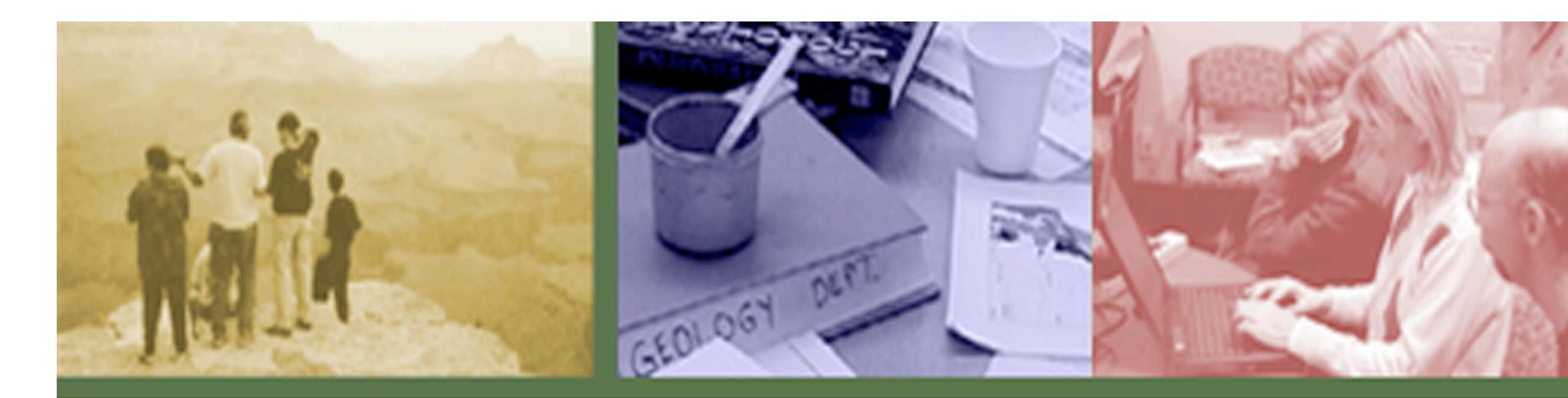


# Understanding Faculty Use of the Web in Undergraduate Geoscience Education

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The Science Education Resource Center (SERC) is developing customized thematic collections and portals for DLESE that help faculty address issues in geoscience education. To be successful, this work must be grounded in an understanding of how faculty think about their teaching and use the web in their work. This poster highlights results of an initial set of faculty interviews and site walkthroughs studying faculty use of the web.

## What we wanted to find out

- How do faculty think about their teaching?
- How do they make decisions about what to do in class?
- What are faculty looking for on the web? How do they find it?
- How do they use these materials in their teaching?

## A focused study on a small sample

- 8 structured interviews of faculty with a range of teaching experience from 2 and 4 year colleges and research universities in Minnesota, 1 graduate student interview
- 21 additional walkthroughs using scenario-based think-aloud protocol
- Iteratively developed coding scheme

## What are faculty thinking and doing?

- All faculty we interviewed relished the chance to talk about their teaching. Most faculty expressed an **interest in teaching higher order thinking skills**.
- **Decisions** about what to do in class are based largely on the **classroom experience** of the faculty member and their colleagues. These are *trusted sources*. Half of the faculty reported that they incorporated information from research that they learned about in journals, at workshops or at professional society meetings.
- Most of our participants use the web a lot. They go to sources that their **colleagues recommend**, or they search with **Google™** on science topics.
- These faculty **adapt and create** from what they find. It is rare to adopt a resource wholesale.

## What are faculty looking for on the web?

- Information or visuals about a science topic
- Specific data to use in an exercise or lab
- Ideas
- Relatively few faculty search the web for teaching materials
- Even fewer think of the web as a source of pedagogic information

## Starting Point: Designed with this research in mind

The Starting Point website is designed to support faculty teaching entry-level geoscience. It features a 'Get Started' section with tips for getting started, a 'Explore Teaching Examples' section with a complete list across various topics, and a main page for 'Starting Point-Teaching Entry Level Geoscience' which includes sections for Earth History Approach, Interactive Lectures, Game-Based Learning, Investigative Case-Based Learning, Peer Review, Role Playing, Socratic Questioning, Teaching with Data, and Using an Earth System Approach. The 'Using Field Labs' section shows students in a field setting, and the 'How Fast Do Materials Weather?' section shows tombstones in a cemetery.

- Teaching examples searchable by geoscience topic and findable in Google™
- Pedagogic information intimately linked with each example and includes tips for use and adaptation
- Site developed by faculty colleagues and peer reviewed to increase its ability to become *a trusted source*

## Initial Evaluation Results

- Examples are extremely popular and spark creativity
- Many faculty explore site using examples in a topic
- Pedagogic information is placed in a useful context
- 6000 hits per month; 1/2 from Google™
- Long visits initiated with searches on pedagogic topics

## We Need Your Feedback

We are looking for more information about how you think about teaching and use the web. Where do you find materials for class? How do you use the web? How do you decide what to do in class? Complete our brief questionnaire or let us know if we can contact you in the future.