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Teaching the Parks

Robert Pahre, Department of Political Science, University of Illinois, 382A David Kinley Hall, MC#713, 1407 W. Gregory Ave., University of Illinois, Urbana, IL 61801; pahre@illinois.edu

Carie Steele, Department of Political Science, 214 Holden Hall, Texas Tech University, Lubbock, TX 79410; carie.steele@ttu.edu

In 2005, Richard Louv's *Last Child in the Woods* crystallized many people's concerns that today's youth no longer spend much time outdoors (see also Pergams and Zaradic 2008). This "nature deficit" may be connected to modern plagues such as attention-deficit hyperactivity disorder, stress, depression, anxiety disorders, and childhood obesity. Public land mangers often fear the current generation will fail to support outdoor recreation (see America's great outdoors).

While discussions have focused on K–12 students, this paper discusses college-level courses that the principal author has offered in national parks over the last five years. These courses focus on the politics of the national parks—Grand Tetons and Yellowstone (three times), Mammoth Cave (four times), Great Smoky Mountains (once), and Indiana Dunes (once). We will discuss only the Greater Yellowstone and Mammoth Cave experiences here. This paper's key finding is simple: students like experiential courses, they learn a lot in them, and they evaluate them favorably. They generally emerge with a greater sense of stewardship.

Course objectives and theories of experiential learning

Field experiences confront academic knowledge with reality on the ground, including the physical landscape, fauna and flora, and social setting (Cantor 1997; Dewey 1977; Kolb 1984). Applying one's assumptions to a new environment can also encourage personal development (DeClair 2004; Gilin and Young 2009).

The specific goals depend on the overall course. All the courses helped students become aware of their personal understandings of "wilderness." Wilderness values helped students examine possible threats to the environment in the national parks, including threats from tourists such as ourselves. Cave tours in Mammoth Cave provide an excellent opportunity for these discussions because they include improved trails, lighting, restrooms, a picnic area, and a café.

Students in the Greater Yellowstone course learned about wildlife management issues when they observed species in the wild, both salient species such as elk, bison and wolves, as well

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as less-salient management concerns surrounding trout, mountain goats, and pronghorn. The courses also sought to develop non-academic skills including team-building, group work, and problem-solving. Students faced new experiences such as erecting tents and wildlife encounters, with instructors as adult mentors for such skills (see Louv 2005).

Course design

Course design initially reflected the senior author's experience with short-term summer abroad programs in Vienna, Austria. Drawing on theories of experiential learning as a four-stage cycle, based on concrete experience, reflective observation, abstract conceptualization, and active experimentation (Kolb 1984), Pahre designed the field experiences in equally-foreign Wyoming. Modifying the final stage, we identified these stages as EORS: experience, observe, reflect, and share. These stages provide the foundation for students' daily reflections.

To encourage personal development in the parks, we camp in tents and cook our own meals. Hikes of varying difficulty providing variable amounts of "challenge" and bring site-based features to class discussion. Discussion helps both individuals and the group construct the meaning of their experiences (e.g., Baker et al. 2002; Katula and Threnhauser 2003; Kolb et al. 2002; Patterson et al. 1998). Dinner conversations provided "official" discussion of the course readings and issues raised by the day's activities. Informal trailside conversations create a one-on-one emotional space, creating a space for quieter students to be heard.

The courses include written assignments both before and after the experience. A workbook uses the EORS framework for daily reflections. Other worksheets are organized by wildlife species (e.g., bison), management problem (e.g., wildfire), or human-nature relationships (e.g., tourism).

Course design also considers the non-academic aspects of the program. *Anticipating* a challenge provides an important part of the overall experience and a way to define the meaning of the experience (e.g., Patterson et al. 1998).

Many students were afraid of nature in some way (Louv 2005; McIntyre and Roggenbuck 1998), such as bears in Yellowstone. Some were anxious about their fitness level, especially at altitude. Knowing this, we plan events so that anxiety has a reward. A narrow trail with exposure just below Inspiration Point in the Grand Tetons is difficult for some students but has a spectacular viewpoint just beyond. Claustrophobia has been a challenge for some students in Mammoth Cave, and we work with students to address their specific challenges.

Learning how to combine the academic and non-academic elements of the course takes two or three visits before the instructor feels comfortable "teaching the site." While experiential theory has been very helpful, experience proves to be the best teacher for the teachers as well.

Recruitment and demographics

John Dewey (1977; see also Kolb 1984) saw experiential learning as empowering and democratic, serving nontraditional students who might struggle in a traditional learning environment. Our courses may not have reached underrepresented groups in traditional demographic terms (Table 1). Whites are somewhat over-represented in these courses compared to the university's population as a whole, as are women.

The two types of courses differ considerably in their demographics. The Discovery course, which is free to students and requires only a three-day weekend during the semester, is more successful at attracting African Americans than the Yellowstone course is. In contrast, the Yellowstone course is more likely to attract Latinos and especially Latinas. Yellowstone also attracts a higher percentage of GLBTQ students than the Discovery course.

Instead of comparing the students to the population of Illinois, or the general characteristics of the population of the University of Illinois, we might compare the students to the population

	Discovery		Yellowstone		Total	Campus[2]
N	46	Percent	30	Percent	Percent	Percent
White	39	84.8	24	80.0	82.9	64.9
Asian-American	3	6.5	3	10.0	7.9	16.6
Black	3	6.5	1	3.3	5.3	6.3
Latina/o[1]	1	2.2	3	10.0	5.3	8.7
Latina/o or non-white[1]	7	15.2	6	20.0	17.1	N.A.
Female	25	54.3	16	53.3	53.9	46.0
Male	21	45.7	14	46.7	46.1	54.0
GLBTQ	NA	NA	5	16.7	NA	3.5[3]

1 Latina/os may be of any race. Transgendered people are classified by the gender with which they identify.
2 Campus figures are for Fall 2012. Percentages exclude international students.
3 Gallup reports that 3.5% of Americans identify as LGBT (www.gallup.com/poll/160517/lgbt-percentage-highest-lowest-north-dakota.aspx).

Table 1. Demographics.

of backcountry users. Oosterhous et al. (2007) find that Yellowstone backcountry users are dominated by single young males, followed by families seeking togetherness and nature experiences. In their study, 71% of our respondents were male, 94% were Caucasian, 46% were married, 55% were age 35 or younger, 73% had completed college, 49% had an annual family income of greater than $60,000, and 20% came from metropolitan areas with a population of more than one million people.

The Yellowstone course brings a more diverse mix of people to the backcountry (Table 1) mostly because the population of Chicago differs from Yellowstone backcountry visitors at large. Our students are also more diverse (64.9% white) than other users of Yellowstone's backcountry (94% white). In short, the students in these courses are similar to the University population but different from the population of backcountry users in desirable ways.

Students' anticipated outcomes in the Yellowstone course

Prior to departure, many students imagine Yellowstone in terms of the tourism experience. They anticipate seeing wildlife, natural beauty, open spaces, and Yellowstone's thermal features. They expect academic outcomes such as learning about park management, wildlife, ecosystems, and the human impact on the environment.

Students generally anticipated a transformative experience (see Patterson et al. 1998; cf. Sax 1980, Chapter 4 for the national parks). For example, one student expected that the experience would help her become an impassioned advocate for wildlife and wilderness—though she did not define herself as already being such an advocate. Many anticipated personal growth, a "life experience," learning more about oneself, or an opportunity to rethink career goals.

Reported outcomes

Both academic and non-academic outcomes were largely consistent with the expectations described in the experiential learning literature. In a course on environmental politics, that we have

regularly taught both in the classroom and online, students often struggle to understand the trade-offs in the NPS Organic Act's mandate to "conserve the scenery and the natural and historic objects and the wild life therein and to provide for the enjoyment of the same…." After the field experiences, students understands these trade-offs very well. One student described the learning experience this way: "I had a preconceived notion that Yellowstone completely fit the definition of a wilderness area. I had never dreamed that there would be as many amenities as we saw nor the amount of roads and hotels." Without experiencing the park, it would be hard to reach this kind of judgment. The same issue frames much of the discussion during cave tours at Mammoth Cave, which has a significantly developed infrastructure.

Students discover that managing visitor impact begins with understanding one's own impact. One Yellowstone student commented "I'm more conscious of myself as a tourist too." Practicing leave-no-trace principles is one of the course requirements. Students also learn how to practice bear safety in camp, and how to view wildlife safely without disrupting natural animal behavior.

Experiential learning forces students to confront a singular place in all its complexity, so tends to draw on multiple disciplines. Students often listed the multidisciplinary nature of the course as its "most beneficial" aspect. One said, "I learned about biology, wildlife policy, and politics all in one course"; another liked that the Yellowstone course "brackets political debate and natural sciences."

As experiential theory would suggest, reflection in journals plays a key role in the learning outcomes. One student "loved the idea of the journals, a great way to learn and stay organized when traveling and camping." Many appreciated shared reflections in conversation: "As a group we came up with great questions and were all able to feed off of each other's ideas. Every night there was a new door opened on a topic that some of us had never thought about."

Reflection and discussion encourage students to find meaning in their own experiences. After that, they think about how the same place might have different meanings for other people. Though disappointed that the highly-developed site at Artist Point (Yellowstone) harmed the group's experience, one student wrote, "I concluded that the Park Service was not wrong for developing areas like the overlook even though it may take away from the richness of an individual's perceived experience of those areas." This experience enriched the student's own understanding of the parks but also provides insight into the pressures the NPS faces in thinking about development.

After having read academic work on the parks, Discovery students seemed especially appreciative of the field experience. One reported that "the trips … helped me to understand what the parks are like." Another student said, "the trip allowed me to realize that what we were studying was real." In various ways, several students said the best part of the course was "Seeing everything first hand on what we have read and discussed."

As experiential learning theory would predict, hands-on learning, applying abstract academic work to concrete subjects in the field, reflections about the experience, and higher student motivation characterize these courses. Students report that "I learned more in those seven days than I ever did in a classroom at school."

These reflective academic experiences can be personally transformative. Though Yellowstone students are most likely to report major personal growth, those in the Discovery courses also report transformative experiences. One called it, "amazing and life changing." They generally cite the field trip as the best part of the course, often as the best part of their first semester at college.

After returning home, the Yellowstone students often cite physical challenge as an important part of their experience. One reports that "it really pushed me to my limits, emotionally and physically." After a backcountry approach to the Grand Canyon of the Yellowstone, another student said that "my group had earned the beautiful view we saw because we worked for it and by

working for it we somehow appreciated the canyon more than anyone else." Such constructions of meanings are a key component of experiential learning theory.

Challenges also brought about personal growth. One student said, "I learned a lot about our national park system while also learning a great deal about myself." Another explained how the experience gave them an appreciation of the aesthetics of nature: "It is one thing to talk about protecting the landscapes and ecosystems from a scholarly perspective, but there is no way to fully understand and appreciate the value of the land being discussed unless you can see and become immersed in it. Just by being there, in the face of such scenery, I was hit by how immense just the pure intrinsic aesthetic value of the park is, and thus affirming my belief of how important it is to preserve such areas."

Such reflections energized some students politically. One wrote that meeting activists at the Buffalo Field Campaign, combined with frequent viewing of bison calves, made her want to be active on the bison issue. Another wrote that, "as I learned about ecosystems like this one, I was surprised how angry I became. I was mad at humans for being so selfish to pollute the Earth constantly without any thought as to how their actions would impact it. I was upset at myself for not caring before and making decisions that would hurt the planet."

These findings are consistent with some recent research on the political consequences of outdoor experiences. Zaradic, Pergams, and Kareiva (2009) found that hiking or backpacking experiences could lead to about $200–$300 in donations to conservation groups 11–12 years later. Our students were introduced to outdoor skills, hiking, the experience of reaching a mountain summit, and successfully navigating close trail encounters with large animals. We hope they will continue to seek out such experiences in coming decades.

Formal evaluation

Evaluation is the weak link in the literature on experiential programs. Most of the literature consists of "show and tell" pieces like this one, in which instructors summarize what they have done. Evidence of effectiveness relies heavily on student self-reporting of their own learning.

There is little evaluation of alternate ways to achieve similar educational outcomes. The literature acknowledges that it is hard to conduct an ethical experimental intervention. Random assignment is almost assuredly unethical, and double-blind experiments are plainly impossible. Selection biases are rampant because the students who choose these programs differ from the overall population in both known and unknown ways. Professors who teach these courses also differ from the faculty as a whole.

Given those challenges, student evaluations provide the primary evidence of learning outcomes. Student evaluations of both professor and course are very strong (Table 2). Similar results are common in experiential programs offered by many professors at many universities.

Conclusions

In political science, undergraduate education tends to emphasize the "view from Washington" and not the view on the ground. Field experiences shift the student view dramatically. Seeing how policies work in the field helps students understand how policy changes in Washington affect human impact on the natural environment, wildlife, and wilderness.

We are fortunate that the University of Illinois has been supportive of these experiential courses. Some faculty take advantage of the opportunities for experiential teaching, but they have no particular professional incentives to do so. Field experiences can be expensive for students, time-consuming for faculty, and require significant investment from universities. Skeptics will reasonably wonder whether the learning outcomes justify the additional investment.

		Mean evaluations, scale from 1 to 5			
Semester	Type	Instructor	Course	Learning	Motivation
Summer 2009	YST	5.0	5.0		
Summer 2010	YST	5.0	5.0	5.0	5.0
Spring 2010	DSC	4.5	4.3	4.3	4.2
Fall 2010	DSC	4.5	4.3	4.2	4.3
Summer 2011	YST	4.8	4.7	4.7	4.7
Fall 2011	DSC	4.9	4.6	4.6	4.2
Fall 2012	DSC	4.8	4.5	4.6	4.3
YST = Yellowstone, DSC = Discovery Course (Mammoth Cave)					

Table 2. Student evaluations.

We believe that over 100 hours of sustained, engaged experiences is much more productive than the mixed levels of engagement exhibited by students over the course of a 15-week semester. Technology is forcing us to rethink how we teach, highlighting the weaknesses of the large lecture hall. While some learning tasks will migrate online, field experiences can offer hands-on, experiential learning that connects the classroom to the world.

References

Baker, Ann C. 2002. Receptive spaces for conversational learning. In *Conversational learning: An Experimental Approach to Knowledge Creation*, ed. Ann C. Baker, Patricia J. Jensen, and David A. Kolb, 101–123. Westport, CT: Quorum Books.

Baker, Ann C., Esther D. Wyss-Flamm, David A. Kolb, and Patricia J. Jensen. 2002. Looking back: Precursors to conversational learning in group dynamics. In *Conversational learning: An experimental approach to knowledge creation*, ed. Ann C. Baker, Patricia J. Jensen, and David A. Kolb, 31–49. Westport, CT: Quorum Books.

Cantor, Jeffrey A. 1997. *Experiential learning in higher education: Linking classroom and community*. Washington, DC: ERIC Clearinghouse on Higher Education, George Washington Univ. ERIC Digest ED404948 1997-00-00. http://files.eric.ed.gov/fulltext/ED404948.pdf.

Cool, Kevin. 2012. Water course. *Stanford Magazine* January/February, 44. https://alumni.stanford.edu/get/page/magazine/article/?article_id=46405.

Dewey, John. 1997. *Experience and education*. New York: Simon and Schuster Touchstone Books.

Gilin, Barbara, and Tom Young. 2009. Educational benefits of international experiential learning in an MSW program. *International Social Work* 52:1, 36–47.

Katula, Richard A., and Elizabeth Threnhauser. 2003. Experiential education in the undergraduate curriculum. *Communication Education* 48, 238–255.

Kolb, David A. 1984. *Experiential learning: Experience as the source of learning and development.* Upper Saddle River, NJ: Prentice-Hall.

Louv, Richard. 2005. *Last child in the woods: Saving our children from nature-deficit disorder*. Chapel Hill, NC: Algonquin Books.

McIntyre, Norman, and Joseph W. Roggenbuck. 1998. Nature/person transactions during an outdoor adventure experience: A multi-phasic analysis. *Journal of Leisure Research* 30:4, 401–422.

Oosterhous, Tim, Mike Legg, and Ray Darville. 2007. What draws people to Yellowstone's backcountry? *Yellowstone Science* 15:3, 20–23.

Patterson, Michael E., Alan E. Watson, Daniel R. Williams, and Joseph R. Roggenbuck. 1998. An hermeneutic approach to studying the nature of wilderness experiences. *Journal of Leisure Research* 39:4, 423–452.

Pergams, Oliver R.W., and Patricia A. Zaradic. 2008. Evidence for a fundamental and pervasive shift away from nature-based recreation. *Proceedings of the National Academy of Sciences* 105:7, 2295–2300.

Sax, Joseph L. 1980. *Mountains without Handrails: Reflections on the National Parks*. Ann Arbor: University of Michigan Press.

Zaradic, Patricia A., Oliver R. W. Pergams, and Peter Kareiva. 2009. The impact of nature experience on willingness to support conservation. *PloS ONE* 4:10, e7367. http://dx.plos.org/10.1371/journal.pone.0007367.