.: Anker Publishing, 1998).
8. Jan A. Baltzer, *People and Places: Managing the Human Side of Information Technology Application*, Association for the Management of Information Technology in Higher Education, Professional Paper Series #7 (Boulder, Colo.: CAUSE, 1991), 4.
9. Everett M. Rogers, *Diffusion of Innovations*, 4th ed. (New York: Free Press, 1995); Paul C. Light, *Sustaining Innovation: Creating Nonprofit and Governmental Organizations That Innovate Naturally* (San Francisco: Jossey-Bass, 1998).
10. Rogers, *Diffusion of Innovations*, 228.
11. APQC, “Today’s Teaching and Learning,” executive summary, 9.
12. Ibid. For a well-documented survey of this topic, see Gary Berg, “Early Patterns of Faculty Compensation for Developing and Teaching Distance Learning Courses,” *Journal of Asynchronous Learning Networks* 4, no. 1 (June 2000): 62–75 (<<http://www.aln.org/alnweb/journal/jaln-vol4issue1.htm>>).
13. Ibid.
14. The author is indebted to Tor Cross and Anne Archambault for the construction of Table 2.
15. Dorothy A. Frayer, “Creating a Campus Culture to Support a Teaching and Learning Revolution,” *Cause/Effect* 22, no. 2 (1999): 3.



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