Research+Practice Partnerships: Fostering Equitable Collaboration

Catherine McCulloch, Peter Tierney-Fife, Pam Buffington

Building effective research and practice partnerships (RPP) between people who have different professional roles and experiences can be challenging. Success depends, in part, on creating positive and equitable relationships of trust and respect. The example process described below includes several strategies that foster mutual respect for the expertise of all partners and facilitate productive collaboration when researchers and practitioners begin to work together.

"It was a very rich and varied group. Wow! Everyone was professional and caring and respectful of one another and clearly valued the contributions from our different points of view."
—Teacher, Auburn School Department, Auburn, Maine

Background

Not only do the two communities of research and practice have distinctive norms, languages, and routines for acting and interacting, but individuals within each community have different experiences and roles that can further challenge communication and collaboration when members of these communities engage as partners. We used the strategies described in the example below to help address those challenges and foster effective collaboration while building a partnership between teachers, administrators, university faculty, researchers, and others. Through interactions and the integration of the experiences, knowledge, perspectives, and insights of each partner, we hoped to develop an environment that welcomed and valued everyone's contributions, as well as a stronger, more relevant, and innovative understanding about interactive technologies in early elementary mathematics education.

Designing for Equity

The initial work of the partnership was to build a collaborative culture, create a shared vocabulary and understanding of the topic, and define our focus. Once the broad focus of our RPP effort in the school district was defined, a group of teachers, administrators, technology specialists, university faculty, and researchers—which acted as a professional learning community—worked together to further refine and co-investigate our questions about using interactive technologies in early mathematics classrooms. During the initial meetings of this group, we read what had already been discovered and reported about the topic, shared how technology was already used in classrooms, and engaged with existing math apps. As each partner used the instructional apps to solve mathematics problems, shared solutions, and discussed technology issues, we could all contribute something unique based on our professional roles and experience, as well as our experience as a learner in the activity. Through these activities, we developed a common language and

understanding about what we considered the best opportunities for co-investigating new approaches to improving student learning in mathematics through technology. Then, during monthly meetings, we worked together to refine our co-investigation, discussed instructional strategies and technology implementation issues, and analyzed app-based videos of students solving mathematics problems similar to those we had solved. During these meetings, all partners could add to and learn from the discussion. For example, teachers had insights into their students and the contexts of their classes, university faculty had insights about the mathematics, and researchers had insights and suggestions about the investigative process. Collaborative tasks, such as review and analysis of student artifacts, provide authentic opportunities to incorporate ideas from research and from practice that can serve to reinforce that various types of knowledge and perspectives have value when co-constructing understanding.

To augment what we were collectively learning through the district co-investigation effort, we convened a meeting of a small group of researchers and practitioners for a two-day Inquiry Group Meeting. (Go to http://interactivestem.org/our-work.html) We designed activities that helped the meeting participants get to know each other and develop the expectation that every person's contributions would be valued. These activities included hands-on activities that were outside the areas of expertise of all the participants, yet related to the topic of the meeting. They acted to "level the playing field". Since our focus was on interactive mobile technologies, we asked participants to engage with apps that were new or in ways that were new to them. For example, during the Inquiry Group Meeting we asked participants to work in pairs to create short digital biographies that leveraged the benefits of technology (including audio and video recording capabilities) while engaging participants in collaborative discovery about each other. This activity jump-started conversation about how and why we engage with technology. The conversation was reinforced during the next activity when everyone was asked to individually imagine and then describe an app they would invent. The activities were designed so that no one participant was more able than another to answer a question or engage with the activity. The activities didn't require participants to use or share their knowledge of mathematics, teaching, or learning. They were a low-risk opportunity that built a foundation for subsequent activities and conversations about how and why we might engage students with technology for mathematics learning.

Design collaboration between individuals and groups to be more equitable and effective—and so the outcomes reflect the richness of the participants—by integrating the strategies outlined in the next column.

Strategies to build effective communication and collaboration in R+P partnerships

Before meetings

1. Invite and include participants who represent a diversity of professional roles, experience, and demographics.
2. Develop goals for the meeting that explicitly include supporting equity within the group and creating outcomes that build on the experiences, knowledge, perspectives, and insights of each person.
3. Co-develop an agenda with representatives from each group that will attend the meeting, and work to have representatives from each group facilitate during the meeting.
4. Start at least initial meetings with activities that "level the playing field," and include these activities occasionally throughout the partnership.
5. Plan activities for individuals to work collaboratively together to achieve concrete and meaningful goals.
6. Plan to address problems or questions of importance to each community and invite multiple perspectives on these issues.
7. Include structures and activities in the agenda that enable each person to contribute.
8. Strategically compose and leverage various arrangements of individuals in groups (small and large) for activities.
9. Throughout the meeting agenda, change the format of activities and the ways in which ideas are shared and recorded to support opportunities for equitable contributions across members of the group.

During meetings

10. Create—and revisit during the meeting-—protocols, norms, and expectations for engagement
11. Commit to defining and clarifying language, terms, and acronyms.
12. Include representatives from each group that attend the meeting in facilitating activities and group discussions.
13. Develop a common language for talking about and uncovering assumptions when discussing learning, teaching, education, and research.

Resource

Interactive Technologies in Early Mathematics Learning: Inquiry Group Report on Strategies to Advance Understanding Among Researchers and Educators
Josephine Louie, Pamela Buffington, Marian Pasquale, Catherine McCulloch, *2015*
http://interactivestem.org/wp-content/uploads/2015/06/Interactive-STEM-Report-Inquiry-Group-2014.pdf