

**Environmental Media
Biology Theory, Journalism Practice, Community Engagement**

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Abstract

Environmental Media brings together Kent State University at Stark's biology and journalism faculty to focus students on challenges facing Ohio's watersheds. The students are not required to have a biology or video background; the 3-hour grant-supported course is open to all majors. But within a semester, students develop the knowledge and skills necessary to create a short documentary that explores solutions to a particular problem, with help from a community partner to serve as a local expert. With the course now entering its third year, some students have called it the best class they have taken, and several continued their work after the semester ended. Some, armed with knowledge from making their film, even formed a student group to oppose hydraulic fracturing in Ohio. The article describes the launch, current status and export possibilities for this course with lasting outcomes.

Introduction

This one has it all: cross-disciplinary study, innovative linkages with government and service organizations, using technology, and service to the community, all in a special topics course at a regional campus. The Environmental Media course at Kent State University at Stark launched in January 2011 with a dozen students who thought it might be fun to take an elective class where they make a video. They left with a meaningful, tangible product that they could share with family, friends and potential employers. Meanwhile, repeated community showings of their films were informing the public about threats to the local Nimishillen Creek Watershed and what they can do about it.

The students also post their work online and write about the experience. Along the way, they learn about inland waterways, including failing septic systems, runoff from parking lots and fertilized lawns, outflows

from old underground mines and, most recently, potential breaches of fracking fluids.

This article recounts how the course came about, the intended and actual learning outcomes as reported by students, and offers suggestions for those interested in trying this on other campuses. Much of the discussion will be about the first-year experience, followed by notes briefly detailing adjustments made for the 2012 class, and what the authors believe has made it something worth keeping.

Background

Casey (1998) observed the various specialties universities have in the general category of "environmental communication," which he defines as "a specific field of inquiry where the communication of scientific and environmental information to lay audiences is the objective." He notes that program names include "science writing, science communication, environmental journalism, environmental communication, natural resources journalism, etc."

Several universities have established nationally prominent programs in the discipline. Michigan State, California at Santa Barbara and Berkeley, Michigan State, Colorado-Boulder, Missouri-Columbia and plenty of others who belong in this sentence who currently have leading roles in training students to combine understanding of the environment with media skills. Santa Barbara even publishes an environmental communication journal and notes on its site that that "no other UC campus, and perhaps no other university in the country, has such exceptional strengths in both media studies and environmental research, education, and outreach."

("Environmental Media Initiative, 2012)

So the Stark Campus of Kent State entered this without illusion that it deserved a place among those leaders. At the same time, enabled by a local foundation's grant and the offer of help from a University of Miami colleague, the faculty saw the opportunity to offer this experience to students at a regional campus.

The public has an appetite for such content -- the environment was sixth in a 2006 survey by broadcast newsroom managers -- but stations were giving less than 2 percent of coverage to the environment between 1998 and 2005, not counting national disasters. (Neuzil, 2008, Page 220) And it's worth adding the caution that Columbia in 2009 stopped taking new students into its well-regarded program in Earth and Environmental Science

Journalism "due to the current weakness in the job market for environmental journalists." ("Earth and Environmental," 2012)

Conceiving the Course

When discussions began in earnest about this in 2010, the Stark Campus was two years into a long-term grant from the Herbert W. Hoover Foundation, an initiative with the goal of addressing environmental issues in a variety of ways for the Stark County community. The initiative already had created a special topics journalism course in Environmental Reporting -- aimed at students who had already a journalism writing course -- but this would be a course for anyone.

It would be informed by filmmaker Ali Habashi, director of the Arnold Center for Confluent Media Studies at the University of Miami in Florida. Habashi had directed of the critically acclaimed documentary "One Water" and, with H.W. Hoover Foundation support, would work with the KSU professors Dr. Robert Hamilton and Dr. Penny Bernstein (Biology); and David Smeltzer, Dr. Joe Murray and Mitch McKenney (Journalism and Mass Communication). The idea was that community partners would be primary sources for the films, and they would come from regulatory agencies, businesses and community organizations to help the students complete their films. The grant would provide more than \$50,000 in video equipment and load support for the team of faculty teaching the course.

Planning Community Engagement

In the months leading up to the course launch, Habashi met with the Kent State team and recommended the faculty be cognizant of how specific elements in the course design could have long-term positive effects for the university and community. But he had already shared a 21-page syllabus adapted from his course at University of Miami. He came in person to emphasize that this was about more than teaching a few skills and some understanding of conservation. His recommendations were really more about sustaining a bigger-picture initiative in the community than delivering a successful course, connecting it to the health of the region and making sure the students' work would ask people to do something.

Before long, the team had developed plans for a semester course that would start with the study of watershed science and related public-policy issues, including discussions with experts on watersheds. Students would analyze sources of watershed pollution and think critically about the strategies being taken to curtail it. Then they do research and story

development as well as production, editing, feedback and re-editing before showing them to campus and community audiences at the end of the semester.

The initial list of community partners for the project included the Stark County Health Department, Stark County Soil and Water District, Ohio Environmental Protection Agency, Western Reserve Land Conservancy, Nimishillen Creek Watershed Partners and other community groups.

Recruiting Begins

The details of the first course announcement, shared in a campus email and on the OurWaterWebs site, explained that students could succeed in the course even without experience in biology or journalism, and "intended to attract a mix of majors, making it a good elective for those majoring in Communication, Geology, Geography, Sociology and Art, among others." ("Spring Course in Environmental Media," 2010).

"It stresses both environment and communicating about the environment. Students will learn about environment and then how to communicate a message about the environment. They will work with community partners to focus on specific environmental issues in our region, teaming up to produce media that emphasize how people are working to find solutions to issues rather than just focusing on problems.

"This course's focus will be the Nimishillen Watershed. Working with community partners who are trying to solve some watershed issues, students will learn background information and then specifics for the particular project they choose. They will develop 1-minute and 5-minute videos to get across a message about the watershed and their project. Students will present their final videos in a public screening for fellow students, their community partners, and the general public. Though students will be using high-quality digital video cameras and editing tools, prior video experience is not required."

The 12 students who signed up were a mix of upper- and underclassmen

from a variety of disciplines, with more than one apiece from biology, journalism and communication.

Course Expectations

The course syllabus cautioned students that things would move fast, and that numerous aspects of the course counted toward the course grade - with the final film counting for less than one third of it:

- Field work and relationship building with community partners - 10%
- Project #1: Blog post - 15%
- Project #2: Trailer and pitching the film - 20%
- Project #3: Final film - 30%
- Project #4: Using social media for community engagement - 15%
- Attendance/class participation - 10%

The students would work as professional filmmakers, interviewing real people for stories that would be published in the community. For that reason, the faculty needed to make sure they knew what they were talking about.

The First Month

The course began its focus on water quality with an immersion experience. The first class meeting coincided with a meeting of the Nimishillen Creek Watershed Partners on the Kent State at Stark campus, so the class adjourned from its Reading of the Syllabus and instead its 12 students sat in on the meeting to see what issues the volunteer organization was trying to solve. The partners included representatives of the regional-planning agency, health department, parks district, soil and water district and state Environmental Protection Agency, as well as a farm manager, some academics and the outreach director for the city museum.

The partners discussed revisions to the Watershed Action Plan and threw around phrasing like TMDL, stopping occasionally to explain that the term means Total Maximum Daily Load, a measure of the amount of pollutants in water. It was clear that much of the content went over the students' heads, and they admitted as much when the class reconvened later that week. But by investing this hour they understood why it was necessary to devote most of the four or five weeks of class to understanding the watershed's issues.

The initial lessons alternated between lecture and lab. The lectures

explained such things as the variety of stream types and what happens when one is rerouted, while labs let them practice measuring such things as temperature, turbidity (cloudiness) and flow. They would also compare the wording of similar issues in a variety of publications -- to illustrate the difference in language and detail among academic journals, popular media and other sources.

Choosing Topics

By the fifth week, the students toured the Nimishillen Creek Watershed by bus, with a guide pointing out chronic problems and emerging concerns along the way. Students got out to shoot video of an S-curve creek cutting through a snow-covered farm field -- in plain view of the new housing development that drains into it. Back in the lab the group identified 11 possible topic areas for the films, but with teams of three only four of them would be possible this year. (Some that weren't taken in the first year were made into films the second year.)

The initial four topics and their community partners were 1) Stark County's problem with failing septic systems, partnered with the county Health Department, 2) an educational film on how consumer choices affect the environment, with the Soil and Water District, 3) how officials remade a city park to slow rainfall runoff, with the city Parks Department, and 4) addressing concerns about hydraulic fracturing, with an ad hoc collection of citizen activists and skeptical officials.

Storytelling Skills

While Smeltzer needed several sessions to demonstrate use of the HD video cameras, tripods, audio setups, lighting kits and editing software, along the way he stressed the need for the filmmakers to consider the audience (Community leaders or regular folks? College students or grade-school pupils?) and what the filmmakers would ask viewers to do. Frightening people about a scary environmental problem is one thing, but giving them tools to solve them is better.

It's worth noting that even in a documentary with a point of view, the faculty cautioned the student-filmmakers to be careful not to play fast and loose with the facts, as a persuadable viewer then would be distracted by the error.

About mid-semester, after the student teams had shot some initial footage, they were required to dress up and pitch their film idea to "funders," which were the faculty posing as grant-makers. This was to mimic

the real-life process of filmmakers seeking underwriters so they can complete an ambitious project. A few weeks later they would present a trailer of their nearly completed films for feedback from the faculty, which included the visiting Habashi.

The Films Debut

The four short films created by the Environmental Media class at Kent State University at Stark, which spent the spring semester making documentaries about Stark County watershed issues, are now available for viewing online. In their finished form, the films were these, with running time and theme:

"The Septic Effect: What Lies Beneath" (9:11) where Sean Baxter, Tyler Clark and Ashley Meinke use playful music and even mild potty humor to make the serious point that as many as 40,000 septic systems in the county are failing.

"Your World, Your Canvas" (4:23) by Derek Wholihan, Julia Blasiman and Megan Beaver, where Wholihan speaks directly to the camera about everyday ways to keep water clean and plentiful.

"Fairhope – Rushing Waters" (5:38) in which Corey Connare and Joshua Quiros show how a sewer repair turned into a park feature that slows down stormwater, prevents flooding, allowing sediment to settle.

"What the Frac?" (12:16) a strong rebuke of Ohio's embrace of hydraulic fracturing by Lilia Fuquen, Tonya Higgins and Ivan Toe. It included footage from Washington protests and the regretful Cornell professor who invented the process.

Their campus debut was the last day of class with an auditorium event where the students described what it took to produce the films and answered audience questions. The films were then shown as part of a private reception at the Joseph Saxton photography gallery in Canton, to an invitation-only audience of community and business leaders. The films were also featured during the Ohio STEM Education Science Summit at the University of Akron. Finally, six months after students completed their films

and the course, the organizers of the Canton Film Fest in October included them as part of an evening devoted to environmental documentaries.

Student Anti-Fracking Group

Several students said they wanted to continue their work after the semester ended. The three who produced "What the Frac?" even formed the student group TASK (Take Action, Spread Knowledge), to educate students and the local community about the critical environmental challenges posed by hydraulic fracturing in Ohio. TASK hosted a June 2011 rally in North Canton that led to stories in local newspapers, and their work continues to this day. As McKenney explained to the local Patch.com news site after the films' premiere, the students didn't initially have a community partner, but they wanted to pursue it because they understood the importance: (Day, 2011).

"Fracking was sort of a wild card. Because it's current, because it does have an impact potentially on the watershed, they came up with that topic and said, 'Can we do this?' and we said 'Sure.' ... They've started a student group, they have their Facebook site, they have plans for more film showings and more activity. So they've really run with this."

Effect on students

The students indicated in their feedback that they felt their work made a difference:

"I really liked how we were first taught about some issues, and then we were able to think about them critically on our own, and choose the one that moved us most."

"We got to build on various skills, including skills in research, interviewing, social media work, blogging, filming, editing and communicating with a community audience."

"The ability to create a permanent -- but malleable -- piece of educational art that will continue to educate the public about issues facing our local watershed, and facing the global watershed, is my favorite part of the course."

Meinke, then a junior studying Applied Communication, told the Patch.com reporter that she didn't sense the gravity of the coursework until after seeing the completed films on the big screen. "Now that we're after the fact and we've finished our products, I can really just say, wow, you know, look at how much we've accomplished," she said. "Look at how many lives we've touched, how many people we may have informed and may have made a difference for."

The Second Year

As the faculty plotted Year 2, it reconfigured to have two teaching faculty, rather than three, and dialed back on the course requirements for community "engagement" following the films' debut. This was in part to save overhead cost to make the course more sustainable, but also because instructors had rush through the "engagement" part the first year anyway. The faculty acknowledged that the content imported from Habashi's lengthy Miami syllabus was really better suited to a 6-hour course.

The group also designed an "overlay" of biology and journalism instruction in late January and early February -- having, say, one hour each in some class sessions -- so there would be a slower build in teaching the storytelling and filmmaking skills. The faculty agreed that it helped both the science and journalism instruction, and added variety for the students. A coordinating faculty member continued to handle housekeeping matters with the students, line up the bus for the field trip and arrange for and announce the public showings at the end of the semester. The second year of the class attracted a disappointingly small five students, most likely due to poor promotion efforts. A new strategy has been formulated for the coming third year of the course to explain to student groups where the course could be used it to fulfill a major requirement, such as the upper-division journalism course that is required of Applied Communication majors.

Five New Films

Because of the small enrollment, the second-year students produced five single-author documentaries, teaming up for interviews so there would be someone else to hold the boom microphone or run the camera while the interviewer gave his or her full attention to the conversation with the source. Their completed films are below, with running time, theme and community partner:

"Trash vs. Treasure" (6:46) by Amanda Pritchard, introducing elementary school-age children to recycling in Stark County, with help from the solid-waste district.

"Mucking Up the Silt" (6:40) by Zack Baer, on efforts to prevent stormwater from polluting Meyers Lake and its outflows into the Nimishillen Creek, working with a neighborhood organization.

"A Problem of Mine" (5:50) where Matthew Lemmon looks for answers about orange water flowing from the area's abandoned coal mines, working with a watershed-restoration group.

"A Question of Survival" — subtitled "Mitigation: Unnecessary Destruction or Viable Alternative?" — (6:02) in which Lori Hershberger questions the wisdom of permitting development on wetlands, quoting opponents of a Smucker's expansion in Orrville.

"Farmers: Our Story" (9:00) by Mark Kover, which offers an alternative lens on agriculture's need for a healthy environment, featuring a pig farmer and an orchard owner.

Once again the campus debut was on the afternoon of the last class, with discussion from the filmmakers. All nine films are also on Vimeo and the OurWaterWebs site, and the latest five are slated to be shown during the "Green Documentary" segment of the Canton Film Festival in October.

Taking the Next Step

For four of the Environmental Media students -- two from the first year, two from the second -- the work continues as grant-funded employees. Using an additional six-figure grant from the H.W. Hoover Foundation, students from all five of Stark County's colleges and universities are being paid to draw samples and test the surface water all over Stark County. The grant, titled "Making the Invisible Visible," includes a student-media component, where they produce stories about the work so community members can understand the impact of pollution on the water

around them. The other two have funding from the Western Reserve Conservation and Resource Development Council a responsibility to connect their community partners with faculty (and ultimately, their students) in courses representing multiple disciplines -- not just biology and journalism.

Recommendations

The authors believe it is possible to transplant this idea to other campuses. It goes without saying that having a grant to provide video equipment and load support for faculty made it easier for the university to start this course. But it should be noted that in the second year, the course ran with two faculty getting 2 hours apiece (instead of the usual 3 for a normal 3-hour course), plus one hour for a coordinator to arrange the tours and film showings. That meant the campus overhead wasn't as high as it was in the first year. Going forward, it might be possible to eliminate the coordinator role and get the class to pay for itself, presuming enrollment stays in the double digits.

The university hasn't had to pay high maintenance or replacement costs for the video equipment, as the first-year costs were covered and it hasn't become obsolete yet. Options to keep costs down include using "prosumer" quality HD video cameras, which run about \$300 each and provide a high-quality image, and relying primarily on lavalier microphones rather than the full set of audio kits. It would also be possible to stretch whatever equipment a campus has available by asking students to bring whatever they already have. Even smartphone video, done correctly, could work for some projects. The idea is that the equipment isn't as important as telling the story well, and taking advantage of the community partners' expertise.

Project coordinator Bernstein, in a 2012 interview before her death that summer, noted the challenge of making the course count somehow in a student's major ("Natural Collaboration," 2012, Page 19).

"Students come to college expecting to be challenged, but they also want to leave with a degree," Bernstein says.

"With every project the Initiative starts, we must ask the question, 'How will this fit into students' graduation requirements?' To keep this wonderful effort alive, we must continue to find ways to make it work within the academic system."

But perhaps it was Meinke's words, following the debut of her septic-tank

film, who offers the best reason for campuses to pursue this: (Day, 2011)

"I stepped into this course as a student who just loved to make films. I stepped out of this course as a person who knows that I can make a difference just as an individual, and know so much more about the environment, and how we can change the world for the better."

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