

Preparing our Students to Work in a

Sustainable World

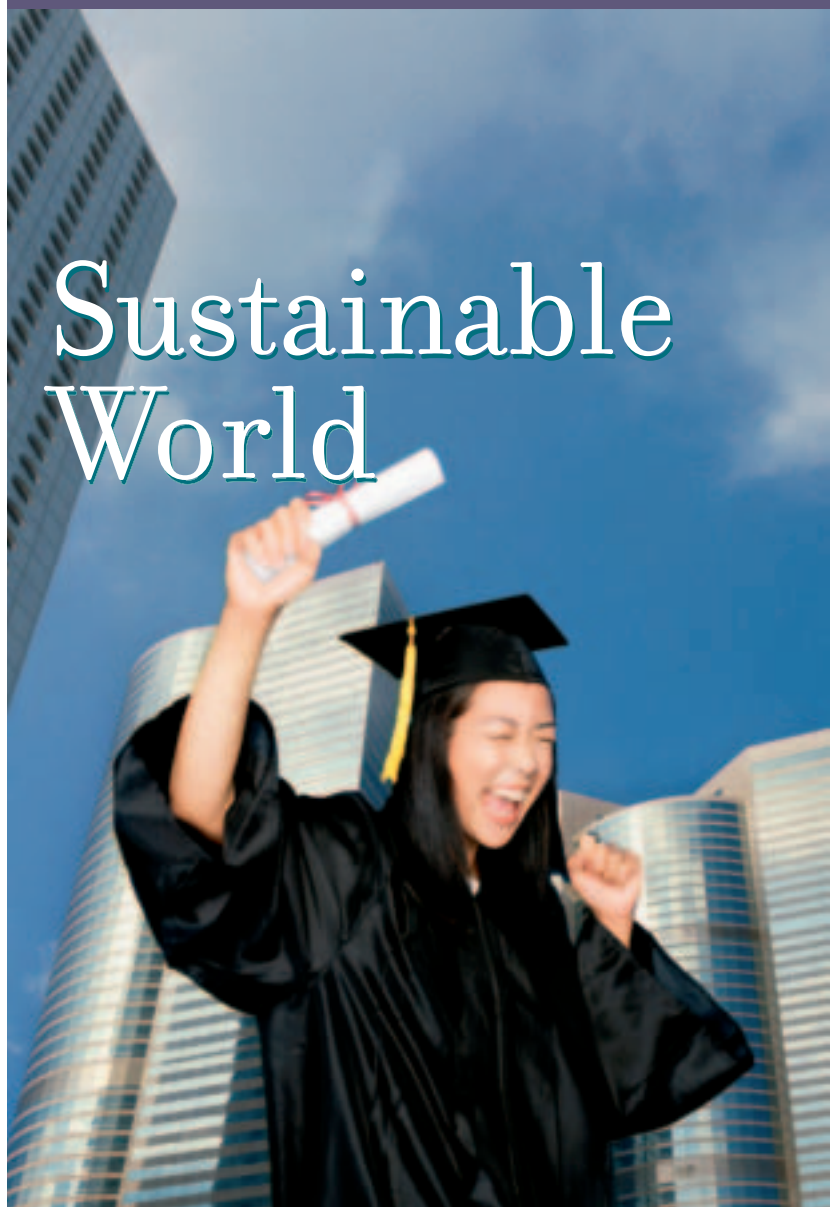
When students leave college and seek employment, they often wish they could obtain the secret formula for obtaining their dream job. What, they wonder, do employers want from their employees today? In addition, what will organizations seek in the future? All employers are looking for a set of skills beyond the job-specific technical skills from their employees. They want interdisciplinary skills and experiences, along with the deep disciplinary grounding.

Moreover, as time goes on, employers are finding that they need employees with a holistic understanding of natural systems and environmental sustainability. In fact, one of the most important drivers for sustainability literate graduates will be the demand from employers. Increasing public interest in environmental issues and responsible organizational behavior means that companies increasingly must manage their environmental and social performance alongside their financial one. Additionally, several expected changes to corporate law could make the reporting of environmental impacts mandatory for large companies, with smaller ones influenced through the supply chain.

Sustainability is a complex issue, involving many disciplines and perspectives. Globally, professionals in many roles are realizing that they need to demonstrate their skills in dealing with such complex problems. For example, as a part of their education accreditation procedures, several professional associations now require undergraduate programs to demonstrate how sustainable development is incorporated into the curriculum.

The skills that students need to learn are not just about the work tasks. They also serve crucial environmental and social purposes. Achieving a sustainable and equitable society depends on young people leaving school or college with the

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By Carol Ann Brodie

full set of abilities that they will need. When students lack such skills, this deficiency is likely to be compounded during their lives, and they often struggle in the work world.

When we combine the general skills that will be required, as well as those that involve environmental sustainability, it comes to quite a list. Students will need help from their universities, mentors, communities, families, and interim employers—we all have a part in shaping our young people.

So, what is this magical list of skills? Many of them are hard to identify, and even harder to train someone to have. Just a few of them are:

- Communication skills—listening, verbal, written and interpersonal—are by far the skill mentioned most often by employers
- Understanding the need for the shift to sustainability

- Sufficient knowledge to decide and act in a way that favors sustainability
- Adaptability and flexibility
- Problem-solving skills
- The ability to work in a team
- Analytical and research abilities
- Multicultural sensitivity and awareness, including in an international context

So, how do our young people learn all of this? Simply put, through experience. As often documented in the literature, we remember 80 percent of what we do or experience, versus only 10 to 20 percent of what we hear. Additionally, few real-world problems rest comfortably within individual disciplines; therefore, it is helpful for a student to be able to view a situation from many viewpoints and disciplines.

We must be careful, though, that employer demands are not the sole reason for teaching sustainability. A paradigm shift is occurring, and a sense of urgency is pervading our society—the time is now, we must respond. The economy, politics, and the whims and fads of society should not dictate this effort. In addition, the flip side of this same coin is that sustainability should be looked at as a reason why someone

expertise together. POE was formed, and soon thereafter launched a new Bachelor of Arts in environmental studies and took on the coordination of the Graduate Certificate in environmental management. Secord states that this Certificate program stands on a “three-legged stool”—with the “legs” representing science, policy, and business.

Building on integrative courses, field and study abroad experiences, all POE environmental studies majors also complete a year-long culminating senior “Capstone Experience” project. This experience requires the students to participate in community-based research and learning in government, non-profit or corporate sectors. A recent issue of POE’s newsletter *Connections* describes several of the students’ activities, from working with immigrants and farmworkers, to ecological restoration and investigative journalism, and working on Superfund sites on the Columbia River. Secord states in a recent issue of *Connections*: “We are all about connections and we thrive—indeed, depend upon—creativity in our collaborations.”

Secord is working hard to prepare his students to succeed in the world. He says that his goal is to give students life-changing experiences, and to teach them how to approach

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would want to work for an organization. It represents a commitment to the future. The organizations that people want to be a part of are ones that have a sense of their past, as well as a sense of purpose for the future—these values attract people. Adding sustainability to the mission and values statement—and then carrying them out through policies and practices—strengthens an organization’s place in the world.

An example of how students are being prepared to deal with issues of sustainability in a complex world, through curriculum, policies and practices is taking place at the University of Washington in Seattle.

University of Washington Preparing Students

In November 2005, I spent a few hours at the University of Washington, Seattle campus, talking with David Secord, co-director of their Program on the Environment (POE), an interdisciplinary program offering a degree in environmental studies. I set out to learn more about POE, and all of the other environmentally related activities on the UW campus. What I found out was remarkable.

POE was started in 1997, with the intent to foster an inclusive, interdisciplinary approach to environmental studies. At the time, these educational activities were decentralized, and the campus was realizing the need to bring people and

complexity of big societal issues that combine social, cultural, economic, and scientific dimensions of the environment. Central to POE is the opportunity for students to become well informed about an issue, and then giving them the opportunity to share the information with relevant audiences.

For example, a recent experience that POE offered students was a class entitled *Choices and Change in the Arctic National Wildlife Refuge*. After preparation in Seattle, the nucleus of this class was a trip to the Arctic National Wildlife Reserve (ANWR), a highly contested landscape. Twelve students—six undergraduate and six graduate—and two professors spent 11 days in Alaska, including eight days rafting in the reserve and three days debriefing at the University of Alaska, Fairbanks. These students reflected the many lenses that this issue must be viewed through, coming from degree programs as diverse as environmental studies and international studies to economics, geology, political science, and marine affairs.

ANWR is a 19-million-acre wildlife refuge, having obtained that status in 1980, 12 years after the largest known oil field in North America was discovered in Prudhoe Bay, about 60 miles to the west. Despite its prominence in the media and politics, less than 1 percent of the nation’s popula-

tion visits the reserve each year. Secord says that the students who went there ultimately grasped the immensity of the problem, despite the complexity of all the issues within and around ANWR. And age or progress in their program did not seem to matter—they all had a life-changing experience. He feels that diversity was the key to that understanding—the contingent represented eight academic departments. Together, they learned a great deal from each other—there are disciplinary depths surrounding such places as ANWR, and they come together in a complex, multidisciplinary puzzle. The field part of this course was partly funded by student travel scholarships provided by two donors to the Program on the Environment, the Lucky Seven Foundation and local Seattle businessperson Tom Campion.

Secord said that the students came up with a phrase to describe their experience: “There’s more there than you think.” While there, they explored several different avenues very deeply—environment, history, petrol, indigenous peoples, geology, and politics. Students met first-hand with two dozen individuals – in Seattle, Fairbanks, and native villages—who as scholars, politicians, business people, or citizens have been directly engaged with ANWR for decades. Secord feels that the experience was a model for how we can make environmental education at a big research university reflect the complexity of actual controversies. This model—combining multiple people, disciplines, and an intensive place-based analysis—could be applied to other important and contested issues, both locally and internationally.

As a follow-up to the Alaska trip, 10 of the 12 students went to Washington, D.C. This trip was not a formal part of the course, nor was it even anticipated before the course began. Students viewed it as a way to bring their uniquely well-informed study and experience to the decision-making arena. Secord said this trip to our capital was a revelation for the students in regards to how policy is formed. The idea for the trip started in Seattle and Fairbanks, when students met with environmental staff for Senators Maria Cantwell (D-WA) and Lisa Murkowski (R-AK). They also met with several Gwich’in tribal elders. The Gwich’in tribe has lived in the arctic for thousands of years, and they are heavily reliant on the caribou that migrate to the refuge each year. The elders and other class speakers urged the students to do something further with the wealth of knowledge they had gained. In response, the Lucky Seven Foundation funded the optional student trip to Washington, D.C., where the students met with members or staff of eight House or Senate offices from both Democratic and Republican parties and debriefed them on what they learned. On November 21, the students who had gone to ANWR made presentations to over 250 people in Seattle, including the general public, faculty, staff, and students.

Earlier this year Secord led another course, Comparative International Perspectives on Cities and the Environment, to New Zealand and Australia. Fifteen students explored inter-

national approaches to urbanization and the environment in three growing coastal metropolitan areas: 1) Seattle-Tacoma, Washington, 2) Sydney, New South Wales, Australia, and 3) Auckland, New Zealand. For 35 days, the students traveled and learned from their interactions with faculty, local urban and naturalist guides, indigenous peoples, urban planners, marine and terrestrial scientists, sustainability experts, and the incredible diversity of sites, organisms and habitats in urbanized Australia, New Zealand, and the Pacific Northwest.

The entire curriculum at UW actually helps provide the interdisciplinary training that students need to work in a complex, sustainable world. A variety of sustainability courses are offered across the university in fields such as sustainable design, sustainable energy, sustainable development, sustainable natural resource use, and corporate and industrial sustainability. Interdisciplinary degrees are available to graduate students, as well as POE’s Environmental Management Certificate Program and an interdisciplinary program called Interdisciplinary and Policy Dimensions of the Earth Sciences. The latter provides graduate students in the Earth sciences a forum to explore interdisciplinary and policy dimensions of their science, and extend their graduate research to encompass those dimensions.

In the College of Architecture and Urban Planning, the UW BaSiC Initiative (Building Sustainable Communities) allows faculty and students to work together to develop partnerships throughout the campus, and with communities in the U.S. and Mexico to develop sustainable communities. For example, the Mexico Program occurs during the winter quarter in various squatter settlements in Morelos. Moreover, the Strawbale Program in Montana occurs during the summer quarter, building on various American Indian reservations.

Campus Experience

In addition to their coursework, UW students have a variety of on-campus opportunities to help them prepare for a sustainable world. Student organizations help to promote sustainability on, and off, campus. For example, the Graduate Environmental Policy Forum (GEPFa) is the student organization associated with the Environmental Policy gateway at the Evans School of Public Affairs. GEPFa is an active participant in the UW environmental community, hosting events and brownbag discussions throughout the school year. In addition, GEPFa offers students an opportunity to network through events both on and off campus.

The Sustainable UW Alliance is an umbrella group for campus interests that wish to see sustainability institutionalized at the University of Washington. Recent projects of the Alliance include passing through student government a small student fee for clean energy investments, as well as an assessment of water use, electricity use, vehicle miles traveled (and fuel efficiency), and solid waste generated. Additionally, the group is collecting the sustainability research and projects being done by UW students into an online bibliography.

Secord and others at UW have also made a commitment to sustainability through their membership in the Association for the Advancement of Sustainability in Higher Education (AASHE), a professional association of colleges and universities working to advance sustainability in higher education in the U.S. and Canada. AASHE promotes the efforts of the entire campus sustainability community, uniting diverse initiatives and connecting practitioners to resources and professional development opportunities in curriculum, operations, facilities, and outreach. The association also provides a professional home for campus sustainability coordinators and directors. AASHE conferences bring together administrators, faculty, students, business and community leaders, and others interested in sustainability.

Buildings and Facilities

Additionally, the university's physical setting and operations promote sustainability, providing a consistent message to students about the appropriate way to live, work, and earn. The university's policy on environmental stewardship states, "By exercising effective management over its activities, the University will promote the sustainable use of its resources, seek to minimize risks to and negative impacts on the environment, and underscore our commitment to protect human health and the environment."

The University of Washington Campus Master Plan—Seattle Campus 2003 guides campus development. The Plan states that sustainable building is an integrated framework of design, construction, operations and demolition practices that encompass the environmental, economic and social impacts of buildings. It goes on to describe sustainable design as that which includes efficient management of energy and water resources, management of materials and waste, protection of health and indoor environmental quality, protection of the environment and reinforcement of natural systems and an integrated design approach.

Because of this foresight UW has shown, several of the buildings on campus have won acclaim. For example, in 2005 Merrill Hall at the Center for Urban Horticulture was awarded a LEED Silver Rating.

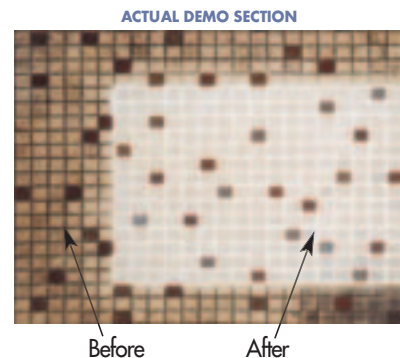
Two other completed projects include the Nordheim Court Apartments and UW Tacoma Phase 2B. The apartments feature a hidden 150-car underground parking garage, an electrical car fueling station, upgraded insulation, and passive solar design. UW Tacoma Phase 2B is the adaptive reuse of five existing warehouse buildings in the City of Tacoma's historic Union Station District by the University of Washington Tacoma campus. The project included reuse of historic structures, revitalization of an historic, urban neighborhood, and hazardous materials abatement. The project also included the use of materials salvaged on site; increase landscaping areas,



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The university's Capital Projects office lists over a dozen current building projects, all of which encompass LEED standards.

Energy and Water Conservation

The university also sets high standards, and is a model of efficiency, in its use of energy and water. Considered a large user of energy in Seattle, the city conducted an energy audit of the university in 1994. Following that audit, UW entered into an agreement with Seattle City Light to implement energy conservation measures. Examples of measures taken include occupancy sensors, heating thermostats set at 68 degrees F in most buildings, lowered water heating thermostats, and a higher air conditioning temperature.

Water conservation measures have included replacing 1,500 older toilets for a projected savings of approximately 30 million gallons of water annually, installing over 100 water-free urinals for a projected savings of approximately 40 million gallons of water annually, and computerizing campus irrigation systems.

Recycling

Recycling at UW is part of a comprehensive solid waste management plan. The recycling program is visible, convenient, and maximizes the recovery of waste. The plan includes waste reduction, procurement of recycled goods, waste collection and disposal, administrative oversight, and outreach efforts designed to educate the campus community regarding recycling opportunities and services.

Transportation Solutions

The ways in which the university deals with transportation needs also sets an example to students, and the community at large. In 2004, UW won the Governor's Award for Pollution Prevention and Sustainable Practices, winning for its Motor Pool.

UW has developed a wide-ranging transportation management plan, with several components. The U-PASS program is the main component of the plan, and covers transit, parking management, carpool/vanpools, bicycle, and pedestrian. Additionally, the university operates two local shuttles. Implementation of U-PASS in 1991 helped to increase the use of transit by students, faculty, and staff.


Currently, the university coordinates with the transit agencies for ride sharing, which helps encourage car and vanpools to and from campus. Additionally, UW offers discounted parking rates to carpool/vanpool users. With a U-PASS, mem-

bers of a carpool/vanpool can park on campus free-of-charge.

UW is also supplying bicyclists with numerous locations for securing and storing their bicycles on campus. Clothes lockers and showers are available at some of these locations, and the university has the largest inventory of bike lockers in the nation.

Summary

The University of Washington is educating its students about sustainability through a well-thought-out curriculum taught by forward-thinking faculty. They also educate their students by setting an example of how a large organization—and individuals—can exist comfortably today and yet still leave more than enough for the future.

For more information on UW's programs of sustainability, including their environmental degree and certificate programs, visit <http://depts.washington.edu/poeweb>. For more information about environmental and social sustainability, visit AASHE's website, www.aashe.org. 

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