

EDUCAUSE Center for Applied Research

Research Bulletin

Volume 2003, Issue 16

August 5, 2003

Student and Faculty Perspectives on E-Learning Support

Mary Beth Baker, EDUCAUSE Center for Applied Research

Raymond Boggs, IDC

Paul Arabasz, IDC



Overview

Much of the research about the growth of e-learning in higher education focuses on the impact of this growth on institutional resources. To be sure, e-learning places new demands on the technical training and support capabilities of higher education institutions. Whether supporting the use of new technology in traditional classroom environments, implementing hybrid courses that include online components, or assisting in the delivery of online distance-learning courses, institutions face big challenges in meeting the technology needs of faculty and students.

Attitudes of faculty and students, however, are less commonly examined—to determine what those attitudes are, how they are formed, and how profoundly they impact e-learning adoption and use. Faculty who have (or have not) perfected their pedagogical strategies in face-to-face classroom instruction sometimes find themselves wrestling with new obstacles in the e-learning environment, such as limitations of technical infrastructure (bandwidth, hardware, and software), learning how to build interactivity into online course modules, and maintaining up-to-date Web links, to name just a few. Students encounter their own problems related to e-learning, including learning to use courseware and word-processing, spreadsheet, and presentation software *well enough to take exams and fulfill assignments*; managing online content; and learning and applying self-disciplined time management.

A recently published study of faculty use of course management systems reveals that faculty and student attitudes about e-learning are driven in large part by the amount and kinds of support and training their institutions provide to those who must climb the e-learning curve.¹ While institutions might measure training and support in financial terms—how much it costs to provide—making insufficient investments in these services has been shown to seriously jeopardize the willingness of students and instructors to adopt e-learning. Indeed, faculty and student attitudes turn out to be key factors in the overall success or failure of institutional e-learning initiatives, and training and support are the strongest influences on those attitudes.

In October 2002, to help institutions address the issue of e-learning support, the EDUCAUSE Center for Applied Research (ECAR) sponsored a study to examine current e-learning activity in higher education.² Nearly 300 institutions representing all Carnegie classifications participated in a quantitative survey, qualitative interviews, or case studies. This research bulletin is the second of two that presents the highlights of that study. The first, “Highlights of E-Learning Support Practices,”³ reviewed e-learning activities and how institutions are organizing to meet changing support requirements. This bulletin focuses on the evolving needs of faculty and students as they move forward with e-learning and presents support-staff activities and the effectiveness of different approaches to meeting the ever-changing needs of faculty and students.

Highlights of E-Learning Support Success

Institutions with the most successful e-learning initiatives in higher education share some common characteristics:

- They use incentives to encourage faculty to pursue e-learning development and experimentation.
- They help facilitate faculty and student preferences in communication methods during e-learning training and support.
- They understand faculty and student experiences with e-learning technology and promptly address the challenges those groups face.
- They help faculty members understand and employ effective practices for e-learning.

Faculty Incentives for E-Learning

Incentives for faculty involvement in e-learning are often driven by the strategic motives of institutions that want to

- institutionalize e-learning, thereby transforming the entire teaching and learning experience;
- accommodate growing student enrollment;
- sustain academic diversity; and
- gain a competitive advantage.

Strong, positive administrative leadership plays a big role in encouraging faculty members to incorporate technology in instruction. Eighty-three percent of the respondents to the e-learning study characterized their institutions as supporting the incorporation of technology into instructional practices.⁴ For faculty members seeking tenure, formal policies about how e-learning efforts will impact promotion and tenure decisions are extremely important.

While providing e-learning training in group settings might be most efficient for the trainers, personalized and individualized instruction for faculty is invariably more effective. Collegial interaction among instructors and between instructors and instructional technologists can generate interest in new approaches to classroom activity and in addressing minor technical concerns that might otherwise impede progress. A culture of innovation can also provide support for moving forward with e-learning training. This is especially important for junior faculty looking to advance their careers. For these instructors, time spent in tenure-related research may be viewed as a higher priority than time spent strengthening e-learning classroom skills.

Table 1 illustrates some specific incentives—supported by institutional policies—to encourage faculty to integrate technology into instruction across various Carnegie classifications. Some institutions use multiple incentives.

Table 1. Institutional Policies Encouraging Technology Integration with Instruction

| | Stipends | Release Time | Special Consideration for Promotion or Tenure | Mandatory/ No Special Considerations | Other | No Institutional Practices |
|----------------------------------|----------|--------------|---|--------------------------------------|-------|----------------------------|
| Associate (n = 40) | 65% | 75% | 13% | 10% | 20% | 10% |
| Baccalaureate (n = 48) | 35% | 19% | 15% | 4% | 31% | 42% |
| Master's (n = 77) | 57% | 47% | 12% | 8% | 25% | 25% |
| Doctoral (n = 57) | 46% | 44% | 11% | 4% | 44% | 26% |
| All Respondents (n = 258) | 47% | 43% | 12% | 7% | 30% | 29% |

Base: Total respondents (n = 258). Multiple responses allowed.

More than 70 percent of respondents noted that their institutions have formal practices to encourage faculty to use e-learning technology in the classroom. Baccalaureate institutions are the least likely to have incentive practices in place, in keeping with their lower e-learning activity levels in general. In contrast, associate institutions are the most likely to encourage e-learning course development.

Support can take a variety of forms, with some institutions noting that indirect encouragement can often be more effective than direct mandates. Virginia Tech, for example, does not require faculty to attend its Faculty Development Institute, but upgrades in hardware, software, and network connections are based on attendance. Colgate University noted that it has a “stealth” approach to encouraging and supporting faculty who express interest, who then share positive experiences with colleagues. As one administrator noted, “We get more interest through word of mouth and gentle leading than through any top-down kind of approach.”

Some administrators noted that various departments and schools may place different emphasis on the three basic faculty activities: teaching, research, and service. The teaching-versus-research balance is a perennial challenge, and the decision to invest the time to capitalize on e-learning resources can be a difficult one. For that reason, effective e-learning training is especially important to build faculty support.

Face-to-Face Versus Electronic Communication

As important as advances in e-learning technology have been in changing the nature of the classroom experience, changes in instructor attitudes and actions have been far more important. Increased reliance on e-mail for communication and on the Internet as a resource for research, instruction, and faculty-student interaction sets the stage for further change.

Even assuming administrative and collegial encouragement of e-learning and a desire among faculty to advance their understanding of e-learning methods, the natural question with regard to training is, What works? Ironically, the old-fashioned personal touch is seen as more important and effective than more advanced and efficient technology-enabled approaches. Adoption of e-learning is uncomfortable for those who lack confidence in their technology skills or believe that e-learning will lead to more work.

For many, hearing success stories from colleagues and working one-on-one with someone “down the hall” can make the difference between a positive attitude and a negative one. As Table 2 indicates, 9 out of 10 respondents cited face-to-face classes and workshops and face-to-face meetings as very or somewhat important in supporting faculty e-learning activities.

Table 2. Importance of Communications Methods Used to Support Faculty E-Learning Activities

| | |
|-----|--------------------------------|
| 93% | Face-to-face classes/workshops |
| 89% | Face-to-face meetings |
| 10% | Synchronous tools |
| 6% | Synchronous Web-based tools |
| 3% | Video conferencing |
| 5% | Other |

Percent of respondents rating factor as important (1 or 2 on a scale of 1–5 where 1=very important), Base: All respondents (n = 251).

As e-learning activities increase, and as a broader spectrum of faculty and students engage in e-learning, preferences for the communication and support mechanisms are likely to shift, though the changes anticipated for the 2003–2004 academic year are quite modest. Survey respondents indicated that the personal touch will remain especially important, although the importance of tools-based communications will increase slightly. While this may seem counterintuitive, it is very much in keeping with the nature of those being trained. The most advanced users, who will also be the earliest adopters, are likely to be the most comfortable with technology and the most willing to rely on technology for training. Over time, as e-learning use increases, training requirements will become more complex: advanced users will want to sharpen their skills further, while less knowledgeable users will still require training in basic classroom technology skills.

Where Faculty and Students Most Need E-Learning Support

Students and faculty vary in their levels of proficiency with technology, though the distribution of sophistication is similar, at least according to survey respondents who tended to be drawn from the IT support and administration community. Each group included people who fell into one the following categories:

- *Leading edge*—Experiments frequently with emerging/cutting-edge computer applications/technology
- *Early adopter*—Uses advanced features in generally adopted computer applications/technology; may experiment with emerging/cutting-edge applications/technology
- *Mainstream user*—Uses generally adopted computer applications/technology proficiently on a regular basis but not prone to experimentation

- *Reluctant*—Tries to use generally adopted computer applications/technology but has problems using basic features
- *Avoider*—Uses computer as little as possible

As Table 3 indicates, about one-fifth of faculty and students can be considered advanced in their technology use, with half in the mainstream and the rest trailing behind.

Table 3. Categorization of Student and Instructor Computer Skill Levels

| | Instructors | Students |
|----------------------|-------------|----------|
| Leading edge | 6% | 8% |
| Early adopter | 14% | 14% |
| Mainstream | 51% | 54% |
| Reluctant | 19% | 16% |
| Avoider | 10% | 8% |

The challenges in supporting a diverse group of users can be significant and are typically driven by the most advanced users. This means that institutions can be encouraged to develop the kinds of support resources that may be inappropriate for less-experienced users. Early attention to less-knowledgeable—but often equally demanding—students and faculty can provide important insights into how best to address support questions that are likely to recur with greater frequency over time.

Although faculty and students seem normally distributed by ability in a similar fashion, the challenges associated with providing technical support to the two groups are very different. Table 4 shows the technology support challenges that survey respondents cited for students. Note that the greatest challenges seem associated with those at the ends of the skill-distribution curve—keeping up with student technology demands is one challenge, but so is students’ lack of technology knowledge.

Table 4. Significant Technology Support Challenges for Students

| | |
|-----|---|
| 32% | Network access/usage problems |
| 28% | Keeping up with students’ technology demands in class |
| 28% | Students’ lack of technology knowledge |
| 23% | Utilizing online course applications/tools |
| 20% | Utilizing online course technology |

Percent of respondents rating factor a significant challenge, Base: All respondents (n = 260).

The challenges associated with providing e-learning support for faculty more often are associated with lack of knowledge than with testing the limits of available capabilities (see Table 5). Lack of knowledge about course design and technology in general are cited most often, and related to this is the natural lack of confidence in a new

approach—especially one where system crashes can still be a problem. One positive challenge is the need to keep up with instructor demands to learn technology—exactly the kind of problem that shows e-learning’s potential.

Table 5. Significant Technology Support Challenges for Instructors

| | |
|-----|--|
| 69% | Instructors’ lack of knowledge to design courses with technology |
| 62% | Instructors’ lack of confidence to use technology in teaching |
| 52% | Instructors’ lack of technology knowledge |
| 28% | Inconsistent platforms, tools, software |
| 23% | Keeping up with instructors’ demands to learn technology |
| 14% | Network/software crashes during classes |

Percent of respondents rating factor a significant challenge, Base: All respondents (n = 260).

Learning from the Pioneers

Every institution must find its own best approach to support for e-learning. That noted, there are five fundamental lessons based on real-world experiences that can help in crafting an effective e-learning support strategy.

Nurture Informal Support and Information Exchange Among Faculty

Formal structures may be counterproductive, but institutions can still provide an environment in which informal information exchange can thrive. The University of Southern California (USC), for example, has initial tutorials on e-learning for faculty, but the university also automatically invites all tutorial attendees to an annual roundtable discussion to learn more tips and share “how to” advice. In addition to adding to the body of shared information, this approach builds a stronger interdepartmental group of e-learning users who can serve as both advocates and resources for colleagues.

Encourage Continuing Professional Growth for Faculty and Students

The nontraditional nature of e-learning and the new skills that it requires may discourage some students and faculty from actively embracing the new technology. From a practical standpoint, though, it is likely that any discipline associated with lifelong learning will be associated with some form of e-learning. St. Philip’s College, for example, applies e-learning in a pragmatic way. Its health information technology curriculum is now online, in keeping with the way the profession is now conducted. As one administrator noted, “It is important to teach students in a way that people are likely to work.” The institution supports the view that an e-learning course experience as an undergraduate also prepares the student for postgraduate professional development.

Design a Process Rather than a Solution

It seems a rueful fact of life that the road to lifelong learning is associated with an apparent lifelong quest for a solution to e-learning support. While there will be at least

relative stability among key technology elements, the creative, individualized, and often messy nature of course content development and implementation means that e-learning support will also have to be flexible and adaptable.

USC's experience is typical, with the institution noting that there is no one-size-fits-all model for e-learning support. One administrator pointed to the varying requirements of different users: "Contrast the needs of the school of education with those of the business school." A highly leveraged central support resource must be paired with a distributed model at the user level. The challenge, of course, is that at the distributed level there are different levels of sophistication and different issues related to funding. Understanding that this is a reality worth reconciling for the long term rather than an impediment to be overcome in the short term can help deflect potential frustration.

Encourage Regular Faculty-Student Communication

Even with technology issues under control, e-learning classes can be challenging to students who do not appreciate that the classes demand self-discipline in managing course work. As one administrator at St. Philip's College noted, "Students often feel they're drifting in space, especially if they don't communicate enough with the instructor." The right balance of communication is essential to keep retention rates high and also ensure that students don't view e-learning activity as "just an Internet class" that can be done at any time—including the last minute. Because e-learning students often self-advise, it is easy for them to misunderstand the demands. Consequently, effective communication with faculty is extremely important to reinforce the view that while the discipline of e-learning may be different from that of traditional courses, student commitment needs to be every bit as vigilant.

E-Learning Is About Teaching, Not Tools

The challenges of e-learning implementation, the increasing sophistication of advanced solutions, and the satisfaction associated with mastering a new technology can all distract an instructor or administrator from the most important benefit of e-learning: improving the quality of instruction. Teaching, learning, and pedagogy should be the true heart of e-learning, not the technology specifics. The director of course development and Web services at the University of Central Florida noted that successful faculty development results from an instructional approach, not from an emphasis on technology. Rather than approach e-learning training as an exercise in mastering tools (such as slide creation or course management), focus on what instructors really do and what they really need. This ultimately allows faculty members to succeed on their own terms in the new environment.

What It Means to Higher Education

E-learning will, no doubt, play an increasingly important role in higher education as the line between face-to-face learning and e-learning continues to blur. Technology-enhanced classrooms, hybrid courses, and online distance learning are here to stay. Supporting faculty and students through their entry into e-learning is as much as

pedagogical issue as it is a technical one, and for many the challenges can be more about self-discipline than about using e-learning tools and the Internet. Faculty and student perspectives about e-learning must be heeded. After all, these are the individuals who must implement the initiatives that administrators are banking on to drive institutional growth and competitive advantage. Prompt and effective attention to the e-learning obstacles that students and faculty encounter is the first step toward long-range success.

Key Questions to Ask

- How supportive is your institution of faculty engaged in e-learning? To what extent is there formal and informal encouragement of faculty efforts?
- What communications methods does your institution use in training and support for e-learning? In which situations is face-to-face communication best? In which situations is electronic communication best?
- Does your e-learning support effort address the challenges that faculty and students identify as most common?
- What institutional processes are currently in place, or need to be, to strengthen support for e-learning?

Where to Learn More

- S. Weber and R. Boggs, *The State of Technology Usage in Higher Education*, March 2001, IDC #24015.
- P. Arabasz, J. Pirani, and D. Fawcett, *Supporting E-Learning in Higher Education* (Boulder, Colo.: EDUCAUSE Center for Applied Research, Volume 3, 2003).
- G. Morgan, *Faculty Use of Course Management Systems* (Boulder, Colo.: EDUCAUSE Center for Applied Research, Volume 2, 2003).
- P. Arabasz, R. Boggs, and M. B. Baker, "Highlights of E-Learning Support Practices," *ECAR Research Bulletin*, Volume 2003, Issue 9, April 29, 2003.

Endnotes

1. G. Morgan, *Faculty Use of Course Management Systems*, ECAR Research Study, Volume 2, 2003, pp. 45–46.
2. P. Arabasz, J. Pirani, and D. Fawcett, *Supporting E-Learning in Higher Education*, ECAR Research Study, Volume 3, 2003.
3. P. Arabasz, R. Boggs, and M. B. Baker, "Highlights of E-Learning Support Practices," *ECAR Research Bulletin*, Volume 2003, Issue 9, April 29, 2003.
4. Arabasz, Pirani, and Fawcett, op. cit., p. 71.

About the Authors

Mary Beth Baker (mbobaker@pacbell.net) is a Senior Fellow at the EDUCAUSE Center for Applied Research; Raymond Boggs (rboggs@idc.com) is Vice President, Small Business and Education Research, and Paul Arabasz (parabasz@idc.com) is Director, Personal Systems Consulting, at IDC.

Copyright 2003 EDUCAUSE and Mary Beth Baker, Raymond Boggs, and Paul Arabasz. All rights reserved. This ECAR research bulletin is proprietary and intended for use only by subscribers. Reproduction, or distribution of ECAR research bulletins to those not formally affiliated with the subscribing organization, is strictly prohibited unless prior permission is granted by EDUCAUSE and the authors.