The February 2018 GER Spotlight is Dr. Christopher Atchison, Associate Professor of Geoscience Education in the School of Education and Department of Geology at the University of Cincinnati and Executive Director of the International Association for Geoscience Diversity. In this GER Spotlight, Atchison focuses on the importance of inclusive design and the need to think beyond the traditional, and often exclusive, approaches to teaching and learning in the geosciences. Check out the full March 2018 Spotlight here!

Featured Article

Assessing students' disciplinary and interdisciplinary understanding of global carbon cycling

"Global carbon cycling describes the movement of carbon through atmosphere, biosphere, geosphere, and hydrosphere; it lies at the heart of climate change and sustainability. To understand the global carbon cycle, students will require
interdisciplinary knowledge. While standards documents in science education have long promoted interdisciplinary understanding, our current science education system is still oriented toward single-discipline-based learning. Furthermore, there is limited work on interdisciplinary assessment. This article presents the validated Interdisciplinary Science Assessment of Carbon Cycling (ISACC), and reports empirical results of a study of high school and undergraduate students, including an analysis of the relationship between interdisciplinary items and disciplinary items... Findings indicated significantly higher levels of interdisciplinary understanding among the Freshman–Sophomore group compared to high school students. There was no statistically significant difference between Freshman–Sophomore group and Junior–Senior group. Items assessing interdisciplinary understanding were more difficult than items assessing disciplinary understanding of global carbon cycling; however, interdisciplinary and disciplinary understanding were strongly correlated. This study highlights the importance of interdisciplinary understanding in learning carbon cycling and discusses its potential impacts on science curriculum and teaching practices.


Job and Internship Opportunities

Post Doctoral Fellow, Center for STEM Research, Education, and Outreach, Southern Illinois University Edwardsville

Assistant Director, Center for the Integration of Research, Teaching, and Learning (CIRTL), Northwestern University (search for position #79628; deadline March 1, 2018)

Director, CalTeach Undergraduate Blended Program in Math and Science, University of California, Irvine (deadline March 1, 2018)
Assistant Professor of Geology (joint appointment with the Department of Geosciences and Environment and with the Natural Science Program), California State University, Los Angeles (deadline March 12, 2018)

Distinguished Postdoctoral Scholar, College of Arts, Science, & Education (including the STEM Transformation Institute), Florida International University (deadline March 31, 2018; contact alidelga@fiu.edu for details)

Postdoctoral Fellow, "A Partnership to Adapt, Implement, and Study a Practice-based Professional Learning Model and Build District Capacity to Meet the Challenge of NGSS," Graduate School of Education, Stanford University (review begins April 10, 2018; contact Dr. Hilda Borko, hildab@stanford.edu for details)

Grant, Award, and Scholarship Deadlines

2017 Emerald/HETL Education Outstanding Doctoral Research Award deadline March 1, 2018

Association for Women Geoscientists Chrysalis Scholarship deadline March 31, 2018

Association for Women Geoscientists Outstanding Educator Award deadline April 1, 2018

National Science Foundation Improving Undergraduate STEM Education: Education and Human Resources (Exploration and Design Tier for Engaged Student Learning & Institution and Community Transformation) Submission Window October 1, 2017-October 2, 2018
Submit to the GER Exchange

NAGT-GER provides monthly updates on professional opportunities, funding, articles of note, researcher profiles, and other content of interest to our membership. Please consider contributing items of interest for inclusion in future editions of the Exchange!

For questions, or to join the GER Communications Committee, contact Communications Committee Chair, Kelsey Bitting.

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