

Respondent Summary

Evolving Campus Support Models for E-Learning Courses

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Wireless networks, course management systems, multimedia, and other technologies add new dimensions of richness and complexity to the learning experience. While technology offers a wide range of learning possibilities, it presents a new set of challenges. To use e-learning effectively, institutions must adapt pedagogy, enhance the technical proficiency of users, and develop a reliable and robust technical infrastructure. All this translates into a host of new faculty- and student-support requirements that institutions must address. To help institutions manage this issue, the EDUCAUSE Center for Applied Research (ECAR) sponsored a study to examine current e-learning activity in higher education. The study addresses the following areas:

- State of e-learning
- Current faculty- and student-support requirements
- Current e-learning infrastructure, training, course/curriculum development, and support practices
- Long-term e-learning support challenges

Scope and Methodology

This study was designed to gather quantitative and qualitative data from institutions representing all Carnegie Classifications. The following data collection and analytical activities were conducted:

- An online survey was completed by 277 respondents from EDUCAUSE member institutions. The purpose of the survey was to develop a baseline on the state of e-learning across all Carnegie Classifications.
 - In-depth telephone interviews and/or case studies were conducted with 20 institutions to understand the “how’s and why’s” of e-learning support models. Interviewees included representatives from support providers (for example, chief information officer or head of instructional technology) and support users (for example, the academic senate chair of the instructional technology committee or an appropriate dean or department chairperson).
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For the purposes of this study, the following definitions are used to describe e-learning courses:

- **Online distance-learning courses:** The majority of, if not all, instruction takes place online. There are no requirements for face-to-face meetings between students and instructor, either in the classroom or via video during the course.
- **Hybrid courses:** In these courses the instructor combines elements of online distance-learning courses and traditional courses. Online forums or Web-based activities may replace a portion of classroom sessions.
- **Traditional courses with technology elements:** These courses are traditional in that the instructor teaches all sessions in the classroom but with the occasional use of technology, such as Web-based activities, multimedia simulations, virtual labs, and/or online testing.

This report is a summary of key findings of the online survey, with added insights from the in-depth interviews. It focuses primarily on central resource practices and issues and represents the average or range of experience of a variety of institutions. Because each institution maintains a unique culture, organizational structure, and relationship between central and school/departmental support resources, some readers will find this information contrary to their own experiences.

State of E-Learning Today

For a variety of reasons, e-learning programs are a high priority for many institutions. For some, the emergence of these programs is an institutional response to evolving faculty interest in applying technology to instruction. For others, this phenomenon is part of the overall institutional strategic vision to enhance the learning experience, to reach a dispersed population, or to increase enrollment. For others, it is a response to increasing student demand for convenience or a logical extension of earlier distance-learning programs offered through video or satellite television. The introduction of course management systems is also increasing penetration rates of e-learning across campuses. In a time when e-learning strategies are becoming an important institutional strategy, nearly two-thirds of respondents express concern that the growth of e-learning support demands will outpace institutional ability to provide essential student and faculty support.

Who Is Doing What

E-learning course activities at institutions surveyed vary by Carnegie Classification. Penetration rates are 100 percent of traditional courses across all institution types. Roughly 70 percent of all institutions currently offer online distance-learning courses, while 80 percent of all institutions offer hybrid courses. More than 95 percent of associate institutions offer online distance-learning courses, versus 27 percent of baccalaureate institutions. Hybrid courses are offered at 93 percent of doctoral institutions and at 89 percent of master's institutions but at only 50 percent of baccalaureate institutions.

Due to the relatively low rates of adoption at baccalaureate institutions, a higher percentage of public institutions offer online distance learning and hybrid courses than their private counterparts. Similarly, smaller institutions (fewer than 5,000 FTEs) lag in offering online distance learning and hybrid courses.

A Growing Commitment

While the percentage of institutions that offer online distance-learning and hybrid courses is impressive, most have only introduced a handful of courses (see Table 1). Those institutions that offer online distance-learning courses indicated that at the end of the 2001–2002 academic year, online distance-learning courses represented only 5 percent of all courses offered. Of those offering hybrid courses, the percentage that are hybrid was more than twice that level (11 percent).

Table 1. Summary of Key Findings for Online Distance-Learning and Hybrid Courses

	Percent of Courses Offered	Percent of Institutions Anticipating More Than 10 Percent Growth in Course Offerings in 2002–2003	Percent of Faculty Teaching a Course	Percent of Students Taking a Course
Online Distance Learning	5	23	9	7.5
Hybrid	11	30	11	13

More than 70 percent of institutions expect to increase the number of e-learning course offerings in the next year. One-quarter of respondents anticipated more than 10 percent growth in online distance-learning courses, while one-third of respondents anticipated greater than 10 percent growth in hybrid courses. Baccalaureate institutions provided the most conservative forecast, with 50 percent of respondents predicting growth in online courses, 16 percent projecting a decline in the percentage of online courses, and 42 percent reporting no growth in the percentage of hybrid courses. Conversely, more than 80 percent of associate institutions anticipated growth in online courses, and 14 percent reported a decline in hybrid offerings.

The percentage of faculty teaching online or hybrid courses is less than 15 percent. Interestingly, however, roughly 80 percent of respondents indicated some agreement with the statement that their institutions encourage faculty to incorporate technology into instruction. Stipends and release time were the two most frequently identified practices to encourage faculty. Still, nearly one-third of respondents indicated that no special practices or considerations are offered to faculty.

Survey respondents estimated the percentage of students who take online distance-learning courses is 7.5 percent, versus 13 percent for hybrid courses. Associate institutions, which indicated a higher percent of online course offerings, reported the largest portion of student enrollment (10 percent) in online courses; baccalaureate institutions, which lag in course offerings, reported only 3 percent of students taking an online distance-learning course.

The Question of Support

Similarities and differences emerge in addressing support issues for faculty and students.

What Are the Challenges?

As the number of e-learning courses grows, the academic experience changes for an increasing number of faculty and students. The learning process evolves, and both groups must adapt accordingly. Course preparation may entail learning a new software application to convey a concept more effectively; students might express their learning efforts using audio or video in addition to the written word. The result is a new set of challenges that each must confront and overcome.

Respondents assessed both faculty and students as having similar computer skills. The nature of their support requests differs, however. Respondents identified “lack of knowledge to design courses with technology” and “lack of confidence to use technology in teaching” as significant technology support challenges. Students’ ability to use technology is not a significant challenge. Rather, the challenge is to enable students to use e-learning technology more: to provide an adequate network infrastructure and to keep up with their technology demands.

The percentage of support requests from faculty is much higher (54 percent) than from students (22 percent). As a result, providing support for e-learning gains priority. Respondents indicated that instructional technology support for pedagogical issues is a priority at many institutions, especially for traditional courses using technology—the most prevalent e-learning course type.

How Are Institutions Organized to Meet the Challenges?

Various factors—including size, location, academic programs, and culture—combine to create a unique central organizational structure at each institution. As a result, each institution organizes its e-learning support structure differently. Some trends did emerge from the research, however. Though some institutions have department/school support, central campus support remains the primary source of instructional technology FTEs, as reported by 64 percent of respondents. Forty percent of the institutions with a central support structure also indicated that an additional support structure was present in academic areas. More than 60 percent of doctoral institutions have an additional academic department or school-based structure providing substantive support for e-learning.

Roughly 50 percent of the campus support organizations devote staff part-time to support e-learning issues. Over the next two years, however, the trend will be to replace part-time staff with dedicated e-learning specialists in the areas of instructor e-learning support and faculty and student technical training. It appears that the area in greatest need is faculty technical training, with 50 percent of institutions planning to increase dedicated staff in this area.

Within campus structures, support staff are organized to support all types of e-learning courses. Different staff, however, are assigned to support faculty and staff. On average, 4.9 FTEs are devoted to student issues while 6.4 FTEs provide support to faculty, perhaps indicating that faculty have a more complex set of needs than students. Doctoral institutions have the highest number of staff in their central organizations, with 12.2 FTEs devoted to faculty and 9.6 FTEs devoted to students.

The Nature of Support

Providing adequate support for e-learning entails a variety of resources—technical infrastructure, training, course/curriculum development, and support. Each resource must be viable, ensuring that, for example, a pedagogically sound course is not hampered by inadequate bandwidth or a lack of instructor/student proficiency in course management software. As institutions implement numerous central resources to assist instructors and students, a variety of best practices have emerged.

Institutions may offer various types of central e-learning resources, but nearly 90 percent of respondents indicated that the “personal touch” remains the most important communication method. This includes face-to-face classes and workshops or meetings rather than asynchronous or synchronous Web-based tools and videoconferencing. This preference may have significant implications as the percentage of e-learning course offerings grows, requiring institutions to scale their resources accordingly. Respondents indicated that for the 2003–2004 academic year, the personal touch will remain very important, though slightly less than today, and that tools-based methods will grow little in importance.

Across all Carnegie Classifications, the majority of central efforts to support instructional use of technology is centered on technical versus pedagogical issues. Survey results indicate that more than 60 percent of effort is spent on hardware, network, and other technical infrastructure issues, whereas 12 percent is spent assisting faculty with pedagogy issues, 11 percent assisting with tool selection, and 8 percent creating e-learning course elements. Neither the size of the institution nor the percentage of hybrid or online distance-learning courses had an impact on the allocation of effort. In part, this finding may reflect the fact that this survey was sent primarily to campus information technology leaders, whose responsibilities may not include those for instructional development and/or design.

Types of Support

Technical resources predominate when online survey respondents identify the e-learning equipment/infrastructure, training, course/curriculum development, and support resources offered by their institutions. Not surprising is that all institutions offer equipment/infrastructure resources because they are required for essential institutional operations. But, as resources become more e-learning specific, a growing percentage of institutions do not provide them. This is especially apparent for support resources. With the exception of training resources, a higher percentage of baccalaureate, small (fewer than 5,000 FTEs), and private institutions do not offer the full complement of resources, possibly because of their lagging e-learning course activities and their smaller resource bases.

Central campus support is most often cited as providing support to faculty and students for technical areas such as equipment and infrastructure and technical training. School/academic department-based units are more likely to deliver support as resources become more specific to e-learning, such as for e-learning course creation, curriculum adaptation, and pedagogy workshops/sessions.

Equipment and Infrastructure Resources

A basic e-learning requirement is an adequate technical infrastructure on which to teach e-learning courses. This entails networks with adequate bandwidth, course management systems, technically equipped classrooms, and adequate computing equipment. Central campus support manages most

equipment and infrastructure resources. The most notable exception is the delivery of “real-life showcases of instructional technology,” which are provided by a central faculty resource center. Virtually all institutions provide equipment/infrastructures resources, again with the minor exception of real-life showcases of instructional technology, where eight percent of institutions do not offer this resource.

Training and Course/Curriculum Resources

E-learning classes cannot function if instructors and students cannot operate the necessary hardware and software. As a result, institutions maintain a variety of training resources to ensure a basic level of proficiency. Institutions must be cognizant of evolving technical skill levels and adapt their resources accordingly to handle the shifting need for advanced technical and pedagogical training. At more than 70 percent of responding institutions, central campus support manages technical training resources. School/academic department-based support, however, plays an increasing role in pedagogically oriented training.

A similar trend is true for the delivery of course/curriculum resources. Central campus support handles technical tasks, while responsibility for pedagogical resources shifts outward. One-quarter of respondents indicated that school/academic department-based units handle these tasks, and one-third of respondents reported that a central faculty resource center is responsible for these tasks. Table 2 and Table 3 indicate percentages of institutions offering various types of training resources and of course/curriculum resources, as identified by the study.

Table 2. Availability of Training Resources

Training Resources Offered	Percent Offered
Sessions/workshops/courses for technology training	100.0
One-on-one instruction/consulting sessions for technology training	97.3
On-site classroom network or technology training class	93.1
One-on-one instruction/consulting sessions for pedagogy issues	91.5
Sessions/workshops/courses for pedagogy issues or methodology	90.8
Pilot training to test e-learning elements in classrooms	83.1
Evaluation of instructors' effectiveness with e-learning tools	69.2

Table 3. Availability of Course/Curriculum Adaptation Resources

Course/Curriculum Adaptation Resources Offered	Percent Offered
Off-the-shelf authoring tools and software applications	97.7
Authoring tools and software application support	96.5
Creation of e-learning course materials	92.3
Online material research and review	90.8
Curriculum adaptation for e-learning	89.6
Customized applications/template creation	88.1
Copyright research and approval	87.3
Learning object repositories	71.2

Support Resources

More than 60 percent of respondents indicated that central campus support provides an e-learning telephone help desk and computer or Web-based instructional tools. Nearly 50 percent of respondents identified school/academic department-based groups and central faculty resource centers as handling many of the interpersonal support resources (such as support group meetings and in-class support). Table 4 identifies the prevalence of several types of support resources.

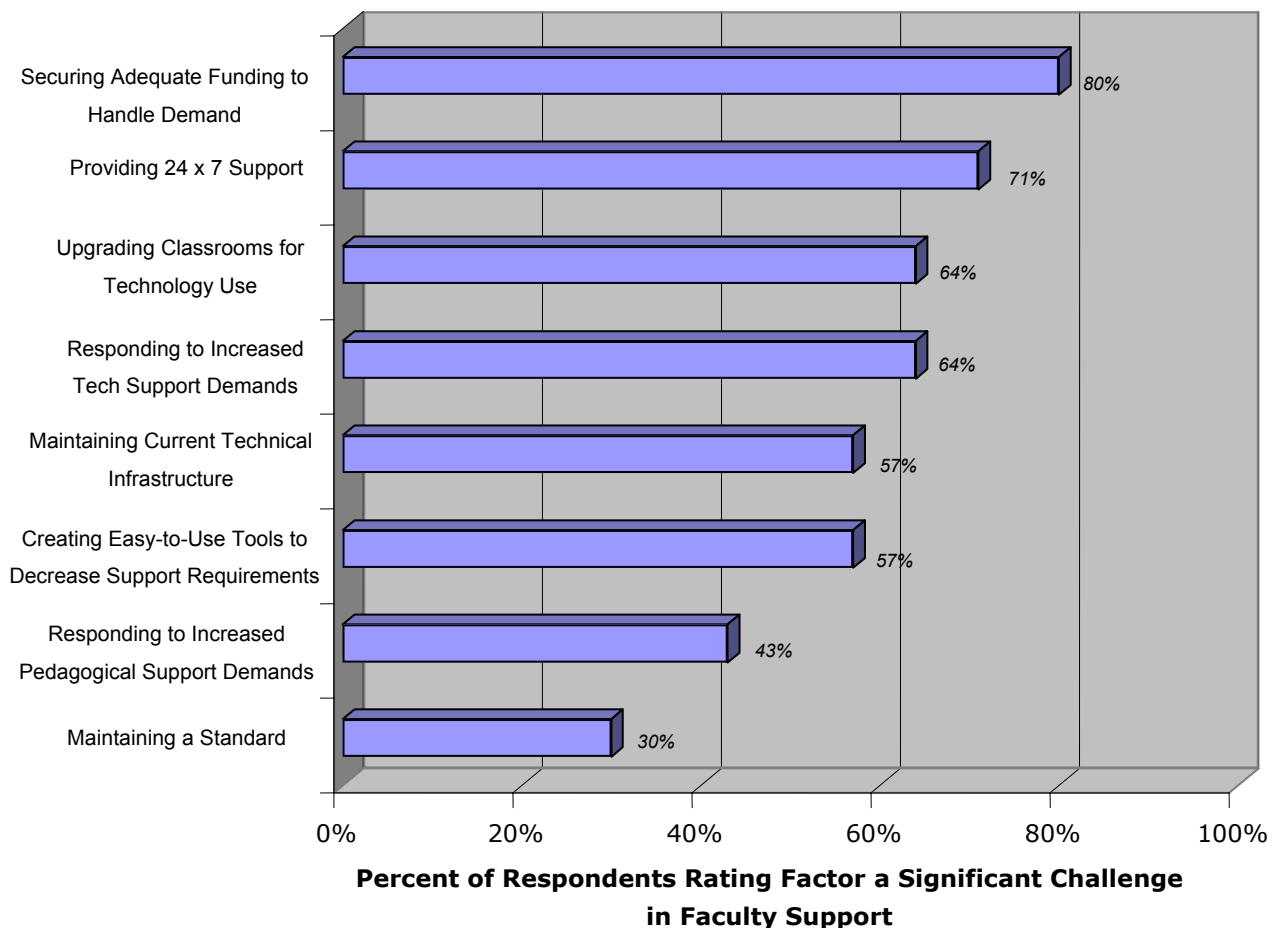
Table 4. Availability of Support Resources

Support Resources Offered	Percent Offered
Computer or Web-based instructional tools	96.9
Online reference resources	96.9
Listserves	82.7
E-learning/technology telephone help desk	81.5
Support-group meetings	80.8
Online community tools	80.0
In-class support or mentoring while teaching	74.2

Looking Ahead to Challenges and Responses

The growing popularity of e-learning generates new institutional challenges. Respondents indicated that securing adequate funding and providing 24 x 7 support are the leading challenges. Scaling and adapting current resources to meet escalating and evolving support requirements are also on the minds of many respondents. Figure 1 shows the responses regarding challenges in meeting instructor support needs. The responses are very similar for student support needs.

Figure 1. Challenges to Instructor Support Needs



Institutions are planning a variety of actions in response to these challenges. Some expect to implement a single standard for course management systems. Others are planning more classroom upgrades and adding special facilities to handle growing demand for multimedia applications. And to supplement personal interactions, many institutions expect to expand the use of e-training with more online resources. The bottom line is that institutions must continually balance the growth in the number of e-learning courses with the changing dynamics of support. Faculty and student needs will continue to evolve, and so must the design of institutional support.

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A copy of the full study referenced above will be available via subscription or purchase through the EDUCAUSE Center for Applied Research (www.educause.edu/ecar/) in June 2003.
