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Published online: 13 Dec 2023.

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Belonging to a research-practice partnership: Lessons from 15 think-pieces about the COVID-19 pandemic and a call for action

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ABSTRACT

Research-Practice Partnerships (RPPs) in education have been gaining increasing currency and support since well before the advent of COVID-19. This article reflects on what the pandemic experience has meant for some RPPs so far, and imagines what other RPPs might look like in the near future. The authors share a collection of fifteen think-pieces written by individuals working in or around, or funding RPPs during the COVID crisis. These contributions include reflections on how the pandemic affected existing RPPs and how teams responded to the disruptions, how the larger context in which RPPs operate matters, as well as how RPPs can help us build a more just and united society. The authors identify lessons to be drawn from across these think-pieces and implications for the field, and close with a call for action about learning scientists' possibilities for belonging to RPPs. Through a somewhat unconventional form of scholarship, this article intends to spark and enrich conversations about tensions and choices facing RPPs and learning sciences scholarship broadly in the coming years.

Introduction

The coronavirus disease (COVID-19) pandemic has upended much of society in unprecedented ways. The purpose of this article is to collectively reflect on what the pandemic experience has meant for some Research-

Practice Partnerships (RPPs) so far, and to imagine what other RPPs might look like in the near future, given that we are currently still living in a precarious time and the effects of this global crisis will persist for many years. To do so, we present fifteen think-pieces written by individuals working in or around RPPs, in addition to those researching or funding RPPs throughout the COVID crisis. Additionally, in the spirit of encouraging dialogue on this topic, we identify a set of lessons that emerged from the think-pieces about theoretical and/or practical directions going forward. Based on these, we conclude with a call for action to push forward RPP work in our field: to reconsider what it means and what it takes to be part of a learning-focused RPP, specifically through the lens of *belonging* as a concept, a practice and a product of partnership.

Over the last two decades, there has been a noticeable increase of partnerships between researchers and practitioners that involve state education agencies, school districts, schools, and other educational institutions, organizations, and groups (Arce-Trigatti et al., 2018; Farley-Ripple et al., 2018; Farrell, Penuel, et al., 2021; Peurach et al., 2022). An RPP can be defined as a "long-term collaboration aimed at educational improvement and transformation through engagement with research [. . .] intentionally organized to connect diverse forms of expertise and [. . .] to ensure that all partners have a say in the joint work" (Farrell, Penuel, et al., 2021, p. iv). It is argued that such collaborations help to "build the capacity of teachers, administrators, district staff, state officials, community leaders, and others to analyze and address the specific challenges they face" (Coburn et al., 2021, p. 15).

Although some question the benefits of RPPs as a specific structure for collaboration (Schneider, 2020), the view that they are a promising strategy to integrate research and practice in the production and use of knowledge has gained increasing currency and support (Arce-Trigatti et al., 2018). Moreover, many also argue RPPs can promote a more ethical and equitable production of knowledge in education (Anderson, 2022; Bevan, 2017; Bevan & Penuel, 2018). In this sense, they "hold great promise for those interested in disrupting power asymmetries, centering equity, and building new pathways for knowledge to flow" (Arce-Trigatti, 2021).

When we began this collaborative writing project in March of 2022, two years had passed since the World Health Organization declared the novel coronavirus outbreak a global pandemic. And yet, despite momentous and often devastating disruptions to our professional and personal worlds, a great deal of scholarship about RPPs was published during this time.These include conceptual and empirical articles (e.g. Andreoli & Klar, 2021; Cooper et al., 2020; Donovan et al., 2021; Farrell et al., 2022; Malin, 2021; Tabak, 2022; Weiland et al., 2021), as well as several systematic literature reviews (Arce-Trigatti & Farrell, 2021; Cooper et al., 2021; He et al., 2020; Sjölund et al., 2022; Vetter et al., 2022; Welsh, 2021). Full special issues in *The Future of*

Children (Basok & Morris, 2021), *Kappan magazine* (Heller, 2021), and *Educational Policy* (Yamashiro et al., 2022) were also devoted to the topic. The William T. Grant Foundation published a report and a set of commentaries on the state of the field of RPPs (Farrell et al., 2021a), and the National Network of Education Research-Practice Partnerships published a handbook for current and aspiring RPP brokers (Wentworth et al., 2021).

Such productivity is likely the fruit of an active decade of RPP work and scholarship. As Farley-Ripple (2021) points out, "many of us have become newly optimistic that the relationship between educational research and practice can and will improve" (p. 8); many might accordingly be inclined to view "the education community as in a much better position to connect research and practice than ever before" (p. 9). In 2018, Arce-Trigatti, Chukrey and López-Turley conducted a sociological examination of the field's expansion, which they characterized as an "upward trend" (p. 577), and showed that RPPs in education "have not only grown in number and type, but complementary organizations and efforts have begun to emerge as well" (p. 561). Although it is developing and evolving in dynamic ways, as an industry, the field is "still in its infancy" (Arce-Trigatti et al., 2018, p. 571).

How, then, has this emerging organizational form fared since the beginning of the pandemic? Can the optimism over its development be maintained? Can individual and institutional connections withstand physical and social distancing measures? Interesting reflections and compelling evidence about RPPs and their role amid the pandemic have begun to surface (Arce-Trigatti et al., 2022). This has been accompanied by calls for research to be better attuned to the needs of practice (Ahn, 2020; Biag et al., 2021; DeMatthews et al., 2020; Henrick & Peurach, 2020; The Future of Children, 2021) and for considerable changes to be made to RPP funding (Spitzley et al., 2021) and the academy (Gamoran, 2022). Further reflections and studies will likely continue to emerge along these lines. In the wake of COVID-19, we must collectively take on the task of reflecting on RPPs at this moment, and envisioning their future in the learning sciences. In the conclusion of this paper, we take this opportunity to reconsider the nature of engaging in RPPs, and focus specifically on belonging.

Think-pieces on RPPs in pandemic times

This article is organized around a set of think-pieces, solicited from individuals working in or around RPPs. The writing project was initiated by the corresponding author who invited twenty-three individuals based on their visibility as authors in the recent scholarship. For this reason, the paper mostly features scholars who study RPPs and/or other professionals involved in organizing, supporting and funding RPPs, who moreover are connected to schools, districts, and state education agencies. We do not claim that the

reflections presented here are representative depictions of RPPs during the pandemic, or that the writers of the think-pieces constitute a representative sample of the partnerships taking place within and beyond the learning sciences. Future projects giving more voice to practitioners based in schools, districts, educational organizations, universities, community-based organizations, and other social sectors, as well as to scholars outside the United States would provide a still-richer perspective.

Think-piece authors were invited to share their perspective via a call for contributions e-mail. Six additional potential contributors were contacted upon referral from individuals who responded to the call. Four contributors invited colleagues to write with them. Nine people did not respond and five declined, mostly stating that they lacked either the time to write a piece or any direct involvement with RPP work since the beginning of the pandemic. This makes for fifteen think-pieces authored by a total of twenty-one people. None of the fifteen submitted contributions were excluded, and most are presented as they were initially written, although some contributors were asked to make minor revisions to length, or in response to reviewer comments. Four contributors took on the extra role of coauthoring the article, notably taking part in drafting, substantially revising and/or critically reviewing the manuscript.

The reasons for soliciting think-pieces was to utilize a format that encourages the expression of personal opinions, succinctly encapsulates direct responses to an event, allows for speculation, and lends itself well to provoking a reaction or stirring up discussion. Additionally, as a curated collection, the think-pieces offer a shared sense of community and direction, which can be especially beneficial in challenging times. The think-piece format does not serve as evidence of how things actually were or ought to be. Rather, it seeks to capture contributors' voices and render a sense of immediacy.

Individuals who agreed to write a think-piece were asked to take up a common set of questions: (1) how has this moment of crisis mainly impacted RPPs; (2) what underlying issues with RPPs has the crisis exposed; and (3) how might these revelations help us investigate and work with RPPs beyond the crisis? These questions were employed as a means of encouraging a shared focus. Contributors were explicitly informed that they were not expected to directly address them. Rather, they were encouraged to structure their piece as they wished and to bring their unique perspective to the table. None of the fifteen submitted contributions were excluded. The multiple drafts of this manuscript were shared with the contributors throughout the revision process and they were invited to provide feedback, but none did so in a substantial manner and none expressed disagreement with our writing and revisions. They were not asked to approve or agree to the article's central charge that we five coauthors developed. We gratefully acknowledge the

contributors of the think-pieces above for the insights and inspiration they provided, while also taking full responsibility for any and all shortcomings in the framing, lessons learned and call to action, which are ours alone.

We present the fifteen contributions organized loosely around three themes to facilitate their reading, even though there is considerable overlap between the views and experiences expressed. The ones in the beginning are more focused on how existing RPP work was disrupted and how research teams handled those disruptions. They highlight the necessity for university-based partners to utilize a variety of relational and innovation competences in order to remain relevant to their practice-based partners and the communities their RPPs serve. The ones in the middle (which begin with the piece entitled *RPPs "unmasked"*) speak more to how the larger context shapes RPPs. They suggest in different degrees the need for situational awareness, which can be defined as efforts to perceive elements in the environment within a temporal and spatial frame, to make sense of their meaning, and to project their status in the near future (Endsley, 1988). The ones toward the end (which begin with the piece entitled *Graduate training in the COVID era*) are especially concerned with how RPPs can help the educational system improve and transform so as to face sources of persistent inequities head on, naming both the needs and responsibilities of a wider range of stakeholders. They highlight the necessity for RPPs to contribute to building a more just and united society. Contributors' affiliations are included in parenthesis beside their name.

RPPs in a pandemic: Relationships are the key to successful research use

Jill Denner (*Education, Training, Research*) and Emily Green (*Education, Training, Research*)

We are researchers who have worked in two formal RPPs and live in the same communities as many of our school partners. RPPs are built on relationships and we developed them through formal and spontaneous (in the community) in-person meetings. When the pandemic started it ended the informal meetings and led to fewer planned meetings due to the rapidly changing demands on school personnel and to everyone's overwhelm with video calls. The lack of regular touchpoints made it difficult for the research team to know what research questions were the most pressing at any point in time, and what variables to track.

While RPPs are designed to address "problems of practice," during the pandemic these were ever-changing which reduced our ability to do rigorous and relevant research. The priorities and research questions we had agreed on before the pandemic took a backseat to the ongoing demands of online schooling, vaccines, testing, and mask mandates. And the added burdens on

schools made it difficult for them to accommodate the extra demands of researchers for things like parent consent and data collection. What sustained our RPP was the relationships we had built. Looking to the future, RPPs will be better positioned to weather crises if a researcher is embedded in the practice organization. This will lead to more spontaneous and regular interactions and increase the likelihood that the research will be useful even when problems of practice change.

Responsive and rigorous: Building a stronger Boston P-3 RPP

Meghan McCormick (*MDRC*), Christina Weiland (*University of Michigan*), and Anne Taylor (*University of Michigan*)

When the pandemic began, the Boston *P*-3 RPP team was in the 5th year of data collection for a longitudinal study and had just launched a new mixed-methods study. Overnight, years of carefully planned data collection were upended and the Boston Public Schools Department of Early Childhood was suddenly faced with the unprecedented challenge of delivering high-quality PreK in a virtual format. The pandemic truly brought to light the importance of RPPs being able to pivot quickly to make data and research useful for practitioners' current context.

Our RPP immediately paused in-person data collection and dedicated time and resources to collecting surveys of teachers' and parents' experiences. We examined the quality and cognitive demand of remote lessons and worked to understand young children's instructional experiences and possible supports. Many of these activities were done quickly in order to get the best possible information to the district in the shortest amount of time. Although most of this responsive work will not make it into a peer-reviewed journal, it has strengthened the quality of our partnership.

Prioritizing work that directly responds to practitioner needs in a timely way and is adaptable to the current context will continue to sustain our RPP beyond into the future. As the world hopefully emerges from the pandemic, we believe the RPP structure will help us to pivot to support new needs as they emerge.

University researchers as designers and consultants

Susan McKenney (*University of Twente*)

When resources are limited, priorities become visible. During the pandemic, the schools in our design-centric RPP were so busy innovating in-the-moment that they felt compelled to restructure their priorities. Specifically, our partner prioritized completion of innovation development over the data collection and analysis that was originally planned to inform it.

Opting for completion over perfection evidences a pragmatism which seems both understandable and predictable. But along with that choice, many school staff limited their contributions to innovation design, becoming more reactive than proactive. Further, schools requested university researchers' expertise less for research and more for leading innovation design and offering coaching. This raises questions about how well university researchers are prepared to fulfill the roles of designer and consultant, and may indicate a need for research on (how to support) the development of these capacities for RPPs to thrive.

Empirical investigation into the infrastructure (i.e. human, material and structural features of context) that can support researcher learning to fulfill the designer and consultant roles is lacking, and seems warranted given the pandemic experience. Meanwhile, researchers who enter into RPPs with the expectation that performing these roles may be desirable, requested, or required are likely to be better positioned to serve practice than those who are caught by surprise.

Opportunities for communication and coordination in post-pandemic RPP development

Annastasia Puriton (*Partnership for Public Education, University of Delaware*) and Elizabeth Farley-Ripple (*University of Delaware*)

As pandemic life normalized, technology enabled us to continue meeting with partners and even increased communication among groups previously challenged by travel time and advanced planning. The convenience and regularity of "Zooming" was a new and unforeseen advantage for partnership development because it made communication and collaboration more manageable and accessible.

However, virtual options added to potential landmines for misjudging reasonable expectations for partnership work, such as the feasibility and utility of their projects or the level of responsiveness from school partners. We realized that to increase communication we needed to *listen* to our partners. We used a "listening session" approach to hear from educational leaders statewide (the Department of Education, Office of Early Learning, the teachers' union, a superintendent, a charter school principal, a human resources representative, and parent). This approach enabled us to mobilize university knowledge resources in ways that were responsive and relevant, ultimately enhancing empathy, building trust, and making us better partners.

We doubt that communication will ever go back to the way it was before the pandemic, but just because virtual meetings are here to stay does not mean they have to be the only way we continue to collaborate. A simple e-mail, phone call, or in-person meeting, strategies we were comfortable with

before 2020, are equally effective. Communicating early, frequently, and strategically can help ensure a mutually beneficial partnership.

Personalization in South Florida: Adaptation to the moment

Stacey Rutledge (*Florida State University*), Marisa Cannata (*Vanderbilt University*), and Todd LaPace (*Broward County Public Schools*)

The National Center on Scaling Up Effective Schools is a partnership between Florida State University, Vanderbilt University and the Broward County Public Schools (BCPS). Founded in 2010, the RPP has worked with BCPS educators to identify, design, implement, and scale Personalization for Academic and Social Emotional Learning (PASL), a systemic reform approach in which adults in schools intentionally and deliberately attend to relationships in schools. Since BCPS is located in South Florida, hundreds of miles away from Tallahassee and Nashville, ours was always a partnership from a distance. Through multiple face-to-face meetings and week-long annual research visits, we strengthened our RPP and grew to over 50 participating middle and high schools.

Like districts across the country, responding to the pandemic and meeting students' and teachers' needs consumed our BCPS partners, with one administrator saying, "everything was a scramble." How does one support a partner in crisis? We listened and sought to respond, abandoning the timeline. While we did Zoom PD with school teams, many of our interactions shifted to the district and school leaders who took on more of the direct work with teachers and students in schools. In March of 2022, we went back face-to-face. Our takeaway: a lot can be done remotely, but nothing beats the energy of being in person.

Pivoting in a crisis: Lessons from the Houston education research consortium

Vivian Tseng (*Foundation for Child Development*)

When schools shut down at the beginning of the pandemic, many districts deprioritized external research as they focused on managing the crisis. In Houston, the research did not stop, but it did pivot. The Houston Independent School District (HISD) had a longstanding partnership with Rice University through the Houston Education Research Consortium (HERC).

In the wake of the pandemic, HISD turned to their partners to learn about their students' needs. Thanks to their decade-long relationship, HERC researchers were ready. They knew the district and its students and could quickly turn around information. As the pandemic wore on, the research partners developed a student survey and provided schools with interactive

dashboards to identify students' needs and learn about nearby service providers that could help meet those needs. The dashboards also revealed inequities across the district, and as HISD plans for the longer term, their research partners were again ready to tackle the equity gaps that increased during the pandemic.

Unfortunately, too few school districts have research partners who can support them in a crisis. But for superintendents who are looking down the road—either to the next crisis or along the path of healing and rebuilding—RPPs can be a cornerstone for success. Shared commitments, deep understanding of each partner's needs, and trusting relationships take time to forge, but when partnerships are in place, they can provide the research expertise districts most need at the times they most need it.

Growing the more malleable skills for partnering

Laura Wentworth (*California Education Partners*)

I observed three themes about how participants within our RPPs engaged with each other during the pandemic.

First, the long term nature of our partnerships allowed them to innovate quickly. Partners used existing social capital (e.g., relational trust) to stretch the nature of the partnership to answer immediate questions. To do this, researchers quickly made pivots in their data collection to produce timely information. Second, district leaders relied on close partners being "on speed dial" (Penuel & Gallagher, 2017) to help them make decisions about scantily explored topics. Within weeks researchers synthesized data for district leaders related to effective practices for online teaching and for planning a return to school. Finally, the skill of brokering was essential to bridge the practitioner and researcher ecosystem. Many district leaders and researchers brokered new ways of working together in regular, online meetings.

As these partnerships now innovate and grow, I see *thought partnership* and *research synthesis* being used more often rather than jumping into a formal study. These consultations will happen more frequently, either via text message or impromptu conversations over Zoom. Partners will use their informal brokering skills to facilitate less formal meetings given their more fluid relationships.

RPPs "unmasked"

Stephanie L. Brown (*York College of Pennsylvania*)

When it comes to the interpersonal side of RPPs—the pandemic has brought forth a new set of considerations for us to ponder. At the heart of "successful" RPPs, is the presence of productive and trusting relationships.

However, at the height of the pandemic, establishing relationships of this caliber presented unique challenges.

As a relatively new teacher educator in a rural region of Pennsylvania, I have carried with me a creative vision of establishing an RPP within our local districts. Studying RPPs has taught me that, even in "normal times," cultivating the types of relationships required to initiate an RPP takes immense amounts of time, trust, and social capital, particularly in rural districts. Meanwhile, school shutdowns made this critical relationship building process near impossible with education leaders, as their focus was on managing their rapidly evolving environments.

Now, as districts open their doors (and Zoom links) to the outside world again, my restored hope is that we can embrace this moment of solidarity to build more authentic relationships—the kind that make RPPs promising and "unmasked" infrastructures where we can confront our most pressing dilemmas in education. Trusting relationships may now have to start with a "Meeting ID" and shared passcode, but, as a result of this shared pandemic experience, I argue this is also the moment when RPPs can become one of education reform's most meaningful approaches yet.

Who manages school reform in a "post" pandemic world?

Alounso Gilzene (*Florida State University*)

My dissertation studied how school leaders in Detroit, Michigan created and maintained partnerships to improve schools. Unfortunately, my interviews occurred within the first months of the pandemic. I found that the school leaders, who all served at predominantly Black schools, struggled to quickly pivot to an online school context because many of their students did not have access to computers or internet at home.

During the pandemic, schools were disproportionately disrupted along lines of race and class (Hardy & Logan, 2020; Maye et al., 2020), which is consistent with many of the systemic issues embedded in our U.S. context (Delgado & Stefancic, 2017). Yet, the principals in Detroit were able to navigate this context thanks to an agreement the school district passed in 2017 to help reduce the partnership social capital gap that exists in many school systems (Bridwell-Mitchell, 2015). Prior to the agreement, principals had to rely solely on informal knowledge and personal connections to make partnerships.

I believe school leaders/administrators are important in creating change in schools (Stanley & Gilzene, 2022). RPPs are also an important part of educational reform, but there seems to be an issue of access. Successful navigation of a "post-pandemic" context will require more intentional collaboration. Entities who intend to engage in RPPs with schools and school

districts should lead the charge in making themselves available for communities who need them most.

Attending to continuous improvement in RPPs

Erin Henrick (*Partner to Improve*)

The COVID-19 crisis caused turbulence in a multitude of ways, and RPPs had to be flexible and adjust. How can RPPs quickly assess and prioritize what adjustments are needed in times of crisis? One tool that has been particularly useful is the Evidence for Improvement Framework (Sherer et al., 2020). It includes three nested levels to assess and understand partnerships.

The first level relates to the *partnership's theory of improvement* (what the partnership is doing to achieve its aims). To handle unexpected events, RPPs should stop, reflect, listen, and revise. Post-pandemic, I recommend RPPs document what was accomplished, reflect on what was learned, and revise their theory of improvement to reflect new realities and needs.

The second level relates to developing a high functioning *improvement enterprise*. Collecting evidence about how well team members are working together ensures that partnership dynamics support productive collaboration, learning opportunities, and a feeling of mutual accountability. Post-pandemic, I recommend RPPs emphasize relationship building among individuals and organizations.

The third level relates to understanding the *environmental context*. Assessing the economic, political, and sociocultural landscape is critical when determining how to adapt and adjust. Post-pandemic, I recommend RPPs regularly take stock of how environmental factors impact the work and share learnings with the broader community.

RPPs will continue to be a key strategy for educational improvement, but they must consider how to best adjust in dynamic contexts.

Managing endemic uncertainty in turbulent environments

Donald J. Peurach (*University of Michigan*)

For researchers engaging in RPPs, the pandemic exposed a key source of risk: RPPs as open systems susceptible to turbulence in their environments. Limited to connecting via Zoom, I heard researchers describe such challenges as securing the attention of their practice partners; maintaining relational trust; building capabilities for collaborative problem solving; and simply knowing what is happening in practice sites. Moreover, the pandemic did much to highlight the voluntary nature of RPPs, their vulnerability to rapidly shifting local priorities, and the weak leverage of researchers on the priorities of their practice partners.

The preceding are well-established challenges of RPPs. When the sailing is smooth, they often go unnoticed. When the waters get rough (as during the pandemic), they rise to the surface. The two words that I heard repeatedly from researchers were "flexibility" (to adapt and adjust as needed, week-to-week and month-to-month) and "balancing" (the aims and work of the partnership with the pandemic-affected realities of practice partners). But the need to maintain flexibility and balance is not exclusively an artifact of the pandemic. Again, it is endemic to RPPs as open systems operating in complex environments.

Moving forward, researchers with aspirations to engage in RPPs would be wise to heed this essential lesson by maintaining careful surveillance of the environments in which they operate, proactively managing environmental exigencies when possible, and maintaining flexibility and balance when not.

Graduate training in the COVID era

Eleanor Anderson (*University of Pittsburgh*)

In teaching graduate students now, more than ever, we need to engage with questions of purpose. In the face of mass death and disabling, ongoing racialized violence, accelerating climate change, acute national and international schisms—what can we earnestly say that a career in education research has to offer?

In Fall of 2021, I taught our university's first course on RPPs. Each week we wrestled with the limitations and harms of our dominant research paradigms. As students learned about mutualistic, long-term, equity-focused RPP work—even with all of its challenges—many affirmed their own commitment to partnering, expressing a renewed (or newly found) hopefulness for the possibilities of research.

Developing and teaching the course reaffirmed possibilities for living my own commitments too. New pedagogical practices for me like co-design with a student collaborator, flexible remote accommodations, and sustained engagement with notions of rematriation all felt natural while working to convey the RPP ethos.

In a "post pandemic" future, with the inadequacies of our current systems laid so starkly bare, providing training in the skills and principles of RPPs lets us offer some moral and practical clarity on the possibilities of education research. Reflecting on partnership with this next generation of scholars—forged in the fires of multiple extended and overlapping crises—is also a gift for those of us lucky enough to teach them, offering us the opportunity to clarify, re-imagine, and re-new our own sense of purpose and possibility as well.

RPPs as a lens for social justice

Bronwyn Bevan (*The Wallace Foundation*)

The conversation in philanthropy has changed dramatically since January 2019. Many foundations have undergone a profound rethinking of priorities to address longstanding social, racial, and economic injustices. But the questions many are asking today in the wake of the pandemic are: How long will philanthropy's commitment to redressing such injustices last? How deeply rooted is this shift in organizational focus? While not a panacea, RPPs could prove a powerful tool for sustaining this agenda.

For one, RPPs can provide funders with in-depth insights into conditions and contexts on the ground: complicating the situation, defying one-size-fits-all solutions, and clarifying the need for longer-term investments. RPPs can invite and demand engagement with the most pressing problems of practice. For another thing, because RPPs can generate deeply theorized and systematically developed accounts of the work on the ground, they can also produce evidence that can illuminate the next steps necessary to the processes of making change. But it is essential to lift up the more wide-spread relevance of findings. Funders are accountable not only to the communities they serve, but also to the resources that they steward for future communities to be served.

RPPs should make visible the complexities of practice and change, the historical and cultural structures that assist and obstruct, and the role of human agency as profound assets for change. This can help funders stay accountable to their communities present and future, and stay committed to equity and social justice in the years ahead.

Connection as a protective factor

Manuelito Biag (*Carnegie Foundation for the Advancement of Teaching*)

Children and youth are in crisis. We're only beginning to realize the far-reaching effects of COVID-19 on the lives of young people. No single entity on its own can address the myriad problems stemming from this pandemic. It's going to take all of us working in concerted ways.

While physical resources (e.g., computers, facilities) have been bolstered to prevent learning loss, we've invested comparably less in strengthening our ability to work together to achieve mutual aims. As leaders and educators in districts, schools, and institutions of higher education, we can do more to foster common language, tools, and methods (e.g., networked improvement science, see Bryk et al., 2015) that help us tackle shared problems.

For partnerships to make a difference, we must be intentional in building infrastructure that bond us in shared action. As Star and Ruhleder (1996) remind us, we must embed partnerships and boundary-spanning practices

into and inside our existing social arrangements and technologies. These practices must be visible, easy to learn and adopt, but flexible enough to adjust to other aspects of the systems involved. Over time and through deliberate practice, working collaboratively across institutional silos will become commonplace.

However, this will not happen without focused intention. We must firm up the "social glue" (Churchill, 2009)—shared norms, identity, narrative, routines, activity structures, and tools—that connect us. It is only through the purposeful building of our togetherness will we get through.

The new frontier for RPPs

Caitlin C. Farrell (*University of Colorado Boulder*)

RPPs hold the potential to play a significant role in transforming the relationship between research and practice in ways that support a more just society. RPPs directly engage with the persistent challenges that local communities face. They can support efforts to bring multiple, diverse perspectives in the conception, design, and implementation of inquiry efforts. Members of RPPs can bring to bear knowledge of a variety of research approaches that honor different ways of knowing and creating knowledge. As long-term engagement with a broad range of stakeholders, they are also poised to support sustained and systemic change.

The RPP field will only be able to rise to the occasion, as it emerges on the other side of the pandemic, if partnerships develop clarity about the sources of inequity and commit to developing and testing strategies to overcome them. This task will likely involve conversations about who has been privileged in the field and whose voice(s) have been left out. It will require ways of examining how power has been distributed within the RPP's own work as well as how it shapes the focal challenges that RPPs attend to. And, it will take continued development of a field of practice-, research-, and community-side partners who are committed to engaging in new ways that support research "with" instead of research "on" families, communities, and educational systems.

Discussion

As a set, this collection of think-pieces represents different perspectives on RPPs amidst the pandemic and helps to envision their future beyond it. Running through these contributions is a vision of RPPs characterized by complexity, but also resilience in supporting students, educators and schools during times of adversity. The pieces demonstrate that RPPs provide unique opportunities and challenges for educational research, innovation and practice. In this respect, the think-pieces showcase insightful lessons and raise

important questions for the learning sciences, namely: being able and willing to prioritize practical demands over knowledge production when needed; cultivating partners' awareness of the larger context to make informed decisions for specific situations; and being dedicated to pursuing justice in research and in partnerships.

Prioritizing practical needs

For one, many think-pieces (especially the ones we ordered first) illustrate different ways in which research partners prioritized practice partners by listening, responding, mediating, and improvising. This seems particularly crucial in times of crisis. In the words of several of our contributors, to support immediate practice needs and inform practical decision making in a timely manner, priorly determined research agendas may have to be paused, take a backseat, stop, and/or pivot quickly, project timelines may need to be abandoned, and teams may need to choose completion over perfection. Building on literature about RPP trust, empathy, communication, and brokering (c.f. Brown & Allen, 2021; Davidson & Penuel, 2019; Henrick et al., 2017; Neal et al., 2015, 2021; Weber & Yanovitzky, 2021) and about researcher capacity for design (McKenney & Brand-Gruwel, 2018) and researcher sense of "responsivity" (Arce-Trigatti et al., 2022), a more realistic and in-depth understanding of what is entailed when university researchers, who truly want to share ownership of the research agenda with their practice partners, focus on relationships and innovation rather than knowledge production ambitions and outcomes. What specific skills, attitudes and resources does it take, and how can such relational and innovative work be supported by the surrounding structures and institutional missions?

Cultivating situational awareness

Another lesson we draw from the think-pieces (especially the middle ones) is that we cannot take for granted that RPPs are able to navigate circumstances that are complex, continuously changing, ambiguous and/or uncertain. Notably, our contributors point out that: partnership arrangements must be negotiated and formalized at higher levels; relationships between partners require serious investments of time and resources, as well as appropriate communication routines and technology; and individuals and teams need adequate frameworks and training to monitor, manage and effectively adjust to environmental exigencies. In this respect, it can be helpful to cultivate situational awareness, or in other words, to proactively strategize about elements in the larger context and their relationships, in order to determine what knowledge is needed and what actions are relevant to achieve specified goals (Smith & Hancock, 1995). The notion of situational or situation

awareness is used as a management strategy in several sectors to ensure informed decision-making in a particular situation through conscious dynamic (c.f. Endsley & Connors, 2008; Parse, 2018; Stanton et al., 2017). Building on existing literature about the conditions that favor RPP success or account for RPP failures (Booker et al., 2019; Farrell, Wentworth, et al., 2021) and about RPP organizational learning (Conaway, 2020; Farrell et al., 2022), would it be relevant to cultivate shared situational awareness in RPP leaders, teams, and systems? If so, what might this look like?

Pursuing justice

A third lesson that can be gleaned from the think-pieces (especially the ones toward the end) is that RPPs offer meaningful approaches to wrestle with questions of justice in the educational system and in society. Our contributors note that RPPs can improve equitable access to education, amplify underprivileged and marginalized voices, make research structures more accountable toward communities, and bring together multiple and diverse stakeholders to work together to improve teaching and learning for those that need it most. Attention to equity in learning contexts is a core value for many in the learning sciences, and RPP work seems to remain for our contributors a promising vehicle in this regard. That being said, RPPs are also implicated in systems of power, and unarticulated dynamics of privilege and exclusion should not go unrecognized and unexamined. Therefore, it is important for the learning sciences to attend not only to contexts of learning, but also to the ways in which RPP discourses and practices themselves are situated in historical, cultural and social contexts. In what ways do forms and forces of (in)equity and (in)justice play out at research sites (c.f. Vetter et al., 2022) and in the conduct of RPPs (c.f. Denner et al., 2019; Farrell et al., 2023)? How can partners promote critical and decolonial forms of RPP engagement (c.f. Anderson, 2022; Booker; 2022, Ishimaru et al., 2022)?

A call to action

In light of what we have learned from the collection of pandemic-inspired reflections presented in this article, it is interesting to reconsider what it means and what it takes to be part of an RPP. For many educational researchers and practitioners, engaging in partnership with one another is about improving and/or transforming educational practice. Yet, as the insights and implications discussed above suggest, this is a multifaceted undertaking. Prioritizing practice needs by focusing on relationships and innovation over research tasks and plans, cultivating an appropriate awareness of what is going on outside the RPP, and pursuing justice in research but also, and importantly, within the partnership; these can be seen as values

beyond the partnership goals and can motivate people to start or keep being part of an RPP. Arguably, this is because such values represent forms of belonging. By endorsing and acting upon them, partners do so because they feel accepted, included and recognized as members of the partnership, of the educational system and of society at large. Do learning scientists who engage in RPPs feel this way?

A commitment to shaping educational practice is one of the defining features of the learning sciences community. Among the "core practices and foci that have defined the learning sciences as a field", as stated by this Journal, are "grounding research in real-world contexts" and "maintaining a strong connection between research and practice."[1] Moreover, a recent survey of ISLS members (which included research scientists at nonprofits, university professors, graduate students, and postdoctoral fellows) shows that learning scientists work in a wide range of settings and disciplinary fields, and this speaks to the "applied direction that the learning sciences has taken" and the importance for its members of impacting and influencing practice (Yoon & Hmelo-Silver, 2017, pp. 180–181). Promoting learning-focused models of research-practice interactions is thus seen as a way for the learning sciences to better impact policy and practice (McKenney, 2018, p. 5). In line with McKenney's argument, and taking up her advice to elaborate "theories and methods to help us understand and optimize [research-practice interactions'] workings" by leveraging "lenses and approaches from sister fields" (2018, p. 5), we call on the learning sciences community to explore *belonging* as a concept, a practice and a product of learning-focused RPPs.

At a very simple level, we could ask ourselves: who belongs, how, where, when and why? For example, in what ways do spaces and doings enable or constrain RPPs in the learning sciences? Or to what extent do power hierarchies in the learning sciences shape current or potential research and practice partners' feelings of exclusion, discrimination or marginalization? A step further would be to study RPPs from the perspective of the multidisciplinary literature on belonging, which according to Lähdesmäki et al. (2016), can be conceived in terms of spatiality, intersectionality, multiplicity, materiality, and non-belonging. Another direction is to explore how belonging relates to RPP scholarship about navigating boundaries (Farrell et al., 2022; Wegemer & Renick, 2021; Yamashiro et al., 2023), or about institutional changes needed within the academy to make participation in RPPs a viable option for more researchers (Gamoran, 2022). Finally, a more practical approach to explore belonging in RPPs is in relation to the learning sciences' evolving understanding of what it does as

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[1]https://www.tandfonline.com/action/journalInformation?show=aimsScope&journalCode=hlns20

a field and which professional trajectories it encourages, as well as how it conceptualizes its identity. A starting point could be Yoon and Hmelo-Silver's (2017) view that master's degree programs represent for the learning sciences a "place for potential growth" (p. 181) to engage practitioners and promote RPPs.

Even amidst the pandemic, RPPs can help to address problems relevant to practitioners, explore how students learn in new and unparalleled situations, recognize varied forms of expertise, and support evidence-based decision-making in school systems. In closing, this paper invites members of the learning sciences to reflect on what it means and what it takes to be part of an RPP through the lens of belonging. In this sense, what should be continued, strengthened, or safeguarded? What should be unlearned or done away with? What should be reenvisioned afresh? And what specifically has the pandemic brought to light that may guide such a collective reflection? Although this article is limited to the viewpoints of a small group of people, we hope that others—particularly practice-side or community-side representatives who partner up with learning scientists—will join us in tackling the issues we raised. We are optimistic that we can, as a community, find new ways to buttress RPP work, and build experiences and structural supports for belonging in RPPs for all of us.

Disclosure statement

No potential conflict of interest was reported by the author(s).

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References

Ahn, J. (2020, April 15). *Research-practice partnerships in times of need*. Design & Partnership Lab: Praxis Makes Perfect. https://medium.com/praxis-makes-perfect/research-practice-partnerships-in-times-of-need-82d856058cd0

Anderson, E. R. (2022). Political considerations for establishing research-practice partnerships in pursuit of equity: Organizations, projects, and relationships. *Educational Policy*, 77–100. https://doi.org/10.1177/08959048221130993

Andreoli, P. M., & Klar, H. W. (2021). Becoming the drivers of change: Continuous improvement in a rural research–practice partnership. *Journal of Educational Administration*, 59(2), 162–176. https://doi.org/10.1108/JEA-04-2020-0078

Arce-Trigatti, P. (2021, October 28). *The evolving world of education research-practice partnerships*. Brookings Blog/Brown Center Chalkboard. https://www.brookings.edu/blog/brown-center-chalkboard/2021/10/28/the-evolving-world-of-education-research-practice-partnerships/

Arce-Trigatti, P., Chukhray, I., & López-Turley, R. N. (2018). Research–practice partnerships in education. In B. Schneider (Ed.), *Handbook of the sociology of education in the 21st century* (pp. 561–579). Springer International Publishing.

Arce-Trigatti, P., & Farrell, C. C. (2021). Research–practice partnerships in education within the United States. In *Oxford bibliographies online*. Oxford University Press. https://doi.org/10.1093/obo/9780199756810-0274

Arce-Trigatti, P., Klein, K., & Lee, J. S. (2022). Are research-practice partnerships responsive to partners' needs? Exploring research activities during the COVID-19 pandemic. *Educational Policy*, 37(1), 170–199. https://doi.org/10.1177/08959048221134584

Basok, D., & Morris, P. (Eds.). (2021). Research-practice partnerships to strengthen early education. *The Future of Children*, 31(1), 21–38. https://futureofchildren.princeton.edu/sites/futureofchildren/files/foc_combined_5.3.21.pdf

Bevan, B. (2017). Research and practice: One way, two way, no way, or new way? *Curator the Museum Journal*, 60(2), 133–141. https://doi.org/10.1111/cura.12204

Bevan, B., & Penuel, W. R. (Eds.). (2018). *Connecting research and practice for educational improvement: Ethical and equitable approaches*. Routledge. https://doi.org/10.4324/9781315268309

Biag, M., Gomez, L. M., Imig, D. G., & Vasudeva, A. (2021). Responding to COVID-19 with the aid of mutually beneficial partnerships in education. *Frontiers in Education*, 5. https://www.frontiersin.org/article/10.3389/feduc.2020.621361

Booker, A. (2022). Designing for a productive politics of participation in research practice partnerships. *Educational Policy*, 37(1), 225–249. https://doi.org/10.1177/08959048221134586

Booker, L., Conaway, C., & Schwartz, N. (2019). *Five ways RPPs can fail and how to avoid them: Applying conceptual frameworks to improve RPPs*. William T. Grant Foundation.

Bridwell-Mitchell, E. N. (2015). Theorizing teacher agency and reform: How institutionalized instructional practices change and persist. *Sociology of Education*, *88*(2), 140–159. https://doi.org/10.1177/0038040715575559

Brown, S., & Allen, A. (2021). The interpersonal side of research-practice partnerships. *Phi Delta Kappan*, *102*(7), 20–25. https://doi.org/10.1177/00317217211007333

Bryk, A. S., Gomez, L. M., Grunow, A., & LeMahieu, P. G. (2015). *Learning to improve: How America's schools can get better at getting better*. Harvard Education Press.

Churchill, E. (2009). Introduction to Section 4: Social glue. In K. S. Willis, G. Roussos, K. Chorianopoulous, & M. Struppek (Eds.), *Shared encounters* (pp. 229–234). Springer.

Coburn, C. E., Penuel, W. R., & Farrell, C. C. (2021). Fostering educational improvement with research-practice partnerships. *Phi Delta Kappan*, *102*(7), 14–19. https://doi.org/10.1177/00317217211007332

Conaway, C. (2020). Maximizing research use in the world we actually live in: Relationships, organizations, and interpretation. *Education Finance and Policy*, *15*(1), 1–10. https://doi.org/10.1162/edfp_a_00299

Cooper, A., MacGregor, S., & Shewchuk, S. (2020). A developmental evaluation of research-practice-partnerships and their Impacts. *International Journal of Education Policy and Leadership*, *16*(9). https://doi.org/10.22230/ijepl.2020v16n9a967

Cooper, A., MacGregor, S., & Shewchuk, S. (2021). A research model to study research-practice partnerships in education. *Journal of Professional Capital & Community*, *6*(1), 44–63. https://doi.org/10.1108/JPCC-11-2019-0031

Davidson, K., & Penuel, W. R. (2019). The role of brokers in sustaining partnership work in education. In J. Malin & C. Brown (Eds.), *The role of knowledge brokers in education: Connecting the dots* (pp. 154–167). Routledge.

Delgado, R., & Stefancic, J. (2017). *Critical race theory*. New York University Press.

DeMatthews, D., Knight, D., Reyes, P., Benedict, A., & Callahan, R. (2020). From the field: Education research during a pandemic. *Educational Researcher*, *49*(6), 398–402. https://doi.org/10.3102/0013189X20938761

Denner, J., Bean, S., Campe, S., Martinez, J., & Torres, D. (2019). Negotiating trust, power, and culture in a research–practice partnership. *AERA Open*, *5*(2), 1–11. https://doi.org/10.1177/2332858419858635

Donovan, M. S., Snow, C. E., & Huyghe, A. (2021). Differentiating research-practice partnerships: Affordances, constraints, criteria, and strategies for achieving success. *Studies in Educational Evaluation*, *71*, 101083. https://doi.org/10.1016/j.stueduc.2021.101083

Endsley, M. (1988). Design and evaluation for situational awareness enhancement. In *Proceedings of the Human Factors Society 32nd Annual Meeting*, Anaheim, CA (pp. 97–101).

Endsley, M. R., & Connors, E. S. (2008). Situation awareness: State of the art. In *2008 IEEE Power and Energy Society General Meeting - Conversion and Delivery of Electrical Energy in the 21st Century* (pp. 1–4). https://doi.org/10.1109/PES.2008.4596937

Farley-Ripple, E. N. (2021). A new day for education research and practice. *Phi Delta Kappan*, *102*(7), 8–13. https://doi.org/10.1177/00317217211007331

Farley-Ripple, E., May, H., Karpyn, A., Tilley, K., & McDonough, K. (2018). Rethinking connections between research and practice in education:

A conceptual framework. *Educational Researcher*, *47*(4), 235–245. https://doi.org/10.3102/0013189X18761042

Farrell, C. C., Penuel, W. R., Allen, A., Anderson, E. R., Bohannon, A. X., Coburn, C. E., & Brown, S. L. (2022). Learning at the boundaries of research and practice: A framework for understanding research–practice partnerships. *Educational Researcher*, *51*(3), 197–208. https://doi.org/10.3102/0013189X211069073

Farrell, C. C., Penuel, W. R., Coburn, C. E., Daniel, J., & Steup, L. (2021). *Research-practice partnerships in education: The state of the field*. William T. Grant Foundation. http://wtgrantfoundation.org/research-practice-partnerships-in-education-the-state-of-the-field

Farrell, C. C., Singleton, C., Stamatis, K., Riedy, R., Arce-Trigatti, P., & Penuel, W. R. (2023). Conceptions and practices of equity in research-practice partnerships. *Educational Policy*, *37*(1), 200–224. https://doi.org/10.1177/08959048221131566

Farrell, C. C., Wentworth, L., & Nayfack, M. (2021). What are the conditions under which research-practice partnerships succeed? *Phi Delta Kappan*, *102*(7), 38–41. https://doi.org/10.1177/00317217211007337

The Future of Children. (2021). *Brief series. Princeton-Brookings: Research-practice partnerships to strengthen education during a pandemic*. https://futureofchildren.princeton.edu/node/2151

Gamoran, A. (2022). Advancing institutional change to encourage faculty participation in research-practice partnerships. *Educational Policy*, *37*(1), 31–55. https://doi.org/10.1177/08959048221131564

Hardy, B. L., & Logan, T. D. (2020). *Racial economic inequality amid the COVID-19 crisis*. The Hamilton Project. https://www.brookings.edu/wp-content/uploads/2020/08/EA_HardyLogan_LO_8.12.pdf

He, Y., Faircloth, B. S., Hewitt, K. K., Rock, M. L., Rodriguez, S., Gonzalez, L. M., & Vetter, A. (2020). Data management and use through research practice partnerships: A literature review. *Educational Research Review*, *31*, 100360. https://doi.org/10.1016/j.edurev.2020.100360

Heller, R. (2021). Research, meet practice. *Phi Delta Kappan*, *102*(7), 4. https://doi.org/10.1177/00317217211007317

Henrick, E. C., Cobb, P., Penuel, W. R., Jackson, K., & Clark, T. R. (2017). *Assessing research–practice partnerships: Five dimensions of effectiveness*. William T. Grant Foundation. https://wtgrantfoundation.org/library/uploads/2017/10/Assessing-Research-Practice-Partnerships.pdf

Henrick, E. C., & Peurach, D. (2020, April 7). *What is the role of education research practice partnerships amid the COVID-19 pandemic?* The Dandelion Seed: Spreading change. https://dandelionseedoutlier.tumblr.com/post/614754604796821504/what-is-the-role-of-education-research-practice

Ishimaru, A. M., Barajas-López, F., Sun, M., Scarlett, K., & Anderson, E. (2022). Transforming the role of RPPs in remaking educational systems. *Educational Researcher*, *51*(7), 465–473. https://doi.org/10.3102/0013189X221098077

Lähdesmäki, T., Saresma, T., Hiltunen, K., Jäntti, S., Sääskilahti, N., Vallius, A., & Ahvenjärvi, K. (2016). Fluidity and flexibility of "belonging": Uses of the concept in contemporary research. *Acta Sociologica*, *59*(3), 233–247. https://doi.org/10.1177/0001699316633099

Malin, J. R. (2021). How educational intermediaries connect research and practice. *Phi Delta Kappan*, *103*(4), 37–43. https://doi.org/10.1177/00317217211065825

Maye, A., Banerjee, A., & Johnson, C. (2020). *The dual crisis: How the COVID-19 recession deepens racial and economic inequality among communities of color.* Center for Law and Social Policy. https://www.clasp.org/publications/report/brief/dual-crisis-how-covid-19-recession-deepens-racial-and-economic-inequality/

McKenney, S. (2018). How can the learning sciences (better) impact policy and practice? *Journal of the Learning Sciences*, *27*(1), 1–7. https://doi.org/10.1080/10508406.2017.1404404

McKenney, S., & Brand-Gruwel, S. (2018). Roles and competencies of educational design researchers: One framework and seven guidelines. In J. M. Spector, B. B. Lockee, & M. D. Childress (Eds.), *Learning, design, and technology*. Springer. https://doi.org/10.1007/978-3-319-17727-4_123-1

Neal, J. W., Neal, Z. P., Kornbluh, M., Mills, K. J., & Lawlor, J. A. (2015). Brokering the research–practice gap: A typology. *American Journal of Community Psychology*, *56*(3–4), 422–435. https://doi.org/10.1007/s10464-015-9745-8

Neal, J. W., Posner, S., & Brutzman, B. (2021). Understanding brokers, intermediaries, and boundary spanners: A multi-sectoral review of strategies, skills, and outcomes. *Evidence & Policy*, 1–21. https://doi.org/10.1332/174426421X16328416007542

Parse, R. R. (2018). Situational awareness: A leadership phenomenon. *Nursing Science Quarterly*, *31*(4), 317–318. https://doi.org/10.1177/0894318418792888

Penuel, W. R., & Gallagher, D. (2017). *Creating research–practice partnerships in education*. Harvard Education Press.

Peurach, D. J., Russell, J. L., Cohen-Vogel, L., & Penuel, W. R. (Eds.). (2022). *The foundational handbook on improvement research in education*. Rowman & Littlefield.

Schneider, M. (2020, February 4). *Research-practice partnerships, redux*. Institute of education sciences. https://ies.ed.gov/director/remarks/2-4-2020.asp

Sherer, D., Norman, J., Bryk, A., Peurach, D., Vasudeva, A., & McMahon, K. (2020). *Evidence for improvement: An integrated analytic approach for supporting networks in education*. Carnegie Foundation for the Advancement of Teaching, Stanford, CA. https://www.carnegiefoundation.org/resources/publications/evidence-for-improvement/

Sjölund, S., Lindvall, J., Larsson, M., & Ryve, A. (2022). Mapping roles in research-practice partnerships – a systematic literature review. *Educational Review*, 1–29. https://doi.org/10.1080/00131911.2021.2023103

Smith, K., & Hancock, P. A. (1995). Situation awareness is adaptive, externally directed consciousness. *Human Factors: The Journal of the Human Factors & Ergonomics Society*, *37*(1), 137–148. https://doi.org/10.1518/001872095779049444

Spitzley, N., McCormick, M., Taylor, A., Weiland, C., Gerry, A., Potter, D., & Turley, R. N. L. (2021). Research lessons from the pandemic: Why unrestricted funding is critical to RPPs. *NNERPP Extra*, *3*(2), 2–8. https://nnerppextra.rice.edu/research-lessons-from-the-pandemic-unrestricted-funding/

Stanley, D. A., & Gilzene, A. (2022). Listening, engaging, advocating and partnering (LEAP): A model for responsible community engagement for educational leaders. *Journal of Research on Leadership Education*, *18*(2), 253–276. https://doi.org/10.1177/19427751221076409

Stanton, N. A., Salmon, P. M., Walker, G. H., Salas, E., & Hancock, P. A. (2017). State-of-science: Situation awareness in individuals, teams and systems. *Ergonomics*, *60*(4), 449–466. https://doi.org/10.1080/00140139.2017.1278796

Star, S. L., & Ruhleder, K. (1996). Steps toward an ecology of infrastructure: Design and access for large information spaces. *Information Systems Research*, *7*(1), 111–134. https://doi.org/10.1287/isre.7.1.111

Tabak, I. (2022). Productive tension in research practice partnerships: Where substance and politics intersect. *Cognition and Instruction*, *40*(1), 171–177. https://doi.org/10.1080/07370008.2021.2010214

Vetter, A., Faircloth, B. S., Hewitt, K. K., Gonzalez, L. M., He, Y., & Rock, M. L. (2022). Equity and social justice in research practice partnerships in the United States. *Review of Educational Research*, *92*(5), 829–866. https://doi.org/10.3102/00346543211070048

Weber, M., & Yanovitzky, I. (2021). *Networks, knowledge brokers, and the public policymaking process*. Palgrave Macmillan. https://doi.org/10.1007/978-3-030-78755-4

Wegemer, C. M., & Renick, J. (2021). Boundary spanning roles and power in educational partnerships. *AERA Open*, *7*, 23328584211016868. https://doi.org/10.1177/23328584211016868

Weiland, C., Sachs, J., McCormick, M., Hsueh, J., & Snow, C. (2021). Fast-response research to answer practice and policy questions. *The Future of Children*, *31*(1), 75–96. JSTOR. https://www.jstor.org/stable/27074988

Welsh, R. O. (2021). Assessing the quality of education research through its relevance to practice: An integrative review of research-practice partnerships. *Review of Research in Education*, *45*(1), 170–194. https://doi.org/10.3102/0091732X20985082

Wentworth, L., Conaway, C., Shewchuk, S., & Arce-Trigatti, P. (2021). *RPP brokers handbook: A guide to brokering in education research-practice partnerships*. National Network of Education Research-Practice Partnerships (NNERPP).

Yamashiro, K., Wentworth, L., & Kim, M. (2023). Politics at the boundary: Exploring politics in education research-practice partnerships. *Educational Policy*, *37*(1), 3–30. https://doi.org/10.1177/08959048221134916

Yoon, S. A., & Hmelo-Silver, C. E. (2017). What do learning scientists do? A survey of the ISLS membership. *Journal of the Learning Sciences*, *26*(2), 167–183. https://doi.org/10.1080/10508406.2017.1279546