Why Now?

College and university sustainability projects have been around for years. The more recent push to connect academic and operational initiatives and reposition sustainability at the campus core is gaining ground in part because related issues have entered mainstream public debate. “There is growing awareness concerning how various social, economic, and ecological issues interrelate,” says Judy Walton, executive director of the Association for the Advancement of Sustainability in Higher Education (AASHE).

In one example, serious concerns about energy supplies and costs in the midst of unstable economies, devastating natural disasters, and burgeoning development of population giants such as China and India have heightened discourse about a shared future on this planet. Combined, the 4,100 higher education institutions in the United States also represent a vast economic engine with a definite capability to leverage spending and consumption patterns in positive ways, says Anthony Cortese, president of Second Nature and AASHE cofounder. The question is: Does higher education have the will to be a key player in teaching and modeling sustainability? In the face of escalating operational costs alone, can it choose not to?

For Cortese, the problem drills much deeper. He argues that, at a macro level, higher education has made far more progress in modeling sustainability than it has in teaching about sustainability. “A sustainability focus requires that we as a society focus simultaneously on systemic solutions for building healthy, economically strong, and secure thriving communities.” And yet, we still tend to view health, econom-

Will Sustainability Take Root?

by Karla Hignite

Do you know sustainability when you see it? The results of an institution’s commitment to environmental, social, and economic health are often subtle. They aren’t always evident, and they can be measured by what you don’t find.

While every isolated action is important—from paving bike lanes to perking fair trade coffee to paying workers a living wage—the core value of sustainability transcends individual efforts. Campus advocates and practitioners who have been planting sustainability ideals for years declare that absent a strong network of support nurtured across disciplines, departments, and stakeholder groups, the probability that any initiative will reach full height is hampered. A holistic focus is needed to capitalize on curriculum changes and operational investments tilted toward a sustainable future. And that’s what appears to be happening: More institutions are embracing systemic sustainability, pairing theory and practice and involving students in key problem-solving and decision-making roles.

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ic, political, security, environmental, population, and other major social issues as separate, competing, and hierarchical, says Cortese. Likewise, higher education itself is generally organized into specialized areas of knowledge and traditional disciplines, emphasizing individual learning and competition and producing graduates ill prepared for cooperative efforts.

“Because they prepare most of the professionals who develop, lead, manage, teach and work in, and otherwise influence society’s institutions, higher education institutions bear a profound moral responsibility to increase the awareness, knowledge, skills, and values needed to create a just and sustainable future,” argues Cortese. Understanding how to create a just and sustainable society must become a fundamental principle taught throughout all education levels and disciplines. “Sustainability is not one more issue that higher education must deal with—like computer literacy. It really is central to an institution’s mission and function.”

The number of alliances and coalitions that have formed in recent years to support sustainability show that it is gaining attention if not acceptance as an organizing value for setting mission. At the least, says AASHE Associate Director Julian Dautremont-Smith, society in general and local communities in particular are increasing expectations for higher education to respond to global challenges in sustainable ways. While early campus efforts represented more of a scattershot approach, Dautremont-Smith is excited about a recent convergence of four key areas in which he believes institutions can make a substantial impact: energy, facilities, food, and curriculum.

Hold the Carbon

Skyrocketing campus energy costs are encouraging more institutions to revisit long-term heating, cooling, and lighting options. More attractive than ever: conservation and alternative energy strategies.

Berea College, located in a southern Appalachian Kentucky community of 12,000, serves 1,500 undergraduates. Through its campuswide energy master plan, Berea is in the early stages of a multiyear project to redesign its energy system and slash consumption by 45 percent by 2015, says Diane Kerby, vice president for business and administration and past APPA President. In addition to building retrofits, Berea is transitioning from a 65-year-old coal-fired heat plant to natural gas. The roughly five miles of buried insulated pipe will bear only a 3 or 4 percent loss of energy compared to a 30 percent loss from the current central coal plant and will require about half the space, says President Larry Shinn. Geothermal technology represents another piece of Berea’s new energy plan.

Entertaining this option meant the college had to slow its renovation process and hire an engineering firm to learn about geothermal requirements and benefits. Today 5 of Berea’s 70 buildings are heated this way.

“The entire process has entailed stepping back to figure out how to take a late 19th-century campus with $140 million in deferred maintenance in 1995 and turn it into something with a smaller environmental and financial footprint,” says Shinn. It’s been a somewhat slow, building-by-building approach, but the outcome will be measured not only in cumulative energy savings but in knowledge gained, says Shinn. “Along the way we are educating architects, contractors, our staff, and community members, whom we’ve invited to be part of our process.”

Shinn argues that the greatest cost of ecological design is when you do little. “Cutting energy use of a single building by 15 percent is a good start, but if you can make bold steps to cut campuswide energy use by 40 or 50 percent, that will certainly cost more upfront but will save much more and more quickly.” Leaders must base investments on fact, including costs of not implementing energy efficiency and renewable energy. Institutions that don’t begin to pay attention to the need to conserve energy and water will pay mightily in the not-too-distant future when greater percentages of operating budgets are required for utilities, says Shinn.

“We all need to calculate what we will spend in ten years if we don’t do anything now.”

Walter Simpson couldn’t agree more. As energy officer for the State University of New York at Buffalo (UB), he believes that a key thrust of any campus greening effort must be energy conservation. “Simply put, energy reflects the single largest environmental impact of a campus—and the biggest potential payback,” says Simpson. “You can do many things, but if you aren’t serious about conservation, you are simply missing the boat.”

In the world of energy conservation, Simpson is marathoner. He’s been catalyzing UB’s energy efficiency efforts since 1982 when he pitched the idea for his job to university administration by promising to pay his own salary from reduced energy costs. Since then, the combination of conservation efforts employed by Simpson and UB’s facilities staff has paid off handsomely, resulting in an estimated annual savings of $9 million. Even so, says Simpson, UB’s energy team is still scratching the surface.

On a campus as big as UB—with 27,000 students and 10 million square feet of buildings—severe energy price fluctuations can spell the difference between a $20 million and a $30 million energy bill during a single year, says Simpson. The big culprit: continued reliance on fossil fuels. “In addition to implementing dramatic conservation measures, making any real dent in energy cost savings requires a radical departure from current consumption practices. From an energy perspective, you aren’t really talking about sustainability until you can cut...
Beyond its built environment, UF has received a prestigious certification from the Audubon Cooperative Sanctuary Program. When the suggestion was made to seek sanctuary status for the university’s golf course, UF’s associate vice president of finance and administration spearheaded a proposal to apply the standards across the entire campus, says Tanzer. The designation recognizes a high level of environmental stewardship in wildlife habitat management, resource conservation, and outreach associated with the 2,000 contiguous acres of the Gainesville campus, which includes 23 conservation areas, some off limits to human traffic.

**What’s for Dinner?**

A third area of increased campus sustainability focus is within food services. Specifically, local food initiatives are carving a place at more institutions.

Middlebury College has been setting its table with local produce and dairy for decades. One third of its dining budget is shared among 35 suppliers in Vermont, says Nan Jenks-Jay, director of environmental affairs and planning. In an age of mass transport and wide food distribution networks, she says, that takes more effort than many may think.

One tangible benefit for students is fresher food, but the bigger payoff extends beyond campus boundaries. Support of local and regional production and labor sources strengthens local economies and bolsters community relations, says Berea’s Kerby. Berea recently formed a steering committee of students, faculty, and staff to develop a local food initiative through which the college will become a patron and a producer, growing some of its food on existing farms located on campus. The proposal will also formalize the college’s commitment to buy locally produced food and make evident the institution’s economic link to its community, says Kerby. “Establishing guidelines for purchasing targets will entail working closely with local producers to determine their capability and may require helping local farmers get organized, perhaps by forming cooperatives, so they can meet Berea’s increased needs.”

According to Cortese, sustainability blossoms in such instances when colleges and universities start to understand their mutual interdependence with their local and regional communities. And understanding occurs to the extent that institutions view themselves of their communities and not merely in them.

**Changing Coursework**

No discussion of what campuses are doing to promote sustainability would be complete without considering what they teach. While decades-long environmental studies programs...
have produced wonderfully trained specialists, the harder
part—and arguably the greater need—is to infuse the full cur-
riculum with a sustainability focus, says Cortese. Among the
institutions to comprehensively tackle this challenge is the
Georgia Institute of Technology, where the process has proven
intensive and long term.

Berea has been sustainability-minded since its founding,
with a long-standing commitment to educating students of
limited economic means and a strong focus on interracial
education and service-learning opportunities. More recently,
consciously efforts toward ecological proficiency have grown
central, with a multidisciplinary sustainability and environ-
mental studies program. And students aren’t only learning
about sustainability in the classroom. Ecovillage is the
college’s newest residential component for married and single
parent students who, along with their children, experiment
with environmentally responsible living through everyday
practice. Vegetable gardens, fruit trees, a greenhouse, and a
wetland are accompanied by technologies that help residents
dramatically reduce energy and water use by up to 75 percent.

That kind of modeling and experimentation are vital for
sustainability as a core value to take root, believes Cortese.
“Ultimately the entire educational experience of students is a
function of not only what they are taught, but how they are
taught and the way in which an institution conducts research,
manages operations, designs facilities, purchases materials, invests resources, and interacts
with local communities,” he says. “In many
cases, we think of these as separate activities.
They are not. All parts of the university are crit-
cal in creating transformative change in the
individual and collective mindsets.”

If sustainability makes such good sense, why
aren’t more institutions heading down this path? Why aren’t some further along? One
major impediment to a full-scale sustainability
focus is denial of the real-world challenges we
all face, says Shinn. “College campuses are
good at this. Not all scientists agree, therefore
we don’t think we should move forward. The
very diversity of opinions on campus can create
a certain skepticism about taking any action.”

Half Full

Despite its unrealized potential, sustainabil-
ity is gaining ground to an extent that should
dissuade glass-half-empty thinking. The prom-
ise that a sustainability focus can permeate a
campuswide agenda certainly seems feasible.
But most veterans caution that cultivating a
sustainability mindset still requires getting
down in the weeds.

For Simpson, putting a commitment in ink
can encourage desired actions and attitudes.

More institutions are developing socially and environmentally
responsible purchasing policies and spelling out specific
benchmarks for everything from tons of waste recycled and
kilowatt hours saved to zero sweatshop-produced products
sold in the bookstore. Not having written policies and stan-
dards can be a real impediment, says Simpson.

One achievable goal in his mind would be shifting the
entire UB campus to 100 percent post-consumer content
recycled copying paper. “Currently about 60 percent of the
campus has converted. Getting the remaining 40 percent on
board would be much easier with a campus policy,” he says.
“We can do only so much by knocking on doors to make a
plea for voluntary transition.”

Good policies are one thing. Implementing those policies
is another matter. UB has energy-conserving temperature
policies, but compliance is a challenge, Simpson admits. “We
do our best, knowing that each degree of overheating is cost-
ing us more than $300,000 a year.” Deep cuts in energy use
and kicking the fossil fuel habit will be possible only when
everyone sees the urgency of addressing problems such as
climate change and is ready to make sacrifices for the sake of
achieving genuine sustainability, says Simpson.

The invisible nature of daily consumption is another im-
pediment, notes Cortese. “We simply don’t see the waste
stream associated with the manufacture of goods and prod-

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ucts or their disposal.” Making that waste expressly visible should be a key strategy for institutions in teaching sustainability, he says.

The invisibility of stakeholders can also stunt efforts, says Simpson. While cross-disciplinary collaborations have begun to flourish, the tendency still exists to leave out at least one key constituent. Too often, when institutions engage in new construction, fixed budgets force decision makers to shave on first costs without factoring in long-term operation and maintenance costs that will eventually become burdensome, says Simpson. “Who is missing is the next generation. Any decision ought to require children in the room as a reminder of future costs and who will pay.”

Likewise, cost-cutting decisions should be considered in light of potential impacts to other program areas, says Simpson. His goal of moving UB from 35 percent recycling of solid waste to 50 percent or better should get a boost with improvements in construction debris recycling. His bigger concern now is what appears to be a setback in office paper recycling. UB’s incremental transition from fully benefited state cleaners to contract cleaning crews who are paid low wages and no benefits has resulted in high worker turnover and a sloppy job of keeping recyclables out of the waste stream, he notes. “Understandably, when university employees start to believe that their efforts to separate materials are a waste of their time, they lose interest in recycling, and the program begins to unravel.” As Simpson asserts, this is also a living wage issue that shows how sustainability has a justice component.

Externally, the ways in which institutions are evaluated present a significant obstacle, Tanzer believes. “In addition to assessing institutions on student-teacher ratios and their volumes of library holdings, what if institutions were also accountable for their energy consumption?” On the positive side, commitments to diversity and access do give sustainability a foothold in the larger debate, she notes. “If institutions would begin measuring the criteria by which students choose the institution—including decisions based on an institution’s sustainability focus and programming—perhaps national rankings would some day include these aspects in their priority mix.”

As Cortese suggests, one way to expedite that kind of influence on accreditation standards would be to seek a strong voice among employers in business and industry asking for graduates with the kind of knowledge, skills, and values needed to move society toward a sustainable future.

Influencing a significant shift in the priorities of external funding sources is another key challenge, says Debra Rowe, professor of renewable energies and energy management at
Oakland Community College, Bloomfield Hills, Michigan, and senior fellow of University Leaders for a Sustainable Future. “Many foundations that fund sustainable production in non-industrialized countries—such as fair trade coffee or sustainably harvested wood—don’t yet recognize that sustainability initiatives within higher education in the United States are necessary to create healthy demand for these sustainable products.”

**You Are What You Fund**

Internally, how to pay for sustainability initiatives requires creativity. Rowe believes bonds offer one great way to fund a package of sustainability projects. “While an individual project may not have a return on investment that would meet that of a bond, the combination of projects that focus on both the social and environmental components of sustainability can meet that ROI and allow a much greater number of projects to be implemented.”

Budget incentives don’t hurt. The promise of payback can set significant savings in motion that pay for other initiatives and programs, says Tanzer. With approximately 75,000 people on its Gainesville campus each day, UF is a city unto itself. “Specific steps we take to reduce energy consumption can have a big impact on institutional savings.” The university has the ability to measure energy use within each building and is working on an incentive program to reward departments and units that reduce consumption by giving half the savings back for them to use as they wish.

Jenks-Jay believes institutional funding should be used to encourage further innovation. “Funding to explore and experiment with campus sustainability can not only result in savings back to the institution but can also reinforce the very purpose of higher education.” In 1999, Middlebury initiated an environmental grants program with a mere $1,000. After seeing the results of first-year projects, the president was so impressed that he offered $10,000 from his discretionary fund to support the next grant cycle, says Jenks-Jay. Since its inception, the program has awarded $69,000 to fund 56 projects, and the college is now working to permanently endow the program.

**Continued on page 25**
basis. Beyond inspiring innovation and creating collaborations among staff, faculty, and students, she believes the grants program models the foundation required for larger societal sustainability by breaking down barriers, encouraging trust in partner relationships, and building an ethic of joint problem solving.

That kind of close-knit collaboration presents a bigger challenge for an institution the size of UF, but the university’s sustainability committee is striving to bring together the hundreds of faculty members working in some aspect of sustainability. For starters, the committee is developing a dedicated Web section for faculty research to capture their projects and to encourage at least virtual interactivity, says Tanzer.

In building interactions, it’s important to cast a wide net when identifying campus sustainability, says Cortese. “Those who work to improve public health may not think that what they do relates to sustainability. But the health of individuals is an essential component of a sustainable society.”

**Germination**

Ultimately, the benefits of sustainability are lost if not communicated—externally, internally, and at all levels, says Cortese. He believes one indicator of whether an institution is moving toward a sustainable future is what it is doing to promote its initiatives in every manner possible.

Ironically, while colleges and universities are a hotbed of learning and innovation, they often miss key opportunities to educate, says Cortese. “I have toured six new LEED silver buildings on campuses in the past six months and only one had information about its sustainable design and what that means for the community.” Finding ways to celebrate and communicate everything being done by anyone—administrators, business and operations staff, faculty, and students—is critical for shifting a campus community in favor of sustainability.

According to Cortese, other essential elements of germination are these:

- Is sustainability recognized as a core goal of education and practice by the president, trustees, and senior academic and administration officers?
- Is it incorporated into the mission and vision?
- Are academic and operational policies in place and relations established with the local community to help move in this direction?
- Are specific rewards and incentives in place for faculty and staff that make sustainability an obvious goal?
- Have indicators been established and measurement processes put in place to benchmark progress?
- Does the institution have a comprehensive communication plan that not only celebrates what it is doing but also connects those activities with the social and economic health of its larger community?

Even after an institution has embraced and internalized the concepts of sustainability, it still must commit to ongoing internal education, says Shinn. “We will always have an influx of new faculty, staff, and students each semester. In trying to make sustainability part of the air we breathe, we must continue to entertain the broad philosophical question about humans in relationship to their natural and fabricated environment.”

From a practical standpoint, engaging that philosophical debate is more easily accomplished if sustainability efforts are centralized. A Berea graduate, Tammy Clemons serves as sustainability coordinator for her alma mater. “Part of my job is simply making sure that the campus community has access to information about green purchasing practices and recycling,” says Clemons. Currently she is compiling best practices so
that others are aware of what they can do without reinventing the wheel. Assessment efforts include monitoring performance metrics for a range of activities and 24 progress indicators established by Berea’s campus environmental policy committee. The college also tracks students’ awareness of and commitment to environmental issues from the time they enter as freshmen to when they graduate.

Education, another component of Clemons’s role, may be as straightforward as explaining how a product is offered on campus. Recent energy efficiency measures to turn off display lights on vending machines required signage to let people know that the machines were operable. “Part of teaching sustainability is modeling behavior,” says Clemons. “It’s important to show that you don’t have to suffer to be sustainable but can still operate in ways that contribute to personal comfort and convenience without harming other people, cultures, or the environment.” To the extent that institutions model these behaviors, Clemons believes municipalities will take note of the possibilities and potential for sustainable living.

Other venues for bringing campuswide sustainability front and center include formal governance structures. Middlebury College’s environmental council is a standing committee of appointed faculty, staff, and students that recommends policy, educates the campus community, and advises the president about projects and their progress. Jenks-Jay believes that the prominence given to serving on the council and to her own role speaks volumes about the institution’s commitment to placing sustainability at its core. She was recently involved in the search for a new vice president for facilities and is serving on the committee to name a new architect firm responsible for campus design under a new master plan. A newly revised college mission statement clearly identifies a commitment to environmental stewardship in both curriculum and campus practices, says Jenks-Jay. “Sustainability isn’t an add-on here, but is central to the decision-making infrastructure of the institution.”

Beneath the Surface

As higher education cochair for the U.S. Partnership for the Decade of Education for Sustainable Development, Rowe has seen a national trend toward sustainability in both the higher education and the corporate sectors. And for those that haven’t yet found their sustainability footing? “My experience is that many colleges and universities can already find a sustainability focus somewhere within their mission,” says Rowe. “At its core, sustainability is about educating students and the larger community of the challenges our society faces and providing them with the skills and knowledge to engage in solutions.”

Seeds worth planting.