

ED13C-0614 Recruitment Strategies for Geoscience Majors: Conceptual Framework and Practical Suggestions

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ABSTRACT

One characteristic of strong geoscience departments is that they recruit and retain quality students. In a survey to over 900 geoscience departments in the US and Canada several years ago nearly 90% of respondents indicated that recruiting and retaining students was important. Two years ago we offered a pre-GSA workshop on recruiting and retaining students that attracted over 30 participants from over 20 different institutions, from liberal arts colleges to state universities to research intensive universities. Since then we have sought additional feedback from a presentation to the AGU Heads & Chairs at a Fall AGU meeting, and most recently from a workshop on strengthening your geoscience program in June 2009. In all of these settings, a number of themes and concrete strategies have emerged. Key themes included strategies internal to the department/institution; strategies that reach beyond the department/institution; determining how scalable/transferable strategies that work in one setting are to your own setting; identifying measures of success; and developing or improving on an existing action plan specific to your departmental/institutional setting.

The full results of all of these efforts to distill best practices in recruiting students will be shared at the Fall AGU meeting, but some of the best practices for strategies local to the department/institution include: 1) focusing on introductory classes (having the faculty who are most successful in that setting teach them, having one faculty member make a common presentation to all classes about what one can do with a geoscience major, offering topical seminars, etc.); 2) informing students of career opportunities (inviting alumni back to talk to students, using AGI resources, etc.); 3) creating common space for students to work, study, and be a community; 4) inviting all students earning an 'A' (or 'B') in introductory classes to a departmental event just for them; and 5) creating a field trip for incoming freshmen, whether they are planning to major in geoscience or not.

Some of the best practices for strategies reaching beyond the department include: 1) working with college/university academic advisors, admissions, career services, especially for undecided students; 2) working with local high schools and community colleges, especially for underrepresented students; and 3) advertising where students communicate (Facebook, Twitter, etc.).

As important as recruitment strategies are, it is critical to have an assessment plan in place to measure the success of recruitment efforts. It takes effort and resources, often human capital, to recruit students. If enrollments go up, and they would have gone up without the recruitment efforts, then scarce resources have been wasted. Some of the best practices include: 1) surveying students, especially those who have recently declared a geoscience major; and 2) surveying students whom you have recruited who have not become majors.

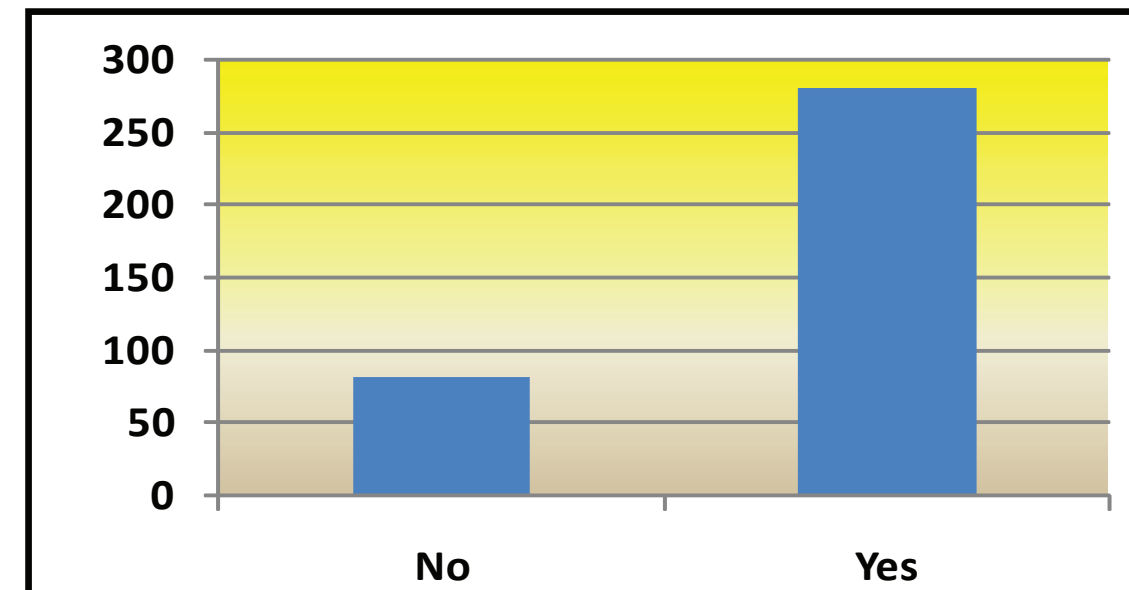
Why Focus on Recruitment?

It's very important to identify the reasons it's important in your department to increase enrollment

Reasons may include:

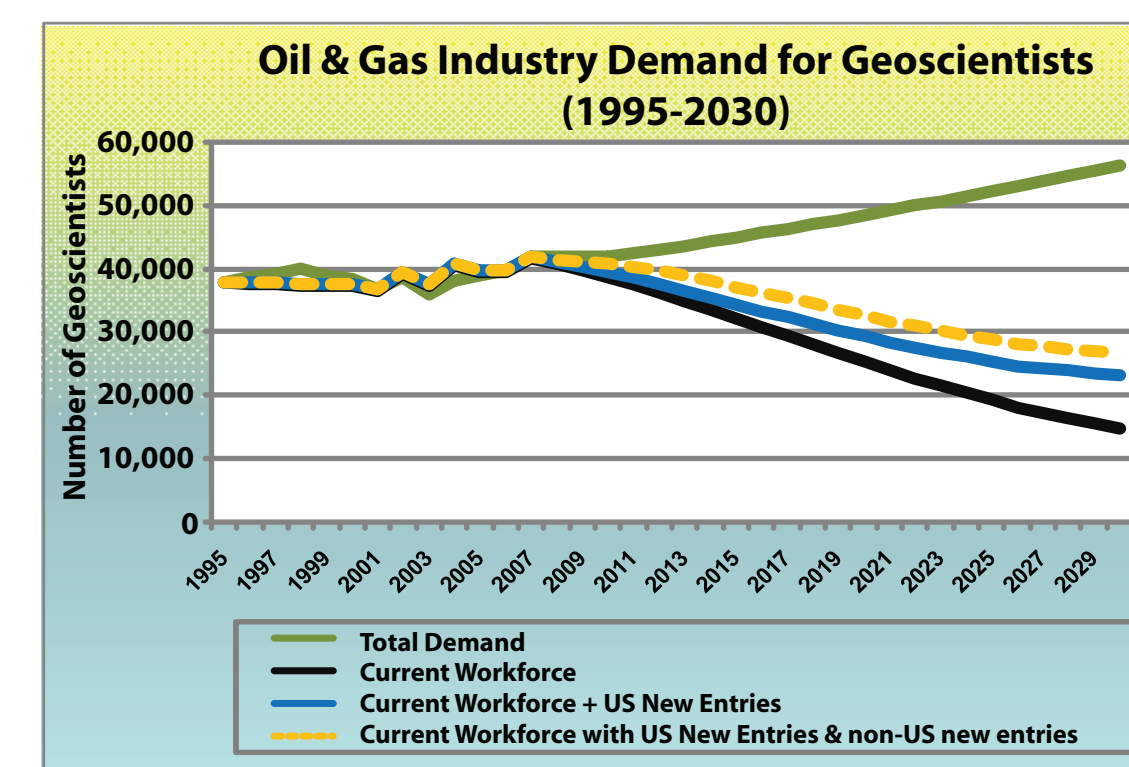
I. Because we all know it's important:

In a survey of over 900 US and Canadian geoscience departments with a nearly 40% response rate, ~80% (281) departments indicated that undergraduate recruitment was important (Eos, Transactions, American Geophysical Union, 89, 242-243, 2008).

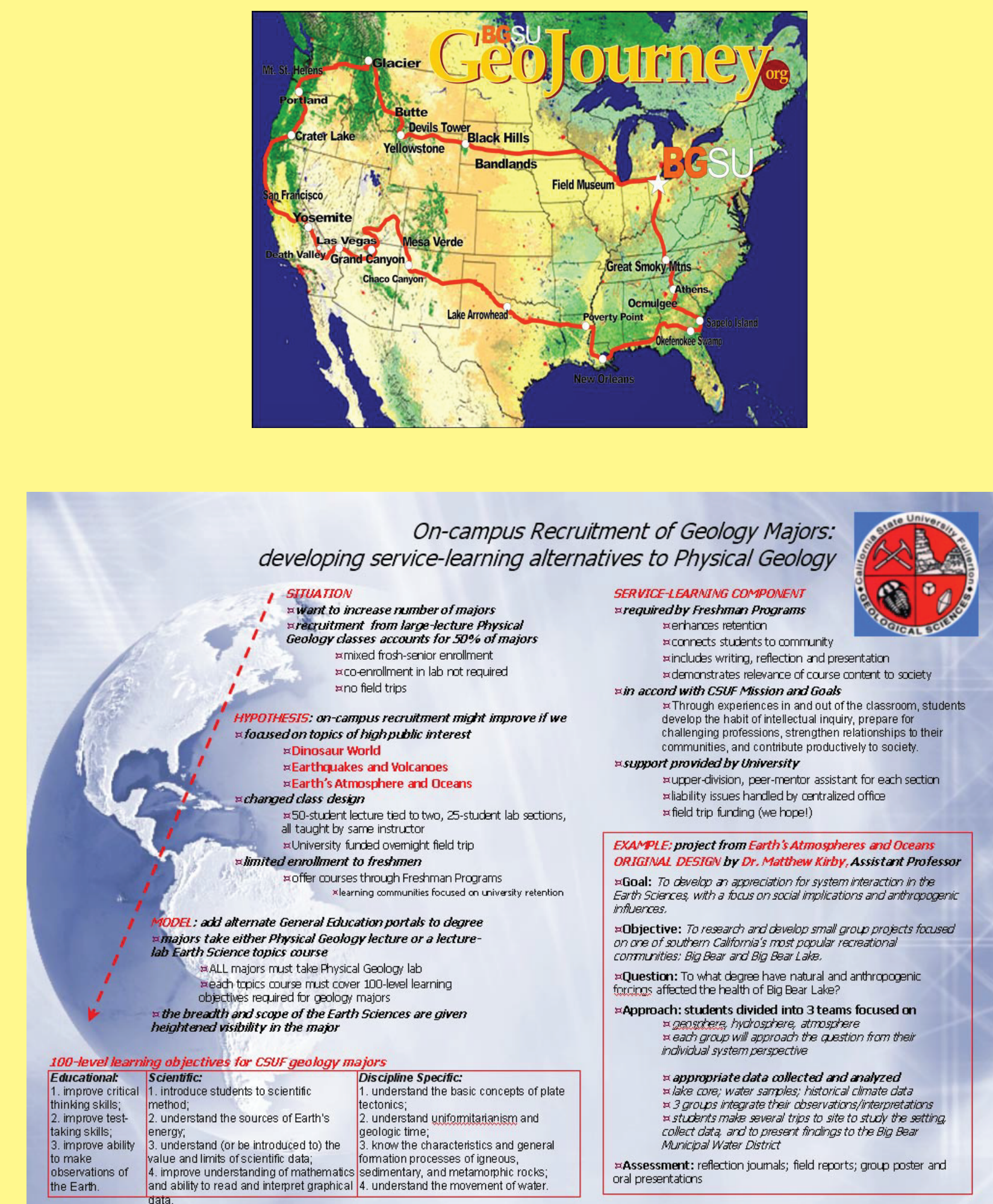
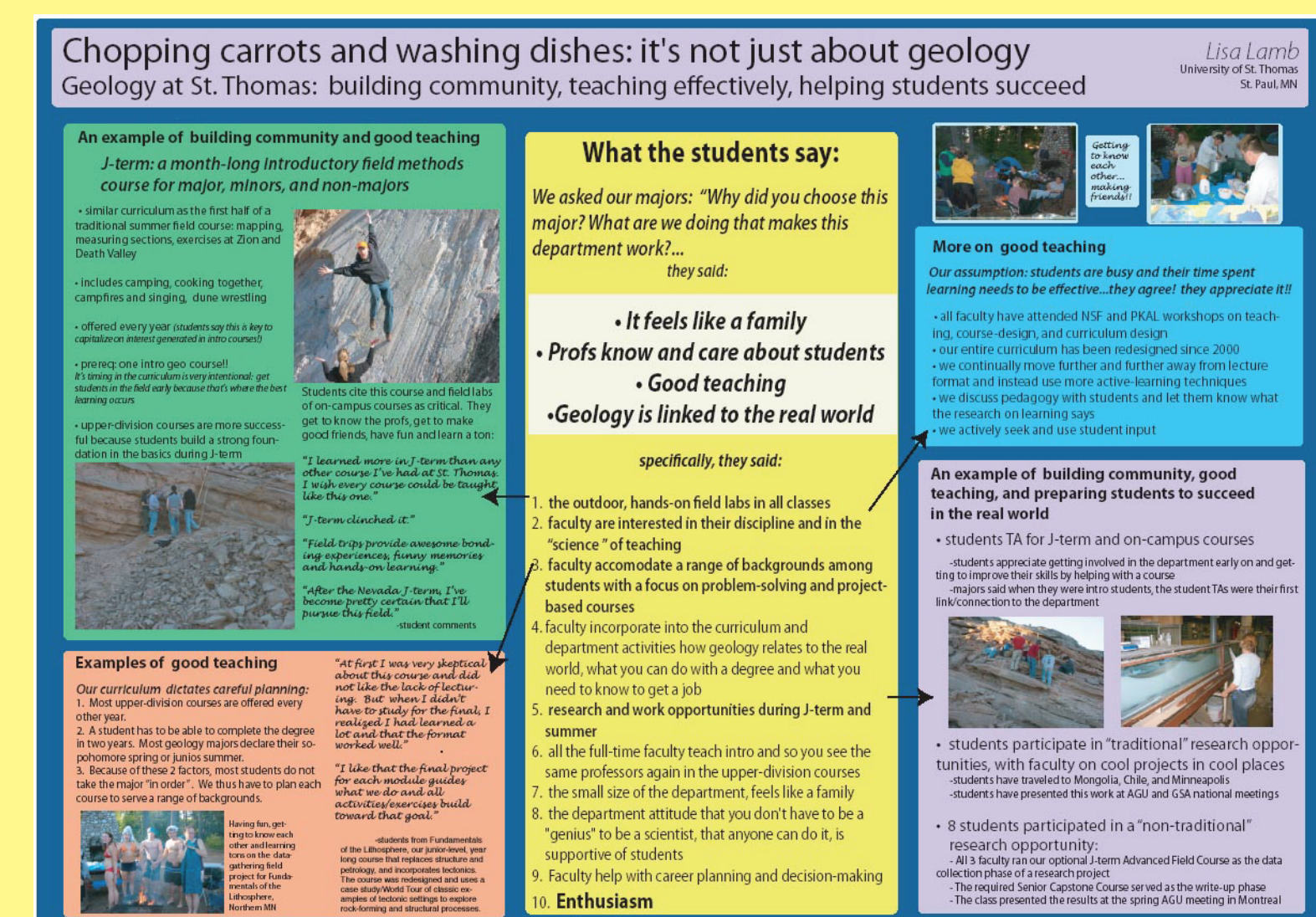
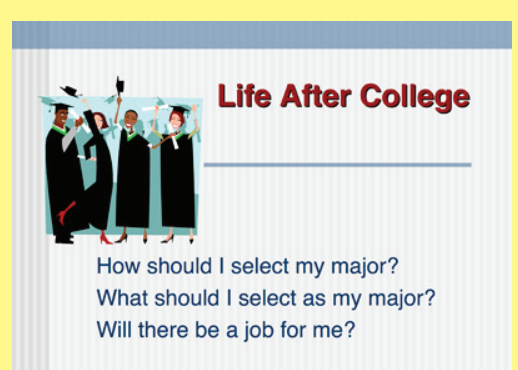
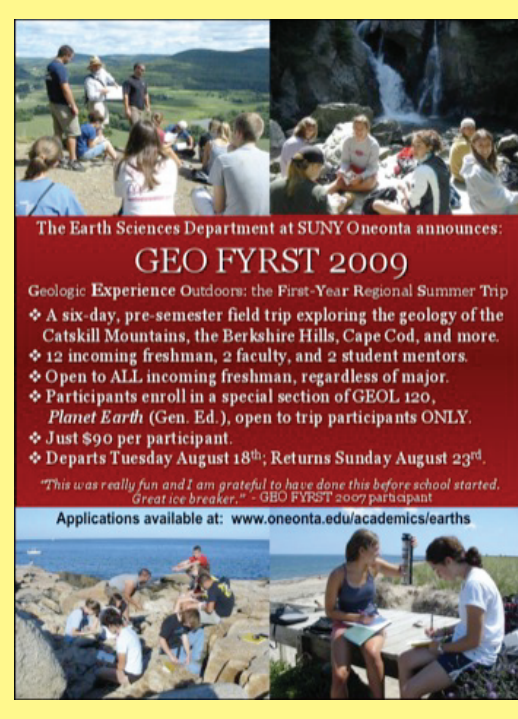


II. Because there will be a need for geoscientists in the future:

Yes! Assuming an optimistic 3% increase in graduate students entering the petroleum industry and a conservative of 2% growth in annual demand for geoscientists after 2011, by 2030, the unmet demand for geoscientists in the petroleum industry will be ~30,000.



III. Because institutional administration demands enrollment growth, or there is the threat of departmental closure, or ... ?



Strategies That Reach Beyond the Department or Institution

Raise Community Awareness

Service learning experiences

Write press releases about research, field trips, etc.

Student research colloquium

Recruit the parents (have geoscience salary information, hiring trends on hand)

Work with Admissions

Promotional materials

Campus tours

Educate the staff & volunteers

Recruit "Refugees" from Other Sciences

Distribute math, chemistry, physics problems with geoscience content

Work with colleagues in biology, chemistry

Work with Advisors

Promotional materials

Career opportunities

Partner with K-12 Schools & 2-Year Colleges

Offer college credit for approved HS geoscience classes

Make your "geoscience career opportunities" presentation at nearby 2-year colleges

Look Beyond Career Geoscientists

Geoscience is excellent preparation for many careers, in geoscience and beyond (law, medicine, etc.)

Develop interdisciplinary minors or related programs

Strategies Local to the Department or Institution

Use Your Introductory Classes

Presentation on geoscience careers just before registration

Keep track of your alumni, and incorporate their careers in this presentation

Invite A/B students to an event just for them

Spice up the course name

Offer topical courses

Use your best faculty

Teach Intro courses every term

Address socially relevant issues

Engage students in *doing science*

Reach Students Early

Be an advisor for incoming students

Reserve seats in Intro courses

Offer a 1st-year seminar course

Field trip/course for incoming or

1st & 2nd-year students

Early research opportunities, in classes & beyond

Advertise your programs!

Advertise Career Opportunities

Presentations in Intro classes

Alumni network

Guest speakers

Develop a Sense of Community

Organize departmental events

Set aside space for students

Get your majors involved:

Use student TAs/tutors/preceptors

Website design and content updates

Blogs about field trips

Facebook pages

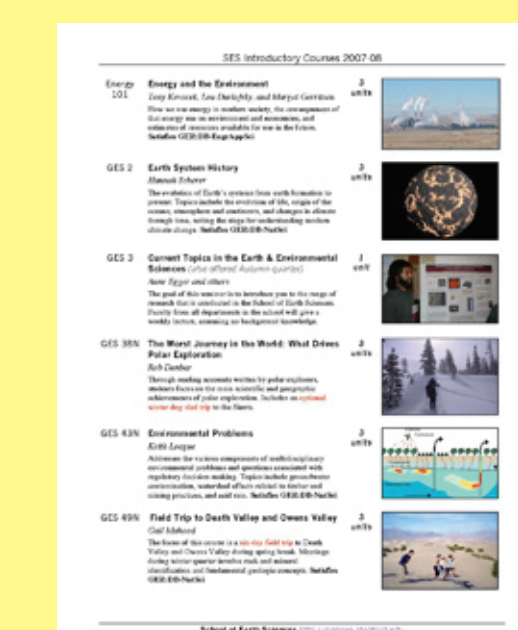
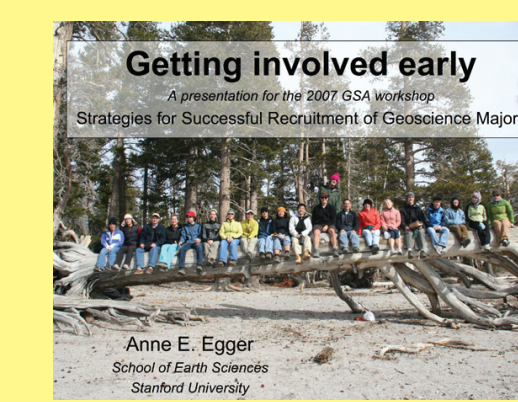
Go Beyond the Classroom

Authentic research

Internships

Field experiences

Service learning



Assessing Recruitment Efforts

It is not enough to answer, "If enrollments go up, I was successful." Correlation does not equal causality!

Why assessment matters:

- Recruitment takes effort, that is wasted if enrollments would have gone up anyway. AGI data indicate that enrollments went up 8% nationally due to increased interest in energy and environmental issues.
- If employing multiple recruitment efforts, how will you know which are most effective?

Strategies:

- Survey Students (immediately upon entering major, when graduating, in Intro classes to gauge interest; ask students who leave the major to explain why)
- Survey Alumni
- Survey Employers

(<http://serc.carleton.edu/departments/recruiting/assess.html>)

Developing an Action Plan

There are several common attributes of successful recruitment action plans:

- They begin with departmental consensus about the goals of recruitment (increase diversity, serve societal needs, get off administration's radar, etc.)
- They typically involve multiple strategies (internal to the department, external, etc.)
- They involve more than one or two people ... it's the department's responsibility, not a few individuals
- They include an assessment plan to measure success and maximize return on effort
- They are flexible, and respond to data and changing situations/environments

Acknowledgements

The information in this poster builds upon: 1) a 2007 pre-GSA workshop on recruiting and retaining students that attracted over 30 participants from over 20 different institutions, from liberal arts colleges to state universities to research intensive universities. 2) a 2008 AGU Heads & Chairs meeting. And 3) a 2009 workshop on strengthening your geoscience program.

Additional resources are available at:

<http://serc.carleton.edu/departments/recruiting/index.html>