

## CUR Sidebar

### Online Guide Encourages Undergraduate Research Using Social Media

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As a student explains the significance of her research to her peers, she points to the key figure on her poster. Another student asks a question. The speaker responds, although some time later. This scene is typical of many undergraduate research poster sessions—however, it takes place entirely online, using the Cloud-based application VoiceThread (<http://voicethread.com/>). With the ability to unite people separated by time and distance, VoiceThread and other social media tools can be used for everything from virtual poster sessions to collaborative discussions concerning datasets.

When thoughtfully and deliberately implemented, approaches using social media can effectively facilitate undergraduate research. CUR Geosciences Division has designed an online resource to encourage and support the use of social media in undergraduate research. For details, see [http://serc.carleton.edu/NAGTWorkshops/undergraduate\\_research/social\\_media.html](http://serc.carleton.edu/NAGTWorkshops/undergraduate_research/social_media.html).

Although the examples in the resource guide are based in the geosciences, the best practices and social-media tools apply to all disciplines. The guide describes four types of such tools (social networking sites, blogs, collaborative projects, and content communities) and gives specific examples of how they can be used from the earliest stages of mentoring undergraduate researchers through final dissemination of their research projects. Using social media with undergraduate researchers presents some challenges, which are also addressed in the guide—in particular, social media etiquette and fair use and copyright policies. Additional resources and examples can be found at the CUR Geoscience Diigo social bookmarking site (<http://www.diigo.com/list/curgeoscience>).

### Course Outcomes

Measurement of course outcomes was consciously built directly into the course. Prior to the beginning of the course, we designed pre- and post-course student surveys centering on learning objectives that we considered important for this course. We were interested in knowing what the impact of the course was on students' subjective confidence in their ability to complete concrete tasks. Three interesting clusters of results emerged from the data we gathered.

In the domain of disciplinary knowledge, students' subjective understanding of the job of "congressman" increased substantially, with the pre- to post-course measure of "confidence" increasing a mean of 35 points (see Table 1). Students in the course also became somewhat less cynical about members of Congress, with students slightly more likely to believe that the lawmakers were not solely concerned about themselves. In the words of one student, "It has made me appreciate them more." Students became more convinced that members of Congress do pay attention to their constituents. Said one student, "They do try to follow the people's voice." However, their exposure to the Congressman's papers did not make them less cynical about Congress as an institution. One student said the experience "left me with the realization that we need change due to a broken system."

Overall, students gained in their ability to evaluate information. In particular, students indicated increased confidence in their ability to evaluate the validity of sources of information and to develop context for an historical document. Students indicated they perceived a small gain in their ability to distinguish between primary and secondary sources.

With regard to changes in students' confidence about their ability to engage in higher-order tasks associated with research, the findings are somewhat mixed, as shown in Table 1. Students reported improved confidence in their ability to conduct independent research and establish connections between concepts. Students' confidence in their ability to complete a project and present their research to an audience dropped. We speculate that these results reflect students' improved appreciation of the efforts required to conduct a *bona fide* research project, one that extends beyond collecting and reporting on established knowledge.

### Conclusion

This course presented an opportunity to engage in a unique and innovative teaching experience. An unprocessed collection of political papers provided the means of engaging first-year students in interdisciplinary undergraduate research. Frankly, this course would not have been as successful if it resided solely in the political science or library "silos."