

Building Strong Geoscience Departments: Case Studies and Findings from Six Years of Programming



Geoscience Departments:
Developing Pathways to Strong Programs for the Future

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

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The Program

The Building Strong Geoscience Departments project helps geoscience departments adapt and prosper in a changing and challenging environment through a program that includes workshops and a website.

Understanding Current Practice Nationwide (Phase 1 and 2)

- Topical workshops bring together leaders to share their experiences
- Workshops produce website and develop visiting leadership team

Dissemination Strategy (Phase 3)

- One large national workshop attended by institutional teams
- Visiting workshop program leaders who bring customized workshops onto campus
- 1-day events at professional society meetings
- Website brings together resources, examples from across the country and supports workshop program

Program Activities

Phase 3

Visiting Workshops (17 between 2009-2011)
Heads and Chairs Workshop (offered annually 2006 to 2011):
Strengthening Your Geoscience Program: A Practical Workshop with Ideas and Examples: (2009)

Phase 2

Assessing Geoscience Programs: Theory and Practice (2009)
Strategies for Successful Recruitment of Geoscience Majors: Conceptual Framework and Practical Suggestions (2007)
Connecting Geoscience Departments to the Future of Science: New Structures for Research and Curriculum (2007)
The Role of Departments in Preparing Future Geoscience Professionals (2007)

Phase 1

Developing Pathways to Strong Departments for the Future (2005)

Reaching Out

Since 2005, *more than 185 of the nation's ~650 geoscience departments* have participated in one or more workshops. 15,000 visitors made more than 23,000 visits to the website in the past year. Of these, *4,000 visits viewed 3 or more pages*, seeing on average 7 pages, indicating robust use.



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Program Impacts

Participants value:

- Opportunity to place their experiences in context of departments nationwide
- Importance of working together as a team to develop action plans
- From visiting workshops: Department is more united and engaged with a stronger vision for the future and action plan to implement that vision
- From Dissemination workshop: Teams valued discussing ideas with diversity of institution teams and peer institutional teams

"Time to work with my team was essential. Conversations with others on action plan was magnificent."
(Dissemination participant)

Short term (3 to 18 months)	Longer term (18 to 45 months)
<ul style="list-style-type: none"> ▪ Shared workshop ideas with colleagues and administration ▪ Implemented student and alumni surveys ▪ Implemented strategies for attracting majors and recruiting students 	<ul style="list-style-type: none"> ▪ Restructuring curriculum or adding co-curricular programming (interdisciplinary, service learning, future of science) ▪ Proactively increasing visibility on campus

Participants from post workshop surveys and interviews attribute changes to time spent on action plan, strategies learned from leaders or other workshop participants, the SWOT analysis, and curriculum matrix activity as well as their ongoing use of Characteristics of Strong departments as benchmarks for their department's progress.

Case Studies

As part of the program evaluation, a deep exploration of the program impacts with five departments was conducted by the external evaluator through longitudinal phone interviews and artifact analysis over two years. The five departments were situated in both large and small universities/colleges and offer a range of degrees (B.S., M.S., PhD.)

"One of our weaknesses was we did not engage in politics, in promoting the department." (Case study interview)

Impacts described by cases

- Becoming more proactive in promoting the department and its visibility at their institution
- Becoming more united and engaged with a stronger vision for the future
- Systematically collecting data to prepare for future external reviews
- Implementing student and alumni surveys (and used results strategically)
- Aligning course offerings with desired skill sets, student interest (e.g. service learning), and future of science (e.g. climate change)
 - Increased majors
 - Additional students through concentrations
 - Interdisciplinary relationships with other departments
 - New faculty hires related to these changes

"A beneficial perspective was the encouragement to focus on what we want our best students to look like."