As intuition would imply, every institution has its own path of e-learning evolution—an outgrowth of each institution's unique vision, student requirements, and faculty composition, among other things. As institutions move along this evolutionary path, technical and instructional support gain significance. Indeed, support programs often provide the foundation needed to grow programs to and beyond critical mass. Moreover, as programs grow and adoption deepens among both faculty and students, the nature and extent of support needs tend to grow along with them. Revealing the factors driving e-learning in the institutions that have adopted it lends insight into the types of support issues likely to emerge. We see a good example of this dynamic in how some institutions offer hybrid, or "mixed-mode," courses to alleviate physical space shortages resulting from soaring enrollment. This ties the specific goal of freeing up classroom space to the support goals associated with hybrid courses (explored later in the study).

In short, we must understand e-learning's drivers to understand why institutions adopt their e-learning models and, in many cases, their support approaches. The following section examines significant factors driving the first wave of e-learning adoption.

Institutional Goals: Primary Catalyst to E-Learning Development

This study found that the character of e-learning programs is generally a direct expression of an institution's goals and vision. We see this in such attributes as whom the programs are targeted to, how they dovetail with the traditional curriculum, and the degree to which the institution integrates the e-learning support infrastructure into core support structures. The University of Central Florida (UCF) offers an example of an institution that has made an aggressive effort to weave e-learning tightly into its overall fabric. Joel Hartman, vice provost for information technologies and resources at UCF, pointed to the fact that e-learning is no longer viewed as "different" or "special" as the clearest sign of this integration: "We've come a long way toward reaching our original goal of getting the 'e' out of e-learning."

For some institutions, e-learning programs' nature and extent stem from a particular administrator's vision—for example, a president, CIO, provost, or chancellor. One of the most prominent examples is Penn State, whose longtime CIO, Gary Augustson, has consistently advocated the progressive use of
technology in teaching since the mid-1980s. Instructors also served as bottom-up catalysts for e-learning as they tried to use the Web to deliver a richer, more engaging experience, keep up-to-date in their methods, or simply add a spark to their career.

Specific departments or schools, driven by unique circumstances, may also take the lead. “Where we see the push to totally online programs is in the schools and colleges where it is a strategic issue,” explained Carolyn Gard, director of university educational technology services at Georgia State University. “For example, our Robinson College of Business knows they need an online MBA program. Our College of Health and Human Sciences is attempting to address the statewide shortage of nurses by creating an online nursing program.”

E-learning can enhance an institution’s reputation, too. Colgate University sees it as a means to differentiate itself from peer liberal arts institutions. “One way to do that,” stated David Gregory, Colgate’s chief information technology officer, “is to have a very solid technology infrastructure that allows us to get new technology into the hands of faculty and students to push innovative teaching and learning.”

**E-Learning As a Vehicle for Community Outreach**

E-learning can address the unique needs of an institution’s targeted student community. Harford Community College aims some e-learning courses at the military population stationed at a nearby army base. “With their transient nature, e-learning courses accommodate their needs,” said Lou Marseilles, Harford’s technology director.

The definition of community encompasses cultural as well as geographic boundaries. St. Philip’s College serves the historically black and Hispanic communities. “The mission of St. Philip’s is to provide education to the community, and we do not limit the community to the surrounding geographic area,” explained Julia Briggs, director of instructional technology, St. Philip’s College. “Distance learning allows us to expand our sense of community even more.” Jeff Noyes, CIO and associate vice president for information technology at The University of Texas at San Antonio (UTSA), cited e-learning’s potential to reach Hispanic populations, whose strong sense of family obligations may prevent them from leaving their homes in small towns.

**Convenience and Lifestyle: The Practical Side of E-Learning**

In many cases, institutions develop e-learning programs to offer students added convenience relative to traditional classroom-based courses. E-learning’s lifestyle benefits include its ability to accommodate the schedules of such harried groups as full-time employees (in continuing education or graduate programs), single parents, or people living far from the physical campus. Glenda Scales, assistant dean for distance learning and computing at the Virginia Polytechnic Institute’s College of Engineering, pointed to research that supports this finding. “Our market study shows that our students want flexibility and convenience [regarding] when and where they take courses,” said Scales, “and that comes with an e-learning environment. That will be the driver for us.” Ron Bleed, vice chancellor for information technologies at Maricopa Community Colleges, concurred: “We see e-learning as a way to give students more flexibility, to give them the best of both worlds—technology as well as student socialization. We want to increase access to students and to create a dynamic learning environment, which dovetail through e-learning.”
Three specific examples show how e-learning helps address concrete student issues.

- **Traffic (Georgia State University)**—“As an urban campus located in downtown Atlanta, most of our students and faculty commute, and it’s not always easy to get downtown,” noted Karen Oates, the university’s information systems training and instructional support manager. “We see e-learning helping both students and faculty to make this less of a requirement.”

- **Real-world technical skills (University of Texas at San Antonio)**—At UTSA, students can hone their technical skills through e-learning courses to better prepare them professionally in general or for specific job requirements. Anita Leffel, a lecturer in UTSA’s management department, said students lag behind if they leave the university without feeling comfortable with the technology they may encounter in the workplace.

- **Mimicking the workplace (St. Philip’s College)**—Many of St. Philip’s e-learning activities focus on the pragmatic goal of preparing students for the workplace technology environment they are likely to encounter. Briggs explained, “We see it as our mission to teach students in a way that simulates their likely workplace environment.”

**Online Learning Picks Up Where Video Left Off**

One driver in the creation of online distance-learning courses is the evolution from other types of distance-learning programs. For example, the University of Washington was well positioned for the online distance-learning market by virtue of its long experience with distance learning in general, dating from its 1912 correspondence print programs. For the University of Alaska SE, it was a natural evolution in their 20–25-year program. The institution used mainframe-based discussion tools, and when Web-based alternatives became available, they moved to the Internet.

Maricopa, Fort Hays, and Virginia Tech augmented their video, interactive video, and satellite classroom programs when online distance learning provided a less expensive alternative. Tom Head, instructional services, Virginia Polytechnic Institute and State University, recalled, “In the early 1980s and 1990s, Virginia Tech had a very extensive distance-learning program originally using satellite and then two-way interactive base video. But we soon topped out with 50 sites across the state and a dozen classrooms on campus, because it was all we could afford and because of classroom space constraints. We conducted maybe 75 to 100 courses per semester using these facilities.”

Many institutions use online distance learning to reach a broader student audience. “We have a program in energy and geo-environmental engineering,” stated David DiBiase, head of Penn State’s E-Education Institute at the College of Earth and Mineral Sciences. “Pennsylvania used to be a world center in energy production, but our potential students for our graduate school are now located in the Middle East. Our program must reach a global audience to stay competitive.”

Online distance learning’s outreach capabilities provide a survival strategy for some institutions with geographically dispersed populations. Both Fort Hays State University and the University of Alaska Southeast use e-learning courses to reach students in sparsely populated areas. “If you look at the demographics, many smaller towns in western Kansas are losing student population,” explained David Schmidt, director of computing and telecommunications at
Fort Hays State University. “Part of our e-learning initiative is survival on our part, to be proactive to keep our program flourishing.” Despite declining student populations, Fort Hays reported 30 to 35 percent annual growth in student enrollment in its virtual college between fall 1999 and fall 2002. At the University of Alaska Southeast, “there is not a sufficient local college-going population,” explained Michael Ciri, director of information technology services. “Ninety percent of Alaska’s population is located in three or four urban centers; the rest is spread across a huge area (one-third the size of the rest of the United States). We have had to make choices about how to reach out to areas that don’t have easy access.”

Other institutions view online distance learning’s strategic value as a tool to reach people who cannot fit a classroom-based course into their schedule. Penn State’s provost, Rodney Erickson, has funded the creation of a handful of high-enrollment, high-impact general education courses. Penn State’s John Harwood, senior director, teaching and learning with technology, expects heavy enrollment in the summer so that students can work while attending school, without delaying their graduation. The University of Central Florida’s Hartman said, “Online learning is essentially our way of recognizing that our older adult working, family-oriented student population finds this to be a more flexible mode of learning.”

The Hybrid Model: Delivering the Best of Both Worlds

The hybrid course’s flexibility entices some instructors to try it. Jonathan Anderson, professor of public administration, University of Alaska Southeast, likes the multiple delivery mechanisms and options that hybrid courses offer; he doesn’t depend on one teaching methodology. The hybrid course’s delivery mix lets instructors focus class time on personal interactions. For example, the University of Alaska Southeast’s Ciri describes how, philosophically, the university tries to focus in-class time on activities best done in class and move other activities, like quizzes, to a Web-based asynchronous mode as much as possible. The result, he said, “is not a reduction of class time, but a more effective use of class time.”

Expanding “Educational Bandwidth”

Space needs drive hybrid course adoption at other institutions. Both the University of Central Florida and the Maricopa Community Colleges use hybrid courses to alleviate classroom shortages on their rapidly growing campuses. “Our rapid growth is outstripping our ability to build classrooms,” stated UCF’s Hartman. “Our hybrid online course model allows a three-hour course to meet one hour per week, with the remainder of activity online. This gives us the ability to improve educational quality by designing active learning, interactivity, and learning communities into classes of various sizes—particularly large classes—while freeing up classroom space. The mixed-mode model essentially hypothetically triples the number of courses that can be placed in a single classroom.” Maricopa’s Bleed believes that hybrid courses offer the most long-term potential at his institution because they save on physical facilities while increasing student socialization.