



N A T I O N A L
L E A R N I N G
I N F R A S T R U C T U R E
I N I T I A T I V E

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ANNUAL MEETING NOTES

San Diego 2002

January 27–29, 2002 • San Diego, California

More than 270 higher education leaders, administrators, information technology specialists, faculty members, and business representatives met in San Diego in January to discuss emerging issues in the delivery of higher education at the eighth annual meeting of the National Learning Infrastructure Initiative (NLII) program.

Established by EDUCAUSE in 1994, the NLII was built on the conviction that technology had the power to transform teaching and learning. It is, according to EDUCAUSE vice president Carole Barone, a bridge connecting teaching and technology. “We want the conversations to begin here,” she said at Monday morning’s opening session. “We look for the emerging issues and then we follow them along the continuum from awareness to acknowledgement.”

The theme of the 2002 annual meeting—Innovative Practice, Policy, and Partnerships: A New Alignment—highlighted the new issues and priorities being felt and expressed by educators and higher education leaders. The sessions demonstrated the speed at which change happens as a result of the rapid pace of technology development. Last year, assessment and e-portfolios were barely on the radar screen. This year, they were key discussion points.

Other issues that held center stage at this year’s meeting included examples of learner-centered environments, collaborative business models, knowledge management, online communities, e-learning, policy, technology that is ubiquitous and transparent, pedagogy and learning theory, and student support services.

NLII Priorities

Cost continues to be an important issue for colleges and universities, many of which are wrestling with rising tuition rates and seemingly bottomless investments in technologies. As NLII Planning Committee chair Bill Graves pointed out during the opening session, “Back when the NLII was started, chief financial officers wanted to know what the return on investment—or ROI—was for all technology. We knew we needed to be about more than technology. We needed to be about the value of technology.”

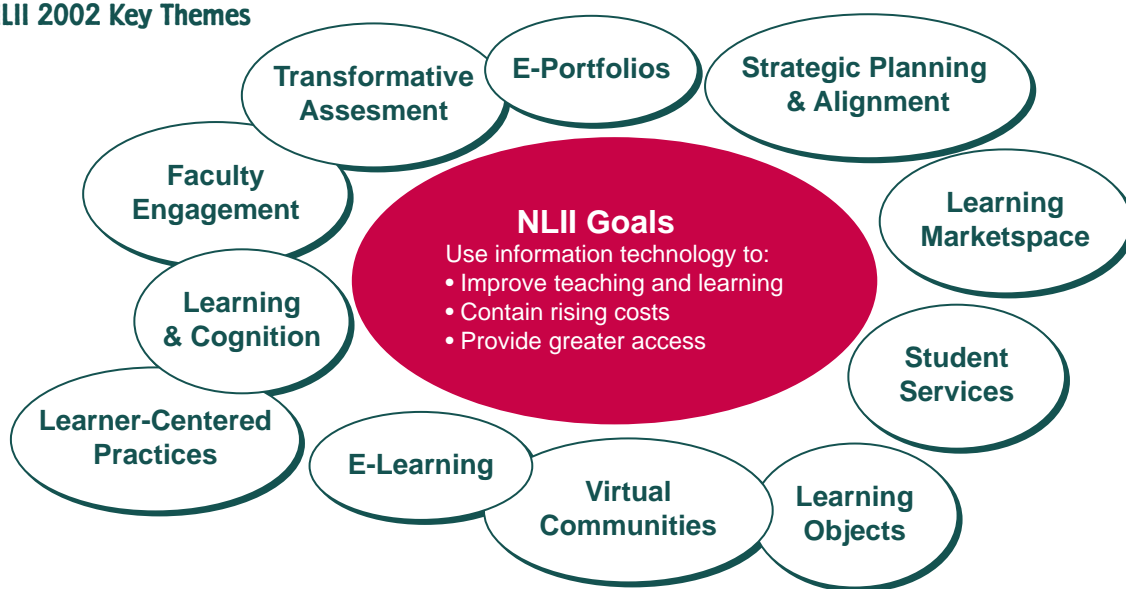
Can IT be a lever for getting a higher ROI in higher education? In a relatively short period of time, education went from being a social good to becoming an economic good as well. Some say this occurred as a result of the advantages offered by new technologies. Through its work, the NLII is figuring out what questions need to be asked to help make higher education a better player in the global economy. The NLII Planning Committee is making those concerns a priority.

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ADVANTAGE OF BREAKTHROUGH
OPPORTUNITIES.”

—CAROLE BARONE

Figure 1—NLII 2002 Key Themes



Graves based his comments on a paper titled *An Updated perspective on the NLII Agenda*, which appears on the Web at www.educause.edu/nlII/keythemes/an_update.doc and which will be published in *EDUCAUSE Review*.

These days, the NLII is also taking a closer look at its mission to see what it can do to help colleges and universities transform themselves in order to deliver education that is learning-centered, active, dynamic, life-long, collaborative, cost-effective, high quality, and accessible. The NLII has developed a list of key themes for the transformation of teaching and learning, which is the basis for its programs and projects and a Concept Map (figure 1), which describes the NLII's research space and the relationship between themes.

The program is investing heavily in providing professional development in new forms through its Transformative Assessment Project, a collaborative effort that brings together the NLII, the Flashlight Program of the TLT Group, and the Coalition for Networked Information (see page 15) for eliciting new ideas about assessment practices and systems that will transform teaching and learning and help institutions of higher education put those ideas into action. A focus session in March 2002, cosponsored by the University of Colorado at Boulder, served as a kickoff workshop for those who wanted to

initiate assessment projects at their institutions. An online workshop/learning community to help them develop those projects is currently being implemented.

Focus Sessions

In 2001, the NLII ran two successful focus sessions: one in March called *Alignment of Planning* and one in May called *Partnering in the Learning Marketplace*. Alignment has become a central theme for the NLII this past year because of its relevance to the new ways that colleges and universities operate. The meeting sought to advance the body of thought on how to align action—including policy setting, project selection, and assessment—with strategic goals, and it helped identify success factors. The NLII is developing a branch of the READY system on this theme. See a description of the project below and the Web site at www.educause.edu/ready for more information.

Partnering in the Learning Marketplace identified the characteristics, types, and evolution of partnerships as well as their impact on systems, institutions, learners, faculty, and participants such as higher education institutions, corporations, and state agencies. Some of the characteristics of partnerships were discussed, such as the drivers in the first and second waves of need, new structures and values of partnerships, new forms of part-

nerships, the evolution and life cycle of partnerships, the true costs in relation to task, and the need to establish a new style of thinking. The focus session managed to identify the key issues that drive partnerships, such as student preparedness, portability of learning, application to lifelong learning, student satisfaction, and regional versus global reach.

In 2002 the NLII is planning three focus sessions. In addition to Transformative Assessment Systems, there is one called *Learning Environment Design*, which is scheduled for May 31 in Vancouver and is cosponsored by WebCT and the University of British Columbia. Another one, titled *E-Portfolios*, is scheduled for October 25 in Evanston, Illinois. That one is being planned by E-PAC, an NLII working group, and is cosponsored by Northwestern University.

Fellowships and Strategic Tools


The NLII Fellowship Program continues to thrive, with two new fellows named for 2002. Colleen Carmean of Arizona State University West and Jeremy Haefner of the University of Colorado at Colorado Springs will study, analyze, and assess specific aspects of the transformation of teaching and learning in higher education that are of relevance to the NLII.

The READY Project also continues to figure prominently into the activities of the NLII. The READY—or the READiness InventorY—

tool is a decision engine designed to help higher education institutions determine their organizational, cultural, financial, and philosophical readiness to expand their use of technology in various realms of instructional and administrative activity. To date, two content areas have been developed: (1) delivery of online learning and partnering in the learning marketplace. Three others are under devel-

opment in 2002: (1) alignment in planning, (2) transformative assessment, and (3) student services (sponsored by IBM). By using the tool, institutions can expect to gain insights into how to apply scarce resources more strategically and how to address weaknesses and take advantage of strengths, respond to the current environment, move the institution further along the transformation topography,

and create a common vocabulary.

The NLII annual meeting serves as a central meeting place for participants interested in hearing about emerging issues and in engaging in discussions to help move forward with solutions. Next year's meeting is scheduled for January 26–28, 2003, in New Orleans, Louisiana. For more information, see www.educause.edu/nlii/meetings/. 

FEATURED SPEAKER

Be Ready for Change

Sidney McPhee takes on the challenges of integrating technology in the core academic mission

Imagine it's the 1930s and you're a passenger on the Queen Mary, steaming across the Atlantic to New York. While strolling along the front deck, you begin to hear a low drone. You look up and see the Pan Am Clipper, winging its way from London

to New York. Would you realize at that moment that the age of the steamship is about to end?

The Pan Am Clipper did more than herald in a new way of transporting goods and people; it forced a new way of thinking about how we work and how we live. It brought about a societal transformation.

Information technology is having a similar impact on society at large and on higher education in particular. The pressure on university leaders is mounting from administrators—who are increasingly concerned with economic competitiveness—and students—who expect their college learning environments to be outfitted with the latest technology. The result is a new generation of college and university leaders who are struggling to keep up with emerging technologies while remaining true to their academic missions.

Sidney McPhee, president of Middle Tennessee State University, spoke at the NLII meeting in San Diego this past January about

the challenges of aligning the rapid pace of technology innovation with the core academic mission and the role of leadership in managing change we cannot control.

"We are in the business of educating people," McPhee said in his opening plenary address. "Everything else we do is in support of that mission." Sitting at the helm of a state university offers a rare vantage point from which McPhee can observe the changes higher education is experiencing. Today's students enter the university with extraordinarily high expectations about the role of technology in the teaching and learning process, while faculty and administrators struggle not only to meet that demand, but even to adapt themselves to new learning environments. "We want to believe we are in control of the technology and its impact," McPhee says, "but very often, technology moves faster than our ability to adapt."

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If we can't control the changes, what can we do to manage them more effectively? According to McPhee, the answer lies in campus leadership—the type of leadership that is capable of understanding faculty culture, willing to plan for faculty support and development, and able to see the benefits of collaboration.

For students entering the university today, technology—particularly the technology of the Internet—is a fact of life. Oftentimes, however, students are more knowledgeable about and comfortable with the technology

than are faculty. That tension, along with the new ways technology is able to enhance the classroom, is redefining the learning space. “Even in the traditional university,” says McPhee, “the classroom is not bound by physical walls.”

To be successful today, campus leadership must play a new role. Faced with governance and financial pressures that didn't exist a short time ago, leaders need to be surrounded by a strong, savvy, and knowledgeable cabinet. And they must be willing to see that a commitment to the right technology infrastruc-

ture is essential to the institutional mission. “Today's leaders need to be able to talk about infrastructure,” McPhee said. “Change is inevitable and the leadership needs to design a structure to support that change.”

Being able to talk about infrastructure means knowing what kinds of questions to ask. For their part, information technologists on campus should be prepared to give answers that fit in with the institution's mission and focus. “With the right leadership and the willingness to think outside the box,” said McPhee, “anything is possible.” **NLII**

FEATURED SPEAKER

Culture Work in Higher Education

Brenda Laurel on the role of IT professional as humanist

In the highly structured world of higher education, roles and hierarchies are clearly defined: educators and researchers interact directly with students while support staff, including information technology (IT) professionals, work in the background to create

and maintain the infrastructure. Within that setting, computer professionals are cast in supporting roles. In the public sector, the roles are reversed: computer professionals are in much stronger positions of power; in fact, in some settings, they are viewed as wizards and inventors. Could information technology staff in higher education contribute more to their institution's teaching and learning mission as equal members of creative teams responsible for student learning experiences?

According to designer, researcher, and writer Brenda Laurel, the answer is yes, especially if they develop and operate out of a deep understanding of institutional values. Laurel, who spoke at the NLII annual meeting in San Diego in January, stated that “today's institutions need to redefine roles, erase boundaries, and invent powerful new

models for cultural transformation.” In such an environment, she continued, “we are capable of designing the future through the values and skills we give our students.”

For more than 20 years, Laurel has focused on interactive narrative, human-computer interaction, and the cultural aspects of technology. She describes herself as doing *culture work*, which she defines as values-driven work or “work you are doing because you believe it is a good thing to do.” Culture workers are committed to working in the language of popular culture, which Laurel

describes as the language in which societies discuss politics, religion, ethics, and action. “As humanists and culture workers, we believe we can do good,” she said, “and we know what is good to do. Our work is to help people grow, retain their integrity, and maintain their sense of self through profound change.” And she sees that as a primary mission of higher education.

IT professionals increase the value of the academy by creating tools that improve teaching, learning, and thinking. According to Laurel, that means there is a substantial, creative role for technologists to play in the design of a new and improved educational system. Unfortunately, throughout the history of computer technology, computer professionals have



Visit

[HTTP://WWW.EDUCAUSE.EDU/NLII](http://www.educause.edu/nlII)

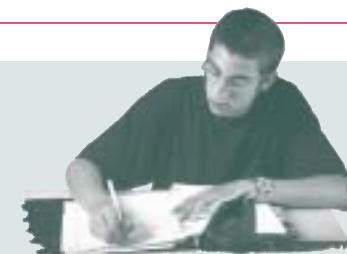
for forthcoming announcements about the NLII Fellows Program, regional focus sessions, symposia & workshops

seen themselves as outside the mainstream, humanistic roles that are central to the institution. That self-imposed isolation makes it more difficult for them to see how much technology influences culture and vice versa. “Culture will often rework a technical innovation,” she pointed out, “leading it to be used in a way that is different from what techies envisioned.”

Laurel is adamant about computer professionals’ seeing themselves as humanists and culture workers because ultimately, computer science will wane as a field of study and become more integral to all studies. “Culture work is by definition subversive,” she said, “and it enables us to flourish under the forces of profound change.” By embracing their role as culture workers, IT professionals in higher

education can help institutions “design the future.” And collaboration is key.

The differences in how IT professionals see technology versus how faculty see it within their culture leads to what Laurel describes as “collisions in knowing,” a theme echoed by David G. Brown of Wake Forest University and Sally Jackson of the University of Arizona in a session titled Discipline-Specific Teaching Support (see p. 13). Brown and Jackson described how the differing cognitive styles of various disciplines mean that IT must shift from a service model to a model in which computer professionals work with clusters of faculty within a discipline. This represents a shift away from the notion of individual support, which is not sustainable in its current manifestation. **NLI**



WHO ARE THE NEW STUDENTS?

They’re hip. They’re quick. And they’re definitely connected. Next year’s incoming freshmen aren’t going to sit still for a dial-up connection and a PowerPoint presentation. They want the bandwidth, the iPod, the wearable technology, and the library to download at three in the morning. Say hello to today’s new students, raised in an environment permeated by instant messaging, the World Wide Web, cell phones, and Futurama.

Are colleges and universities ready? Not yet, but they’re working on it. Staying one step ahead of an 18-year-old who’s been rewiring the family rec room since birth hasn’t been easy since Atari widened the generation gap two decades ago. The ante then got seriously upped in the mid 1990s, when TCP/IP met http and a world wide web of knowledge and information burst onto the scene. For today’s student, information and access are food and water—or at least pizza and Diet Coke.

In an enlightening exchange between NLI participants and students, the students discussed how they worked, learned, and socialized and what they liked and did not like about their courses. Christopher Arismendez, an Arizona State University West student, commented that “the hardest thing about classes today is sitting through traditional lectures.”

And what do they think of us? Very little; that, at least, hasn’t changed since the dawn of the student-teacher relationship. We’re old and stodgy, and we need their help with the printer. And they’re pretty sure we should spend more time listening to them. As Arismendez said: “I work two jobs. I have friends, responsibilities, and a social life. I want information now. Don’t waste my time.”

FEATURED SPEAKER

What the New Student Will Be Wearing and What that Has to Do with University Facilities Design

Attendees partake of food for body and mind at Mark Valenti address

From the Guggenheim Museum to the Sistine Chapel, building design has long been perceived as an art and a science. Buildings don’t just contain rooms and furniture; they serve a purpose. And in today’s age of advanced technology, physical structures are being wired to serve our needs like never before.

Learning spaces have always been designed to leverage the technology around teaching and learning, whether it be a chalkboard, a lecture podium, or a computer lab. But planning for the learning environment of the future means taking into account the needs of tomorrow’s student, for whom high-speed connectivity, 24-by-7 access, e-book learn-

ing, and streaming audio and video will be facts of life. In today’s new learning environments—driven by information technology—facilities will be built or refurbished that incorporate emergent products in the consumer electronics marketplace and at research and development institutions. Economist,

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communications expert, and acoustical architect Mark Valenti, president of the Sextant Group, Inc. (www.thesextantgroup.com), told NLII attendees what they can expect their buildings to be like in the future.

“Technology changes the way we design and build buildings,” said Valenti. The most dramatic changes in design criteria in the future will likely involve the move toward wireless communications. Valenti says the new student will *be* the network connection by wearing a mobile, wireless Internet appliance rather than relying on computer workstations or even personal digital assistants the way we do now. And with campus boundaries becoming more and more porous as distance learning and high-speed access grow, what we expect from our buildings will necessarily change.

The big issue for campus leaders and facilities managers is figuring out what higher education leaders can do now to prevent building and facilities from becoming obsolete once built. Should they be wired or wireless? Valenti says that as far as infrastructure goes, fiber is a safe bet: “It’s almost future-

proof.” And with the latest estimates putting wireless use at 40 million to 60 million users by 2002 and at 750 million users by 2004, short- and long-distance wireless services on campus are going to be in big demand.

Valenti also says “the Web today will become a visual medium,” so he suggests that campus leaders pay attention to the increasing demand for Internet audio and video. In addition, with television’s shifting from analog to digital technology—analogue television is slated to end in 2006—bandwidth is going to be a big concern as the line between computers and television is finally erased.

As part of that trend, the publishing industry will be making some significant changes. According to Valenti, the e-book is expected to replace 25 percent of textbooks by 2005. And digital paper is expected to enter the market in 2002. The first applications will be in retail signage, in which digital paper will enable retailers to post price and promotion signs that can be changed with a keystroke. The new technology will ultimately centralize signage and promotion for chain and so-called big box stores. In higher

education, digital paper might become the new wallpaper of the classroom, replacing the blackboard.

In higher education, new user interfaces are necessary so that instructors can walk up to any type of podium and be able to customize it for their needs regardless of where they are. Such an interface, says Valenti, “needs to be as ubiquitous and easy to use as an ATM machine.”

Valenti showed examples of learning spaces designed to accommodate emerging technologies and learning styles. Those spaces were designed for interaction among students and faculty and are often incorporated into a larger learning/information-gathering/social space. The traditional lecture-style classroom, defined by four walls, was not evident in any of those designs.

While we can never know what new technologies will emerge or how they will be used, Valenti was willing to make a few predictions. First, Internet2 will replace the Internet. Second, high-speed, all-optical networking will become commonplace. And third, we can count on wireless becoming the norm. **NLII**

Finances, Currency, and Higher Education in the World

Sally Johnstone talks about a new technology-costing methodology, learning as the new academic currency, and higher education as a global concern

As concerns about economic recession grow and budgets tighten, higher education is bracing itself for cuts and preparing for a new age of accountability. According to Sally Johnstone, director of the Western Cooperative for Educational Telecommunications, the biggest pressures facing

higher education today are finances and student outcomes. She discussed financial and international issues as well as the notion of learning as the new academic currency this past January at the NLII annual meeting in San Diego.

Laying out the “constellation of issues” that are “hammering on the heads” of legislators and policy makers, Johnstone helped stimulate thinking about where institutions need to be in order to survive and to continue meeting the needs of learners in the age of technology and information.

The New Academic Currency

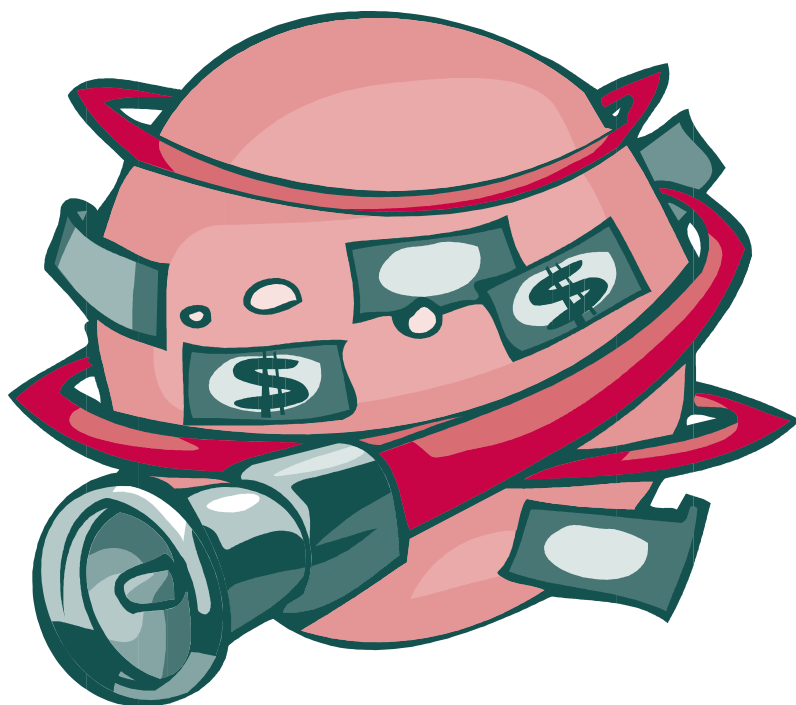
With technology changing the way academic courses in particular and education in general are being delivered, students are beginning to manage their education differently than before. Swirling—the practice of pulling credits from more than one institution—is on the rise. According to Johnstone, data from the mid-1990s show that a large number of students getting baccalaureate degrees within five years of completing high school have attended more than one institution. And both students and parents fully expect credits to be transferable.

In addition, the profile of the distance

learner is changing. At one land-grant university, 85 percent of the online students were actually full-time students living on campus. “When distance learning was video, the average student was a 29-year-old woman,” Johnstone said. “Now that student may be 19 and living in a dorm.”

With a greater emphasis on accountability and outcomes, will learning trump credit hours as the new academic currency? Johnstone says yes and she lays out the argument with coauthors Peter Ewell, and Karen Paulson in a soon-to-be-published ACE/EDUCAUSE monograph titled *Student Learning as Academic Currency*. The book is part of a series called Distributed Education: Challenges, Choices.

Within many professions, students are expected to go through a certification process that is repeated many times in a lifetime. “We’re looking at borrowing from other professions the notion that what counts is not just a degree,” Johnstone told the NLII audience. In those cases, student learning is measured, and the standards by which it is measured, are recognized throughout the



industry and the profession. “You carry the appropriate measures and institutions are not quibbling with each other,” Johnstone said. “If we get there in higher education, it’ll change the way institutions work.”

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Accountability and Efficiencies

Citing figures from the National Conference of State Legislators published in October, Johnstone delivered the gloomy news that 44 states were reporting revenues below forecast levels, 26 states anticipated overspending, and 28 states have already implemented budget cuts. “The budget outlook for 2002 is worrisome,” she said. “There is increased spending on homeland security on account of 9/11, so money is being diverted.” While the K–12 community is protected, the two areas that are most vulnerable for budget cuts are transportation and higher education.

As budgets tighten, legislators are demanding greater accountability and efficiencies in higher education, in which investments in technology have been significant. “Policy makers need to know technology-related costs, and they need a consistent metric across institutional units as well as across institutions,” Johnstone said. She added that the WCET membership foresaw some of the issues and demanded that those issues be addressed. The result is a new project on technology costing called the Technology Costing Methodology (TCM) project, a policy tool being pilot tested in 18 states and institutions.

“The TCM project came out of the need to provide data on the costs of using educational technologies,” said Johnstone. While it is not a set of accounting protocols, it is a costing-analysis tool—including standard definitions of cost categories—that institutions and multi-institutional agencies can use (1) to analyze the costs of instructional approaches that make heavy use of technology and (2) to legitimately compare cost data for different instructional approaches. More information can be found at www.wiche.edu.


Achieving efficiencies in higher education means shifting focus from the provider to the student. “If we start thinking about an institution’s providing academic and support services for students and letting students pick what they get from other institutions, we begin to see a shift in the way we think about spending money,” said Johnstone. In doing

that, we move away from the type of curriculum planning that focuses on content and we begin to focus on learning and providing assistance with learning. Johnstone refers to this as institutions becoming responsibility centers. In other words, institutions take responsibility for students, whether they are geographically in the same place or not. Institutions spend less time and energy developing materials. And they place more emphasis on the needs of students and the associated administrative support. This represents a significant shift in the ways institutional leaders think about approaches to accomplishing institutional missions. “It’s inevitable,” Johnstone said. “We cannot sustain our current model of every institution doing everything for every student.”

Higher Education as a Global Concern

While not all of the budget problems fac-

ing higher education today can be attributed to 9/11, Johnstone says the tragic event opened our eyes to how the rest of the world sees the United States. “We have to take seriously the notion that our country can export more than just movies and fast food,” she said. “There is a role for higher education in the developing world.”

Johnstone cited UNESCO, which is working with WCET, as one organization that is trying to sort through the complexities of information dissemination. UNESCO is also looking at becoming a clearinghouse for quality standards for information, such as databases, libraries, and courses. “With UNESCO, we are trying to answer the question, What constitutes essential information?” said Johnstone. “In addition, we are trying to work on making universal access possible. Just as Hollywood is everywhere, U.S. higher education should be everywhere.” 

MARK YOUR CALENDAR!

**The NLII Annual Meeting
is moving back to
New Orleans
in 2003.**

**January 26–28, 2003
New Orleans, Louisiana**



IMPORTANT 2003 DATES

NLII 2003 Annual Meeting CFP's due	October 3, 2002
Registration begins for NLII 2003 Annual Meeting	October 31, 2002
Hotel reservations deadline	December 27, 2002
Registration deadline	January 15, 2003

For more information, see www.educause.edu/nlII/meetings/.

But we're going back to San Diego in 2004.

January 25–27, 2004 • San Diego, California

Learner-Centered by Practice—Learning Design

Speaking at a North Atlantic Treaty Organization conference on organizational learning and technological change 10 years ago, National Aeronautics and Space Administration scientist and cognition expert William J. Clancey said, “We inhibit learning when we view people as machinelike, suggesting they follow instructions like a machine, and force them to justify behavior exclusively in terms of previously articulated plans.” Turning attention to the student—rather than the machine—NLII annual meeting conference goers tackled the issues surrounding learner-centered education.

Cognition occupied center stage in a panel discussion on how best to apply known theories of learning to the online environment. Stephen Downes of the Senior Research Office at the National Research Council of Canada joined Lynette Gillis, president of Learning Designs Online; NLII 2001 fellow Helen Knibb; and Utah State University professor M. David Merrill in exploring the relationship between learner centered educational theory and the next-generation technologies currently being tested in North America’s colleges and universities.

“Online learning is 24/7, not course driven,” said Downes, who argued that students drift to online courses for reasons of cost, convenience, and effectiveness. “People learn on Google,” he said. “Students say the university isn’t a good place to study. It’s distracting, time wasting.” Anyone who’s watched exhausted students sacked out in the upstairs lounge of the campus student center can attest to the squandering of resources. The presenters all agreed on the general goal: Empower students to learn as they go, sitting at their computers at 1 a.m. with the instant message screen open, Dogpile poised

to fetch, and half a pot of coffee perched atop a pile of printouts from an online database. Create a learning environment that provides them with access and the ability to continually build their knowledge base, and they will likely oblige.



“Information is not instruction,” said long-time educator David Merrill. “Simon Says is not effective instruction and does not teach you how to solve problems. Designing collaborative or open learning environments is much harder than spray-and-pray teaching, and yet we don’t examine how to do that.” Merrill’s hands-on classroom experience was showcased in his presentation as he made the case for online instruction that incorporates the most practical and effective classroom strategies: Stand aside and let students learn by doing. Allow students to solve problems. Meet them where they live. Show rather than tell. Make them do rather than listen. Offer knowledge applicable outside the course.

Gillis used her corporate experience to build on Merrill’s classroom wisdom, demonstrating that people learn most effectively when they can evaluate their own performance as they go. She highlighted a cell

phone instructional course that allow trainees to measure their own competency and then repeat the test to hone their skills. Allowing students to refine their abilities is not cheating; it’s sound instruction.

Learner-centered design practices was the focus of Knibb’s research as an NLII 2001 fellow, and she’s finalizing a white paper on the topic that will be the starting point for the research of NLII 2002 fellows Colleen Carmean of Arizona State University West and Jeremy Haefner of the University of Colorado, Colorado Springs. In addition, the NLII is holding a focus session on this topic on May 31 in Vancouver, British Columbia, Canada, under sponsorship from WebCT and the University of British Columbia. 

NLII Focus Session

LEARNING ENVIRONMENT DESIGN

May 31, 2002

Vancouver, British Columbia, Canada

*Sponsored by WebCT and the University
of British Columbia*

www.educause.edu/nlII/meetings/nlII022/

Focus on what is known about learning and cognition, and the conditions that support meaningful learning. Together attendees will explore learning environments, some of the teaching and learning strategies that can be used to support them, and how technology can most effectively contribute to creating those environments. This focus session is organized around the research results from the work of NLII 2001 fellow Helen Knibb, whose research project was organized around innovative, learner-centered instructional design and practices.

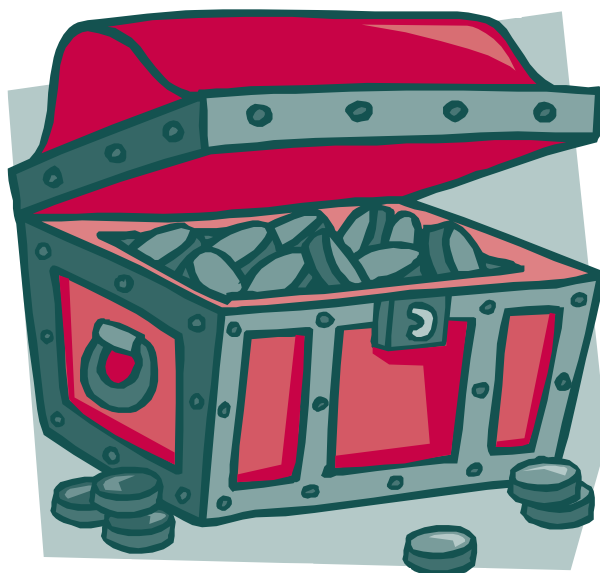
Learning Materials, Tools, Markets, and Standards

Many college professors are venturing into cyberspace these days—learning HTML, experimenting with Web design, and pointing their students to brand-new Web sites for assignments, due dates, course syllabi, and, increasingly, links to other sources. Anyone with a basic understanding of HTML can create a link to somewhere else in cyberspace, but what are the implications of actually pointing and clicking in an increasingly point-and-click academic world?

The practicality of diving for treasure in this seemingly bottomless well of digital images and documents was a key subject at this year's NLII meeting in San Diego, organized around the themes of learning objects and digital repositories. The wider institutional implications of that bounty also stirred considerable attention. The digital repository infrastructure is already up and in use at some colleges and universities, creating a laboratory for new systems and techniques. Students can use school-generated portals to build on their own academic interests; they can also sign on to online libraries and repositories, such as MERLOT, Questia, ebrary, and NSDL. Students and faculty can now search preconstructed databases for articles, quotes, bios, and primary texts. A keyword search in MERLOT (Multimedia Education Resource for Learning and Online Teaching) for Plato can—within a few mouse clicks—lead users to the Internet Classics Archive, where Plato's *Apology* can be viewed online. Professors also share the wealth: An American history teacher might use the same resource to point students to a Web site on the Battle of Lexington and Concord or locate an appropriate assignment for a lecture on Confederate slave sol-

diers during the Civil War. And in the wake of this reality, administrators discuss funding, management, and long-term planning for digital repositories, while technologists scramble to actually provide the infrastructure that will support them.

The creators of these online libraries and databases were well represented in San Diego, where Edward Cooper, former CEO of MERLOT, joined Assistant Provost M. S. Vijay Kumar of Massachusetts Institute of Technology and chief executive Edward C. T. Walker (of IMS Global Learning Consortium)




to discuss the future of technology designed to help students and faculty find and use Learning Objects on the Internet. In one of the sessions, Cooper and Walker shared stories and technical insights about the feasibility of their own initiatives and in a later session, on the promises and pitfalls of Learning Objects.

Ohio State University deputy CIO and professor Susan Metros furthered the conversation, painting a vivid portrait of the point-and-click conundrum—endless possibilities with very little structure or consistency. Professors with the requisite technical

savvy—or help from their schools—can use existing technology to point students toward a dizzying array of sources and information, but those instructors then must don additional hats; they become researchers and resource managers by evaluating sources and helping students navigate the information. Metros and her partners in the session—University of Tennessee Web instructional technologist Kathleen Bennett and University of Arizona research associate Veronica Diaz—all argued for applying academic standards to this new technology: use-reusable, peer-evaluated, media independent learning objects that are tagged and referenced to clearly identify the source. They also agree that educators will be challenged to learn the technology and become more creative in the classroom.

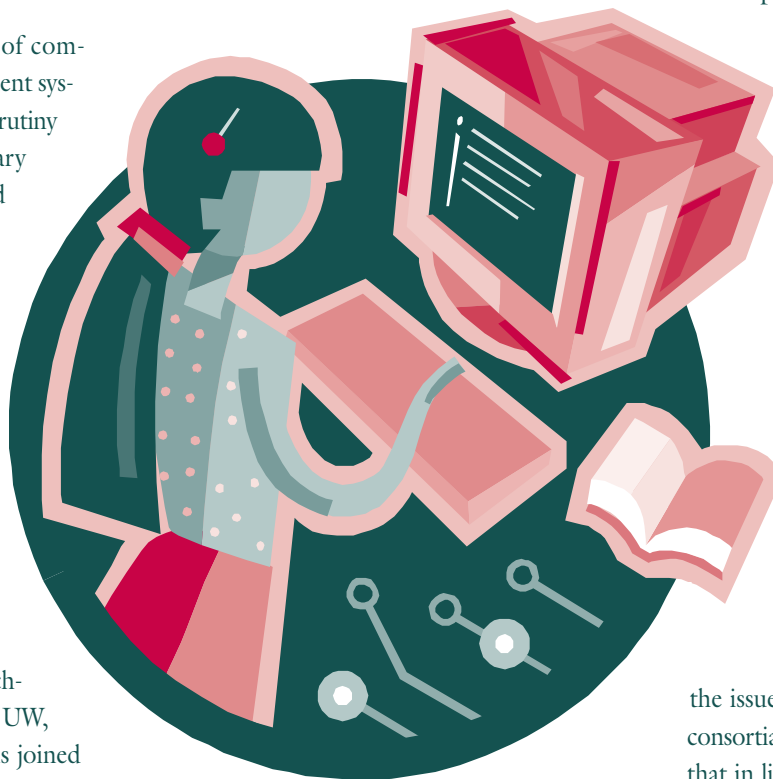
Digital repositories help faculty members and students alike become managers. They enable students to retrofit a course to their own learning styles and interests. SMETE for example, allows users to log on for free, search databases, and create a profile based on academic interests and background that then provides links to learning objects that might be user specific. SMETE also refers users to other members who have similar interests.

Learning Objects are an NLII theme because their use has the potential to, as Metros said, “offer great value in terms of saving time and money in course development, increasing the reusability of content, enhancing students’ learning environments, sharing knowledge within and across disciplines, and engaging faculty in a dynamic community of practice.” The NLII is supporting the development of a Learning Objects working group chaired by Metros. For more information, see the NLII Key Themes page on the NLII Web site, or contact Metros at metros.1@osu.edu. 

Go It Alone? Or Adapt What's Given and Make It Your Own?

The wholesale adoption of commercial course management systems came under close scrutiny at the NLII meeting in January in San Diego in a session titled The Myth of LMS, in which two administrators from the University of Washington challenged the slash-and-burn approach to creating a blended campus by suggesting the simple imposition of canned course management systems. If the machinery for managing education is already in place, said Tom Lewis, director of the Educational Technology Development Group at UW, why reinvent the wheel? Lewis joined Oren Sreebny, assistant director of the university's Client Services, Computing, and Communications department to argue that the university infrastructure already supports learning management systems. "Packaged solutions in isolation cannot easily or economically provide this type of integration," said Lewis. "Given that most university systems are already in place to provide many of the tools, do we throw out the old to build this integration onto canned LMS tools or do we go it alone, incorporating the current tools and a new, homegrown LMS into an integrated solution?" Another example of a custom-developed course management system was presented by Jay Fern and Robert Lowen, technologists from Indiana University, who showed how their university implemented OnCourse and grew it to 53,000 users in just six semesters.

On the other hand, many universities do not have the resources to go it on their own. For them, partnering is an important solution to the conundrum between using costly,



custom-developed, and therefore more-responsive course management systems and imposing less-expensive, one-size-fits-all, canned solutions in the area of existing learning management practice. All forms of joint ventures—those involving universities working with other universities, universities working with government organizations, and universities working with private industry—were showcased at the NLII annual meeting.

Ted Dodds, associate vice president of Information technology at the University

of British Columbia offered a window in to his university's e-strategy that supports partnering with government and private industry to help blend the learning environment.

In How to Solve the Not-Invented-Here Syndrome, Ali Jafari of Indiana University-Purdue University at Indianapolis (IUPUI) and John T. Harwood, of Pennsylvania State University described a project in which Penn State, instead of developing its own learning management system, adapted the OnCourse system developed at IUPUI. They discussed the validity of adopting and adapting products developed by other universities and described

the issues and challenges that emerge from consortial relationships. Harwood suggested that in light of various open-source movements—such as OKI or MERLOT—it is time for us to reexamine our beliefs (sharing is good) and our practices (see p. 12).

Carnegie Mellon University vice provost Joel Smith put his school's Blackboard Building Blocks initiative on display. Presenting with Daniel Crane, senior vice president of Blackboard, Inc., Smith outlined a compelling partnership between business and academia. The college purchased the backbone—or infrastructure—from Blackboard and then permitted faculty, institutions, and even some commercial users to build onto it for free—under the supervision and management of the administration. ^{NLII}

"IN LIGHT OF VARIOUS OPEN-SOURCE MOVEMENTS—SUCH AS OKI OR MERLOT—IT IS TIME FOR US TO REEXAMINE OUR BELIEFS (SHARING IS GOOD) AND OUR PRACTICES"

—JOHN HARWOOD

Partnering in the Learning Marketplace

‘Collaboration is hard,” said Penn State University senior director John T. Harwood at the NLII annual meeting in San Diego, “but none of us can flourish alone.” Nice words, but how do universities overcome their natural balkanizing, competitive, we-can-do-it-better-than-anyone instincts to form cooperative, mutually beneficial relationships with other institutions?

Sharing wisdom from their book *Partnering in the Learning Marketplace*, authors Ann-Hill Duin and Linda Baer took charge of that complicated and controversial topic in their featured session titled Developing Successful Partnership Investment Portfolios. Quoting Cisco Systems CEO John Chambers, the authors served up a vision of partnership based on a sound business model: shared vision, geographic proximity, and similar cultures paired with short-term gains for all stakeholders in the relationship make the partnership formula successful. Universities must assess their own willingness to take risks, they said, and then dive in, fully aware of the legal and financial implications while still acknowledging the experimental nature of strategic partnerships.

Bruce Chaloux, director of the Southern Regional Education Board (SREB), highlighted the success of this unique compact between 325 southern colleges and universities that currently covers 16 states and offers 7,000 credit courses and more than 250 degree programs. Founded in 1998 with just 45 institutions, this interstate partnership creates an academic free trade zone in the southern states: Colleges share courses and programs. A single portal stitches the campuses together, providing an easy-to-access list of e-courses. Students pay a common electronic tuition rate. The final package, says Chaloux, opens access to education to a much larger pool of students—especially to disadvantaged students—while creating a regional marketplace for electronic courses.

Sharing technology also can create problems between schools. With Linux revolutionizing the operating system marketplace, an open-source debate is under way in academia: If OKI and MERLOT serve up spectacular databases of images, documents, tests, and lessons free of charge on the Internet, why is it still so difficult for colleges and universities to exchange technological ideas? Penn State dove headfirst into this shark pit last year when it chose to adopt OnCourse—a course management system pioneered by Indiana University—Purdue University at Indianapolis. Harwood and IUPUI professor Ali Jafari joined forces in a session titled How to Solve the Not-Invented-Here Syndrome to describe the drama that preceded the partnership: setting up the ingenious template-based system was a simple copy-and-paste procedure; convincing the institution to adopt and use it was another matter. Penn State’s resident techies complained they could build a better system and not everyone on the faculty was thrilled with the new, alien system. To combat that resistance, Harwood adopted a consortial relationship with the faculty that took a streamlined, tech-savvy, ego-free approach to the problem: control costs, retrofit existing tools to teaching environments, and, most important, keep the focus on teaching priorities rather than on the technology.

A variety of other partnerships were placed under the microscope at the NLII meeting: In a session titled Institutional Partnerships for Excellence in Online Learning: A Case Study, college administrators Susan Bray and Kim A. Scalzo from Rensselaer Polytechnic Institute discussed their institution’s relationship with General Motors Corp. to provide GM employees with courses on managing the workplace in a cross-cultural environment. Representatives from the University of Wisconsin system showcased their statewide initiative for supporting e-learning at ITS@Wisconsin: Education Serving Education.

And in a session titled Innovations in Institutional Cooperation for Online Learning Materials, two presenters from the University of Waterloo revealed how they’ve encouraged professors to use learning objects not generated within the university environment.

A few presenters were willing to discuss business models for their partnership ideas.



PARTNERING TO BE KEY NLII THEME

Partnering in the learning marketplace has been a key NLII 2000–2001 theme and will continue to be a key theme through 2002 because it provides new opportunities to reconfigure the way instruction is funded, developed, marketed, delivered, and supported. The NLII held a focus session on the topic (see www.educause.edu/nlII/meetings/nlII013/ for a summary of the findings) and sponsored the development of a branch of the READY system based on the book *Partnering in the Learning Marketplace* by Ann Hill Duin, Linda L. Baer, and Doreen Starke-Meyerring (www.educause.edu/ready). A white paper building on and updating the book was distributed to NLII annual meeting attendees and is available online at www.educause.edu/nlII/keythemes/developing_paper.doc.

In terms of ROI, William Graves, founder of Eduprise, challenged participants in his session—titled the Role of IT and Partnering in Creating New Educational Wealth—to consider measuring wealth in educational terms, pointing to the many social and educational benefits that will attend the successful application of technology to an academic environment. In a session titled E-Extension/USA: Teaching an Old Dog New

Tricks, David King, executive director of Indiana Higher Education Telecommunication Systems, laid out plans to use the Land-Grant University (LGU) system pioneered in Indiana 90 years ago as a model for online educational services. King discussed the role of LGUs as the first U.S. distance-learning network by sending agents out into communities to assess learning needs while providing access to education for an unprece-

dent number of people in the Midwest. Holding out his vision for the continued democratizing of education, King illuminated his plans to build on the LGU system by using the connectivity of the Internet to reach an even wider audience. “We are in a new age of mentoring in the style of Socrates,” King said. “It’s no longer the big eating the small; it’s the fast eating the slow. Speed of response is rewarded.” ■■■

Faculty Engagement and Support

Good teachers are always rooting around for new ideas, more now than ever as the high-tech explosion makes use of learner-centered pedagogy much more feasible. More often than not, a new technique or strategy can be found at the other end of a keyword search, but increasingly, the classroom itself is drifting into cyberspace. Several presentations at the NLII’s annual meeting in San Diego focused on faculty members in transition, offering new models for the creation of blended classrooms and departments.

Overcoming the squabbling, competitive, and often polarized nature of faculty groups is both a necessity and a natural consequence of implementing a technology-centered program. Recognizing that fact of life in academic culture, Wake Forest University vice president and dean of the International Center for Computer-Enhanced Learning David G. Brown joined Sally Jackson, vice provost of educational technology at the University of Arizona to present their fascinating vision of a discipline-specific blending of technology and pedagogy—one that relies on disciplinary resources rather than taking the one-size-fits-all template approach.

Using a unique grid configuration that creates quadrants for interactivity, information, minimal media, and multimedia, Brown and Jackson demonstrated in their session titled Discipline-Specific Teaching Support how the tools and materials available can be retrofit to

individual disciplines. Depending on the discipline, chat, tutorials, models, virtual worlds, text, sound, graphics, and animation can be used like building blocks in the creation of a blended classroom. Humanities departments, for example, might lean toward a text- and chat-heavy approach, while fine arts programs might opt for one that uses sound, graphics, and animation more effectively. In the design of new tech-supported learning environments, one size does not fit all, but a discipline-specific approach can help create models that are appropriate to departments and faculty groups with shared academic interests.

According to Jackson and Brown, the discipline-specific approach can revolutionize culture as well as pedagogy. They painted a clear portrait of department culture in a large university as balkanized workplaces in which teaching and research are pitted against each other in a struggle for resources and prestige and in which individuals operate in a vacuum of peer support, seeking assistance alone while forced into unhealthy competition. They promoted their model as the antidote: teaching and research agendas are joined under an umbrella of discipline-centered groups that are then led by the faculty and designed to promote unity and the sharing of resources.

But how can a school—especially a very large one—gain faculty ownership of new models for teaching and learning? Leaders from the Teaching and Learning Collaborative at the University of North Carolina discussed

their successes in the unifying of professional development across the sprawling 16-campus state university system at their session titled The UNC Teaching and Learning with Technology Collaborative: 16 Campuses Working Together to Promote TLT. Program coordinator Hilarie Nickerson and executive director Frank Prochaska demonstrated the portal they created to help 9,000 UNC faculty members buy into the university’s ongoing marriage of technology and teaching. The user-friendly portal features more than a thousand entries designed to assist teachers: reviews of resources, examples of successful practices, articles, links to specialized online communities, and much more. The portal also directs faculty to the Multimedia Education Resource for Learning and Online Teaching (MERLOT), which has collected a wide array of learning objects for instructors to use in the online environment.

Faculty buy-in was also the central theme of a session titled Implementing and Adapting Multitiered Faculty Development Initiatives. University of Tennessee technologists Jean Ann Derco and Julie Little presented their model, which incorporates wireless laptop technology and reusable learning modules and units into the classroom while creating a statewide faculty development portal to help teachers climb on board.

In Combining Faculty Engagement with Readiness Assessment: A Case in Point, University of Hartford senior adviser of technology planning and assessment and former


(continued on next page)

NLII fellow Paul Hagner unveiled his school's efforts to pair readiness assessment with faculty engagement by first identifying four types of faculty members: entrepreneurs, second wave, careerists, and reluctant. What is the institution doing to help second-wave faculty? It's building smart classrooms—from 2 in 1999 to 26 today, and it's offering workshops to help faculty become proficient in Web page creation and management, leverage the benefits of alternative teaching strate-

gies in the classroom, and become more comfortable with Blackboard. It's also pulling out the stops by means of incentives and support.

And it seems to be working. Hagner reported that in October 2000, the institution's investment in Blackboard yielded two users, courses, and instructors. By January 2002 those numbers had risen to an astonishing 4,543 users, 520 courses, and 289 instructors.

The whole issue of faculty engagement was an NLII key theme for 2000–2001, as indicated

by Hagner's fellowship research focus. For more information, see his white paper "Interesting Practices and Best Systems in Faculty Engagement and Support," which appears on the NLII Key Documents page at www.educationcause.edu/nlII/keydocs/index.asp. 

Strategic Planning and Alignment for Institutional Transformation


In 1999 the University of North Carolina at Wilmington was an information technology nightmare. With a fast-growing 10,000-student population and offering nearly a hundred different degrees, this star of the state's 16-campus public university system had to make some tough decisions. A decade of high-tech hyperbole and good intentions had left the school with more than 20 disconnected technology committees; Academic Affairs and Information Technology (IT) Systems were firmly ensconced in separate fiefdoms. The list of online courses read like a cut-and-paste ransom note: jumbled, random, and unstandardized. Construction projects and renovations were log jammed.

The solution, said Provost John C. Cavanaugh at the NLII annual meeting in January, came in the form of a blended-mode university—a unique marriage of management and technology that changed everything. Today, he says, UNCW's technology committees are paired down and jointly chaired, its online courses are corralled into clear departments, and its numerous new construction projects are moving ahead. Based on the image of a double-helix model that parallels administration and technology, this new hub of learning that blends virtual learning opportunities with the social living and learning experience of a physical campus has

affected every aspect of life on campus. UNCW offered more than 50 online courses this past spring, all of them seamlessly listed alongside the standard curriculum on a fully standardized, easy-to-navigate portal on the college's Web site. Behind that slick presentation lie a common strategy and a joint infrastructure that treat online learning with the same respect and standards applied to more-traditional courses. "The key to the success of this model is constant communication between the IT group and Academic Affairs," said Cavanaugh, in describing the double helix in action. "It requires a new way of thinking."

"Blessed are they who are flexible, for they will not get bent out of shape," said University of Colorado IT Initiatives coordinator Deborah Keyek-Franssen in her session on Strategic Planning. Keyek-Franssen discussed the details of her institution's bottom-up restructuring plan, which was based on a series of comprehensive surveys and interviews gauging computer use and skills. The results were not surprising. Faculty members at CU were more likely to use technology to organize their courses than to use it as a way of innovating their teaching styles. The research revealed that pedagogy has been relatively unaffected by the quantum leap in technology. And students and faculty admitted they felt their computer skills were inadequate.

Keyek-Franssen and her committee of faculty members used the data to identify two visions of educational technology at the school: (1) IT and information literacy and fluency and (2) uses of educational technology in learning and teaching. CU is currently creating a comprehensive, inclusive, collaborative model for strategic planning based on the research.

While almost every campus has a strategic plan—and possibly an information technology strategic plan that theoretically describes the mission and goals of the institution in relation to teaching and learning—it is not clear that those documents have been helpful as roadmaps leading to desired institutional transformation. Through NLII focus sessions, NLII fellows' research, and the Transformative Assessment Project, the NLII has been exploring how to align action—including policy, budget, project selection, and assessment—with strategic plans. In order to achieve institutional goals, the phrase *transform teaching and learning* must be specifically defined for the institution, beyond the general essence of creating an educational environment that is active, learner-centered, dynamic and lifelong, collaborative, cost-effective, and accessible. The NLII is working on developing a methodology for assessing institutional readiness to transform through aligned planning efforts. The emerging methodology is described in the Alignment in Planning branch of the READY system, which can be found at www.educationcause.edu/ready. 

Transformative Assessment Systems

During the go-go, hi-tech '90s, most colleges and universities believed they were headed down at least one technological road to education Nirvana: classrooms got retooled, distance-learning technologies got put into place, and libraries got hard wired to go to the student rather than the other way around. But like much of the hype and hoopla that dazzled and blinded the dot com generation, the technology that promised to revolutionize education quickly devolved into a waste of hard-drive space. Promises got broken. Money got wasted. Utopia became unrealized. And always the question, What went wrong?

Two sessions at the NLII annual meeting in San Diego examined the infrastructure ordeals of the past decade and offered encouraging strategies and action plans so that institutions could do their own retooling—and, most important, continue moving toward the objectives that fueled their ambitions in the first place. Taking a student-centered perspective was highlighted in the session titled Implications of Web-Based Learning for Student Evaluation of University Teaching. Charles Dziuban, director of the research initiative for teaching effectiveness at the University of Florida joined the university's vice president, Steven Sorg, to tackle this often contentious issue. Acknowledging that student evaluations are always controversial—especially when tenure, promotion, and merit pay are tied to them—Dziuban and Sorg presented UCF's impressive method for gathering and analyzing student evaluations fairly. The university used three years of data and more than 450,000 evaluations to critique individual professors and programs within the UCF system. Dziuban and Sorg presented the statistical model used for their research and the evaluation form, which was used for both online and face-to-face instruction.

In the session titled Transformative Assessment Systems, Stephen C. Ehrmann, president of the Flashlight Program (www.tlt-group.org/programs/flashlight.html), joined

Joan K. Lippincott of the Coalition for Networked Information (www.cni.org) to describe the Transformative Assessment Project—a joint project of the NLII, CNI, and the TLT Group—and to showcase transformative assessment methods that actually work. Parlaying his considerable experience in the area of institutional and academic assessment into clear and concise strategies, Ehrmann is still positive about the possibilities. Forty years of applying technology to education have yielded excellent methods for teaching technology; they've also opened up education to a much wider audience. Unfortunately, enhancing a university with new technology is like upgrading a computer:

WITH LITTLE CHANCE OF OUTMANEUVERING BUILT-IN OBSOLESCENCE, ENTIRE EDUCATIONAL AGENDAS ARE SOMETIMES BUILT AROUND FLASHY COMPUTER PROGRAMS THAT WON'T OUTLAST THE LIFE SPAN OF THE AVERAGE TELEVISION SITCOM.

when will the shiny new toys become obsolete? With technology as the focus, such enhancements will almost always fail, Ehrmann said.


"For a variety of reasons, institutions and programs tend to focus just on the new technology itself," said Ehrmann. "That's bad."

While universities are usually enamored with new technology, they're not entirely blind to the transient nature of new innovations in a constantly changing marketplace. With little chance of outmaneuvering built-in obsolescence, entire educational agendas are sometimes built around flashy computer programs that won't outlast the life span of the average television sitcom. Add to the scenario a plethora of frustrating computer bugs and the unmanageable growth of branching software that can be added to indefinitely without institutional controls, and most new

technology initiatives are forced to focus on technology rather than strategy.

A more effective approach, said Ehrmann, is the well-conceived, long-term plan that uses technology as a tool rather than an object of institutional worship and ultimately frustration: set long-range goals; choose technology that can be used incrementally and be easily updated; and use easy-to-access-and-manipulate teaching materials. Those initial steps, coupled with a system for tracking progress and a solid institutional coalition, will lead to success, said Ehrmann.

In an effort to create an environment for building the body of practical knowledge about transformative assessment systems, the Coalition for Networked Information, the NLII, and the TLT/Flashlight Program established the Transformative Assessment Project. The project leverages existing resources—such as the American Association for Higher Education's Assessment Forum—and focuses on building new knowledge and understanding about assessment for information technology professionals. Composed of three modules—an in-person focus session (scheduled for March 15, 2002, in Denver, Colorado, and cosponsored by the University of Colorado, Boulder), an online workshop, and an associated online learning community—the project, as Lippincott described it, aims to address teaching, learning, and technology and to link institutional transformation and goals. "Institutions know that they need to think beyond paper-and-pencil surveys when they think about assessment," said Lippincott. "In this way, we hope to help them understand the practical applications of basic assessment concepts and at the same time to work together as a learning community to create new knowledge about transformative assessment."

In addition, a Transformative Assessment branch of the READY system (www.educause.edu/ready/) is under development. For more information about the Transformative Assessment Project, see www.educause.edu/nlII/keythemes/transformative.asp. 

E-Portfolios

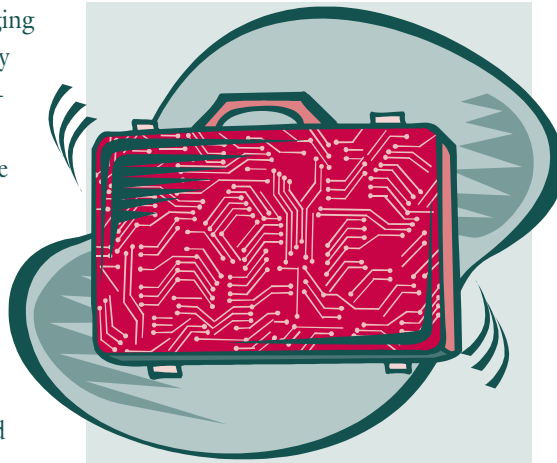
Imagine Shannon, a sculptor and recent art school graduate, on her first job interview at a prestigious SoHo art gallery. A week earlier, she sent the executive director an electronic résumé with links to an online portfolio of her work that she's been building—with the help of her professors—for the past three years. Now she sits in an air-conditioned second-floor office exchanging stories with the director, who's already perused her gallery of images and photographs. He's also read her brief how-to manual on the bronzing technique she invented during her senior year and the paper she wrote on detecting fraudulent paintings for her Art History class. The director is impressed with her visual presentation skills and her deep knowledge of art history. Shannon doesn't know it, but she'd been hired before she set foot in the gallery.

With new technology breaking down the barriers between text and images, school and work, and online and traditional environments, folio thinking is gaining ground on many college campuses. The NLII annual meeting in San Diego acknowledged those new techniques and strategies in a session titled *On the Wings of Change: E-Portfolios Take Off*. Five representatives discussed the initiatives their colleges and universities have pioneered to bring e-portfolios into the classroom and beyond.

University of Alaska professor Helen Barrett demonstrated how a lifetime of academic and professional achievement can easily be blended into a seamless, visually stimulating package by using existing hypertext techniques. Portfolios serve as mirror, map, and sonnet, providing structure and easy navigation through a lifetime of accomplishments. E-portfolios, Barrett said, are easy to customize, and they can be used for learning, assessment, and employment purposes. Like reading an entry on an online encyclopedia, the viewer can effortlessly explore a

student's talents and interests.

Building on Barrett's outline of the issues, Carnegie Mellon University Media Lab codirector Toru Iiyoshi demonstrated an online portfolio that had been created by a college music professor. Using streamed audio and video, the folio blended sound, images, and text into a seamless multimedia presentation. Iiyoshi described the process behind the



NLII Focus Session

E-PORTFOLIOS

October 25, 2002

Evanston, Illinois

*Planned by E-PAC and sponsored
by the Northwestern University*

www.educause.edu/nlii/meetings/nlii023


Advance the body of knowledge on issues around e-portfolios by looking at projects currently under way across the world and interesting practices that are developing. This focus session is organized around research results from the work of NLII 2001 fellow John Ittelson, who is chairing E-PAC, an ongoing NLII working group on e-portfolios, with representatives from the Stanford Learning Lab; the Knowledge Media Laboratory of the Carnegie Foundation for the Advancement of Teaching; Minnesota State Colleges and Universities; the University of Alaska at Anchorage; Northwestern University; and the University of Washington.

presentation as “tedious and time-consuming” and encouraged the development of technical tools that will help streamline the setup for online portfolios.

Stanford University research scientist Helen Chen demonstrated how the e-folio process could easily be incorporated into all aspects of a college career: Chloe, an imaginary college student, uses her e-folio to develop her own plan of study for international relations, choosing courses that fit her interests within the discipline. She articulates learning goals and updates them as she moves through college, gaining new experiences and insights.

She incorporates everything from a language course to a service project in New Mexico. As she nears graduation, she uses the same technology to shape folio presentations (online résumés) for several different potential employers. After graduation, she continues to build on the résumé, adding links to job experiences and accomplishments.

Several other presenters shared thumbnail sketches of successful e-portfolios. Gary Langer, associate vice chancellor of Minnesota State Colleges and Universities also presented stunning examples of e-portfolios while describing his unique initiative to begin the e-portfolio process in collaboration with the private sector before college. John Ittelson, director of the California State University Idea Lab and NLII 2001 fellow, illuminated the potential of e-portfolios, or so-called universal repositories, to replace traditional manuscripts.

E-portfolios are a key NLII 2001–2002 theme because their use represents a new form of assessment that has the potential to transform teaching and learning into a more learner-centered endeavor. An NLII-sponsored working group, E-PAC, has been formed with Ittelson as chair. The group is currently planning an NLII focus session on e-portfolios, scheduled for October 25, 2002, in Evanston, Illinois. For more information about NLII e-portfolio activities, see www.educause.edu/nlii/keythemes/eportfolios.asp. 

Virtual Communities

Whether we use the term *online* or *virtual*, the notion of community still refers to people and the places they create and occupy. If social interaction is central to learning, is it possible to create electronic environments in which learners have the social constructs necessary for forming knowledge?

Current research on learning design suggests that the key principles of learning do not necessarily include face-to-face interaction, even if they demand a social component. Evidently, knowing the needs of the community is what's important in the design of community space, whether that space is a Web site or a classroom. This research was described at the NLII meeting in San Diego at the featured session titled Virtual Communities by panelists Melissa Koch of SRI International, Sabine Seufert of the Institute for Media and Communications Management and the University of St. Gallen, Vicki Suter, director of the NLII program, and representatives of Emory University.

What issues should be considered in the design of a learning community? One is the notion of user lock in, or what is referred to as preferences or personalization of community space. Another is an understanding of the effects of networks and knowing when an addition to the space adds value to the entire Net. Yet another is the concept of thinking through the dynamics of community space; on the Net, for example, there are a lack of location barrier, the diverse locations of users, and a sense of many-to-many connecting. And finally, it pays to understand that within a successful community there is a sense of connection, trust, mutual understanding of the collective culture, and belonging.

Sometimes a virtual community can actually enhance a physical community. In 1989, graduate students in the department of biology at Emory University established an online class conference environment they called



LearnLink. That year, 27 classes and roughly 600 students used LearnLink, and the students were converted to the experience. Since then, the product has grown into a dynamic, engaged, vibrant academic community that thrives in a virtual world. Evidence of its success was brought to the fore by Emory's Alan R. Cattier, Donald Harris, and Adam Lipkin in their session titled LearnLink@Emory: Community across an Institution.

As of fall 2001, more than 17,000 users were using LearnLink to take more than 700 classes; all this from a campus that had struggled for years to encourage physical community on campus. LearnLink has emerged as a substantial presence on Emory's campus, albeit virtual. Today it reaches beyond the currently enrolled student body to also include prematriculants, who now have access to both current students and faculty. The institution is talking with the alumni office with a view toward engaging alumni in online discussions.

On the Web, online communities have formed prolifically, as people with common interests find each other across the Net and create new models for social dynamics. Those interested should see www.mon-goosetech.com/realcommunities/overview.html, where they'll find a white paper on the 12 Principles of Civilization. The paper outlines what makes community.

Virtual communities are an NLII key theme for several reasons.

- Some or most knowledge is created socially.
- Face-to-face experiences are important and bounded by space, time, and money.
- We need to leverage face-to-face experiences as much as possible by providing an environment in which to prepare for them beforehand and in which to then extend effective connection and communication after the face-to-face meeting or conference.
- We need to harness technology to create environments in which learners—whether they be students, faculty, staff, or EDUCAUSE/NLII members—can construct and share knowledge when face-to-face experiences are too expensive or not possible.
- Internet technologies have the potential to overcome other barriers in the creation of broad-based, vibrant, and engaged academic and professional development communities.
- EDUCAUSE and the NLII depend on volunteer members for much of the intellectual capital generated and for tools that encourage and facilitate member collaboration on task forces and working groups, known as virtual teams.


Starting with the NLII Staff Virtual Team, the NLII has been conducting virtual community pilots on an increasing scale of size and complexity since 1998. NLII staff assisted in the development and design of the EDUCAUSE Virtual Communities Initiative, which is part of the 2002 Program Plan approved by the EDUCAUSE Board of Trustees and which includes plans for a number of formal pilots to test virtual community and virtual team products and services with representative samples of EDUCAUSE membership. The purpose of the pilots is to refine the needs assessment; finalize functional specifications; complete technical specifications and evaluation of potential software and services for virtual communities against functional and technical specifications; test

(continued on next page)

integration of commercial software with existing EDUCAUSE systems and other commercial products; make buy-or-build recommendations; conduct preliminary training and evaluation of the role of staff and volunteer community leaders; and determine start-up and operational costs for full production services.

The first EDUCAUSE Virtual Communities

Initiative pilot is being sponsored by the NLII: the Transformative Assessment Project Online Workshop/ Learning Community pilot (see www.educause.edu/nlii/meetings/nlii014/ta.p.asp) from March 2002 through September 2002. The purpose of the online workshop/learning community pilot is to provide a learning environment that supports members of institutional teams as they carry out

transformative assessment projects at their institutions while at the same time allowing them to continue to be active contributors to the emerging body of knowledge about transformative assessment. For more about this project and the NLII Virtual Communities key theme, see www.educause.edu/nlii/keythemes/VirtualCommunities.asp. 

Improving Learning and Reducing Costs through Redesign of Large-Enrollment Courses

Lessons Learned through the Pew Grant Program in Course Redesign

After years of talking about the possibility that sound investments in information technology could mean higher quality, better access, and reduced costs in the areas of teaching and learning, the Pew Grant Program in Course Redesign

decided to put the theory to the test. The program set out to improve a prime area of ineffectiveness in teaching—the large-enrollment lecture course—and at the same time explore a return on investment strategy.

The results, according to Carolyn Jarmon, who delivered the news at the NLII annual meeting in January, are a collective saving of more than \$30 million across 30 institutions in high-enrollment courses, cost reductions averaging 25–47 percent annually, higher grades, increased levels of content knowledge and performance by students, and improved retention. Not bad for the first three years.

The institutions involved in the three rounds of project funding tackled familiar problems. Resource-hungry, high-enrollment courses were characterized by ineffective traditional systems and structures, such as credit-

for-contact hour, technology that had gotten bolted on to old systems rather than embedded, and labor-intensive instruction.

Not only were the courses not cost-effective, but also teaching methods—such as lectures and multiple sections—frequently saw poor attendance, low recall of content, and disengaged students. On course completion, it was found that students were ill prepared. Faculty across multiple sections favored teaching to their area of interest, not to a common curriculum. As a result, students had significant gaps in what was supposed to be a standard body of knowledge and outcomes. Others simply failed, thereby limiting their future choices. When faculty did tackle course redesign, the result was often a stand-alone product, one nontransferable should they exit, or courses that were simply neither sus-

tainable nor scalable. One key goal was to demonstrate the ability to scale such redesigns with large enrollments—not just small, individual courses—so that the savings are real and able to provide resources for other institutional endeavors.

The institutions selected for the project were those that could demonstrate a successful record of implementation. “Higher education is terrific at planning,” said Jarmon, “It’s the application where we have difficulty.” The Pew Grant wanted institutions and people who could do—not just think about doing. Pew looked for prior experience, strategic positioning, and demonstrated understanding of research-based pedagogies. The initiatives that got funded were perceived as doable, effective, and straightforward—those offering serious and creative attempts to reduce costs. Funding was provided for the transition because the cost savings would be ongoing once the redesign had been completed. Those selected made a commitment to course redesign, the sharing of the resulting body of knowledge, and dissemination of the results.

Key to the course redesign process and subsequent success was the thoughtful selection of appropriate pedagogies. Active learning—not passive note taking—promotion of student engagement and interaction with one another, reduction in the number of face-to-face class meetings replaced with well-designed interactive software, individualized assistance and 24/7 access to online resources were some of the course characteristics. Add to that an emphasis on practice, appropriate


feedback, responsiveness to individual learner needs and learning styles, and the use of technology to automate some of the forms of monitoring (“You haven’t logged on for two weeks”), assessment (at one institution, replacing with automated evaluation four full-time teaching assistants grading 16,000 homework assignments), and differentiated personal learning strategies (learn as an individual, learn in a group, or test out of a module). Add to that learning gains, motivated students, and better retention, and the picture begins to look like success.

Participating schools are finding that oth-

ers at their institutions are adopting the redesign characteristics. At Fairfield University, the entire biology curriculum is being redesigned based on improvements in student’s learning and the pedagogical methods of the initial redesign. At Penn State University, engineering statistics and biostatistics, as well as statistics courses on other commonwealth campuses, are being redesigned using the PSU model for introductory statistics developed through the Pew Grant Program in Course Redesign. At the University of Central Florida, the model established for a political science course is being

used in the mathematics and English departments to redesign large-enrollment introductory courses.

While Jarmon was explicit about stating there was no single, best model, there was plenty of evidence that student learning improved and quality gains were made. The redesigns were certainly labor saving, but the end result was that students and faculty were working in more meaningful ways.

More information on the Pew Grant program can be found at www.center.rpi.edu. 

Serving the Underserved

Can technology help institutions become more responsive?

The minute you step into a classroom at Salish Kootenai College (SKC) on the Flathead Indian reservation in western Montana, you begin to understand why *theory* is not a word in any Native American language. For Native Americans, knowledge is neither hypothesis, guesswork, nor conjecture; it is a process whereby students “come into knowing.”

At SKC, students come into knowing in classes designed from an American Indian perspective taught in tribal languages that might otherwise disappear. So deep is the well of learning and culture among Native Americans that at a similar institution—Bay Mills Community College—a traditional tribal literature class is taught only during the winter term because the stories are supposed to be told when snow is on the ground. Like scores of other tribal colleges scattered across the United States, SKC is in every respect a place of culture, language, and learning. And it has a few things to teach the rest of higher education about tackling issues of cultural diversity in an age of computer-mediated learning.

“NATIVE AMERICANS HAVE A VERY SPECIFIC SET OF BELIEFS WHEN IT COMES TO THE EDUCATIONAL PROCESS, AND IT INVOLVES GROUP LEARNING, UNDERSTANDING THE ROLE OF FAMILY IN THE LEARNING PROCESS, RECOGNIZING THE UNIQUENESS OF EACH TRIBE, AND HAVING ABSOLUTE RESPECT FOR THE INDIVIDUAL.”

—LORI LAMBERT

Today many institutions of higher education are grappling with dramatic shifts in student, faculty, and staff demographics. And while some are finding that technology some-

times widens the divide, others are finding ways to utilize technology to make themselves more responsive to diverse audiences. The NLII annual meeting in San Diego offered a window into demographic transformation and served up compelling proof that advanced technology can be a strategic tool for reaching out to the underserved.

At the heart of each of the programs described in those sessions is a \$6-million grant funded by the National Science Foundation and awarded to EDUCAUSE for the purpose of assisting minority-serving institutions as they develop campus infrastructures and national connections. The program, called AN-MSI—or Advanced Networking with Minority-Serving Institutions (see www.anmsi.org)—is working with tribal colleges and institutions serving black and Hispanic populations. In each case, creative uses of technology—whether through connectivity, distance learning, or course design—are helping serve the educational needs of minority students while working to preserve language, culture, and tradition.

Nowhere is this more obvious than at Salish Kootenai College, where courses reflect the sensibilities of the population by emphasizing the cultural values of the natural world. “Native Americans have a very specific set of beliefs when it comes to the educational process,” said

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Salish Kootenai's Lori Lambert, who described her work at a session titled Institutions in Transformation: New Demography, New Technology, and New Faculty Roles, "and it involves group learning, understanding the role of family in the learning process, recognizing the uniqueness of each tribe, and having absolute respect for the individual."

Under Lambert's leadership, a technology-based distance-learning program is now in place at SKC in two areas of study: human services and environmental science. The courses were designed to incorporate the same sensibilities that go into the development of campus-based courses at SKC. "To be successful in this environment," said Lambert, "we had to be supportive of students and faculty. By doing so, we knew we could raise the bar of expectation when it came to education."

Understanding how minority cultures operate is essential to understanding what will work in an educational setting. Henry Ingle of the University of Texas at El Paso described technology and demography as drivers for educational change and transformation at his institution. In the El Paso region, 11 percent of the population has a college degree. At UTEP, 69 percent of the student body is Hispanic and 83 percent of the students are gainfully employed. It is by every definition a culturally diverse and challenging environment.

El Paso doesn't have a long tradition of encouraging college education, so the university—under the leadership of Diana Natalicio (see NLII Meeting Notes, New Orleans 2001, www.educause.edu/nlii/meetings/orleans2001/01_notes.pdf)—created a campus environment that looks a lot like the city it serves. And the university is dedicated to creating social and cultural ties to the community. According to Ingle, the institution's leaders knew that to create a culture of education among El Paso's population, the university would have to move toward a technology base. But there was never a doubt that technology offered the vision.

Leveraging certain funds acquired through a lawsuit, UTEP set out to create a high-tech

building that would spotlight the university's resources and reflect the culture of the community. "Twelve thousand students go through that building every year," said Ingle. "And there they find a digital media center staffed by students, an office of technology planning and distance learning, and a staff that is bilingual and bicultural." UTEP also became an Internet2 site. By infusing the institution with a technology-based infrastructure that could serve both on- and off-campus students, the institution is able to encourage lifelong learning.

Recognizing that culture and learning are inherently linked is an essential part of any successful distance or computer-mediated education program. Culture, said Joyce Williams-Green of Winston-Salem State University, a historically black college or university (HBCU), is the lens through which we view the world—"that complex whole that includes knowledge, belief, art, morals, law, customs, and any other capabilities and habits acquired by people in any society." But sometimes technology only heightens awareness that certain groups are underserved.

In the United States there are 116 HBCUs—most of them situated in the Southeast. Thirty-five of them are participating in the AN-MSI program. According to Williams-Green, a NAFEO study shows that infusion of technology into the curriculum is a major area of concern at HBCUs, as is the use of computing in the homes and schools of black and Hispanic populations, which is at a lower level than that of white populations.

Adding to the difficulty is the demographic of the HBCU student in the knowledge age. "That student is older, has children, is working, has limited access to technology, and is largely African-American," said Williams. And their institutions have networks that are still evolving, have limited staff, experience increasing pressure for access, have more diversity among students, own lower versions of software, and enjoy few resources to stay ahead of the curve.


Working to address those issues, Williams-Green has taken a leadership position in the

USING SATELLITES TO REACH THE UNDERSERVED

As part of its cooperative program with Internet2 and the AN-MSI project, the American Distance Education Consortium (ADEC) is not only testing infrastructure solutions for the "last 10 miles"; it is also conducting participatory learning research with tribal colleges and communities, rural and remote learners and locations, and historically black colleges and universities. A key component of ADEC's work is creation of the Advanced Internet Satellite Extension Project (AISEP), an initiative aimed at exploring and evaluating satellite technology to deliver the Internet to the underserved.

The results have been promising, said ADEC president Janet Poley in a session titled Research-Based Learning Materials for the Underserved, due in large part to the team effort and the quality of the players. "We needed people who really understood all aspects of the technology," she said. "By doing so, we ended up with something far less expensive. You need to engage people with different mind-sets."

Poley cautioned participants against assuming that high bandwidth means more learning. "We need to make appropriate investments in learning," she said. "Technology is necessary but not sufficient. It needs to enhance learning."

formation of the Virtual Institute for Technology Advancement in Education—or VITAE-HBCU—a consortium of 13 HBCUs, of which Winston-Salem is one. The mission of VITAE-HBCU is to provide member institutions with the knowledge, skills, and experience to assess, plan, implement, and evaluate technology-based instructional strategies that will enhance the social and educational opportunities of HBCU faculties, HBCU students, and the communities in which they live. "HBCU students know they're in an HBCU," said Williams-Green. And that can be either part of the problem or part of the solution. 

Systemic Progress in Teaching and Learning

For years, both the education and mainstream presses have been sounding the alarm over students' riding through the education system, getting degrees, and landing in the employment market devoid of marketable skills. The drama of students' pushing fretfully from interview to interview, armed with degrees gained by

simply showing up in class—but without the requisite critical-thinking and basic computer skills—plagued educational leaders for much of the last part of the 20th century. With all of the promises of a technology-based educational system that puts students at the center, why are so many leaving college unequipped for the demands of the job market?

The answer is that in an age when knowledge and information are currency, students need more than academic content: they need skills that will enable them to find, interpret, and critically analyze information content and the technologies that deliver information. And while it's true that a good number of incoming freshmen—raised on video games, the Internet, and Webcasts—constitute perhaps the most technosavvy generation yet, their high-tech wizardry should not be mistaken for a solid base in navigation, selection, and critical analysis of electronic resources. Some college and university leaders refer to this as information literacy or fluency.

George Mason University is tackling that issue, and its efforts to do so earned it a 2001

EDUCAUSE Award for Systemic Progress in Teaching and Learning. Representatives from GMU discussed the components of its program in a session titled Technology across the Curriculum at George Mason University: An IT/Academic Partnership.

WITH ALL OF THE PROMISES OF A TECHNOLOGY-BASED EDUCATIONAL SYSTEM THAT PUTS STUDENTS AT THE CENTER, WHY ARE SO MANY LEAVING COLLEGE UNEQUIPPED FOR THE DEMANDS OF THE JOB MARKET?

The university's Technology across the Curriculum—or TAC—program (<http://cas.gmu.edu/tac/>) builds on the model of its Writing across the Curriculum program. It is designed to incorporate appropriate technologies into all classes and ensures that every student—in whatever field—graduates from GMU with technological skills and an understanding of how they can be used. The TAC

program is a collaborative effort between the GMU College of Arts and Sciences and the Division of Instructional Improvement and Instructional Technologies. To achieve its goals, Arts and Sciences faculty developed a list of skills students need in courses, fields of study, and early employment. Then TAC worked with all departments in the college to redesign more than 90 courses and develop six technology-focused minors, some in conjunction with the School of Information Technology and Engineering. By the fall of 2001, more than 7,500 students had participated in one or more of the courses.

As EDUCAUSE pointed out in its Teaching and Learning Award citation, GMU's exemplary program advances deliberate, institutionwide innovation while remaining grounded in both student needs and student achievement. The GMU program features a number of elements to ensure its success and sustainability and that would be useful to other institutions and state systems, such as a systematic process through which faculty identify core basic and advanced skills, a grid matching those skills with programmatic curricular change, both student and faculty support systems, a budget process that matches the priorities articulated in the TAC program, and a solid assessment mechanism.

Systemic change is also at the core of another 2001 EDUCAUSE Teaching and Learning award winner—this time in the form of an online learning program. The State University of New York's Learning Network (<http://sln.suny.edu/admin/sln/original.nsf>) is designed to increase access to SUNY's academic programs and maintain consistently high quality in online learning. And it manages to achieve those goals with verifiable fiscal prudence.

SUNY's thoughtfully designed and implemented program features a variety of elements other institutions will value. It has a well-structured, four-stage faculty development process and a seven-step course design process with extensive training and support

NLII KEY THEMES


Visit www.educause.edu/nlII/keythemes for descriptions of NLII key themes and opportunities to participate in NLII projects.

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“In an age when knowledge and information are currency, students need more than academic content. They need skills that will enable them to find, interpret, and critically analyze information content and the technologies that deliver that information.”

for participating faculty. It features a robust technology architecture that offers a reliable development and learning environment for faculty and students and emphasizes a high degree of individual interaction. The Learning Network has a 24/7 technical support program that serves all participating SUNY Learning Network institutions. And it sports a funding and property rights model that recognizes and rewards contributions by individual faculty and institutions while at the same time acknowledging a common need for high-quality support and service.

Evidence of the success of the SUNY Learning Network abounds. From 1995 to 2001, annual course offerings increased from 8 to more than 1,500. Student enrollments increased from 119 to more than 25,000. Participating SUNY campuses increased from 2 to 53 of 64. And complete online degree offerings increased from 0 to more than 40. “We set up a system-wide program for campuses to offer their degree programs by zeroing in on what is redundant,” said Eric Frederickson, assistant provost of advanced learning technology at SUNY. Those redundancies included faculty training, technology infrastructure, help desks, marketing, and program development among campuses. However, campuses remain independent and in control, retaining responsibility for acad-

emic authority, student services, and receiving and managing revenue. “This worked because we had the right model,” said Frederickson, “and because we had respect for campus autonomy and the role of faculty and because we provided services that would be hard to find on a local campus basis. And it creates a high-quality experience for students and faculty.” They also have a very strong assessment component embedded in the program. For more information about the EDUCAUSE Award, see www.educause.edu/awards. 



MARK THIS DATE

NLII Fellowship Applications Deadline

The NLII Fellowship Program is a program of two half-time, one-year fellowships targeted toward faculty and teaching and learning support staff at institutions of higher education. Applications for the program are due Wednesday, July 31, 2002. For more information, see www.educause.edu/nlII/fellowship. An online application form will be available starting May 31, 2002.

A MESSAGE FROM THE NLII STAFF

Thanks to our flexible presenters, who went beyond “this is what we’re doing here at Hilltop University” to “here’s a framework for understanding these shared issues, and here are some general principles and effective practices based on them that we’ve developed that have replicable, sustainable, and portable results.”

Thanks to the 45 percent of you who responded to the evaluation. The most common rating of overall satisfaction was 4; the overall mean rating was 4.18. (For more details, see the NLII Web site.)

Following are some of the representative comments we received.

“Wonderfully planned and executed. High levels of service, intellect, and exchange.”

“I look forward to NLII, as I believe it showcases the quality work of industry professionals seeking best practices, as opposed to lots of single-instance good ideas that cannot be easily replicated.”

“I would like to see some active learning sessions where participants receive information ahead of time and work through it together.”

“I was very frustrated by the number of concurrent sessions.”

“The people I met were wonderful, but there wasn’t enough chance for smaller-group interaction.”

We are responding with the following changes for the NLII Annual Meeting in 2003. The number of concurrent sessions will be limited to five per time slot. Session lengths will be increased to one hour. The second day of the conference will be extended to 2:30 p.m. And an afternoon dedicated to workshops and to meetings of self-selected communities of practice and interest—both of which will be highly interactive and participatory—has been added. Look to the NLII Web site for more details and information as they become available.

And mark your calendar now for the NLII 2003 Annual Meeting, scheduled for January 26-28, 2003, in New Orleans. For more information, see www.educause.edu/nlii/meetings/.

Federal Policies and Programs Influencing Collaborative and Distance Learning

EDUCAUSE policy analyst Garret Sern and LAAP coordinator and FIPSE program officer at the U.S. Department of Education Brian Lekander discuss federal policies and programs that affect higher education’s intelligent use of information technology.

The USA-PATRIOT Act’s Impact on Higher Education

In the aftermath of September 11, the U.S. Congress made the sending of antiterrorism legislation to President George W. Bush’s desk a priority. The result was bipartisan approval of the USA-PATRIOT Act of 2001. Signed into law by President Bush in late October 2001, provisions within the act include Internet-service-providers’—including higher education’s—liabilities and responsibilities when those entities cooperate with requests by law enforcement to monitor the Internet communications of customers. The act does not impose any new unreasonable financial or technical requirements on the higher education community. However, provisions within the act create the potential for unregulated government intrusion and surveillance of communication networks. Higher education administrations find themselves balancing the desire to be law-abiding, patriotic citizens with the desire to ensure that the academy remain an open conduit for free expression and a protector of faculty and student privacy.

EDUCAUSE advises its members to take the following steps to ensure they are doing everything in their power to strike that balance.

- Confer with the member’s institution’s legal counsel.
- Review privacy, confidentiality, and security policies.

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- Establish procedures to respond to increased court orders while recognizing liability protections stipulated under the new law.
- Review systems to identify ways surveillance can be accommodated without degrading network performance.

Broadband Access

As the Bush Administration tries to craft a national telecommunications vision, Congress and the Federal Communications Commission are wrangling with whether the federal government is doing enough to promote the deployment of broadband networks. Higher education has remained clear of the political-industry-led fight, focusing instead on affordable connectivity from the local-loop to national high-speed backbone networks and on increasing the level of support for the research and development of broadband applications and national optical network test beds.

Promoting Distance Education in the Digital Realm

How can education promote the use of digital communications in education and research while ensuring that content creators get compensated fairly? The content community and education and library coalition negotiated compromise legislation known as



the TEACH Act (S.487), which both parties agree balances those concerns. While the TEACH Act is being held up in the House Judiciary Committee, the higher education and library community is deliberating on its responsibilities to prevent the unauthorized downloading and distribution of copyrighted works, keeping in mind the technological protection measures available in the marketplace.

Federal Funding Programs and Policies

What are higher education's information technology (IT) needs, and what does higher

education want from the federal government? That is the question being asked by federal postsecondary program officers in the wake of most postsecondary IT programs' being either eliminated or consolidated into state block grants. The Bush Administration has devoted most of its energies to its No Child Left Behind initiative, which aims to improve K-12 education by eliminating burdensome administrative hurdles and duplicative technology programs. Not much is left over for higher education. There were no fiscal year 2002 appropriations for the popular Learning Anytime, Anywhere Partnerships program (www.ed.gov/offices/OPE/FIPSE/LAAP/), which supports consortia and other partnerships devoted to asynchronous distance education. EDUCAUSE believes the funding reductions are a wake-up call for higher education to become more active in communicating its needs to federal policy makers and especially in sharing community success stories that resulted from federal IT programs.

For more information on the policy issues EDUCAUSE is covering, see www.educause.edu/policy/policy.html.

For more information on the Department of Education's Fund for Improvement of Postsecondary Education FIPSE program, see www.ed.gov/FIPSE. **NLI**

Find complete NLI meeting information and proceedings at

www.educause.edu/nlii/meetings/sandiego2002

For PDFs of this newsletter, see www.educause.edu/nlii/keydocs

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