

Moving Scholarly Activities into a 2-yr College Setting

On the Cutting Edge: Preparing for an Academic Career in the Geosciences: Workshop for Graduate Students and Post-Doctoral Fellows

Saturday, July 31 2010, 10 to 11 am

Presented by Katryn Wiese City College of San Francisco

The ideas within this document come from a variety of past workshop presenters, including myself, Al Trujillo (Palomar College), Robert H. Blodgett (Austin Community College), and Elizabeth Nagy-Shadman (Pasadena City College).

What does SCHOLARLY ACTIVITY mean for 2-year-college faculty?

RESEARCH

- Collaborating with other 2-year and 4-year college departments and with research groups and/or local consulting and government agencies:
 - Placing student interns and providing students with research and job experience
 - Recruiting majors
 - Sharing resources (seminars, materials, etc.)
 - Increasing your students' and departments' education in local issues
 - Incorporating research data into classroom
 - Potentially funding classroom data collection
 - As PI or Co-PI – in educational or geoscience discipline research

WRITING

- Writing a popular book or guidebook about the local geology
- Contacting publisher's representatives about writing a study guide, lab manual, textbook, or multimedia exercise
- Volunteering to write book reviews for a professional journal
- Creating an Earth Science BLOG

PROFESSIONAL SERVICE

- Teaching colleagues (2-year and 4-year) within and outside your college (both discipline related workshops and pedagogy workshops, including fieldtrips)
- Developing or assisting with educational workshops (AGU, GSA, SERC, etc.)
- Leading a field trip for a local/regional geoscience society
- Chairing a session at the annual regional or national meeting of the:
 - National Association of Geoscience Teachers (NAGT)
 - Geoscience section of the state academy of sciences
 - Geological Society of America (GSA)
 - American Geophysical Union (AGU)
- Volunteering to serve:
 - As an officer of a professional society
 - On a NAGT, GSA, AGU or other professional society committee
 - As a journal reviewer
 - As a judge for speakers or poster-sessions

CURRICULUM DEVELOPMENT

- Purchasing, setting up and maintaining a seismograph from the Incorporated Research Institutions for seismology (IRIS) - <http://www.iris.washington.edu/edu/AS1.htm>
- Becoming part of the GLOBE program - http://www.globe.gov/globe_flash.html

- Establishing and maintaining a campus weather station – possibly in conjunction with a local television station
- Asking the county soils office of the National Resources Conservation Service (NRCS) to take cores of the soil on campus and mounting those cores for classroom use
- Asking a local well driller, quarry or mine to donate their services to drill a well on campus and taking core or use it as an observation well
- Asking a local surveying firm to donate their services to establish a High Accuracy Reference Network (HARN) station benchmark on campus
- Asking a local landscaping firm to donate boulders of various rock types for landscaping on campus
- Asking a local stone supply firm to donate small polished or unpolished slabs or broken pieces for classroom use

OUTREACH/COMMUNITY SERVICE

- Teaching K-12 teachers & students
 - Placement of student interns
 - Recruitment of majors
 - Recruitment of teachers
 - Teacher training
 - Loaning or donation of materials
 - Shared curriculum development
 - Basic skills and preparation
 - Making field trips more accessible
- Hosting booths at local fairs;
- Participating in Earth Science Week (<http://www.earthsciweek.org/>) and or Earth Day:
 - Showing geoscience videos (NOVA, National Geographic, etc.) with popcorn and a Q & A session afterwards
 - Preparing a bulletin board or display for the library, cafeteria, student lounge or main administration building related to the annual topic
 - Leading a field trip for any interested students
 - Leading a mineral or fossil collecting trip for any interested students
 - Jointly hosting a GPS geocaching exercise with the geography program
<http://www.geocaching.com/>
 - Having the mayor/city manager/governor issue an Earth Science Week declaration
 - Holding a rock/mineral./fossil identification event
- Having an open house.
- Giving public science talks.
- Assisting in community science workshops (especially those for young children and minorities)
 - Development of curricula
 - Loaning or donation of materials
 - Recruitment of majors
 - Training workshop leaders
 - Placement of student interns
 - Public education
 - Community building
- Assisting the media (television, internet, radio, newspapers)
 - Hosting programs or blogs
 - Presenting on programs or blogs
 - Writing articles
 - Providing expert advice or interviews for writers on natural hazards, natural resources, pollution or environmental issues, etc.
- Providing resources to local museums and aquariums.
 - Placement of student interns

- Loaning of display materials
- Development and leading of local field trips
- Assistance with display design
- Assistance with curricula
- Brown-bag lectures
- Collaborating with local/state/national park programs (leading field trips, teaching community classes, providing resources, producing curriculum)
- Getting involved with local political groups (energy, waste, environmental issues that pertain to Earth Sciences)
 - Providing expert advice
 - Recruiting resources
 - Calculating statistics
- Enriching your department's and Geoscience visibility:
 - Having art students paint an Earth systems mural on campus
 - Having photography students take/display pictures of local rocks/minerals/fossils
 - Mounting and displaying geologic maps in the hallway
 - Having students create a permanent mineral/fossil display
 - Preparing a geoscience current events bulletin board with Web graphics
 - Preparing a brochure for your research program or the entire geoscience program
 - Developing a geoscience program Website
 - Collaborating with other 2-year and 4-year college departments and local research groups (programs, curriculum, field trips, guest speakers)
- Giving a talk to the local rockhound group
- Conducting a book drive with geoscientists in the community to donate or buy geoscience books for the local library and schools
- Having your environmental geology class do a source-water protection survey (watershed or wellhead protection) for the public water supply system
- Having students work with the county extension agent to distribute information to homeowners about testing and protecting their private water wells
- Having students work with science teachers to get their schools involved with the Globe Program - http://www.globe.gov/globe_flash.html
- Collecting science textbooks and shipping them to a college in a developing nation
- Volunteering to judge the local science fair
- Volunteering to participate on a school district science curriculum committee
- Having students volunteer with the local US Power Squadron to survey USGS/NGS benchmarks - <http://www.usps.org>
- Having students work with local scout troops on geology merit badges

CONSULTING

- Becoming a licensed geoscientist
- Doing subcontract work for a consultant
- Reviewing textbooks and other educational media
- Preparing test questions or score standardized tests

It's not required, so why do it?

We're not paid for it... so what other motivation exists?

- Makes us feel like good humans / citizens by giving us an opportunity to share our skills
- Gives us a chance to enjoy other pleasures
- Potentially allows us to impact our own community in positive ways
- Increases science education of community
- Satisfies our desire for service
- Fulfills our sense of professional responsibility
- Keeps us excited and interested in our field of study
- Makes our job more fun
- Increases recruitment! (Especially for brand-new campuses)
- Gives ourselves and our department/school a better public profile
- Creates networks that will facilitate future research projects for students (projects that have local relevance!)
- Expands our views beyond my limited institutional environment
- Connects ourselves and our department with our town (improves relations!)
- Exposes underrepresented groups to Earth Science
- Increases visibility of the institution within the community
- Can involve our students (giving them hands-on experience and helping them gain confidence).
- Provides resources for our students (internships, jobs)
- Educates the community on local environmental issues, especially policy makers
- Strengthens relationship between college and leaders
- Encourages more interest in teaching in the community
- Can connect with service-learning or mentoring programs and potentially fund students
- Attracts money from private and public donors
- Builds better relationships with local landowners (facilitates field work)
- Advertises expertise of our department as a future resource
- Provides resources and professional development to K-12.
- Improves our own education and teaching
- Makes our own classes more relevant and interesting for our students
- Engages our students

What are the benefits and challenges at 2-yr-colleges?

BENEFITS

- Self motivated - no expectations
- No commitments
- No need to go after \$
- Don't have to do what someone else wants or expect you to do
- Not required to follow someone else's standards or procedures
- Students are more diverse, and many will be more motivated than anywhere else.

DRAWBACKS

- No support
- Limited time and resources
- Potential lack of credibility
- Students are more diverse, and many will be disinterested and unmotivated

TIPS

1. Make the scholarly activity a partnership. Work is shared!
2. When approaching organizations and people, be sure your project is one that will save them time or make their job easier.
3. Look to good models within your own department, other departments, other colleges, or the organizations that interest you.
4. Start with an existing program (such as GLOBE – global learning and observation for the betterment of the environment – worldwide protocol for how K-12 students can collect data)
5. Network. Network. Ask.
6. Match your interest with departmental/college goals.
7. Be realistic about time you can commit.
8. Look to private companies and local foundations for funds. Look everywhere. Admissions. Deans. Public Utilities.
9. Look to your students for ideas and support (especially regarding time).
10. Make your research part of your classes
11. Conduct educational research or community-based research
12. Reduce your teaching load to free up time.