



# Supporting E-Learning at St. Philip's College

Dave Fawcett, IDC

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**EDUCAUSE**

4772 Walnut Street, Suite 206  
Boulder, Colorado 80301  
[www.educause.edu/ecar/](http://www.educause.edu/ecar/)

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EDUCAUSE is a nonprofit association whose mission is to advance higher education by promoting the intelligent use of information technology.

The mission of the EDUCAUSE Center for Applied Research is to foster better decision making by conducting and disseminating research and analysis about the role and implications of information technology in higher education. ECAR will systematically address many of the challenges brought more sharply into focus by information technologies.

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## Preface

The EDUCAUSE Center for Applied Research (ECAR) produces research to promote effective decisions regarding the selection, development, deployment, management, socialization, and use of information technology (IT) in higher education. ECAR research includes

- ◆ research bulletins—short summary analyses of key IT issues;
- ◆ research studies—in-depth applied research on complex and consequential technologies and practices; and
- ◆ case studies—institution-specific reports designed to exemplify important themes, trends, and experiences in the management of IT investments and activities.

While technologies offer many new learning possibilities, they also present new challenges. Institutions must adapt pedagogical practices, ensure technical proficiency, and develop and maintain a reliable and robust technical infrastructure to use e-learning effectively. These demands translate into a host of new instructor and student support requirements that institutions must address.

To help institutions achieve these goals, ECAR and IDC conducted research to learn

about the evolving student and instructor support requirements for online distance-learning courses, hybrid courses, and traditional courses that leverage technology. The research examines the issue from the perspectives of support providers and support users. From the provider perspective, ECAR examines central resource organization structures, resource availability and effective practices, and the challenges presented by e-learning's increasing popularity. From the user perspective, ECAR examines the e-learning course creation or adaptation process, challenges faced, and the effectiveness of support received for the process. The research also examines instructors' and students' technical proficiencies and support requirements. This research proceeded in three phases.

## Phase 1: Online Survey

ECAR conducted an online survey of the EDUCAUSE membership to develop a baseline on the state of e-learning courses and their central support activities in higher education. It received 274 valid responses, which represents 18 percent of the surveyed EDUCAUSE membership. The survey's general topics included:

- ◆ online distance learning, hybrid course offerings, and student and faculty participation;
- ◆ student and instructor technical proficiency, e-learning activities, and support requirements;
- ◆ availability of instructor training and technical, course/curriculum, and support resources;
- ◆ infrastructure and organization of support resources; and
- ◆ current and future challenges to meeting support requirements.

## Phase 2: Telephone Interviews

We conducted the second-phase interviews to drill down into the “whys” and “hows” of central resource support models for e-learning. We recruited interview candidates from a group of willing respondents from the initial survey; EDUCAUSE staff and an ad hoc advisory committee comprising EDUCAUSE members involved in e-learning also helped with recruiting. We selected candidates on the basis of several criteria, including reputation as a leader in e-learning, percentage of hybrid and/or online course offerings, and degree of faculty and student involvement in e-learning. During January and February 2003, ECAR invited 23 institutions to participate in qualitative interviews, and 19 institutions accepted the invitation.

ECAR and IDC created interview guides to solicit in-depth opinions on the issues touched on in the survey research. IDC and ECAR analysts conducted telephone interviews with support provider representatives (for example, a manager from the central IT department, a manager from the instructional technology unit, or a representative from the institution's faculty resource center) and support user representatives (such as the academic senate chair of the instructional technology committee or an appropriate

dean or department chairperson) from each institution.

## Phase 3: Case Studies

For the case study field research, ECAR and IDC chose six institutions from among the qualitative research participants and other institutions that have significant e-learning initiatives or have implemented noteworthy central e-learning support models. The case studies seek to gain a deeper understanding of the various central e-learning support models and, by extension, what has worked well and what needs improvement. We assume that readers of the case studies will also read the main report, which incorporates the case studies' findings within the report's generalized context.

ECAR wishes to thank the leadership of St. Philip's College for their time, assistance, and diligence in support of this research. In particular we thank Julia Briggs, director of instructional technology; Bess Porter, instructor of health information technology; Karen Sides-Gonzales, coordinator, Instructional Innovation Center; Bob Kemmerer, technical services manager; and Audrey Mosley, associate professor of English.

We hope that readers of this ECAR case study will learn from their experiences.

## Case Background

One of four colleges in the Alamo Community College District, St. Philip's College (SPC) is among the oldest and most diverse community colleges in the nation, and one of the fastest growing in Texas. A historically black college and Hispanic-serving institution with a semester enrollment of more than 8,000, SPC operates three campuses, the largest of which—the Martin Luther King campus in San Antonio—accounts for 90 percent of its enrollment.

In addition to traditional on-campus course delivery, SPC offers classes through

local high schools and military facilities, and through video telecourses and Internet-based online courses. The college employs 200 full-time faculty, 368 part-time and adjunct faculty, and 204 nonfaculty staff. SPC awards associate's degrees in arts, sciences, and applied sciences and a certificate of applied science.

SPC began offering Internet-based e-learning courses in 1997. At present, the college offers Web-based associate's degrees in liberal arts and health information technology, and a Web-based certificate in computer information systems. SPC is currently developing a Web-based certification program in computing information technology. Approximately 1,500 students are currently enrolled in e-learning courses. SPC, following guidelines set by the Texas Higher Education Coordinating Board, classifies e-learning classes into two broad categories:

- ◆ *Web-based distance learning*, defined as courses in which students spend at least 50 percent of class time outside the classroom. This category includes both interactive TV-based telecourses and Internet-based distance learning.
- ◆ *Web-enhanced classes*, defined as courses in which students spend at least 50 percent of class time in the classroom, but have a substantial Internet component to the overall learning environment. In these hybrid classes, Web technology supplements classroom time. The key criterion for a class to be truly "Web enabled" is the use of the Web to interact with content outside the class (including class-related research, assignments, and tests) for the purpose of reinforcing classroom instruction.

SPC's e-learning initiatives are funded almost exclusively by grants. For faculty course-development time, these include a series of "innovation grants" issued by the

district. Funding for support, course development, and faculty training resources comes from a five-year Title III grant from the U.S. Department of Education. SPC's eligibility for these grants stems from its status as an historically black college.

## **Drivers of E-Learning at St. Philip's College**

The origins of SPC's e-learning activities—which now involve nearly 50 instructors—can be traced back to a group of early pioneers who began using Web technology for instruction.

### **Faculty Innovation Plants the Seeds of E-Learning**

One of the first e-learning pioneers—Luis Lopez, an instructor in SPC's business information solutions department—created a fully Web-based class in 1997 using off-the-shelf Web publishing software. As the first to introduce Web-based e-learning at SPC, Lopez not surprisingly needed to improvise as he created the course platform. Since SPC hadn't yet procured course management software, Lopez opted to build a home-grown, HTML-based solution. One of the most important factors in this application's creation was that Lopez—an instructor of Web authoring—was able to rely on his own expertise.

At about the same time, other e-learning initiatives began to take shape in other SPC departments. In the English department, one instructor began investigating the feasibility of adding Web components to her second-semester freshman composition course. A parallel effort was also under way in the health information technology department, which teaches health professionals to work with health-care-related documentation in various settings. In both of these cases, the instructors took the initiative but needed assistance in navigating issues related to

e-learning technology, which—given the truly embryonic state of e-learning at SPC—were essentially unexplored.

The turning point came when Lopez began to partner with these instructors to help them frame their e-learning goals and get their courses online. As part of the latter effort, Lopez constructed a Web-based template that would provide faculty with an ersatz course management platform. This template, which was ultimately adopted as the early model for SPC's e-learning course platform, was perhaps the most important catalyst to the early growth of e-learning at SPC.

### **Building Critical Mass . . . and Shifting Gears**

While the collaboration of the first three pioneering faculty represented the genesis of e-learning at SPC, it also served as a starting point for its diffusion. The diffusive adoption of e-learning is best exemplified within the health information technology department, where Bess Porter, the department's e-learning pioneer, sold her colleagues on the benefits of Web-based instruction. As Porter pointed out, the fact that technology was becoming an increasingly important part of the discipline made it a fairly easy sell: "One of our central missions as instructors is to prepare students for what they are likely to encounter in the workplace, and the growing use of Web technology was—and is—clearly the most important development. We as a department saw the fundamental need to reflect this in both the content and instructional methods of our classes. As a result, our curriculum is now entirely online."

Within a year of e-learning's introduction at SPC, some 20 courses were being offered, all the product of faculty-driven innovation and collaboration. One of the clearest patterns to emerge at this early

stage was that pioneering faculty were—not surprisingly—developing e-learning courses that were of interest to them. Indeed, because there were effectively no institutional goals or policies to guide SPC's instructional technology efforts, no mechanism existed to ensure courses with the highest enrollment were e-learning enabled.

Cognizant of the growing number of e-learning courses sprouting up within various departments, SPC's academic administration sensed the need to play a more prominent role in shaping the college's overall e-learning policy. What SPC needed, said Julia Briggs, director of instructional technology, was a roadmap to guide and coordinate the next stage of e-learning's growth. "The administration realized it was time to put together a more serious plan on how we as an institution evolve the e-learning program," stated Briggs. "We needed to come up with a unified vision of how e-learning fit in with SPC's overall curriculum."

### **E-Learning and SPC's Vision**

At SPC, an especially tight linkage exists between its goals and motivations in offering e-learning courses and its institutional vision. The college defines this vision on the basis of both its model—it is a comprehensive, public community college—and its uniquely targeted constituency, the regional black and Hispanic population. As a public community college, SPC puts a strong emphasis on serving its local community and, as such, providing flexible options that accommodate its students' lifestyles and needs. One of the most fundamental defining characteristics of SPC's community is its high level of geographic dispersion, reflecting the relatively low population density of its surrounding area (western Texas). In recognition of this, SPC has established a wide range of satellite campus locations, including high schools, military bases, and branch campuses, and it

offers video-based telecourses to students. In all cases, the goal has been to increase access to the institution.

While increased access was not a significant driver of e-learning adoption in its early phase, e-learning was clearly consonant with this broadly defined goal. As discussed later, e-learning has gained more prominence in facilitating increased access because the college created a more institutional (top-down as opposed to bottom-up) set of strategies and policies. Briggs explained: "As we put together our strategic plan, we saw e-learning as a huge component of it. Given that our mission is to provide education to the community—and that we do not limit community to the surrounding geographic area—e-learning has become a critical part of our overall strategy because it allows us to expand our community even more."

The second key element of SPC's mission is a strong focus on developing practical, marketable skills among its students. Within the range of courses offered, this appears in the abundance of

- ◆ applied science and technical programs designed to prepare students for employment or to update skills; and
- ◆ special occupational training and upgrading programs for business, industry, and government.

SPC's e-learning initiative strongly supports its goal of giving students real-world exposure to advanced technology within their chosen subject areas. The previously discussed development of a Web-based curriculum within SPC's health information technology department strongly exemplifies this dynamic. Bess Porter, the initiator of this program, reaffirms the centrality of this goal. "Our goal in introducing Web-based distance learning was first and foremost to familiarize our students with this [Web-

centric] way of working because it was becoming increasingly prevalent in the industry," she said. "It's a case where the medium for exchanging information is nearly as important as the message."

## Promoting E-Learning Among Faculty

Having established a critical mass of e-learning courses in 1998, SPC began to focus on ways to bring the program to the next level—namely, how to create a more coherent set of policies at the institutional level. The most important issues affecting this goal related to

- ◆ creating an institutional framework for managing, training for, and promoting e-learning; and
- ◆ providing incentives to faculty to encourage them to develop e-learning classes.

The first year e-learning classes were offered at SPC, each initiative was essentially a "point solution"—one disconnected from a broader institutional context. The impetus for their creation came from pioneering instructors with little if any support from or coordination with department heads, instructional training resources, or SPC's academic administration. With SPC poised for growth in its e-learning activities, the need to increase the interaction between these areas became clear. This meant, for example, a more systematic set of training processes for e-learning as well as a more systematic communication flow between academic departments and the college's training resources—specifically, SPC's Instructional Innovation Center (IIC), discussed in detail below. By opening an ongoing dialog between the college's training resources and academic leaders, SPC as an institution could better plan which courses

would be developed into e-learning courses and, as a result, be better prepared to meet training and support needs.

SPC responded to the need for closer coordination through two initiatives. First, the college created a protocol through which academic departments systematically communicated their e-learning course and faculty development plans well in advance of the coming academic year (discussed in detail below). The second, more informal initiative established a tighter dialog between the department chairs and the heads of the IIC (Karen Sides-Gonzales) and instructional technology (Briggs).

Although the systematization of protocols was critical to the creation of an institutional e-learning strategy at SPC, the need to promote e-learning—to encourage faculty adoption and to gain administration support—was equally important. SPC therefore created incentives intended to compensate faculty for the time required to develop an Internet course. These include a one-course release time for full-time faculty and a \$500 stipend for adjunct faculty.

While such incentives stimulate faculty e-learning adoption to some extent, a considerably more effective approach has been to make e-learning participation part of the tenure and promotion evaluation process. Instructors receive this credit by completing the IIC's master teacher certificate program.

## **Supporting E-Learning at SPC**

Faculty and students present different e-learning support challenges; therefore, addressing them effectively requires different strategies and resources.

## **Key E-Learning Support Challenges: Faculty**

For SPC's faculty, perhaps the most frequently cited challenge is the sheer amount of effort and time required to develop and maintain an e-learning course. Briggs sees the growth of this perception as a direct result of the changing profile of faculty e-learning adopters. "For the most part, instructors don't at first appreciate the fact that this is a different kind of teaching and learning experience, and that a major commitment of time and training is required," she said. "At the beginning, the pioneering faculty were willing volunteers, and because of this were eager to learn all these things. The second wave of faculty are not entering the program with the same level of enthusiasm, and they are surprised at some of these differences. They're amazed at how labor-intensive and time-consuming it is—at the amount of time it takes to develop and teach the course, and the time required to respond to e-mail alone."

As SPC's faculty coordinator for distance learning, Audrey Mosley (also an assistant professor of speech) is well acquainted with faculty concerns about e-learning's added demands. "One of the biggest issues we've seen is the enormous volume of correspondence with students, and the time that it requires," Mosley said. "For the majority of faculty who teach both Internet-based classes and traditional classes, it's been a real challenge balancing the time commitments between the two [modes]."

To contain the problem of runaway e-mail obligations, the IIC imposed a limit of 20 students per Internet course. The IIC also assists faculty with the goal of helping them help themselves, explained Sides-Gonzales. "We've seen many cases where teachers, by

the second semester, are looking for advice on managing e-mail because they are worn out," she said. "Our approach is to share strategies with faculty on how to manage their courses so that it doesn't eat up their lives. It's important that we *teach* them to fish, not fish for them."

The fact that newer e-learning adopters tend to be less sophisticated has also impacted technical support requirements. Specifically, newer faculty tend to require more support, generally with the use of course management software or Web-page maintenance. Even factoring in the steeper learning curves of late-adopter faculty, however, the consensus among those interviewed for this case study was that tech support has not been much of an issue for faculty. One key reason for this is SPC's flexible policy toward course management systems. An overview of how SPC arrived at its current CMS support policy illustrates the importance of support as a consideration in its decision.

In 1998, the Alamo Community College District assembled a task force made up of several distance-learning faculty members to review various platforms and determine which would be most effective and which they liked best. The group's findings would ultimately determine which CMS the district procured for use by SPC and other district colleges. But as Sides-Gonzales pointed out, in relying on early adopters' input, the group failed to take into consideration the next wave of decidedly less tech-savvy faculty: "When that small group of adventurers and pioneers selected the course management software, that worked out very well for the group, but as it started moving on to faculty members who were *not* as tech savvy, the complexity of the course management software became an issue," she said. "This resulted in a lot of hesitancy among some of the faculty who were later adopters. Ultimately, the college opted to allow faculty

to choose between a variety of different course management software packages or the Web template [originally designed by Luis Lopez]."

Thus, although this multiplatform approach has undermined SPC's goal of establishing institution-wide practices, it nonetheless appears to have mitigated faculty technical support problems.

### Key E-Learning Support Challenges: Students

As SPC's course offerings have increasingly integrated e-learning, student readiness has presented a persistent challenge. In the e-learning sphere, SPC views readiness along two dimensions: technological and what might be called "motivational." Inadequate technological readiness generally manifests itself in students'

- ◆ lacking the necessary hardware or software configurations to participate in an e-learning class, ranging from having an incompatible browser to not owning a PC; and
- ◆ lacking an understanding of basic computing and communications functions, such as sending e-mail attachments.

Because faculty serve as the de facto front-line support resources for e-learning students (to be discussed later in detail), inadequate technological readiness significantly disrupts e-learning efforts, as instructors have been forced to spend class time providing remedial instruction on basic computing functions and applications such as Microsoft Word.

Motivational readiness refers to whether a student's learning style is compatible with e-learning's requirements. As Briggs explained, the fact that SPC students self-advise into e-learning has made learning-style incompatibility a chronic problem. "Since the beginning, our most persistent problem has been getting the right students into

e-learning courses," she said. "Because we're an open-admission college—students have the capability to register over the telephone, the Internet, or in person—students self-advise and get into a course that they're not ready for because they either don't have the proper learning style or the level of motivation for an e-learning course. . . . It's one thing to take telecourses because they're very good at watching television. However, e-learning requires the student to be very self-directed. The problem is that students can put themselves into situations that they are not well suited to resolve, and this clearly has a negative impact on retention rates within a particular course."

In the most recently completed semester, SPC's e-learning classes have experienced a relatively low student retention rate (approximately 78 percent) relative to traditional classes (approximately 95 percent).

SPC has attempted to address the problems of self-advisement by providing students various Web-based self-screening tools with which they can (but are not required to) assess their readiness. For example, a survey on the Center for Distance Learning (CDL) Web site lists questions related to learning style under the heading, "Is Distance Learning Right for Me?" Briggs sees such devices as a start but concedes it has inherent limitations as an effective screening tool. "The system's weak point is that people don't always answer honestly or, when they do, they don't always take the advice that they are given," she said. "An equally important problem is that students are not as knowledgeable with some basic applications as they think they are, and it becomes apparent only after the class has begun and they're unable to keep up."

A notable exception to the retention problem is SPC's health information technology program, whose e-learning classes are all 100 percent online. Here again, Briggs

sees the inherent compatibility between the technological requirements of e-learning and the increasingly techno-centric nature of the health-care information workplace as the major driver: "It's a uniquely good match because the students are motivated and see the payoff down the road."

## **SPC's E-Learning Support Infrastructure**

As discussed earlier, SPC supports e-learning through two organizations.

### ***The Center for Distance Learning***

Headed by Julia Briggs, the CDL provides all administrative support for distance learning at SPC, including both telecourses and e-learning courses. The CDL is a unit of the instructional technology department, which supports approximately 40 student computer labs located on the SPC Main Campus, at the Southwest Campus, the Northeast Learning Center, Randolph and Lackland Air Force Bases, and other sites in and around Bexar County. The CDL's core functions straddle both the student and faculty populations. On the student side, it provides general distance-learning information and a distance-learning orientation program. It also provides computer application training to faculty, staff, the military, business, and industry. The CDL works with the IIC to ensure that training resources are aligned with faculty needs. The CDL also operates a hot line for student help and schedules interactive video courses.

### ***The Instructional Innovation Center***

Headed by Karen Sides-Gonzales, the IIC is a resource center whose core function is to train and support faculty in the development of instructional materials and pedagogical strategies. The IIC provides curricular and technological support and guidance for faculty to assist in the enhancement,

development, and restructuring of course curriculum. With locations on the Main Campus and the Southwest Campus, the IIC gives faculty access to both technology infrastructure and trained instructional design and support staff. The IIC employs a staff of approximately 25, all but six of whom are funded by a Title III grant from the U.S. Department of Education. In addition to faculty training, IIC services include

- ◆ an online support center targeted to adjunct faculty;
- ◆ written materials on such e-learning topics as assessment, learning theory, professional development, and teacher/learning strategies;
- ◆ Web links and Web page templates; and
- ◆ provision of faculty loaner equipment such as laptops, projectors, and digital cameras.

Since their establishment in the mid-1990s, both the CDL and IIC have evolved considerably from their original form. CDL's roots extend back to 1996, when Briggs assumed the combined responsibilities of academic computing and distance learning (then interactive video). At the time, the number of video-based distance-learning initiatives was growing rapidly, largely on the strength of the support they received from SPC's Office of the President. Briggs recalled that as the number of distance-learning courses grew, the need to create a dedicated support resource became increasingly clear. "We had a large number of student questions coming in related to distance learning, but no real infrastructure to address it," she said. "That was the real catalyst to the CDL's formation."

Similarly, the IIC evolved from an organization initially focused on pedagogical issues to one increasingly focused on technology—first through the inclusion of multimedia in the classroom and later through the adop-

tion of Web-based e-learning. At present, the IIC's core training offerings include

- ◆ e-learning training, under the Teaching Excellence in Distance Learning (TEDL) program; and
- ◆ technical training for specific applications or functional areas, including productivity applications, desktop and Web publishing applications, messaging, and imaging.

### **A Closer Look at E-Learning Training at SPC**

The training and course-development process starts with a course's initial approval as an e-learning course and the instructor's assignment—both the department chair's responsibility. To be approved for online course development, a course must be either a core curriculum course or part of an online degree program. Once the department chair and vice president of academic affairs sign off, the department contacts the IIC with its intention to develop a specific e-learning course. The IIC then assigns a specialist to confer with the faculty member to determine the level of support and training he or she will need and schedule the appropriate training. The training process consists of three modules.

#### ***Pedagogy***

This module provides practical training, using theory and best-practices data, in three e-learning areas: planning, teaching and learning, and assessment. For best practices, the module incorporates a mix of global e-learning research with examples from SPC faculty. The instruction portion includes Web-based lessons and practical, related assignments. Faculty trainees adapt their syllabus for e-learning for their first assignment, then develop an interactive lesson plan appropriate to a distance-learning course. The module concludes with the third

assignment, development of an assessment plan for the lesson.

The pedagogy module lasts 10 to 12 hours, split between classroom time and online time. Sides-Gonzales described the module's flavor: "We talk about interactivity in great detail—how important it is in a traditional classroom, and how it's even more important in the distance-learning classroom. We also show our faculty trainees how retention levels suffer when the e-learning instructor doesn't meet this higher interactivity threshold. In addition to interactivity, we teach faculty how to address various learning styles and intelligence levels. We've also considered it important to remind faculty that this is *not* a correspondence course. While the goals of the course may be the same, how you get there is different."

### **Technical Training**

The IIC designed the technical training module to dovetail with the pedagogy module, the basic idea being that while faculty undergo technical training, they also develop their e-learning courses. Trainees employ the pedagogy module assignments (syllabus, lesson plan, and assessment) within their technical training. They first create a home page that includes a welcome, syllabus, course outline, orientation, course schedule, office hours, contact information, and other basic elements. The technical training module takes nine hours to complete. At the end of the general technical training, faculty members meet again with IIC staff for course management software training. Specifically, they identify which platform the faculty member will use and arrange training workshops accordingly. Course management software training typically takes anywhere from five to 12 hours, depending upon the platform.

### **Course Readiness Review**

Designed to ensure that faculty trainees are ready to deliver the e-learning course, this is arguably the most important module. The first phase involves a preliminary assessment with a small group of IIC staff (such as instructional designers and multimedia specialists) who work with the faculty member to ensure the course is ready to go. The faculty member then undergoes a final course readiness review. The review forum is a small group of e-learning "veteran" faculty—known as the "readiness commission"—to whom the instructor presents the newly minted e-learning course in a manner that simulates the students' experience. On the basis of the presentation, the observing faculty advise that the course is ready to teach or needs additional modifications. If modifications are required, the IIC prepares a letter to the department chair indicating the specific changes needed before the course can go online. The chair then decides whether to comply with this recommendation. Once the recommended changes are made, another course readiness review is conducted, and so on, until the course is approved.

### **Enhancements to Training Processes Pay Off**

Since the IIC began training faculty for e-learning, it has been challenged to accommodate a wide range of technical expertise among SPC faculty. In response to this need, the IIC has followed a policy of modifying the TEDL process's structure to maximize its flexibility for faculty's benefit. In fact, the IIC's current three-module approach evolved from a more monolithic approach that compelled all faculty, regardless of expertise, to follow the same essential track.

Of the three basic elements of IIC's e-learning training—pedagogical, technical,

and readiness—the technical component needed the most flexibility, reflecting the variability of technical knowledge among SPC's faculty as a whole. In contrast, adding flexibility wasn't an issue for the pedagogy-related content (based on the credible assumption that all faculty need pedagogical instruction for e-learning) or the readiness review evaluation (which is already inherently flexible). Sides-Gonzales said that adding more flexibility to the process was all but unavoidable: "What we discovered—and it really hit us hard a year ago—was that our one-size-fits-all Teaching Excellence in Distance Learning program, which we worked very hard to develop, wasn't working anymore. It worked well for some faculty, but didn't work well for others. It was at that point that we came up with the idea of offering distinct modules that allowed faculty to opt out of things they already knew well. The thing we would *not* compromise on was the pedagogy, because as much as people think they know everything there is to know about teaching, they usually don't—and they certainly don't online."

Sides-Gonzales and her IIC team emphasized providing faculty with exposure to the "real world" of e-learning instruction. A key outgrowth of this approach is the use of peer faculty members in both the instructional and evaluation phases. The biggest value, said Sides-Gonzales, is the "view from the trenches" that veteran e-learning faculty can provide: "We see the use of peer faculty members in the training process as highly complementary with our own resources, since they know the practical issues, while we in the IIC are strongest on the theory. Unless you're really in the thick of it, you just don't know [e-learning issues] as well as someone who's actually doing it. Also, these peers reinforce to new distance-learning faculty members that this isn't something that's going to allow you to put your feet up and

not have to go to class—counter to a surprisingly wide impression among the faculty. They've shown that it's time-consuming, it's a lot of work, but it's extremely rewarding. It's getting this message across that's very important. Also, because we have so many different disciplines—we'll have someone who teaches plumbing with someone who teaches philosophy along with someone who teaches nursing—they are able to bounce ideas off each other and learn from each other. In fact, our trade-oriented faculty probably had more to do with improving instruction in the liberal arts area than any other group. It's just amazing."

### Prevailing Practices for E-Learning Technical Support

As presently configured, SPC's institutional policies for technical support are split between SPC e-learning faculty, SPC administrative resources, and district-level resources. The variables governing which resources are marshaled include

- ◆ whether support is for students, faculty, or administrative staff;
- ◆ the problem's nature and complexity; and
- ◆ in the case of software, the specific application.

Standard policy calls for faculty to receive technical support from the Alamo Community College District's Support Central help desk (a unit of the district's information technology services group) by either telephone or e-mail. (In addition to addressing faculty technical support issues, the district manages the wide-area network linking all district facilities.) In practice, however, many faculty request and receive help from instructional technologies support staff, whose primary role is to support SPC's 40 computer labs. Under this somewhat provisional arrangement, faculty either visit the office in person or call in by phone.

The student e-learning support infrastructure involves a mix of resources, including e-learning faculty, instructional technologies staff, and district staff. Under current policies, faculty should be the first point of contact. After working one-on-one with an e-learning student, faculty should either remedy the problem when possible or direct the student to other resources. For example, a student having a CMS problem will be directed to either the district help desk (for the platform the district procured in 2000) or the software vendor's help desk (for one of the two platforms SPC procured). Students can also obtain in-person support from instructional technology technicians in computer labs or from tech staff in SPC's library, known as the Learning Resource Center.

Although the system is working reasonably well now, some adaptation will likely be needed to fully meet the specific support demands generated by e-learning over the longer term. One such area is the need for around-the-clock, seven-day-a-week coverage. While SPC does not provide 24 x 7 support now—Briggs cited both insufficient demand and lack of funds as the key reasons—the growing number of students taking e-learning courses will likely create the need. “Demand for 24 x 7 is pretty spotty now, but as e-learning grows, the demand for 24 x 7 will probably grow with it,” she said, adding that the need for economies of scale would likely make 24 x 7 support a district-level responsibility.

Nevertheless, although scale-related benefits favor district-level support, some shifting of responsibility to the college level is likely, especially for the faculty, according to Bob Kemmerer, technical services manager in the instructional technologies group. “In the future, it's likely that the Instructional Innovation Center will pick up the faculty support role,” he said. “The biggest reason

is that it makes more sense, since there are already locally available resources on campus.”

## Lessons Learned in SPC's E-Learning Experience

Since introducing e-learning classes in 1997, SPC has compiled some key findings of what works best and what needs improvement. These findings, which relate to both the faculty and student sides of the equation, fall into three areas, cataloged in the following sections.

### Institutional Issues

*Academic administration support*—“One of the biggest challenges of e-learning has related to our culture—the fact that we're old and tradition bound. We've learned that unless we secure adequate academic administration support for e-learning initiatives, everything else is a battle.” (Briggs)

*Adequate infrastructure support*—“The quality and reliability of the technological infrastructure is critical. If we're able to keep this technological infrastructure up and running, it's going to make the option of teaching e-learning courses a lot more appealing to faculty members.” (Briggs)

*Holistic involvement across the institution*—“For e-learning to be successful, it needs to be from the ground up—grass roots. You need to have faculty working with support staff figuring out all the different support systems and how things can be pulled together [so that] people like the registrar understand the problems and issues of faculty. Moreover, faculty need to make more decisions on how the e-learning programs are going to be pulled together. It is much less successful if there is an administrator telling you what to do and how to do it.” (Sides-Gonzales)

*Administrative support as the foundation for e-learning growth*—"It's very important to have strong administrative support at the highest level. In the beginning we didn't have it—but we also didn't need it that much because [faculty] pioneers were willing to take charge and the administration was willing to try it. As it's grown, the need for structure and the need for more academic support have become overwhelming. Getting that academic support—and an understanding of why it was necessary—was difficult because it was outside the everyday experience of deans and vice presidents. However, once that was in place, it really helped us by adding structure and control. It allowed us to focus on higher-enrollment courses and thereby serve the biggest part of population. That administrative support was critical to being able to add that structure." (Mosley)

## Faculty and Departmental Issues

*Faculty resourcefulness*—"While the Instructional Innovation Center will help faculty early on, faculty are expected to be entrepreneurial to keep up with the ongoing demands of the class. It's akin to teaching them to fish, but not fishing for them. If faculty are having problems with their e-mail management, then the Instructional Innovation Center will provide suggestions on how to fix it, but *not* fix the problem." (Sides-Gonzales)

*Intermodal instructional benefits*—"We've seen a trend where faculty that have developed online courses, but also teach traditional courses, import many aspects of their e-learning courses to their traditional instruction methods. In this way, there's been a valuable cross-pollenization between the two [modes]." (Briggs)

*Adequate support for e-learning faculty*—"E-learning instructors can fail because people on high do not understand

the intense commitment required of faculty members to be successful in e-learning. Or the fact that these faculty members are working evenings and weekends doing all kinds of things to make sure their courses are successful, and we don't have the monetary incentives to help them along except while they're developing the course. Nor do we provide the kinds of support—like a teaching assistant in each department to help all of the distance-learning instructors with phone calls or e-mails—that allow faculty members to focus on teaching." (Sides-Gonzales)

*Flexible, adaptable training processes*—"We as a training and support resource needed to take into account the reality that faculty sophistication profiles were changing, and that as a result a one-size-fits-all approach—especially one developed with early adopters in mind—was not going to work." (Sides-Gonzales)

*Faculty keeping an open mind on pedagogical training*—"We needed to make sure that faculty realize that even though they know their subject matter—they *don't* know e-learning. We needed to help them understand that the pedagogy is different from technology and that they needed to structure the class differently for the class to be effective." (Mosley)

## Student Issues

*Keep students plugged into e-learning classes*—"From an instructional standpoint, the key issue is in making sure that students keep up, to counter the perception that it is 'just an Internet class' and can be done at any time." (Mosley)

*Faculty maintaining close contact with students*—"Students often feel that they are drifting in space, especially if they don't communicate enough with the instructor. To keep retention rates up, students and faculty need to strike the right balance between too much and too little correspondence." (Mosley)

*Adequate prescreening methods for students—*“As long as students self-advise, retention will always be a problem within e-learning classes. We have people who signed up for e-learning courses that don't have a computer. While that's okay because they can take [the courses] on campus, it's not the ideal person for the e-learning course.” (Briggs)

### **The Future of E-Learning at SPC**

In the near future, SPC expects to expand the range of e-learning courses offered, along with the number of Web-based degree and certification programs. SPC considers the

expansion of e-learning initiatives an important part of its long-term strategy not only because it offers outreach and service benefits, Briggs said, but also because it better positions SPC to handle swelling enrollment when physical facilities expansion can't keep up. “Our e-learning program has been highly beneficial to our student community by making education more convenient, better adapted to their lifestyles, and more attuned to the needs of the real world,” said Briggs. “As we go forward, we expect e-learning to assume an even more important part in our institutional mission.”