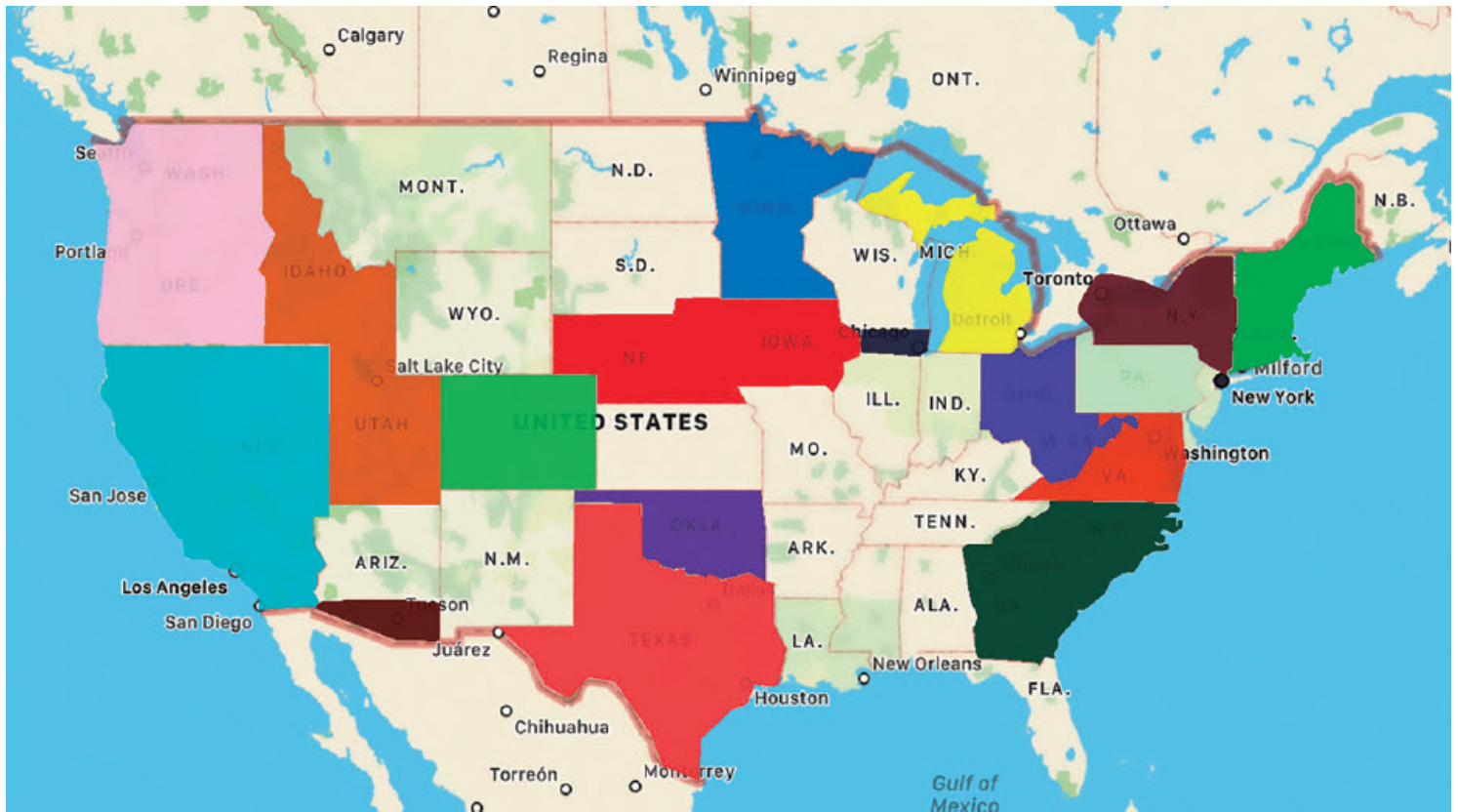


The Communities For Mathematics Inquiry In Teaching (COMMIT) Network

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How does a community get started?

From Amy Ksir: *I had attended several workshops and conferences on inquiry-based learning (IBL), co-authored course notes, and was using IBL in all of my classes. But, I was feeling isolated in my department. Wouldn't it be great to have a more local group of faculty, also using similar teaching techniques, who I could troubleshoot with and bounce ideas off of? At the Joint Mathematics Meetings, I attended a talk given by the entire Nazareth College math department. They discussed the benefits they had gotten from meeting with other faculty through a regional community of practice in Upstate New York. During the Q&A session, I asked the audience whether anyone else wanted to start something similar in Maryland? Two people I'd never met, on the other side of the room, raised their hands! Thus an inquiry community in the Maryland-DC-Virginia area was born.*

Regional COMMIT Communities

A regional COMmunity for Mathematics Inquiry in Teaching (COMMIT, formerly referred to as an IBL community) is a local group of higher education faculty interested in practicing various teaching and learning techniques centered on student inquiry, as well as sharing their knowledge with others.

There are many terms used to describe approaches to the teaching and learning of mathematics that are based on student inquiry. Two of the major strands that informed the first communities in our network are the practice-focused tradition of Inquiry-Based Learning (IBL), and the theory-focused tradition of Inquiry- Oriented Instruction (IOI). Their common goals are often summarized by the four pillars: instructors foster equity in their design and facilitation choices; students have opportunities to engage deeply with rich mathematics; students have opportunities to collaborate in making sense of that mathematics; and instructors inquire into student thinking. There are many other names for mathematics instruction with approaches that are aligned with these principles; and thus there are instructors with a variety of backgrounds and starting points who have found value in membership and participation in these communities. Some of these approaches include problem-based learning, student- centered teaching, active learning, ambitious teaching, discovery learning, process-oriented guided inquiry learning, complex instruction, and culturally responsive teaching.

Regional COMMIT communities help members transform their teaching by providing effective support mechanisms through professional development, mentoring, and collaborations. After attending a national conference, meeting or workshop, instructors often return to their home institutions and have a “Now what?” feeling. Regional groups respond to this by giving instructors a place to meet other interested practitioners of inquiry, as well as a place to gain initial ideas about changing instructional practice. These groups provide ongoing access to professional development without the need of a plane ticket to a national conference or workshop. Each regional community is in an ideal position to understand the needs of instructors of the local region, thus allowing for a grassroots route to bringing an inquiry experience to every student.

COMMIT Activities

Each regional community has sponsored a variety of events to support its members. For example, members of the New England community have recently been holding a book discussion group. The Maryland-DC-Virginia community held a special session at their fall 2016 MAA section meeting, allowing members to showcase their different inquiry teaching practices. The Michigan community recently held a workshop in conjunction with a conference on Mastery Based Grading that was hosted by a university in the region. The original regional community in Upstate New York started in 2014 with a group of instructors meeting monthly for informal conversations about successes and challenges in their courses. In the age of COVID-19, the Iowa-Nebraska community has been hosting regular camaraderie videoconference sessions to keep in touch with colleagues teaching at nearby institutions who share similar students and similar life experiences. COMMIT communities also invite interested faculty to a regional email list where they can hear more about nearby, upcoming workshops or trade advice. The five communities just described have regular meetings and activities, and there are several other coalescing communities (see map).

COMMIT communities provide just-in-time professional development to faculty interested in increasing their instructional capacity, from novice to veteran practitioners of inquiry teaching practices. By the end of the 2019-2020 academic year, regional COMMIT leaders reported common themes related to the types of value participants found engaging in regional activities. They are: partaking in the exchange of ideas, engaging in an inclusive environment, networking, and having access to resources and funding to support their learning and implementation of inquiry in

teaching.

Idea Exchange: *"I enjoy the network of professors who come together to exchange ideas."*

"It was very encouraging to hear great ideas and meet so many interested parties!"

Inclusivity: *"I really like how the ... group works to learn together and is inclusive of all no matter what level of understanding and implementation of IBL they're at. This really came out through participation with the book group how everyone is willing to learn from each other."*

Networking: *"I thought it was great simply having a time and place to meet up with those interested in [COMMIT] communities. As someone looking to form one, this was a great catalyst for doing that."*

Access: *"I no longer have start-up funds that I can spend on travel, and our departmental funding and funding from the Provost's office is limited. Much of our support goes to opportunities for students (instead of faculty)."*

While each of the COMMIT communities varies in size, scope, and mission, often depending on the needs of the particular region, each of the five established communities shares the following core features. Each community has meetings at least annually which are dedicated to professional development surrounding inquiry practices and techniques. Each community demonstrates a commitment to professional development, though the methods used for this may vary from one region to the next or from one year to the next. Each has a focus on building community within the region in some way, such as through informal group discussions, an email list, reciprocal class visitations, or informal videoconference meetings. Each regional group seeks to engage a diverse participant population by promoting an inclusive vision and mission for their community. Though each community is centered on a specific region, we encourage all who are interested to come and join us; for example, faculty in Pennsylvania regularly participate in COMMIT events in both the Upstate New York and Maryland-DC-Virginia regions.

The COMMIT Network

Just as the members of each of our respective COMMIT communities get together to discuss successes and challenges in their courses, the leadership teams of each regional community have banded together into a COMMIT Network. Representatives from communities in the network meet multiple times each year virtually and at conferences to share innovative successes, discuss challenges, and present funding opportunities. One of the challenges that has come up for all of the leadership teams is how to effectively attend to equity, inclusion, and power-sharing in both community events and leadership structures. It is easy to broadly advertise events, but we are also focusing our energy on doing the work to ensure that folks from a variety of backgrounds are supported as community members, and that expertise from a variety of sources is recognized. For example, regional communities have reached out to faculty at community colleges and minority serving institutions to ensure that we work with and learn from instructors at those institutions.

One of the goals of the COMMIT Network is to grow by including and supporting the leaders of new communities as they develop across North America. Each community is contributing to the body of knowledge about effective practices related to COMMITs, and new materials are under development for encapsulating these best practices. The Academy of Inquiry Based Learning (supported by the PRODUCT project, NSF-DUE #1525058) has developed a workshop about creating

a COMMIT community; this free workshop is now offered, in face-to-face and online settings, through the COMMIT Network. New communities can be organized without an independent source of start-up funds, especially when events are planned in collaboration with an MAA section or other existing entity. COMMIT communities with funding can host deeper workshops, sponsor travel for participants, and engage in targeted outreach to expand the community into new demographics.

“This network allows me to talk to people with the same interests, the same philosophy ... Having people to talk to, that’s the biggest thing for me. I don’t have to feel like I’m the only one who is doing it. I have support.” Another leader added, “These are people I am already familiar with from regional and section meetings...it made it easier to start conversations.”

For more information about the COMMIT Network, see our website at COMathInquiry.org, where you can find a calendar of regional events and links to each individual COMMIT community. Please contact COMathInquiry@gmail.com if you would like to be connected with a coalescing COMMIT leadership team in your region, or if you’d like your community to be added to our list and be linked to from our website.

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GET MORE

More on the Upstate New York community and how it grew can be found in J.R. Cushman, R. Gantner, C.Y. George, M.L. Morrow, & P.X. Rault, [2018]. A model for expanding active learning regionally: The Greater Upstate New York Inquiry-Based Learning Consortium. *PRIMUS*, 28(8), 754–771. doi.org/10.1080/10511970.2018.1424743.

For more on student inquiry learning, see S.L. Laursen and C. Rasmussen. I on the Prize: Inquiry Approaches in Undergraduate Mathematics. *Int. J. Res. Undergrad. Math. Ed.* 5, 129–146 (2019). doi.org/10.1007/s40753-019-00085-6.

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