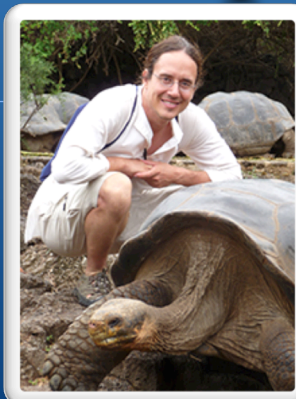


The POGIL Inquirer

In The Spotlight: Urik Halliday

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From The POGIL Project Director



Dear Friends,

This summer is shaping up to be an exciting one at The POGIL Project. We are in the thick of finalizing plans for our annual POGIL National Meeting, our regional summer workshops, and our inaugural National Conference for Advanced POGIL Practitioners (NCAPP).

At PNM, we will continue to work on refining our Project Strategic Plan, making sure it is ready for the challenges of the next five years. Our summer workshops are quickly filling up and we are excited

to unveil some new sessions for our participants. And NCAPP is shaping up to be one of the most innovative events of the summer — a conference that is, in true POGIL spirit, for and by its participants.

We are also looking forward to the new book edited by Shawn Simonson that will delve into various aspects of the POGIL pedagogy and that will serve as a much-needed update to our 2008 ACS Symposium Series publication. Shawn's book should be available through Stylus Publishing later this year.

Finally, as we celebrate 15 years of The POGIL Project, I want to thank all of you for your contributions as colleagues, educators, and valued members of the POGIL family. The work of The Project is enriched by all of you.

Richard S. Moog

Upcoming Workshops

May 1	Round Lake Middle School, IL Part 3
May 13, May 20	Teaching with Your Mouth Closed at Seattle Pacific University, WA
May 19	Calvin College, MI
May 30, Aug. 11	West Nottingham Academy, MD
June 3-6	15 th Annual POGIL National Meeting, MO
June 5-6	Middle Tennessee State University, TN
June 7-8	Marist School, GA
June 26-28	National Conference for Advanced POGIL Practitioners, PA

For more info on upcoming POGIL workshops, visit www.pogil.org

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 Rick Moog, Director Marcy Dubroff, Executive Editor Kyah Eichholz, Managing Editor



Q: What is OPTIC?

A: The Classroom Observation Working Group has been working on developing a classroom observation tool for use in a POGIL classroom. The instrument, which is modeled from TDOP (Hora, 2013), COPUS (Smith et al, 2013), and OPAL (Frey et al, 2016), is a behavior observation tool. OPTIC codes have been chosen to capture typical behavior of instructor and student behaviors in a POGIL classroom.

In OPTIC, both the instructor and student behaviors are marked in two-minute intervals. One section of OPTIC describes the POGIL phase being used during that time interval, e.g., active reading, guided learning, or reporting out. The observation tool also focuses on the amount and type of interaction students have with each other and with the instructor; e.g., instructor talking to learning team, students interacting with each other within a learning team, or learning teams interacting with other learning teams.

The group is also developing a visual timeline modeled from the OPAL timeline (Frey et al, 2016). This timeline is in the form of a chronological timeline displaying all the codes marked during the observation in the interval in which they occurred. This timeline is a “big-picture” view of the type and position of activities or events are occurring in the classroom. This visual timeline gives the instructor a snapshot view of the entire class session and is an intuitive way of reflecting on one’s teaching.



—Courtesy of Gina Frey



Where in the world is the POGIL water bottle?

We are asking you to send us a picture of your POGIL water bottle wherever you may be to show the POGIL community the wide-ranging scope of our unique pedagogy (and our really cool bottle.) Let's see how many places we can reach.

At left, the water bottle had a marvelous time riding the trolleys of San Francisco during the ACS meeting in April. Courtesy of Alex Grushow, Rider University.

Send your photo or video of your water bottle to Marcy Dubroff at mdubroff@pogil.org.

In the Spotlight:

Urik Halliday

Von Steuben Metropolitan Science Center, Chicago, IL

Halliday, a new member of the POGIL Steering Committee and one of the 2017 PEACH Award recipients, was part of a team of POGIL facilitators who helped "flip" a school district outside Chicago last year. The work is ongoing, as last year, the high school component was completed and this year, the middle school is undertaking the same process.



Q: How did you get involved in POGIL?

A: Well let's start with the first time I was exposed to POGIL. I was participating in a CPS (Chicago Public School) Grant that was vertical aligning AP Chemistry Curriculum with local universities in Chicago. Over the course of the grant, a professor named Patrick Daubenmire first exposed me to the POGIL process. I then started to implement the POGIL process in my classroom and I soon realized I needed more training, so I attended a 3-day summer workshop where I was trained by Michael Garoutte and Tracey Murray and they shared their experiences, knowledge, and wisdom with me. After the 3-day regional, I attempted to write a POGIL activity about establishing collaboration between students and then returned to Von Steuben the fall semester after the 3-day workshop. During that semester, I was attempting to share with my educator colleagues at Von Steuben the power of the POGIL process but was unable to convince them how a collaborative learning environment where students construct knowledge is achievable, so I decide to apply to the POGIL Facilitator Training workshop. At this training, I was exposed to the experiences, knowledge, and wisdom of Andy Bressette, Suzanne Ruder, and Tim Herzog; I was also allowed to participate in a fishbowl where I presented an activity called "We are a Learning Team." After the Facilitator Training, a few months passed when I received an email from Gina Frey—she was the coordinator of a presentation session at the 2014 BCCE and asked if I would be interested in speaking and sharing my experiences with Student-Centered Learning.

I agreed. Then the day before the presentation at the BCCE conference vendor area, I was volunteering to help at the POGIL booth. At that booth I met Laura Trout and Rick Moog. The next day they attended the session I was scheduled to present. A month or so after the 2014 BCCE Marcy Dubroff asked if I would be interested in facilitating a series of workshops for the Baltimore Public Schools; after which I continued to facilitate POGIL workshops, began attending POGIL National Meetings and working with a POGIL working group. Through it all, I met many of the great, caring, intelligent, beautiful persons of the POGIL Project. The next part of the adventure will begin this June 2017 where I will be a dutiful member of the POGIL Steering Committee. So... I guess to make a long story short; I got involved somewhere in there!

(Continued from page 3)

Q: How has the transition been, smooth or with difficulties, in the Round Lake School System from the traditional lecture to POGIL?

UH: The transition was a little rough. While the transition was needed, many teachers felt that it was a change that was being thrust upon them. In situations like that, problems can germinate. So the initial workshop with the Round Lake teachers was challenging, but the members of the facilitation team were able to overcome the initial resistance by addressing the teachers' concerns and helping them move forward to see how a changing from a Teacher-Centered classroom environment to a Student-Centered classroom environment would lead to increases in student achievement. After the first workshop, the subsequent workshops were well received and very much appreciated, so the transition became smooth.

Q: How have the students responded to the change?

UH: I can only speak to my experience with my students changing from a Teacher-Centered Classroom to a Student-Centered classroom. My experience is that students often resist early in the year to learning in a collaborative learning environment where they construct knowledge. Many the students resist because they are challenged to think more, which they are not used to. However, as the year progresses students begin to realize that learning with others is fun and helps them build confidence in their ability to learn abstract concepts like chemistry. A trained POGIL classroom facilitator is needed though.

Q: Can you reflect on this change to a student-centered system?

UH: The change for myself, to transition my classroom from a Teacher-Centered learning environment to a Student-Centered learning environment, took about two academic years. When I started implementing the POGIL process in my classroom, I was the only teacher at my school using POGIL. I did not have a support network, I did not have anyone to share my difficulties or successes with. I feel the the learning curve could easily be reduced if the teachers at a particular school transition from a Teacher-Centered learning environment to a Student-Centered learning environment together, where they support each other in the transition.

Registration Open for Summer Workshops

If you are a high school teacher or college/university instructor and want to enhance your professional development, our POGIL 3-day workshops are for you! You will learn about POGIL's philosophy and methodology and benefit from additional focus on activity writing, classroom facilitation, and/or lab implementation. Informative poster and plenary sessions will provide you with opportunities to meet and network with other POGIL users.

New Course Tracks in 2017

We've changed our course structure and have rearranged our tracks! In the past, we've offered tracks based on your experience level. This year we are offering themed tracks where participants of any experience level can focus their attention on a particular aspect of POGIL - Activity Writing, Classroom Facilitation or Implementing POGIL in a Laboratory Setting.

On the Day 1 of the workshop, those new to POGIL will attend a Fundamentals of POGIL session while those who have previously attended a POGIL workshop will attend two new sessions of universal application. The start of the Day 2 will expose all participants to POGIL activity structure and facilitation in a POGIL classroom. For the remainder of the workshop, participants will follow a series of sessions focused on their chosen interest area - Activity Writing, Classroom Facilitation, or Implementing POGIL in the Lab.

Registration Information

The workshop fee is \$415, which includes registration, materials, three lunches, and two dinners. On-campus housing for two nights is available for an additional \$150 and includes two accompanying breakfasts. Visit www.pogil.org to register today!

North Central Regional Workshop

University of St. Thomas
St. Paul, Minnesota
July 10-12, 2017

Activity Writing, Classroom Facilitation & Lab tracks available

Southwest Regional Workshop

Colorado College
Colorado Springs, Colorado
July 12-14, 2017

Activity Writing and Classroom Facilitation tracks available (no Lab track)

Northeast Regional Workshop (FULL)

Johns Hopkins University
Baltimore, Maryland
July 17-19, 2017

Activity Writing, Classroom Facilitation & Lab tracks available

Southern Regional Workshop

The University of Memphis
Memphis, Tennessee
July 17-19, 2017

Activity Writing and Classroom Facilitation tracks available (no Lab track)

Northwest Regional Workshop

Lewis & Clark College
Portland, Oregon
July 25-27, 2017

Activity Writing, Classroom Facilitation & Lab tracks available

*****Thanks to an anonymous donor, we have a limited number of scholarships available for High School STEM teachers in rural Washington counties. Visit www.pogil.org for more information.**

National Conference for Advanced Practitioners – June 26-28, 2017 — Announces Three Corporate Sponsors



NCAPP 2017

The POGIL Project is excited to announce that three of its longtime corporate partners will serve as sponsors for the upcoming National Conference for Advanced POGIL Practitioners June 26-28 in Allentown, PA. Flinn Scientific, PASCO scientific, and Wiley will provide scholarship assistance to several NCAPP participants. Each of the sponsors will also attend the conference and be available to discuss their products



An NC-APP!

The NCAPP organizing committee will debut a new app for the conference that attendees can download on their personal devices. The app will be updated throughout the conference and will include the schedule, attendee and presenter profiles, maps of the surrounding area/venue, interactive features for attendees to message each other, and other social media options. The app is currently in development and will be ready to download by the end of May. You can find it for free on the Apple App store or Google Play.

New Website

The POGIL Project is excited to announce that it is working on a new website that will launch August 1, 2017.

The website will feature a new graphic concept, more pictures from around the country, a cleaner design, and a new events interface and interactive calendar for POGIL workshops for forthcoming.

The website is being developed by P'unk Avenue in consultation with the National Office staff. The events interface will be developed on the Wild Apricot Platform. "A website refresh is long overdue. We are excited to put a dynamic new face on our Project" said Marcy Dubroff, associate director. "As always, we will welcome feedback and input from website visitors in order to make sure the site is what the POGIL community wants and needs."

POGIL Published Works

Evaluating the effectiveness of POGIL-PCL workshops

Stacy L. Stegall, Alexander Grushow, Robert Whitnell and Sally S. Hunnicutt

The POGIL-PCL (Process-Oriented Guided Inquiry Learning in the Physical Chemistry Laboratory) project has developed a series of workshops to introduce faculty to POGIL-PCL and to facilitate the development of new experiments. More than 60 faculty members from various institutions have attended these workshops. Workshop participants were surveyed in order to evaluate the effectiveness of the workshop and better understand why faculty choose to adopt POGIL-PCL. Of the participants who completed the survey, 77% had used POGIL-PCL experiments. The results of the survey show that personal influence is a major factor in all stages of the adoption process.

DOI: 10.1039/C5RP00225G (Paper) *Chem. Educ. Res. Pract.*, 2016, **17**, 407-416

Cooperative learning in organic chemistry increases student assessment of learning gains in key transferable skills

Dorian A. Canelas, Jennifer L. Hill and Andrea Novicki

Science and engineering educators and employers agree that students should graduate from college with expertise in their major subject area as well as the skills and competencies necessary for productive participation in diverse work environments. These competencies include problem-solving, communication, leadership, and collaboration, among others. Using a pseudo-experimental design, and employing a variety of data from exam scores, course evaluations, and student assessment of learning gains (SALG) surveys of key competencies, we compared the development of both chemistry content knowledge and transferable or generic skills among students enrolled in two types of large classes: a lecture-based format versus an interactive, constructive, cooperative learning (flipped classroom) format. Controlling for instructor, as well as laboratory and recitation content, students enrolled in the cooperative learning format reported higher learning gains than the control group in essential transferable skills and competency areas at the end of the term and more growth in these areas over the course of the term. As a result of their work in the class, the two groups of students reported the most significant differences in their gains in the following areas: "interacting productively to solve problems with a diverse group of classmate," "behaving as an effective leader," "behaving as an effective teammate," and "comfort level working with complex ideas." Our findings clearly show that cooperative learning course designs allow students to practice and develop the transferable skills valued by employers.

DOI:10.1039/C7RP00014F. *Chem. Educ. Res. Pract.*, 2017, Advance Article

Kudos!



Sean Garrett-Roe recently received the Chancellor's Distinguished Teaching Award for Chemistry. The award recognizes teaching excellence by members of the University of Pittsburgh's faculty.

Red Hat, the world's leading provider of open-source solutions, recently honored Clif Kussmaul, associate professor of computer science at Muhlenberg College, as an instructor who champions open source education in the United States.



Dr. Kristina M. Lantzky-Eaton has been named Provost and Vice President of Academic Affairs at Hilbert College. She is the first woman in more than 20 years to serve in the chief academic officer role at Hilbert.

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The website is being developed by P'unk Avenue in consultation with the POGIL Project national office. The events interface for workshops will be developed on Wild Apricot platform.

"A website refresh is long overdue. We are excited to put an exciting and dynamic new face on our project" said Marcy Dubroff, associate director of The POGIL Project. "As always, we will welcome feedback about the new website once it is debuted and we will continue to refine it to make sure it is meeting the needs of the greater POGIL community."

POGIL Regional Coordinators

North Central Region—NC (IA, IL, IN, MI, MN, SD, ND, NE, OH, WI)
Urik Halliday, Friedrich W. Von Steuben Metropolitan Science Center (2017)
Craig Teague, Cornell College (2018)

Northeast Region—NE (CT, DC, DE, MA, MD, ME, NH, NJ, NY, PA, RI, VT, WV)
Steve Gravelle, St. Vincent College (2016)
Joe Brown, U.S. Coast Guard (2017)

Northwest Region—NW (AK, ID, MT, OR, WA)
Bonnie Wehausen, Idaho Falls High School and
Laura Lavine, Washington State University (2017)

Southwest Region—SW (AZ, CA, CO, HI, NM, NV, UT, WY)
Heather Wilson-Ashworth, Utah Valley University (2017)

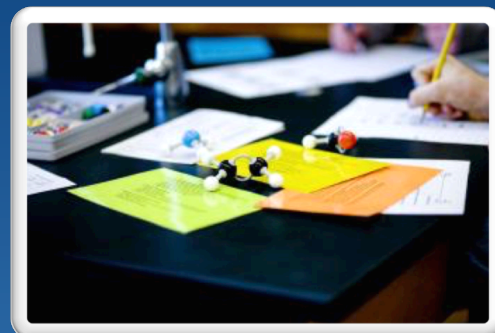
South Central Region—SC (AR, KS, LA, MO, OK, TX)
Michael Garoutte, Missouri Southern State University (2017)
Tricia Shepherd, St. Edward's University (2018)

Southeast Region—SE (AL, FL, GA, KY, NC, MS, SC, TN, VA)
Megan Hoffman, Berea College (2017)

Looking to Book a Workshop?

- If you would like to bring a POGIL workshop to your area, please get in touch with us! We are interested in teaching more instructors about POGIL at both the high school and post-secondary levels and want to help them make their classrooms and laboratories more student-centered.

Please visit our website and submit an event request at <https://pogil.org/contact/enter-request> or email Marcy Dubroff at mdubroff@pogil.org.



Send us your news!

We'd love to feature your news, your grant, or your video on the POGIL website and in the POGIL newsletter. Send news to Marcy Dubroff at mdubroff@pogil.org

Get all the latest POGIL news by following us on Twitter or Facebook! Sign up to get our @POGIL tweets at [twitter.com](https://twitter.com/POGIL).

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The POGIL Project

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