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## Is There Room for Sustainability in Every Classroom?

By: Elisabeth Bailey

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The scene: Art history class. The professor is showing slides of stained glass windows from a medieval cathedral. Her lecture describes the process and procedures for making stained glass, their significance in history, and the artistic intent behind them.

Is there room for sustainability in this discussion? When she first encountered this question as part of **The Ponderosa Project** at Northern Arizona University, the professor in question didn't think so. Sustainability is the province of environmental sciences, right? And her syllabus was full--who has time to work in an entirely new concept? But after being invited to join a small group of faculty who were engaged in the process of building community and reflecting on sustainability, the professor dug a little deeper to see how that concept and her discipline might be connected.

As it turns out, those very windows discussed in her class were made in a strikingly unsustainable way. Despite common conceptions that sustainability is a 'contemporary' issue, human beings have struggled with finding balance in their environments for much of recorded history. The process of creating stained glass requires intense heat--produced by what was at that time an unprecedented volume of firewood. Drastic deforestation related to stained glass production began to affect British bioregions as early as the fifteen century. After her workshop experience, the participant brought this revelation into her classroom, along with a discussion about how artists can select and evaluate the materials they use for sustainability.



Students at Emory University's Piedmont Project discuss sustainability with their professors. (Peggy Barlett)

Similar changes are taking place at colleges and universities across the country and the world, as sustainability finds its voice in curricula about every topic imaginable.

"It's a paradigm shift," says Dr. Geoffrey Chase, dean of undergraduate studies at San Diego State University, former leader of The Ponderosa Project, and current chair of the **AASHE** board of directors. "We're moving from a model in which schools are divided by departments to one in

which working across departmental boundaries is crucial to successfully infuse sustainability into the curriculum. It's all about community."

Abi Abrash Walton, faculty member of the Department of Environmental Studies and Assistant to the President for Sustainability and Social Justice at **Antioch University New England**, has plenty to say about the deep sense of connection that is intrinsic to successful sustainability in academia: "Curriculum is leading to palpable change in the community. Particularly when you're talking about academia and the way that people engage in academic inquiry, it's usually a position that's divorced from their own personal connections with what they're studying. It does a disservice to the connections that they actually may have. So what we're encouraging here is recognition of those connections." Students at Antioch work intensively on sustainability projects with the local organizations and businesses in their community of Keene, New Hampshire. "We have excellent town gown relations," says Abrash Walton with pride.

This paradigm shift has been happening on the national level at a disturbingly slow rate, however--the National Wildlife Federation's **2008 Campus Report Card** found that curricula connections are lagging far behind sustainability initiatives in other parts of campus life.

Jean MacGregor, Senior Scholar and Director for the Curriculum for the Bioregion Initiative at the Washington Center, confirms this gap. When she first began her work in this area, Dr. MacGregor was shocked to realize how abstract and tenuous students' understanding of sustainability was. Not only did they have no connection to the bioregion in which they lived, they lacked any grasp of the concept of sustainability as it applies to everyday life. Her response was to develop a training model that encourages faculty to integrate sustainability concepts into the most basic concepts of their disciplines, especially at the introductory levels.

"They don't want something uncomfortably patched on, or a tangent. Students can smell this--that the faculty member's out on a twig somewhere. The question becomes then, how do sustainability concepts get taught in a way that relates to the big ideas of the class?" she says.

In the faculty workshop, each professor is invited to invent one assignment, lab, or field trip that teaches the fundamentals of their course through a local, meaningful sustainability context. "We ask faculty members to identify keystone concepts in the courses they teach--for a biologist that might be genetic expression, or in literature, literary devices like symbolism and metaphor and understanding how writers use them to make an argument. What we're really doing is helping faculty step across the threshold into a new space. It's not just curriculum formation--it's faculty formation," she says.

In one of her recent workshops, Dr. MacGregor worked with an organic chemistry professor to infuse sustainability into his solubility lab through an everyday problem: stains in clothing. Students were asked to investigate solubility as it relates to dry cleaning, looking at questions such as, "What do dry cleaners use to dissolve stains? Why is the dry cleaning industry so highly regulated? What does it mean to be an organic dry cleaner? Are there new trends in dry cleaning fluids?" These questions led naturally into a discussion about toxics and the reduction of toxics--a fundamental concept in sustainability. In this particular example, the students in question were on

track for a nursing degree. They left the program understanding not only chemical solubility, but with a sophisticated sense of how toxics affect the atmosphere and human health--both concepts they will be using in their careers.

Although sustainability in curricula is still lagging well behind sustainability in other sectors of campus life, there are a few clearly great models of schools with strong sustainability components across their curricula.

**The Eco League**, a consortium of five colleges which all specialize in education aimed at building a sustainable society, serves as one model. As small schools with strong pre-existing community networks, the member schools of the Eco

League broaden their students' sustainability curriculum by offering them the opportunity to study at any of the other schools in the consortium for up to two semesters. This approach offers students the experiential knowledge of applying the lens of sustainability to different ecosystems and cultures during their education.



Emory students take a walk through the woods. (Peggy Barlett)

Another strong model for sustainability in curricula can be found at colleges such as **St. Olaf College** in Northfield, Minnesota, where a sustainability-themed academic year has been used as a springboard to introduce the concept of sustainability into the curriculum across the entire campus at once. The college is pursuing a dual mission, both "creating a culture of permanence" on campus, and preparing students for competitive careers in a world that is becoming rapidly more environmentally aware.

Among larger educational institutions, **The Piedmont Project** at Emory University in Atlanta, Georgia, stands out as a beacon of best practices. The Piedmont Project, named after the ecosystem in which Emory is located, trains faculty participants from every department of every school within the university on how to infuse sustainability into their curricula-in fact, they now offer these trainings to faculty at schools across the country. One professor from the Piedmont Project developed an introductory class that teaches basic concepts in chemistry entirely through the issue of global warming; another developed a Chinese language curriculum that allows students to develop their writing skills by describing Emory's relationship with the environment in pictographs.

Introducing sustainability into curriculum takes work, experimentation, and above all, funding. The current low levels of sustainability taught in the classroom imply a great deal of work to be done. But thanks to the recently passed **Higher Education Sustainability Act** and the creation of a **University Sustainability Grants**

**Program**, the future of funding for sustainability in curricula looks hopeful. Beyond that, it's largely a question of finding processes that work for each individual institution-and implementing them at a rapid pace, as curricula plays catch-up with facilities and student-led movements on American campuses.

Best practices don't look the same from school to school. "There are many lenses, many ways to talk about or 'do' sustainability," says Dr. Chase. "Getting to know your place is important. Getting to know people is important."

What is common between them, though, are a focus on process, rather than product; a loosening of boundaries--between departments, between faculty and staff, and between school and community; a deepening of community connections; and dedicated individuals who bring their whole self to the table while inviting others to do the same.