

## WHOSE PROBLEM, WHOSE PRACTICE? NEGOTIATING THE FOCUS OF RESEARCH-PRACTICE PARTNERSHIPS WITHIN SCHOOL MATHEMATICS

Charles Munter  
University of Missouri  
munterc@missouri.edu

Cassandra Quinn  
University of Missouri  
cdquinn@mail.missouri.edu

Phi Nguyen  
University of Missouri  
phinguyen@mail.missouri.edu

*At the core of productive research-practice partnerships is a mutual commitment to addressing problems of practice, which must be jointly negotiated, working through differences in perspective, status, and authority across partners. But what is less clear is how to account for and navigate the influence of broader accountability policies in the framing of those problems, as their application can lead to “manufactured” problems specified around state standardized testing outcomes. In this conceptual paper, we reflect on recent encounters with school district personnel, some of whom we were interested in fostering research-practice partnerships, to describe an ethical dilemma of whether and how, in our position as researchers, to invite potential partners to take up more “authentic” problems of practice.*

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Late in 2017, the lead author and a small team of researchers were meeting with leaders of a small, rural district in the midwest U.S. in hopes of initiating partnership work around a common problem of interest. That fall, they had conducted a series of interviews with leaders and teachers, attempting to learn about the mathematics-related problems with which the district was wrestling and how individuals in the district framed those problems (Benford & Snow, 2000). From the outset, the researchers had expressed interest in developing a partnership rooted in district challenges rather than imposing ideas stemming from their own research agenda (Penuel, Fishman, Cheng, & Sabelli, 2011). At this meeting they were sharing what they had learned through the interviews, inviting district personnel’s responses, and listening for opportunities to endorse and offer help with a challenge of mutual interest. Toward the end of the near-hourlong meeting, the lead author (CM) invited the group to take a step back and articulate, in broad terms, their aspirations for mathematics learning in the district, to which a school administrator (A) responded:

CM: Thinking broadly, what- what are your goals for the children of [your community] in mathematics?

A: Short term, for at least *my* building, by the time they get to fifth grade, their fifth-grade scores are not- not good. Like, at *all*.

CM: So, Ok-

A: And a lot of it was number sense even starting in the third grade, so, like, when third graders are struggling with number sense, that’s obviously coming from us too, so- I mean, that’s not very narrowed down, but-

CM: But, I want to suggest that you, kind of, immediately went to *test* scores.

A: Well, because data shows if there’s progress or not.

In this exchange, the administrator suggested that the grades 3-5 intermediate school may be insufficiently supporting students in developing number sense (“that’s obviously coming from us too”), but what was most troubling for the administrator—and what defined the broader mathematics goal—was improvement on state standardized test scores. Munter, failing to hide his disappointment with that framing, lamented that the administrator “immediately went to test scores” when invited to think broadly about children’s mathematics learning.

### Negotiating Problems of Practice

Over the last decade, there has been increasing attention to and support for research-practice partnerships (RPPs) in education as a means of bridging the “research-practice divide” (Coburn & Stein, 2010), as evidenced by grant competitions (e.g., the Institute of Education Science’s Researcher-Practitioner Partnerships in Education Research program; the Spencer Foundation’s Research-Practice Partnership Grants Program) or special issues in research journals (e.g., Herenkohl & Herenkohl, 2019; Penuel, Cole, & O’Neill, 2016; Penuel & Hill, 2019). One frequently employed definition for such partnerships is that they are “long-term, mutualistic collaborations between practitioners and researchers that are intentionally organized to investigate problems of practice and solutions for improving district outcomes” (Coburn, Penuel, & Giel, 2013, p. 2). Indeed, a consistent commitment across the growing body of work through/on RPPs in education is that they begin with *problems of practice* “as encountered by participants in an activity system, rather than with researchers’ goals for the improvement of teaching and learning” (Penuel, 2014, p. 100).

Increasingly, there are also accounts in the literature of the messiness and tensions that can arise as researchers and practitioners negotiate the problems they might collaboratively address (e.g., Desimone, Wolford, & Hill, 2016; Henrick, Muñoz, & Cobb, 2016; Penuel, Coburn, & Gallagher, 2013; Vakil, McKinney de Royston, Nasir, & Kirshner, 2016). Penuel and colleagues (2013), in particular, have highlighted the roles that status (e.g., from university affiliation or role as practitioner) and authority (e.g., from positions of leadership in a district) play as problems are identified and defined and as decisions about which solution strategies to pursue are made. And Vakil et al. (2016) have stressed how hierarchical relationships between researchers and practitioners can persist, especially when dimensions of researchers’ positionalities are left unexamined. Such work helps to foreground the ethical issues that underly the formation and work of research-practice partnerships. As Bang and Vossoughi (2016) have reminded us, “we must take seriously the question of ‘Who does the design and why?’ (Engeström, 2011, p. 3),” the answers to which are “also deeply bound up with the *how and where* of design, demanding a focus on process and the genesis of relations as well as the places within which they are made, live, and unfold” (p. 179, italics in original).

### Whose Problems? Whose Practice?

In some ways, the episode with which we began this paper matches descriptions of partnership negotiation in the literature, as the researchers and practitioners were likely entering the conversation with different values, interests, and perspectives, and differences in authority and status were undoubtedly shaping the interactions. But we have come to view the question of “Who does the design and why?”—and concomitantly, “Who does the *problem framing* and why?”—as likely implicating entities not at the negotiating table. Specifically, for us, the school administrator’s pointing to “fifth grade scores” as a primary object of concern invokes a much broader set of reforms and accompanying discourse that are rooted in neoliberal principles (Croft, Roberts, & Stenhouse, 2016) and reduce the role of K-12 students to data production for the benefit of adults’ regimes (McDermott, 2013). And, although a host of local stakeholders are arguably complicit in building and maintaining this system, more broadly, it is imposed by legislators, policymakers, and other “silent partners” who, with *their* authority, impose constraints within which school leaders and teachers identify goals and problems.

Given the potential influence of this broader frame, we can ask whether the problems of practice that district leaders articulate are *real* or *manufactured*. When we say “real,” we refer to challenges that exist in pursuit of an extensive aim of education, such as the pursuit of truth (Dewey, 1938) or the practice of freedom (Freire, 1970), which seek to prepare students for a “whole life, not simply an economic existence” (Noddings, 2007, p. 26). And by “manufactured” (Berliner, 1995) we refer to

challenges that exist only as a result of the imposition of standardized test-based metrics of proficiency and “adequate progress” (U.S. Department of Education, 2002; 2015), which offer no direct benefits to the laborers “at the bottom”—public school children (Munter & Haines, 2019). Based on experiences like the opening scenario, we became curious which kinds of challenges are most salient in school districts, and whether there might be patterns in relation to community contexts.

### **Patterns in Problems of Practice**

To answer those questions, we investigated the mathematics-related challenges identified by mathematics leaders across the U.S. state of Missouri. We sampled 50 districts, ranging from rural to urban contexts, and in each one interviewed the district leader most directly responsible for mathematics instruction (Munter, Nguyen, & Quinn, 2020). In each interview, we invited leaders to describe their biggest mathematics-related challenges, what they perceived to be the cause(s), and what, if any, initiatives they were pursuing in response. Two of the leaders reported that their districts did not have any mathematics-related challenges, and nine described initiatives they were pursuing, but without specifying any problems motivating their efforts. For the present discussion, we focus on the other 39, among whom three main types of problems emerged: student outcomes (n=30), student experiences (n=6), and equity (n=3).

As we have alluded to above, we found some of these problems of practice to be *real* (challenges that exist in pursuit of expansive educational aims) and others manufactured (challenges that exist only as a result of the imposition of standardized test-based metrics of proficiency). Of the 30 leaders who articulated problems related to student outcomes, two pertained to internally established indicators of course taking patterns; all of the other 28 were focused on externally established indicators, primarily state standardized test scores. It is possible, of course, that some districts were facing challenges with ensuring all of their students were being supported in learning mathematics. However, their identification of low test scores as, itself, the problem and not merely a symptom, suggests that the bulk of district leaders we interviewed articulated manufactured problems of practice.

Of the remaining nine leaders, three articulated challenges related to issues of equity and six described challenges related to how students experience school mathematics. Because they look past the surface of standardized test scores, it is possible that these problems of practice are more genuine. For example, six leaders centered students’ classroom experiences, with one describing a challenge of providing a cohesive school experience, and five describing challenges related to supporting student engagement (i.e., enjoying mathematics, seeing its usefulness, or engaging in sensemaking). For example, one small metropolitan district is working on supporting student engagement by adopting a workshop model, with the intention that through collaborative activities, mathematics experiences will be more authentic for students. And the three leaders’ descriptions of problems related to equity may signal a concern about real problems in differences in opportunity (Da Silva, Huguley, Kakli, & Rao, 2007; Flores, 2007). However, it is also possible that even these problems are, to some extent, manufactured. For example, a district may be concerned about student engagement or cohesion only as a means of improving state test scores. Similarly, leaders’ equity concerns may be defined by and limited to “achievement gaps”—narratives that are framed by externally established, standardized test-based metrics and often reinforce deficit narratives of students of color (Martin, 2009).

Additionally, as reported elsewhere (Munter et al., 2020), we found that leaders from districts outside of metropolitan areas were more likely to describe problems of practice related to outcomes. This suggests that the “*where* of design” (Bang & Vossoughi, 2016) indeed matters, as small, rural,

districts may be suffering the differential impact of accountability policies, and more often attending to manufactured problems.

### **An Ethical Dilemma**

It is at this point in our consideration that we reach an ethical dilemma. In our position as university-affiliated researchers, with the hierarchy and status that accompanies whatever “academic expertise” we are perceived to have (Penuel et al., 2013, p. 247), if we are convinced that the problems with which a great number of our potential partners are concerned are manufactured (i.e., that they are accepting a frame from the broader neoliberal agenda), who are we to tell them that their problem is not real? After all, even if the problem *is* manufactured, how they experience its implications are likely very real. Then again, who are we to withhold those insights? If we “honor” the problem they have identified, we risk (being complicit in) perpetuating a system of sorting and ranking that does not enrich the lives of students, particularly those who are most vulnerable in institutions of schooling. And, if we simply walk away from a potential partnership because we are unwilling or uninterested in taking up what we view to be a manufactured problem, whatever assistance we might have had to offer is squandered.

We have not reached a clear resolution of this dilemma. We do, however, take inspiration from Freire (1970) in assuming that the question is not *whether* to engage in fostering partnerships, but *how* to do so in liberating ways—which may require further reflection and analysis with respect to how to ethically pursue problems of practice that are increasingly “real,” including how we can respectfully acknowledge and affirm practitioners’ very real institutional pressures and demands while advocating for problem frames that more explicitly target inequity and students’ experiences in school mathematics.

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