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Teaching Sustainability: The Case of the Incredible Shrinking Professor

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CHAPTER 5

Teaching Sustainability: The Case of the Incredible Shrinking Professor

Elisabeth M. Hamin

Teaching sustainability, it seems to me, is different than many of the topics we teach at a university. Unlike biology, say, which creates biologists, or planning which creates planners, there is not profession of "sustainer." As David Orr notes, achieving sustainability in the postmodern world will require an "active, competent citizenry" (1992, p. 30), demonstrating "civic virtue, a high degree of ecological literacy, and ecological competence throughout the population" (1992, p. 31). The pedagogic goal is to encourage a world view, one in which students will become citizen activists for sustainability after they graduate, whether in the civic sphere or by bringing sustainability criteria to bear on their work. Because sustainability is very complex, these citizens need to be able to acknowledge the insufficiency of what they will know and not be paralyzed by it. Instead, they will need to turn to others to form groups of inquirers who can research multiple aspects of a question and together have a chance of seeing a broader picture of the complex designs of the world and the opportunities for sustainability. Sustainability will be achieved only through communities of learners and activists, and this is what a curriculum in sustainability must model. Empowerment cannot be only an academic concept described in the class, but must also be experienced by the students within the class. Only by making teaching approaches consistent and coherent with teaching substance on this topic will we create the communities and citizens we need for the future.

I have taught a course entitled *Sustainable Communities* once a year for six years. The course has been taught as a collaboration with a former colleague, Rob Thompson, and as a sole instructor course; taught primarily as a lecture series, and more recently as a regular seminar; taught to undergraduates and graduate students; taught primarily to planning students; and taught to primarily environmental studies students. I have tried out a variety of books and varied

the ratios of lecture to in-class exercises and discussion, over time moving further and further from lecture-based content. The course has sometimes utilized regular research reports for students to further investigate one topic of their own choosing and sometimes had the whole class work together on a campus greening project. Clearly, I have struggled and experimented with the course over its life. While these variations certainly are not efficient in terms of class preparation time, they do give me a better base from which to write this chapter, and have kept the course overall fresh for me each year.

The one thing that has stayed steady over the years is the focus of the class. The goal of my particular course is to give students a chance to investigate ways to integrate sustainability into the structure of the built environment and introduce ways to undertake community development that are alternatives to market-driven economic development. The focus of the course is on actions that can take place at the site, community and regional scale, rather than national or international policies, although one cannot effectively address the local without some discussion of the national and the global. But I am convinced of the value of focusing student discussion on local activities because these are often implementable and because it is at the local level that most people are actually involved and where they typically can make the most difference. My goal with this course is to graduate citizens who recognize the applicability and importance of sustainability criteria in a wide range of settings, whether as volunteers or within their employment, and feel empowered to begin to address them. It is developing ways of viewing the world, rather than accumulating quickly forgotten facts and theories, although certainly some of this learning goes on.

Let me make this more concrete by describing the general principles that underlay my particular take on sustainability and that are introduced in the first few weeks of the course. Most students enter the course having been raised on a steady diet of television nature shows describing human devastation to the tropics, science projects on what goes into landfills, and bad news about global warming. As a result, I spend little time preaching to the choir about global environmental degradation. What is less obvious to most students is that there cannot be just environmental solutions; that sustainability is a three-legged stool, which also requires improvements to economy and equity to allow fundamental changes in the world (Campbell, 1996, p. 276). Thus, the "three-e" approach is central to all inquiries and, even as we talk about solar energy for instance, we think about how it can be more accessible to those with fewer resources, how it can be made in ways perhaps less dependent on traditional profit motives and more based in the community, but still improving lives. Throughout the course, as we discuss alternative building techniques, infrastructural technologies, and social structures, we try to find the holy grail—policies which achieve the nexus of the three e's: improving equity, ecology, and economy all at the same time. This approach accords well with what Orr (1992, p. 39) calls the epistemology of sustainability, which centers on

interrelatedness—the connection between land, air and water, human

The second key point has been the idea that sustainability is not just about being interested in persuading students to identify what will have to change in the way businesses make less trash or in the way students' individual choices are made, but for the joy of composing a more sustainable, less hypocritical, and more equitable world. This has been at the forefront of my mind. I hope to be sanguine that as a society we are less convenient or more efficient because those actions are more difficult. The right thing needs to become part of our physical structures and our social and distributional equity, and this as a prerequisite for change. We can only do the right thing by doing the right thing. We must acknowledge that this action is not just about that support sustainability, but it is about the agenda? Without experience, we get citizens to prefer them. We have to teach the course or to take a more active awareness of the values of a sustainable world. Technologies that help us in this world are our students, who must develop a more sustainable world to become standard rather than

A key point for the course has been a certain piety from discussing the environmental problems of students this right up front. It is about Wal-Mart. That always appears in the class, who are, after all, in a world of converted, and minimizes the environmental impact of the classroom. Similarly, when we discuss the SUV-driving mother, as example, we do the right thing. This has been a policy design that much better.

An interesting point is the connection between Plant and Soil Sciences at the undergraduate level and the perspective. His entire course is about

interrelatedness—the connections between viewer and viewed, indigenous and colonial, air and water, human and nature.

The second key point that must be made early is a contested point. I present the idea that sustainability is not about individual lifestyles. I personally am not interested in persuading students to recycle; I am interested in getting them to identify what will have to change so that everyone recycles or, better yet, so that businesses make less trash in the first place. The course may incidentally change students' individual choices, and that is great. When I compost, for instance, it is not for the joy of composting, but out of a desire to live coherently and not be hypocritical; the course tends to keep me honest and keep sustainability in the forefront of my mind. I hope it does the same for the students. But I am personally not sanguine that as a society we will get the majority of people to do things that are less convenient or more expensive on a daily basis over the long haul just because those actions are more ecological or socially beneficial. Instead, doing the right thing needs to become easy and the wrong thing hard; we need to build into our physical structures and delivery mechanisms resource efficiency, social and distributional equity, and prevention of ecological harm. In many ways, I see this as prerequisite for changing the underlying values of the average citizen—only by doing the right thing will people learn the value of the right thing. I acknowledge that this notion creates a political circle. Without widely held values that support sustainability, how can we force sustainability onto the political agenda? Without experience of the values of sustainable policies, how can we get citizens to prefer them? I am glad that I need not resolve these dilemmas to teach the course or to take action. My job, as I see it, is to assist in widening awareness of the values of sustainability and the existing and (re)emerging technologies that help us in that direction. From there, it is our future leaders, our students, who must develop those alternatives, publicize them, and get them to become standard rather than alternative.

A key point for the course is that this "enstructuration" approach removes a certain piety from discussions; it is not about "greener than thou," and I tell students this right up front. I admit to having bought disposable diapers at Wal-Mart. That always appears to be comforting to the "less evolved" in the class, who are, after all, in some ways more important to reach than the already converted, and minimizes moralizing and judgments that I prefer not to enter the classroom. Similarly, when we talk policy, sometimes we judge policy benefits by whether they would convince the Sopranos of television fame, or someone's SUV-driving mother, as examples of those whom policies have to persuade to do the right thing. This has a way of keeping the course real, although it makes policy design that much harder.

An interesting point is that a colleague of mine, Professor John Gerber in Plant and Soil Sciences at the University of Massachusetts, has begun offering an undergraduate course on sustainability that takes exactly the opposite perspective. His entire course is structured around providing students with the space

and time to evaluate their own values and actions as well as how they support the planet or increase global and local harm. The argument here is that change will come only through individual choices and beliefs. If I were to design a curriculum on sustainability, this sort of contrast is exactly what I would try to encourage.¹

At a certain level, once these core principles are clear, my main role in the class is done. The rest of the course becomes interesting iterations of examining policies and designs to implement these key principles (enstructuration and the three-e's). The challenge in the course design then becomes to find our way through the variety of technologies and approaches that could be included under the rubric of sustainable communities. These options can and have ranged from power sources to building materials to neighborhood and city design; from household economies to community-supported agriculture; from community gardens to the consequences of genetically modified crops on organic agriculture; to the implications for butterflies and Nigerian farmers from Monsanto's policies. We can discuss organizing for campus change, for civic change, for opposing the World Trade Organization or for creating community food banks and alternative currencies. We can discuss the connections between corporate manufacturing decisions and municipal solid waste, and William McDonough's efforts to create safe, recyclable materials, for instance, and the principles of waste reduction. We could talk about how power is generated and the relative benefits of being on the national grid or off of it. You see the problem—the issues that local sustainability brings up are so broad, so interconnected, so interesting, that it is quite difficult to place boundaries on the topic. It is this very breadth that has structured my pedagogic response—the incredible shrinking professor.

The implementation of sustainability principles in the world covers such a breadth of material that certainly I, as a limited human being, cannot profess expertise over all of it. Yet I am loathe to tell students that we will discuss only these certain aspects of sustainability because that is all I can say that I really know, when there is this whole relevant universe out there that the students are often more interested in than my particular area of city planning. Were there a curriculum on sustainability, the problem might be addressed. But at this university today, there are few courses where that is the main topic, although certainly in many courses ecological and social innovations come up. Facing the limits of my knowledge has been a humbling, but also enlightening, experience. My response has been to structure the course so that students can follow their own interests and learn from each other.

Let us return for a moment to how our university graduates may be implementing sustainability. Will any individual have sufficient knowledge or political power to determine appropriate policies, particularly as citizen activists? No, clearly not. Instead, the way policies change and in particular the

way sustainability will get built together, researching new types of sustainability at the local level empowered to explore alternative implementation of new approaches. What to do, what to know, what it is unclear to me why we should it so clearly will not be the course make sense where there is a clear coherent whole, but sustainable models that facilitate development.

I try to be very explicit and will not be surprised and frustrated. In the syllabus, for example, I say

In keeping with the idea of designed the teaching approach (word) to emphasize student to lead discussion on the presentations will describe sustainability. . . . My hope is the sustainable communities making in a locally-situated global concerns.

I talk about it the first day of their expectations. I also talk about peer learning and collaboration and the way they will be successful and investigated throughout the semester has been well received by many. For example, in a recent evaluation of classes and suggested that it is it, since the professor did not accumulate of facts). Indeed, I call "The Great Teacher," one will be dissatisfied, and this does not preregister for the class. Fortunately

¹ Details on Gerber's class are available at: <http://www.umass.edu/umext/jgerber/sustliving.htm>

² The approach I describe here has some assumptions and goals with them. However, residential or at least to flow through the class does not achieve that. Still, creating interest in sustainability could be a very good

³ I am not certain the writer was a student

way sustainability will get built into existing practices is by citizens working together, researching new topics and learning from each other. Implementing sustainability at the local level will require citizen learning communities, empowered to explore alternatives, learn from each other, and press for implementation of new approaches. Will these citizens have a professor telling them what to do, what to know, what to read? Again, obviously not. Given this fact, it is unclear to me why we should model that experience in the classroom when it so clearly will not be the conditions of their lives. Classic instructional style may make sense where there is a clear body of knowledge that builds into a relatively coherent whole, but sustainability studies are not that. So alternative learning models that facilitate development of shared learning appear necessary.²

I try to be very explicit about the pedagogy of the course so that students will not be surprised and frustrated when I don't behave like a "real professor." In the syllabus, for example, I include this paragraph:

In keeping with the ideals of sustainability and community action, I have designed the teaching approach (pedagogy, for those comfortable with that word) to emphasize student initiative and peer learning. Generally, I expect to lead discussion on the frameworks and conceptual questions. Student presentations will describe particular techniques for increasing community sustainability. . . . My hope is that we can model the same values implicit in the sustainable communities movement—grassroots, collaborative decision making in a locally-situated framework that nevertheless considers more global concerns.

I talk about it the first day of class, in a gentle effort to get students to shift their expectations. I also talk about it the last day of class, reminding them that peer learning and collaboration as they experienced it in the course is likely to be the way they will be successful in activism for the structural changes that we have investigated throughout the semester. I should say that while this overall pedagogy has been well received by many students, for others it is quite annoying. For example, in a recent evaluation, a student identified himself³ as a "consumer" of classes and suggested that if students could get refunds, he would ask for it, since the professor did not contribute substantially to his knowledge (i.e., accumulation of facts). Indeed, a student looking for what Donald Finkel (2000) calls "The Great Teacher," one who lectures authoritatively and engagingly, will be dissatisfied, and this does constitute a certain percentage of the students who preregister for the class. Fortunately, for a larger percentage of the students, the

²The approach I describe here has clear resonance with learning communities and shares many assumptions and goals with them. However, learning communities are usually understood to be residential or at least to flow through coherent curriculum (Shapiro & Levine, 1999), and my single class does not achieve that. Still, creating residentially based communities of learning based on a shared interest in sustainability could be a very powerful technique, much more so than my one class.

³I am not certain the writer was a he, but the language choices appeared to be gendered male.

pedagogy seems to work, and evaluations have suggested over and over again that students value having had discussion opportunities, and while experiencing occasional frustration when peers do a poor job of leading learning, nevertheless most students appreciate the course design.

Within the course, there are several methods I have used to develop rapport and empowerment among students. First is having a student lead particular class readings. I have tried assigning discussion leadership for general readings and for particular case studies and find the case studies to clearly and positively contribute to the development of a participatory class culture. Having students lead regular course readings is less clear, as students are often presenting information they are not all that comfortable with and, as a result, the presentations are not routinely successful. Not surprisingly, students seem to prefer to lead discussions that focus on why a group did something and its outcomes, rather than a lecture on, say, alternative economies. This is particularly true for undergraduates; were I to teach a primarily graduate student course, I might return to having students lead topical discussion rather than focusing on cases. Even within the case studies, I have found it helpful to clearly identify the key questions I hope each discussion leader will address. An example is the book *Ecology of Hope* (Bernard & Young, 1997), which describes various resource-based communities and their efforts to use community organization to regain or retain control over their natural and economic resources. This book was quite popular for its focus on what is actually being done now, and students seemed pleased to present these cases, although it needs to be supplemented with urban material to appeal to a broad spectrum of students and their likely future work.

Another approach I have used is to align students into reading groups. I assign groups of three or four students who share a general interest, and they are supposed to help each other write their papers. I assign to the students within the reading group dates that drafts are due, and days when comments are due back; only after that does the paper go to me. The response to this varies a great deal by the particular personality of the students and for some groups has worked very well and for others created just an empty exercise. For motivated groups of graduate students, this approach seemed quite successful, and having them help each other with papers changed the sense of a competitive classroom into a cooperative one. For undergraduates, the sincerity with which they undertake their peer reading has varied significantly. To encourage seriousness about it, at the end of the semester, I give students a chance to rate each other regarding the helpfulness of comments received from team members. To encourage students to take this seriously, I allot a small percent of the grade for it.

To facilitate research skills and provide students with experience investigating a topic on which they often know very, very little, I also assign a research paper. The students choose the topic, although often I bring in a list of topics from previous years plus things I have been wondering about. One student in the class thereby becomes the class expert on solar heating for homes, another the

expert on community gardens, and another becomes the class expert on us about community currencies, from their new area of expertise unrelated. To address this factor

The first set of techniques in the second set develops empowerment is that of engagement. For the campus. Work at the campus students know best, particularly. It is also a big, complex institution. It is difficult the real world can be in ways that are difficult to mirror are not members. While I was a indicators for what we hoped years. (I subsequently left the campus. At the University of Massachusetts, projects such as researching, better include alternative to students discuss what project vote if consensus is taking a direction. This aspect is part. have preferred that last year's support among the class members shut up. In retrospect, the instructor I may step in and insist on it.

Ideally, each class lays a over the years there is sufficient change. Doing a campus green of the instructor, as many people be contacted, such as operating plants, and so forth, to develop what is its current status. But various desired characteristics and can create long-term change one, with its opportunity for students. This sort of engaged university or the department, optimizing a course based on

The premise of this class sustainability needs to culture take control of the class, just communities and workplaces at the beginning of the course.

expert on community gardens for immigrant neighborhoods, while a third can tell us about community currencies. As discussion progresses, students can contribute from their new area of expertise. A risk is that these topics can feel scattershot and unrelated. To address this factor, I group the presentations into shared themes.

The first set of techniques I described develops a sense of community, and the second set develops empowerment to learn through research. A third key principle is that of engagement. For this, the approach I have used is a project to green the campus. Work at the campus level has several advantages. It is the area the students know best, particularly the undergraduates, and are the most invested in. It is also a big, complex institutional environment and gives students a taste of how difficult the real world can be. But administrations can be responsive to students in ways that are difficult to mirror in some external community of which the students are not members. While I was at Iowa State University, students gathered baseline indicators for what we hoped would provide guidance for projects in subsequent years. (I subsequently left that university, so that effort did not directly continue.) At the University of Massachusetts, students chose instead to undertake specific projects such as researching how to increase recycling in the dorms and how to better include alternative transportation in the campus plan. In all cases, I let students discuss what project they want to undertake for the campus greening, vote if consensus is taking too long, and overall they must provide their own direction. This aspect is part of the discipline of empowering students—I would have preferred that last year's students do an indicators project, but there was not support among the class members for it, so I had to live out my principles and shut up. In retrospect, the indicators project was a much better way to start, and I may step in and insist on it as this year's project.

Ideally, each class lays a foundation that the next class can build on, so that over the years there is sufficient follow-up and depth to actuate real campus change. Doing a campus greening project well requires great dedication on the part of the instructor, as many people spread throughout the university system have to be contacted, such as operations and procurement departments, power and water plants, and so forth, to develop an understanding of how a university operates and what is its current status. But doing it well has the potential to combine all of the various desired characteristics of community, empowerment, and engagement, and can create long-term change. And of the methods I have used in the class, this one, with its opportunity for actually changing the world, means the most to students. This sort of engaged service work, assuming sufficient support by the university or the department for the instructor to succeed, is central to really optimizing a course based on sustainability principles.

The premise of this chapter has been simple. The pedagogy of teaching sustainability needs to cohere with the principles of the topic. Students must take control of the class, just as in life they will have to take control of their communities and workplaces. This suggests that the role of the instructor is large at the beginning of the course in setting frames of inquiry and readings, identifying

appropriate styles of discussion and comments that do not connect to the course's themes, assuring contributions by the shy members of the class. But as students master these ideas and skills and the course progresses, the sign of success is how often the professor can keep her or his mouth shut, to borrow Finkel's (2000) phrase. In sustainability studies, the professor should, over time, shrink from expert to revered member of the inquiring community.

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Strategies U of Susta in U

Linda L. I

This chapter illuminates the concepts of sustainability in Tourism Management (HTM) clarifies the educational primary vehicle for discovery (CBR). The impetus for this is the management academy's and manage diverse peoples. The issue of sustainable exploration as it is a serious countries.

The origins of the department hospitality and tourism management has evolved to accommodate best prepare students for careers 500 students in its undergraduate the most respected in the world *Gourman Report: A Rating of International Universities*.

Its mission, "to teach about the hospitality and tourism to multiple constituencies: 1) Educate levels so they can succeed in leadership in changing environmental industries through original research in the industries through program