

### Callan Bentley

There are a couple of items I'd like to touch on in this essay. Given the breadth of possible questions, I think it would be fair of me to mix and match a bit. So I intend to cover three things here, from general to specific: (1) quality, (2) field work, and (3) blogging.

#### **Quality**

One of the 'prompts' provided by workshop organizers asked: "What have you found to be most successful in broadening participation in the geosciences at your institution and what made it successful?" While I could talk about many things here, I think the #1 item that draws students to our classes is quality. My colleague Ken Rasmussen and I have developed a reputation for high standards, enthusiasm, and dedication which recruits more students to our courses than any other variable. Our enrollments have been consistently strong, and our reviews good. Here are some example comments from the website RateMyProfessors.com:

His lectures are fun and interesting and his use of hilarious analogies keeps the class intrigued in the material. He also teaches through example which I found extremely helpful, like when he shows the class geologic formations in different countries or compares geologic landmarks to Led Zeppelin music videos.

He is extremely helpful, funny, and really enthusiastic about geology, which totally helps learning about it. He is really easy to talk to if you're having problems, but you have to work to get that "A". Study your notes and read ahead and be prepared to think in his class. Highly recommend!

In spite of the current economic downturn, rising enrollments throughout NOVA and maxed-out geology classes every semester led our dean to propose (and get) a third full-time geology faculty person for our campus. This person will start in the fall semester. I find this quite extraordinary for a community college, but see it as a *Field of Dreams*-style "If you build it, they will come." We've built up a strong program, and the students are pouring in. Many NOVA students transfer to George Mason University, and the GMU geology majors are consistently about half NOVA transfer students, and half "home grown" at GMU (with much larger throughput of introductory level students).

We aim for quality in our pedagogy and our lab space and our diction. We dot our i's and cross our t's. I see our dedication to quality as our greatest strength. While this is extremely general, it's also simple real, and it's what keeps the students coming in. I suggest that it should be transferrable to other institutions.

#### **Field work**

With one exception, all our classes involve field trip components. My own classes all have mandatory field work components, while other instructors opt for optional field trips. I feel passionately about the power of the field experience to manifest learning that

would take longer to soak in via lab work or description in lecture. A consistent theme in my end-of-semester evaluations is that the field trips were a key part of the students' learning experience. They like the break in routine, they like exploring on their own, and they like having the professor guide them through the experience. Many of my Physical Geology students report that the field experience on the Billy Goat Trail is a fundamental "aha" moment, where various concepts originally learned in class come together and form a cohesive picture, like separate threads merging to form a tapestry. A [multiyear self-study](#) that I have conducted on field work backs up these claims with quantitative and qualitative data. Our administration supports these field experience by loaning us college vans, paying for gas, and covering the insurance of the field experience. We are very grateful to them for this support.

## **Blogging**

Finally, a unique aspect to my own situation at NOVA is that over the past 2.5 years, I've been writing a public-interest geology blog (contraction of "web log"). This blog ([Mountain Beltway](#)) serves many purposes: an archive for my own thinking, an interconnected web of communication with other geology-interested people (industry, faculty, students, general public), an opportunity to try out concepts, and a place to share geology, and thus revel in its mysteries and satisfactions. I've gotten a lot of 'geoblogging,' and I'm not alone. A growing number of geoscientists around the world are committing their thoughts to the Internet, making available a wealth of experience, perspective, and geography. I know that my blog has been a

For example, a student e-mailed me with a question, seeking to clarify a concept that had come up in class, about using bedding/cleavage relationships to determine whether bedding has been overturned. Rather than just replying to his e-mail, I went a step further in my explanation, and then [posted it on my blog](#) for all to see. I sent my student the link to the blog post, and then I sent it to the rest of the class, too. A few weeks later, that blog post was still teaching people, and not only in my classes. It garnered this comment:

I'm an Auburn student currently studying for a Structural final and you have no idea how much this helped! Great explanation and pictures! Saved me a huge headache, thanks from me and the countless people from my class I'm going to have to explain this to now!

The blog has been a source of much positive feedback for me, and it has led to several other opportunities: a research collaboration, a fellowship with the [Fine Outreach for Science](#), and inclusion of some of my blog-hosted images in papers and books. My connections with other geobloggers has been rich and rewarding, with experiences that range from getting together to drink beer at GSA meetings to free lodging while travelling cross-country. Blogging is free. It's a public service, and it makes you a better teacher because you practice expressing concisely the same concepts you teach in class. In the long term, blogging generates a rich online resource that your students can access and learn from, and so can other students (formal or informal) from around the world. It can take as much time or as little time as you want to devote to it, but I have found it to yield rewards well worth the time I invest in it.

There is one other 2-year-school geoblogger that I know of: the talented and prolific Garry Hayes of Modesto Junior College, who authors [Geotripper](#). Will you join us?