

Irina I. Holden

# Expanding instruction beyond library topics

## Teaching a First-Year Experience course on sustainability

The first year of college is stressful for students, requiring extra attention from instructional staff in charge of the freshman learning experience. Colleges and universities around the country are developing and offering programs and courses to help facilitate this transition for first-year college students, such as Living-Learning Communities and First-Year Experience courses, or Freshman and Transfer Seminars, as they are called at the University at Albany.

A few years ago, the University at Albany's vice provost for undergraduate education decided that the university should develop freshman seminars. They would be one-credit courses that focused on sustainability, globalization, ethics, or leadership. Faculty members from all academic departments were invited to write course proposals for these seminars. In response to this invitation, instructors from several different departments responded, including biology, geography, history, Latin-American studies, and social welfare.

Like many of my colleagues at the university, I decided to write a proposal for a freshman seminar. At that time, one of the courses I was teaching was Information Literacy in the Sciences, a one-credit general education course that introduces students to both information literacy and science literacy. Science literacy—and more specifically students' attitudes toward it—had been a particular focus of my research at that time. Based on my experience in these areas, and my growing interest in the field

of sustainability, I developed a proposal for a course entitled “Science literacy through sustainability.” The proposal was accepted and initially offered in the fall of 2011.

### Sustainability

The study of sustainability—that is, the ability of systems to remain diverse and productive for long periods of time—has gathered momentum over the past several years for good reason. The population of our planet is continually growing, and the task of supporting it with finite resources poses unique challenges to the continued survival of our species. The study of sustainability is quite broad, and surveying it in a regular three-credit course would be difficult. Doing so in a one-credit seminar would be even harder, and I knew that I would need to narrow my topic considerably.

Doing so involved integrating several interests. For several years I had been reading food politics authors like Michael Pollan and Marion Nestle. I had also become an organic gardener and was working at a local food co-op, where I prepared organic and locally raised foods. Drawing on these interests, as well as on my background in information literacy, I decided to develop a seminar on science literacy and food sus-

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tainability, showing students how practical science literacy can be applied to solve food sustainability problems.

## Designing the course

After my proposal had been accepted, I needed to develop a syllabus. I chose one that comprised readings, class discussions, writing projects, and a final team project.

- *Readings.* I sought course readings that would both enlighten students and provoke discussion. To begin with, I required my students to read the Science section of *The New York Times*, as this is a regular requirement for my Information Literacy in the Sciences course. Students needed to read two-to-three articles weekly and be ready to share their impressions with the rest of the class. This exercise in developing science literacy seems to be quite effective. I often run into former students who tell me that they are still in the habit of reading the “Science Times.”

Articles from *The New York Times*, such as “To cut global warming, Swedes study their plates”<sup>1</sup> and “Golden rice: Lifesaver?”<sup>2</sup> introduced students to some of the dilemmas posed by food sustainability, such as noting the amount of carbon dioxide emissions used to produce a particular food on its label, and the costs and benefits of genetically modified organisms like golden rice as a potential solution to nutritional problems in developing countries.

I also selected readings from publications like *Scientific American* and *The Scientist*, government documents such as the transcripts of pertinent Congressional hearings, and book chapters by authors writing on the environment and sustainability, such as Wendell Berry’s “The Native Grasses and What They Mean” from *The Gift of Good Land*,<sup>3</sup> which describes our interdependent relationship with the land.

- *Guest speakers/visual media.* There were two types of guest speakers. The first introduced students to important aspects of college-level study. For example, a government documents librarian at the University Libraries discussed government information,

and created an extremely useful library guide for the seminar. A representative from the university’s Advisement Center spoke to the students in early October about selecting courses, registering for classes, and obtaining a degree audit. Finally, in order to help students work on their group projects, science zines, a coordinator from the university’s Interactive Media Center (IMC) came to show them how to use Microsoft Publisher. IMC staff also developed a science zine template, which was posted on the center’s website.

The second type of guest speakers were experts in a particular area of sustainability. These speakers not only stimulated class discussion, but also gave the students’ ideas for their assignments. For example, a local landscape designer spoke to the class about converting an abandoned plot in downtown Albany into a community garden. The project involved not only clearing the area but restoring the soil, which had been tainted by industrial pollutants. The presentation and ensuing discussion encouraged students to develop their own ideas about food production and sustainability.

Students also watched and discussed several TED talks that addressed food sustainability and science literacy, as well as a couple of documentary films. Among the latter was *Land of Plenty*, *Land of Want*,<sup>4</sup> a PBS documentary about the problems of modern agriculture in four different regions of the world.

- *Information literacy skills.* Of course, since the purpose of a freshman seminar is to orient new students to the rigors of college-level study, I required my students to learn the usual “library stuff.” We started by looking at the university’s library catalog and WorldCat. I explained how interlibrary loan grants them access to almost any book in print and how to use the service. We also looked at electronic databases, especially those that were likely to be useful for their course assignments. For example, I showed them how to search LexisNexis for an article in the Science section of *The New York Times*.

We also discussed APA style and how to write citations using it. Students were later required to include at least two citations at the end of their short papers. This requirement proved difficult for some of the students, who had only been taught MLA style in high school. I discouraged students from using citation generators on their assignments, as I believe they should be able to actually write proper citations, especially in undergraduate courses.

- *Writing assignments.* Writing assignments included four short (around two pages) essays, either reflective or comparative. For example, Wendell Berry's "Native Grasses and What They Mean"<sup>5</sup> describes the history of the Land Between the Lakes, a national park created with the help of the Tennessee Valley Authority, a government-owned corporation that provides energy to much of the American South. In the essay, Berry discusses his ambivalence on visiting the park: on the one hand, he says, it is wonderful to see the native grasses of the American prairie growing wild there. On the other hand, it is sad to think that 948 families were forcibly removed from the land in order to create this national preserve. My writing assignment asked students to consider Berry's argument and decide whether the creation of the park justified displacing those families.

Students were also required to comment on the course readings in a class blog. In addition to developing their understanding of the course material, blogging taught the students how to use this important web publishing tool. The reflections on the readings that students posted in their blog entries were generally shorter than in their papers, but the medium still provided enough space for them to pose important questions about sustainability and science literacy.

- *Group projects: Science zines.* Students also developed science zines, short pamphlets that develop ideas about science in a grassroots style. I first came across the idea in an article on participatory literacy by Andrew Yang,<sup>6</sup> who teaches biology and

writing at the School of the Art Institute of Chicago, where he developed the idea of having students publish science zines. After doing more research about science zines, I decided that they would work well as a semester-long group project. An example of a science zine assignment can be viewed in my chapter on science literacy in the Information Literacy User's Guide: An Open, Online Textbook.<sup>7</sup>

## Teaching: Experience from the trenches

Actually teaching my freshman seminar was a challenge. In part, this was because the seminar had two objectives: to build the students' knowledge base in the subject area and to facilitate their adaptation to college-level study. In order to meet this second objective, I decided to make certain concessions to their level of academic experience. For example, I accepted late assignments, though I don't allow them in my usual information literacy course. I felt that the students needed to be given a chance to improve without being penalized, even though their other instructors, especially in larger lecture courses with 200 to 300 students, were likely to be less lenient.

Teaching an exclusively first-year audience posed other challenges. My information literacy courses tend to be populated primarily with juniors and seniors, with a smaller number of freshmen and sophomores. Having a "mixed population" in the course typically sets a higher standard for maturity and makes for a better-behaved class. This was not the case in a class made up entirely of freshmen. Teaching the seminar made me realize that high school behaviors die hard(!). Fortunately, these behaviors tend to improve with time.

I have been coordinating library instruction for the university's freshman seminars for the past couple of years, which has allowed me to observe other instructors' interaction with their students, as well as to learn about their research and library access needs. The instructors' expectations of their

students with regard to research competence include proper use of publication manuals such as the MLA and APA, using the library catalog and databases, and learning proper search techniques for optimal results. Some instructors required knowledge of Library of Congress subject headings and call numbers, others concentrated on a particular research tool, such as PubMed. These interactions with other freshman seminar instructors have been extremely valuable in helping me to retool my own seminar.

## Conclusion

Academic librarians have traditionally worked closely with teaching faculty to provide instruction and stand-alone research sessions. In addition to these professional roles, some librarians teach credit-bearing courses, usually information literacy. A few years ago, I had the opportunity to take a few steps from these general practices and develop a freshman course on sustainability, putting to use the knowledge I have accumulated over the course of several years of research on the subject, as well as my background and expertise in the area of information literacy. Developing and teaching the seminar posed new challenges: it was the first time I had taught sustainability, and I was teaching it to students who were new to college-level study. And there were, predictably, missteps along the way. Still the experience was extremely rewarding, both for me and, I think, for the students.

I believe that academic librarians are uniquely suited to bring their expertise in the areas of research and information literacy to bear in developing courses on interdisciplinary subjects, like sustainability. After all, research requires a subject, and most of us have applied our skills to gaining knowledge in particular areas. In doing so, research librarians can become valuable partners with their academic colleagues, not just in supporting roles but as instructors.

## Notes

1. Elizabeth Rosenthal, "To Cut Global

Warming, Swedes Study Their Plates," *The New York Times*, October 23, 2009.


2. Amy Harmon, "Golden Rice: Lifesaver?", *The New York Times*, August 25, 2013.

3. Wendell Berry, "Native Grasses and What They Mean," in *The Gift of Good Land* (San Francisco: North Point Press, 1981).

4. *Land of Plenty, Land of Want*, directed by Heil Weiner, United States: ScreenScope Production, 1999, DVD, 57 minutes.

5. Berry, "Native Grasses and What They Mean."

6. Andrew E. Yang, "Engaging Participatory Literacy through Science Zines," *The American Biology Teacher* 72, no. 9 (2010): 573-7. doi: 1-.1525/abt.2010.72.9.10.

7. Irina I. Holden, "Chapter 9. Science Literacy," in *Information Literacy: A User's Guide*, edited by Trudi E. Jacobson and Gregory Bobish (Open SUNY Textbooks. Geneseo, NY, 2014): 120-129, <http://textbooks.opensuny.org/the-information-literacy-users-guide-an-open-online-text-book/>. 

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Designing Curriculum & Developing Educators for the Information Literacy Courses of Tomorrow (Online course: April 3-21, 2017)

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