One of the languages we teach and learn at summer camp is a language of setting and achieving goals. Nearly every conversation I have with my campers during the summer and in our emails throughout the year focuses on how they will go about doing the things they plan to do. You are far and away the least goal oriented teacher I have ever had. This semester, you have shown me the merits of this pedagogical practice, and I have learned from it. You are a good teacher because of it...You do not let your students fool themselves into thinking that they can do something or know something once and for all....Perhaps...the value of your pedagogy [is that]...it creates space for filling up. I wonder if I will use your tool in my own teaching. (froggies315)

We write as two experienced teachers, in the fields of Education and English, who are accustomed to creating open-ended exploratory classrooms, and to receiving feedback from students such as the passage above (this one was taken from the final self-evaluation of a senior biology major, who was completing an advanced English seminar on “Ecological Imaginings”).

In Fall 2010, we enrolled ourselves in the faculty seminar Ken Bain offered at Bryn Mawr College on “natural learning environments,” where we were asked to engage in a very different sort of pedagogy: to create goal-based scenarios for our students, identifying target skills and creating learning environments to support them. The Natural Learning Initiative begins with the presumption that “people tend to learn most effectively...when they are trying to solve problems that they find important,” and when they can do so in an “environment in which they can feel a
sense of control over their own education” (Bain). In the seminar, we were asked to consider what we wanted our students to be able to do as a result of taking a class; how the class might contribute to that development; what major paradigms we would want our students to question, and perhaps change; and how we would put them in a situation in which those paradigms do not work.

We very much value the attention paid in these so-called “natural learning environments” to igniting student interest, but find ourselves uneasy with the tension between cultivating students’ “sense of control,” on the one hand, and guiding them to discover the unworkability of their paradigms, on the other. This process of using the classroom as a site where students’ “mental models” of the world are explicitly challenged and changed feels to us too packaged and predictive.

In fretting about the unintended outcomes of this well-intentioned work, we raise several questions: What happens, here, to self-directed learning? How “natural” is it, really, to focus student attention, even on topics of their own declared interest? What of the inevitably unexpected ways that human beings take up and learn from our encounters with the environment and with one another? What about leaving space for surprise, for what the teacher hasn’t anticipated, for directions she herself has not yet explored? What about the possibility of, and need for, divergent thinking?

In the year since that faculty seminar, we have co-designed and co-taught several linked courses on ecological literacy. Emerging from our interdisciplinary collaboration is a pedagogical orientation, strongly guided by the experiences and reflections of our students, that understands learning as a dance between the sort of
individual decision-making attended to in “natural learning environments,” and the insistently unpredictable intra-action of parts in an emergent whole (cf. Barad). Along with a number of ecological and pedagogical theorists, our students have helped us re-conceptualize both the assumption of what’s “natural” in teaching and learning environments in general, and what might be well suited for ecological instruction in particular.

Our querying of the “natural” has been impelled by the work of ecological literary theorist Timothy Morton, who observes that

saying that something is unnatural is saying that it does not conform to a norm, so “normal” that it is built into the very fabric of things as they are....“nature”...has the force of law...against which deviation is measured....Thinking, when it becomes ideological, tends to fixate on concepts rather than doing what is “natural” to thought, namely, dissolving whatever has taken form. Ecological thinking...that did not stop at a particular concretization of its object, would thus be “without nature.” (14, 24)

Our own resistance to calling any learning environment “natural” is thus a resistance to normalization, to the construction of a replicable framework, and a concomitant search for the sort of agency that such resistance makes possible (cf. Ellsworth 44). As the ecologist Buzz Holling has observed, “policies and management that apply fixed rules for achieving constant yields...lead to systems that gradually lose resilience,” because our knowledge of the system we deal with is always incomplete. Surprise is inevitable....ecosystems...are inherently uncertain....Part of that is because...management changes the system being managed. Successfully managed systems are ever-changing targets because they release the resources for new kinds of human opportunity....In principle, therefore, there is an
inherent unknowability, as well as unpredictability... sustaining the foundations for functioning systems. (733-734)

In such an unknowable, and therefore unpredictable system, we invite our students to go exploring, with an awareness that the process will be both full of surprise—and unending. One of our students, who has long struggled with “learning disabilities,” a purported inability to “focus” in the classroom, responded powerfully to our invitation to “get lost” (cf. Solnit) in the classroom. In her final self-evaluation for “Ecological Imaginings,” Sara Gladwin wrote that

From a very early point in my life, I’ve been identified as notoriously unable to finish everything I touch. From a plate of food, to drawings, conversations, papers- to quote my mother, I’ve never been able to “cross the finish-line.” As I’ve grown in my learning, I’ve come to appreciate some of the ways in which I allow myself room to grow, to add, to change and edit myself....It is too important to me not to close the door on what might come if I choose to remain unfinished, choose to open myself up for change. (Gladwin, “Classroom”)

Sara also responded strongly to a podcast by Gordon Hempton, an “acoustic ecologist” who is recording “The Last Quiet Places” on earth. Hempton’s project, Sara reported, had

a huge effect on my thinking. One of the things discussed in the podcast is how children are taught to direct their attention, to close themselves off to divergent and distracting thoughts... I’m starting to wonder whether or not it is “ecologically literate” to teach and condition children to filter out divergent thinking....the majority of children are being taught not to pay attention to their surroundings, to let the environment fade into the background....Maybe a more environmentally friendly way of teaching children would be to actually use the environment as a place of learning....maybe the environment would be better protected if we indulged divergent thinking more, instead of always attempting to shut it down. Maybe the world would be better served if instead of reprimanding the student whose eye has been caught by whatever environment can be seen from a classroom window, we were to give that student the opportunity to go outside, to broaden their thinking
horizons. Maybe we would be able to expand our concept of importance, give focus to what has been consistently pushed into the backgrounds of our imaginations. (Gladwin, “Divergent Thinking”)

Sara, like froggies315, describes the kinds of teaching and learning we seek to cultivate in our classrooms: environments where, among other pursuits, we “expand our concept of importance, give focus to…the backgrounds of our imaginations,” and thereby create “space for filling up.”

We quote our students at length here to share our sense of our classrooms as places where we respect what pedagogical theorist Elizabeth Ellsworth identifies as the “eruptive, unruly space between a curriculum’s address and a student’s response,” a space that is “populated by the difference between conscious and unconscious knowledge, conscious and unconscious desires” (41). In doing so, we focus less on creating pathways for students to reach our goals for paradigm shifting than on modeling classroom ecology on other, less predictable dimensions of the world.

Morton, who first queried our presumptions about the “nature of nature,” describes the rich unruliness of the environment as “the strange stranger...any entity whose arrival we can't predict, whose being is fundamentally uncanny and unfathomable” (160-161). Holling also underscores the “dynamic, inherently uncertain” nature of ecosystems, which have “multiple potential futures” (734). If we understand classrooms in this way, then no learning environment can be termed “natural,” but there are a plethora of possibilities for classroom ecologies. We choose to pursue the fecund dimensions highlighted by Morton and Holling as resources for dynamic, divergent forms of teaching and learning.
Such pedagogies respect the diversity and disequilibrium that can characterize human action and interaction; as described by Emma Wipperman, they are dynamic and integrative rather than linear and unidirectional. In a blog entry for a course on “Educating for Ecological Literacy,” Emma enlarged the classic humanist focus of radical educational theory:

I think we need to ecologize Freire. He has been arguing against teachers acting upon their students, and for teachers and students to live with, in solidarity. We cannot just act upon the world, we must live with it; we cannot act “in order to transform it,” but must act, transformed by and with the world. (Wipperman)

These pedagogies have worked well for a wide range of our students, including those, like froggies315, who first thought teaching and learning was, camp-like, about achieving goals; those, like Sara Gladwin, who had found classrooms as sites for the construction of disability (cf. McDermott & Varenne); and also those who, like our first-semester international students, are adjusting to the cultural differences posed by U.S. college classrooms. As one of them wrote at the conclusion of her ecological seminar,

There were times that I felt I made a mistake to come to United States. The classes are much harder than I imagined. I had to squeeze my brain hard to get the idea of the readings and express my ideas through English letters. Sometimes I felt I was being thrown onto a foreign land to stand on my own shaky legs…Then I learned to take a Thoreauvian walk – a sauntering without a goal, a ruminating of the thinking. I learned to get lost so as to extend the boundaries of self into unknown terror and try to see the world through the lenses of different people. I enjoyed playing with alternative languages…I began to take new approaches to the world…to value the earth as a whole that natural and society is inseparable. (Shengjia-Ashley)

Much outcomes-based educational work has short-term optimization as its goal (Callahan, 1962; Oakes & Lipton, 2006; Ravitch, 2010). We offer here an
alternative in more flexible, open-ended teaching practices that thrive on diversity,
an alternative way of thinking about “unbounded” teaching, of recognizing our
classrooms as part of larger ecosystems characterized by an unlimited, often
“unruly” fecundity and diversity that do not submit to the limitations of injunction,
testing, command or control.

Works Cited


Hempton, Gordon. The Last Quiet Places. On Being, with Krista Tippett. May 10,


[http://serendip.brynmawr.edu/exchange/self-evaluation-4](http://serendip.brynmawr.edu/exchange/self-evaluation-4)
