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Research-Practice Partnerships in Education: The State of the Field

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Contents

Executive Summary

Research-practice partnerships (RPPs) are an important part of the educational ecosystem that connects research, policy, practice, and community work in the United States. They are a prime example of how long-term collaborative approaches to research can address persistent challenges and systemic inequities in our schools and communities.

Research-Practice Partnerships in Education: The State of the Field expands on the 2013 white paper *Research-Practice Partnerships: A Strategy for Leveraging Research for Educational Improvement in School Districts* by scanning the current landscape of partnerships, identifying points of variation, and outlining shared principles.

Redefining RPPs

First, the report offers a new way of defining a research-practice partnership in education:

A long-term collaboration aimed at educational improvement or equitable transformation through engagement with research. These partnerships are intentionally organized to connect diverse forms of expertise and shift power relations in the research endeavor to ensure that all partners have a say in the joint work.

From this definition, five principles emerge that highlight the differences between RPPs and other kinds of partnership in education or other forms of research:

- They are long-term collaborations.
- They work toward educational improvement or equitable transformation.
- They feature engagement with research as a leading activity.
- They are intentionally organized to bring together a diversity of expertise.
- They employ strategies to shift power relations in research endeavors to ensure that all participants have a say.

Dimensions of Variation

Second, the authors move away from categorizing distinct types of RPPs—such as research alliances, design partnerships, and networked improvement communities—and instead delineate a set of four dimensions along which RPPs vary, namely: goals pursued, composition, research approaches, and funding sources. Characterizing the field in this way provides a frame for current and would-be RPP participants to consider the affordances and constraints of each unique approach to partnership work.

With respect to an RPP's **goals**, two elements are critical: whether the scope of work is focused or broad, and whether members of the RPP conceive of equity as central to the *process* of partnering, or as central to the *outcomes* the partnerships seek to achieve.

The **composition** of RPPs also varies with respect to the partners and organizations involved. Researchers in universities and research nonprofits may partner with state agencies, local school districts, schools, community organizations, families, youth, or other stakeholders. RPPs might also comprise two or more organizations and/or actors from multiple tiers of an educational system.

RPPs' **approaches to research** constitute another dimension along which they may vary. While all RPPs engage with research as a leading

activity, how RPPs structure their research varies by inquiry activity, length and intensity of an engagement, and roles for participants.

Finally, RPPs rely on different **funding sources**. National public and private funders have supported research in partnership, as have local and regional foundations. Available funding impacts whether and how RPP work can proceed, and the nature of the work RPPs can undertake given various funding priorities, focus areas, structures and limitations on what funding can support, and the funder's level of involvement.

Moving Forward

Third, the report conveys four pressing issues identified by RPP leaders as essential for the field to address in its continued commitment to RPPs:

- Understanding how well RPPs meet their goals and the conditions that support or hinder their progress.
- Cultivating the next generation of RPP leaders to develop the range of skills, knowledge, dispositions, and orientations needed to engage in partnership efforts.
- Building operational capacity for RPPs through dedicated funding.
- Learning at the boundaries with other forms of collaborative research such as collaborative community-engaged research, community research collaboratives, participatory action research, youth participatory action research, participatory design research, and other forms of collaborative work to transform institutions to work toward more just futures.

RPPs—the work they do, the communities they engage, and the goals they pursue—will continue to evolve. This paper offers a snapshot of the landscape of RPPs at a pivotal moment. Prospective partners can use the ideas shared to inform how, why, and with whom they may organize an RPP, while existing RPPs may draw on the ideas when planning and implementing next steps. For funders and policymakers, these ideas can help clarify what RPPs are—and what they are not—and offer firsthand insights on their potential.

Preface

The idea for supporting this paper came from a meeting on studying research-practice partnerships that John Easton, then Senior Fellow at the Spencer Foundation, and I convened in July 2017. It had been four years since the William T. Grant Foundation published a landscape scan of research-practice partnerships by Cynthia Coburn, William (Bill) Penuel, and Kimberly Geil. That paper, *Research-Practice Partnerships: A Strategy for Leveraging Research for Educational Improvement in School Districts*, had become a seminal reference because it united what had been disparate, sometimes competing, initiatives together under the umbrella of RPPs. Before then, many partnerships described in the paper did not identify as members of the same field. Instead, drawing from their intellectual traditions, they identified as design research partnerships, emerging from the learning sciences; Consortium-type partnerships, modelled after the Chicago Consortium on School Research; or Networked Improvement Communities, which stemmed from the Carnegie Foundation's interest in improvement research in healthcare. The paper, as well as an associated learning community we supported, helped these different types of partnerships see their commonalities, learn from each other, and strengthen their work.

Fast forward to 2017 when John and I—as well as original authors Cynthia and Bill—thought the time was ripe to update the landscape scan. In addition to the blended forms of partnerships that had emerged, the 2013 paper focused exclusively on school districts as the practitioner partner. This, however, left out existing collaborations that had engaged community-based organizations, national nonprofits, and state education agencies as practitioner partners. The updated paper that you are reading broadens the definition of RPPs to include those partnerships. It also analyzes collaborations in terms of their goals, strategies for organizing their work, research approaches, and funding sources. This paper also expands the definition of RPPs to include equity both as an important dimension of many RPPs and as a key educational improvement outcome.

Even as we move this paper to publication, the world and the role of RPPs continues to evolve. The past year has been one of intense racial reckoning. The COVID-19 pandemic, relentless anti-Black and anti-Asian violence, and racialized xenophobia at our southern border have laid bare our country's longstanding, systemic racism. This reckoning will undoubtedly impact RPPs and how we think about power and partnerships. Indeed, the RPP field found collective strength in mobilizing partners who shared a vision for transforming the relationship between research and practice. As we look ahead, I hope the field will embrace difficult conversations about race and racism—about who has been privileged in the field, who has been left out, the ways racism has too often been overlooked, and how to center a racial analysis and the people who have long pursued such analyses. Inevitably if we succeed, I am confident that we can collectively forge an even stronger field of partnerships capable of buoying a more just society.

Vivian Tseng
July 2021

Introduction

Persistent inequities in public education have been compounded in the recent past by forces such as the global pandemic and the lasting effects of systemic racism. Their disproportionate effects on Black, Indigenous, and other youth of color, plus their families and their communities, add to the "education debt" already owed these groups (Ladson-Billings, 2006). There is a renewed urgency for efforts that challenge the ways educational research, policy, and practice reproduce systemic racism and unjust distributions of resources and opportunities (Paris & Alim, 2017).

Now, more than ever, educators and communities require multiple strategies to address current issues and imagine new possibilities for education for the future. If social science is to play a role in disrupting the status quo, research will need to directly engage with the persistent challenges that local communities face. Research will require multiple, diverse perspectives in the conception, design, and implementation of inquiry efforts. It will need to involve a variety of research approaches that honor different ways of knowing and creating knowledge. Long-term engagement with a broad range of stakeholders is also essential to sustained and systemic change (Doucet, 2019; Kirkland, 2019).

Research-practice partnerships are a strategic way to pursue locally driven, collaborative approaches to research in support of educational equity.[1] These long-term collaborations promote educational improvement and transformation through engagement with research. They are intentionally organized to engage diverse perspectives and to shift power relations among researchers, educators, families, and communities. RPPs exist in many fields, from public health to medicine to social services.[2] Research conducted in education RPPs can result in new insights into the processes, practices, and policies that improve education for students, educators, families, and communities.[3]

Due to their history of working in partnership with schools and communities, many RPPs were well positioned to support educators and communities in today's challenging times (Potter et al., 2021). When the COVID-19 pandemic emerged in early 2020, RPPs conducted studies to help state agencies and districts understand which students were learning in person and which were participating online, and whether students with disabilities were receiving the support they needed (Education Policy Innovation Collaborative, 2021; Lenhoff et al., 2020). Researchers supported their partners in identifying the needs of teachers in remote teaching situations and evaluated long-term programs

RPPs have become an important part of the educational ecosystem that connects research, policy, practice, and community work.

designed to support teachers in creating racially equitable learning environments (Patrick & Newsome, 2020; Villavicencio et al., 2020). RPPs also explored how families and communities creatively responded within their networks to share information and resources in the absence of systemic support from community institutions (Greenberg et al., 2020).

Indeed, in the past decade, RPPs have become an important part of the educational ecosystem that connects research, policy, practice, and community work. The number of education RPPs has exponentially grown, given interest from foundations and federal funders (Arce-Trigatti et al., 2018). New forms of RPPs have emerged, drawing on a range of approaches previously thought to belong to specific types of partnerships (Farrell et al., 2017). Networks of RPPs now support learning across partnerships (Arce-Trigatti et al., 2018). Finally, the research base on education RPPs has grown, adding to our understanding of their dynamics and outcomes (Penuel & Hill, 2019). In some circumstances, RPPs have enabled partners to make effective use of research to inform their thinking and guide local decision-making, resulting in new ways of thinking, changes in policies, and greater opportunities for students (Henrick et al., 2018; Penuel et al., 2020; Phillips, 2019).

Since the field of RPPs has expanded and matured over recent years, it is time to take stock of where it now stands. In 2013, members of this authorship team offered a definition of RPPs in a white paper supported by the William T. Grant Foundation (Coburn et al., 2013). The project was carried out in response to the growing interest in this form of collaboration between educators and researchers (see "A Note About our Methods"). At the time, RPPs were relatively rare and had not been widely studied. The paper offered a definition of RPPs, outlined a typology of the predominant types of RPPs at that juncture, and discussed the benefits and challenges of RPPs through a literature review and interviews with RPP leadership. At the funder's request, the paper focused on RPPs

A Note About Our Methods

This paper draws on two sources of data to help us map the field. First, we interviewed 50 RPP leaders, including practice and research representatives from new or hybrid forms of RPPs, as well as funders and thought leaders in the field. We sought a diversity of RPPs with respect to the original typology, as well as partners in state agencies and community-based organizations (CBOs). We employed a snowball sampling strategy, asking people to recommend others we could tap for definitions and perspectives on RPPs, then interviewing those nominees.[4] We continued the process until we were unable to identify new themes or perspectives. As part of the effort, we spoke with both individuals who currently identify as part of the RPP field and leaders from other collaborative research efforts. We transcribed and systematically coded interviews. We identified central themes and developed analytic memos to revise the definition, identify points of variation in RPPs, and offer direction for the field. We concurrently reviewed existing research on RPPs within education.[5] Our review focused on empirical studies of RPPs in education conducted between 2013 and 2020, the time period after our last review of the RPP literature (Coburn & Penuel, 2016). After a systematic search process, we coded and identified findings and themes from 200 unique studies of RPPs. We used this literature review to support our revised definition and dimensions of variability.

between researchers and school district leaders, although partnerships can include RPPs that involve a much broader range of practice partners. The original paper did not explicitly attend to how partnerships defined or pursued goals related to equity. An updated survey of the RPP field was needed.

To take on this task, we engaged in a systematic mapping of the field of contemporary RPPs in education. We discovered that our original definition was limited since it focused on partnerships between researchers and districts, and only partly addressed RPPs centered in the community or with state education agencies. With a broader range of partnerships now in the field, we needed a definition that addressed these partners' priorities and concerns, as well as the research methods more typically used by these types of partnerships. The mapping, as well as a parallel study of RPPs funded by the Institute of Education Sciences (IES), also taught us that the original typology of kinds of RPPs still held for some partnerships but did not match others well (Farrell et al., 2018). Hybridization had increased since the time we proposed our typology of partnerships, where those in one category began to adopt the strategies and approaches of partnerships in others. It made greater sense to break down strategies and approaches to highlight the key dimensions along which RPPs can vary, rather than hold tight to a typology that no longer captured the complexities of RPP work. We now instead identify the key ways RPPs vary in structure (e.g., who is at the table) and substance (e.g., goals, strategies for organizing research activities), illustrating this variability with portraits of contemporary RPPs. Further, conceptions of equity—both in the outcomes of RPPs and in the ways partnerships themselves get organized—are increasingly central, as many in the field recognize that transforming systems toward equity is of vital importance. We conclude by discussing pressing issues that will likely influence RPPs in the years to come.

Our intention is that this paper will be of use to those who seek to develop, maintain, study, or fund RPPs. We hope its orientation toward RPPs and how they vary will be useful to people who are curious about RPPs and seek to learn more about the ways they work and how they differ from traditional research arrangements. For those forming RPPs, we hope that naming the dimensions of variation will inform decisions on how to structure them. Finally, we hope this update will be useful in helping funders set priorities, support projects funded, and build capacity in the field.

RPPs in Education: An Updated Definition

We updated the definition of an RPP in education to:

A long-term collaboration aimed at educational improvement or equitable transformation through engagement with research. These partnerships are intentionally organized to connect diverse forms of expertise and shift power relations in the research endeavor to ensure that all partners have a say in the joint work.

Five principles of RPPs emerge from this definition.[6] Together they highlight the differences between RPPs and other kinds of partnerships in education or other forms of research.

RPPs Are Long-Term Collaborations

RPPs go beyond a single scope of work outlined in a consulting agreement, a contract, or a grant. While partnerships vary widely in duration, our interviewees typically considered a partnership in its first or second year to be in the "early" or "emerging" stage of joint work, and working together for three or more years to be a "mature" collaboration. The "long-term" label reflected an open-ended commitment by partners that allows for the collaborative work to evolve. RPP leaders observed that such commitments are necessary to confront the tough issues educational systems face and to pursue ambitious research agendas. As one state policymaker involved in an RPP explained:

It's not just limited, with one or two research questions, and then the project is over and we move onto something else with someone else. Rather, [an RPP] means to tackle a particular area of research that is of interest to us. We may start out with a concrete set of research questions, but those may change or otherwise evolve over time as we learn new things.

As this leader noted, RPP agendas can—and do—evolve over time as partners uncover new problems, tackle implementation challenges, and pose additional questions that reflect a greater understanding of their shared goals and the problems to be addressed.

A single project is not enough to establish a collaboration as an RPP. An initial project that involves two or more partners may evolve into an RPP—but it can only officially emerge as such after the initial project concludes and the partners decide to continue working together. Partners may be tempted to call their initial collaborative effort an RPP when a funding agency provides the opportunity for them to come together under that label. However, it is more useful to consider this type of effort a collaborative research project until a record of multiple, successive, or overlapping projects can be established.

Researchers in RPPs collaborate in research efforts *alongside* or *with* students, families, community members, educators and education leaders, and policymakers. The term "alongside" communicates the numerous ways that research within RPPs often involves joint reflection among partners to gain perspective on a particular issue. The term "with" means that RPPs pay attention to who is (or is not) at the table in RPP research (Philip et al., 2018). In a certain sense, all research is conducted "with" others and requires cooperation between research participants and those conducting the research. However, cooperative research is not necessarily collaborative since researchers in traditional studies do not invite partners to help frame issues, nor are they necessarily concerned with ensuring that research insights are useful in helping expand how participants think about those issues. This collaborative approach to research distinguishes RPPs from traditional basic research, which typically is primarily conducted for a research audience.

RPPs Work Toward Educational Improvement or Equitable Transformation

Contemporary RPPs form with the goal of changing educational institutions and opportunities for the better. As interviewees explained, RPPs can focus on "pressing needs or challenges" or strategies to "leverage systemic strengths," and these issues can be rooted in practice, policy, or community needs. RPPs can work to advance local improvement or transformation efforts in a range of ways. Some RPPs seek to work within existing structures while others seek to design new systems. Some seek improvement on measures used in accountability systems for schools, like standardized test scores, while others seek to define outcomes valued by communities and not always measured in schools, such as centering Latinx parents in school-level budget decisions (Family Leadership Design

Collaborative, 2017). RPPs that seek equitable transformation work to move entire school systems toward greater equity, reducing disparities related to race and ethnicity, social class, gender and sexual identity, disability status, and other dimensions of inequality. Centering the needs of students, families, educators, and communities often illuminates systemic challenges to change that invite RPPs to explore new possibilities for how systems define and approach problems of inequity in education (Bang & Vossoughi, 2016).

Directly supporting improvement or equitable transformation goals contrasts with much of today's research in education. In an RPP, the primary audience for research is its partners. By contrast, the primary audience for much education research is other researchers. The importance of research peers is reinforced through processes like peer review, tenure and promotion, and publishing in specialized venues mainly read by other researchers. While these processes rarely involve evaluation by educators in school and community settings, researchers in RPPs are held accountable by their partners for producing timely and relevant research.

Engagement with Research Is a Leading Activity

Research is a central activity of RPPs that brings partners together. Partners use systematic methods to gather information to answer particular questions. Traditionally, researchers direct and define the research process, then share findings with others after the fact. RPPs upend this norm by involving a range of stakeholders in different phases of inquiry. Most RPPs conduct research that seeks to contribute to a larger body of research in education, creating opportunities for diverse stakeholders to help identify a focal question or to make sense of findings. Others engage in rapid cycles of inquiry to test "change ideas" rooted in

research (Hannan et al., 2015; Russell et al., 2019). In some instances, experiences within an RPP can lead to opportunities for participants to take on new methods of inquiry in their day-to-day lives and adopt identities of co-constructors of knowledge (Cammarota & Fine, 2010).

Research is also considered a product of RPPs, and is thus reflected in the ideas, findings, and tools that emerge from inquiry efforts. RPPs produce multiple products, including but not limited to peer-reviewed journal articles and publications that contribute to the education knowledge base. Research products can also take the form of research and practice briefs, webinars, or blogs (Farrell et al., 2018). Research can be "baked into" the design of tools, materials, or routines and then shared, such as curriculum materials that are developed with research-based instructional strategies (Ikemoto & Honig, 2010). Ideas generated by research can be carried into practice settings in ways that shift how people think about an issue and can have consequences for policy (Farrell, Coburn, & Chong, 2019; Schneider, 2014; Smith, 2013). As one researcher of RPPs explained, research from partnerships they studied aimed to produce "...practical knowledge that could be represented in tools, artifacts, people's heads, or communities of practice."

Finally, RPPs can support the *use* of research in decision-making, policymaking, or practice. A key reason is their ability to support the interactive processes central to research use, including persuasion, negotiation, and sensemaking (Amara et al., 2004; Coburn et al., 2008; Contandriopoulos et al., 2010). Research findings do not speak for themselves; instead, engagement with research requires people to make sense of conclusions, discuss their relevance to current context, and identify or design solutions in light of other financial, political, material, or temporal constraints (National Research Council, 2012; Huguet et al., 2019). Participants in an RPP may together review findings and discuss implications for policy changes (Henrick, et al., 2018). They can codesign

tools or professional development materials by drawing on ideas from research (Borko et al., 2017; Johnson et al., 2016). They may sift through the range of available evidence-based programs or adapt such strategies to their local context (Coburn & Stein, 2010). Regardless of the particulars, engagement with research supports broader RPP goals. As one researcher studying RPPs with school districts described, "Knowledge use is not the end game. The end game is creating better districts that are organized smarter, that do their work better, that understand things better, and support students better."

Collaborative arrangements with pursuits other than research as leading activities do exist between research organizations and schools or between researchers and community organizations. For example, a school district may regularly contract with a researcher to provide professional development to teachers over an extended period. A school of education may establish a partnership with a school district for the purpose of providing opportunities for teaching candidates to gain experience by teaching alongside mentor instructors. While both arrangements could be collaborative and support organizational goals, the arrangement would not be considered an RPP unless research is a leading activity.

An Evolution of the RPP Definition

This report builds on the original 2013 white paper, *Research-Practice Partnership: A Strategy for Leveraging Research for Educational Improvement in School Districts*. Here, we briefly name several shifts to orient readers who are familiar with the original RPP definition and typology (see Appendix A). The 2013 paper defined RPPs as "long-term, mutualistic collaborations between practitioners and researchers that are intentionally organized to investigate problems of practice and solutions for improving district outcomes." Our new definition departs from the original in four ways. First, it moves away from characterizing RPPs as focused on "problems of practice," in favor of a view that emphasizes the ways RPPs work toward system improvement and transformation goals (Bell, 2019). Second, rather than emphasizing that RPPs produce original analyses, the current definition emphasizes the ways research is considered a leading activity. In fact, RPPs can produce novel methods for improvement, build a body of knowledge across studies, or engage in efforts to codesign, test, and study tools or interventions. Third, more than being "intentionally organized," RPPs are designed to build on and use the expertise of a wide range of stakeholders. Finally, the new definition clarifies how the "mutualism" in RPPs involves power sharing and transforming relationships among researchers, practitioners, and communities—all in the service of educational equity or improvement.

RPPs are Intentionally Organized to Bring Together a Diversity of Expertise

Educational systems are complex, and an individual's position within those systems provides their view of issues and opportunities for change (Campano et al., 2016). RPPs bring together various people with unique expertise and perspectives to help accomplish the goals of the partnership.

Expertise relates to the perspectives, experiences, and know-how participants bring to a partnership. Educational leaders may bring an understanding of constraints on school systems, insight into classroom conditions, or strategic thinking about how to get things done within a school system. Those with a research background may bring expertise rooted in past research findings or research methods. Still others, like community and family members, may possess expertise based on lived cultural, historical, or political experiences in their local communities. Further, expertise is not always based on one's organizational home. Many researchers have been—and continue to be—educators familiar with the world of practice or policy, while some in policy and practice have experience with research methods and design (Newman et al., 2015). Community members and educators can contribute ideas that are grounded in both personal experience and encounters with other insights from educational research.

In RPPs, individuals with different roles offer diverse contributions to the work they complete together. RPPs may engage partner expertise through the joint analysis of study findings, helping partners make sense of data that can inform ongoing reform efforts (Kaplan et al., 2019) or through collaborative design (Ishimaru & Bang, 2016). One leader in an RPP driven by community's questions explained her partnership's approach to incorporating diverse perspectives in this way:

How do we honor, value, and bring the perspectives of community members, students, teachers, and groups that don't necessarily have the same institutional power that a researcher has, or a district leader has? How do we bring them into the process? A lot of RPPs have the potential to do that. It's honoring those voices in different ways than a traditional academic study does. There are more venues for participation in real and authentic ways.

In whatever manner RPPs structure their interactions, they work to center the experiences of practitioners, policymakers, students, families, and/or community partners as critical sources of knowledge.

The fact that RPPs intentionally leverage diversity of expertise distinguishes them from other long-term research collaborations. Researchers may find that some collaborations only invite the voice of a single educator in shaping the research. However, the infrastructure that supports this type of collaboration is likely very different from that which involves a research team and multiple educators, particularly if the goal is to leverage the diversity of available expertise. Intentional efforts to elicit multiple perspectives and voices enables RPPs to address the complexity of systems from the standpoint of people located in various places within those systems. Yet it presents the concurrent challenge of creating strategies to ensure that participants have a say in an RPP's goals and functions.

RPPs Employ Strategies to Shift Power Relations in Research Endeavors to Ensure All Participants Have a Say

Many contemporary RPPs intentionally offer multiple stakeholders the opportunity to exercise power by giving them a say in partnership goals and activities. RPPs exist to address an historical and persistent imbalance of power: the researcher's long-exercised power to define the focus of research without giving participants a say in purposes and methods, in effect, turning them into subjects who lack voice or power. RPPs also contend with the fact that school and community partners can exercise power by defining the terms of engagement, granting or limiting access to research participants, and sharing or withholding information about internal dynamics of their organizations. In addition, while the power to define goals and set direction are often shaped by a partner's position as a researcher or educator, it is also shaped by their race, class, gender, and sexual orientation, among other factors (Ishimaru & Takahashi, 2017).

A hallmark of RPP work is its careful attention to power dynamics, including who is involved; how data are collected, managed, and used; and who makes the decisions about when and where to apply for funding. RPP leaders seek to answer questions about people, priorities, and projects through processes that pursue the perspective of multiple participants and stakeholder groups.

Attention to power relations in the research is what makes RPP research distinctive. Past grant portfolio reviews of agencies such as the IES show limited evidence of stakeholder considerations in researcher-initiated projects (Government Accounting Office, 2013). Most researcher-initiated research grant proposals reference prior research and national policy documents in making a case for the research, rather than draw on the

RPPs can support the *use* of research in decision-making, policymaking, or practice. A key reason is their ability to support the interactive processes central to research use.

documented concerns and priorities of research participants. In intervention research, participant involvement in the codesign of interventions is often underspecified or absent (Ormel et al., 2012; Roblin et al., 2019). In RPPs, the work to ensure that participants have a say in the focus of joint work is considered integral to research efforts, even if it requires reconciling the competing priorities that can emerge when research and practice come together.

A Note about Power Dynamics in RPPs

Imbalances in power can factor into a partnership's relationships, processes, and its distribution of resources and labor in many ways. The aspiration to create more democratic forms of RPP participation can easily lead to broader representation within them without actually transforming dynamics so members of historically marginalized communities have a genuine say in the joint work (Bang & Vossoughi, 2016; Zavala, 2016; O'Connor et al., 2011). An individual or organization with relatively greater status or authority may influence how decisions are made, whose voices are given more weight, and how partnership members interact (Coburn et al., 2008). Power imbalances can be related to partner or stakeholder identity (e.g., race, ethnicity, gender, sexual orientation, socioeconomic status, [dis]ability, language, immigration status, cultural affiliation, etc.); differences in organizational affiliation, professional role, or formal education; and the intersections among these (Denner et al., 2019; Lezotte et al., 2021; Vakil & McKinney de Royston, 2019; Vakil et al., 2016; Wegemer & Renick, 2021). These dynamics have historical roots in intersecting systems and structures of power, oppression, and disenfranchisement (Combahee River Collective, 1995; Crenshaw, 1991).

Partnerships in Action

The following brief descriptions of two RPPs illustrate the updated definition of RPPs.

The University of Chicago Consortium on School Research
Generally viewed as one of the first RPPs and recently celebrating its 30th year, the UChicago Consortium on School Research is a partnership between researchers at the University of Chicago and Chicago Public Schools (CPS). Since 1990, the partnership has tackled a wide range of district issues, with sustained efforts on dropout prevention, social-emotional learning, the impact of school closings, and factors that support school level-improvement (Roderick et al., 2007). UChicago Consortium research has informed the district-wide implementation of an "on-track" indicator system that educators use to identify and support ninth grade students at risk of falling behind in high school (Allensworth, 2015). The UChicago Consortium's surveys of parents, students, and educators also provide the district with unique information on relational trust among stakeholders in the school system and organizational conditions for improving schools. Analyses of these data provide a framework that Chicago and other districts have used to organize system-wide improvement efforts (Bryk et al., 2010). Like other RPPs, the UChicago Consortium is organized to broaden decision-making power through an advisory board which helps define the focus of the work. The board includes representatives from the school district, members of the teachers' union, and community leaders.

Redwood City Together
The Redwood City Together initiative is a long-standing community-based RPP comprised of community agencies in northern California's Redwood City, its school district, and research partners at Stanford University's John W. Gardner Center for Youth and Their Communities. Launched in the 1990s, the initiative aims to form partnerships that support the health and well-being of youth and families in Redwood City and North Fair Oaks. These partnerships look toward outcomes such as reducing the impact of poverty, supporting student success in school, promoting community health and wellness, increasing community engagement, and enhancing safety.[7] Over the past 20 years, research partners at the John W. Gardner Center have provided support through facilitation, program development, and studies of specific initiatives on family engagement and community schools. They have also conducted analyses of community issues grounded in the Youth Data Archive, a database of administrative data from multiple public agencies complemented by researcher-generated datasets (McLaughlin & O'Brien-Strain, 2008). Notably, the RPP's researchers maintain formal data-sharing agreements that require partners to have a say in what questions to ask, which analyses to publicly report, and how and when results will be shared with—or used by—others (Nelson et al., 2015).

Variation in Today's RPPs

While RPPs may share the essential elements described above, they can greatly differ in substance and structure.[8] We have identified four main points of variation in the features of today's RPPs: goals pursued, organizing strategies, research approaches, and funding sources (see Figure 1). To illustrate these dimensions, we draw on recent research, including short profiles of RPPs and our own studies of RPPs.[9] While there is no single correct way for an RPP to organize, naming the diversity of organizational styles can inform choices on how to design them. It can also shape future scholarship on the effects design features may have on outcomes.[10]

Goals

All RPPs work toward goals of educational improvement and transformation, but the nature of those goals varies widely from partnership to partnership. In our recent interviews, partners stated that these differences matter, and reflect the deeply held values of those involved. Two elements are particularly critical to an RPP's goals: (a) a focused versus broad scope of work, and (b) different conceptions of equity.

Focused versus broad

RPPs vary in the breadth of initiatives they pursue. In our study of IES-funded RPPs, we found that some pursued a narrow focus of work such as supporting the improvement of instruction in a particular subject area, for example, literacy or science (Farrell et al., 2018). Other RPPs, like the Research Alliance for New York City Schools, have a portfolio of projects focused on evaluating district policies; identifying patterns in access and persistence as students move from high school to college; and engaging in implementation studies of programs designed to combat racism, among other areas of work.[11]

An in-depth approach has benefits. A central focus area may allow partners to dig in deeply to work together. They may be able to concentrate efforts rather than try to work on several issues at once. Working in one area over an extended period may allow the partnership to gain insights that come with "following the contours" of a problem over time (Donovan & Snow, 2018), but it can come with risks, too. An RPP focused on one area may lose attention and support under new leadership or if organizational needs and priorities shift. A narrow focus may also present funding challenges if the issue is not a focus area for funders.

Working on a broad range of issues does have its affordances. Given the intertwined nature of educational issues, a team focused on several areas would likely make more progress than a
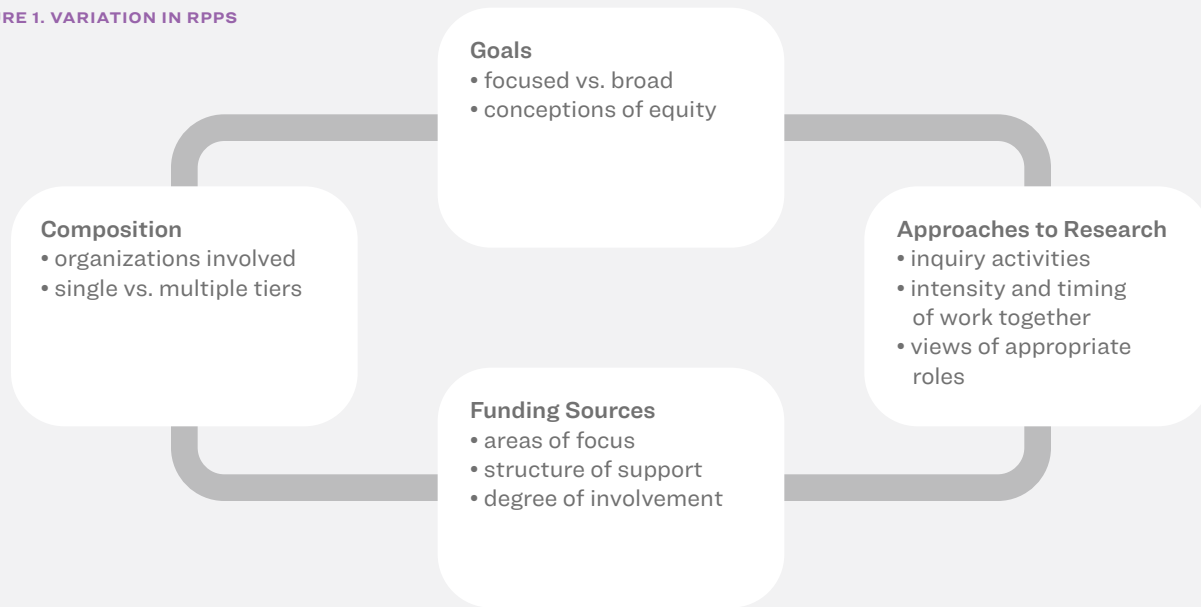
team narrowly focused on an issue that did not attend to related challenges or circumstances. In RPPs that work with large educational systems over time, practice or community partners may ask research partners to meet the system's various needs by taking up a broad agenda. Yet it can be difficult for RPPs to maintain a broad focus because individual researchers tend to have expertise in only one or two areas. A broad agenda may also strain resources and capacity, as partners may have limited time to contribute to RPP work (Bryk et al., 2015). Working on multiple issues usually requires more people with relevant knowledge, expertise, or authority involved in the partnership.

Different conceptions of equity

We earlier discussed how addressing inequities between researchers and practitioners is a central feature of all RPPs. By definition, RPPs are designed to advance equity goals by addressing historical imbalances of power between researchers, educators, and community members. Here, equity is central to the *process* of partnering.

Yet some RPP leaders we interviewed conceived the equity in their work in other ways, which likely reflects the diversity of understandings of equity in the broader environment (Philip & Azevedo, 2017; Henrick et al., 2019).[12] For some, conceptions of equity centered on the *outcomes* their partnerships sought to achieve. The goal of some RPPs is to understand persistent differences in outcomes for various ethnic groups or socioeconomic levels (Allensworth, 2015; Booth, Oyer, et al., 2015; Durham et al., 2015). In this vein, RPPs have focused on access to high-quality pre-K for students of different racial/ethnic, economic, or linguistic backgrounds (Baumgartner, 2017); reclassification rates for English learners in different instructional settings (Umansky & Reardon, 2014); disproportionalities in discipline rates (Anyon et al., 2016); inequitable placement of effective teachers and principals (Grissom & Bartanen, 2019b & 2019a); and other outcomes. After identifying a disparity in outcomes, an RPP might seek

FIGURE 1. VARIATION IN RPPS

Goals
• focused vs. broad
• conceptions of equity

Composition
• organizations involved
• single vs. multiple tiers

Approaches to Research
• inquiry activities
• intensity and timing of work together
• views of appropriate roles

Funding Sources
• areas of focus
• structure of support
• degree of involvement

to address the inequity through changes in educational practice, new or revised policy, or adoption of an intervention. Progress can be measured by closing gaps or raising overall outcome levels.

Other RPPs described their equity goals in terms of addressing the *systems* that contribute to or reproduce inequality. These RPPs explicitly focus on attending to the historical, political, social, and economic systems that (re)produce social injustice related to race, income, language and immigration status, disability status, and gender and sexual identity, among other injustices (Anyon et al., 2018; Leonardi & Staley, 2018; Campano et al., 2016). As one partnership leader noted, her partnerships demonstrate "explicit attention to historical inequities. We surface them, discuss them, and try to frame the work and the relationships in terms of the historical inequity." The RPP then works to disrupt the systems that reproduce these outcomes by centering the community's concerns to determine the focus of research, and by creating new roles where community members are central to knowledge generation and solution identification (York et al., 2020).

An RPP's equity orientation first matters because it animates the partnership's work. An RPP's conception(s) of equity is likely to inform which partners are at the table. Second, it likely influences the partnership goals, such as whether partners focus on "given" system outcomes—or propose outcomes valued by stakeholders whose voices typically are not at the table when goals for improving education are set. Third, the equity orientation likely shapes whether the RPP foregrounds systemic processes as primary or secondary targets of change.

The degree to which equity is a central frame for RPPs also can vary. Some may center their work around an equity agenda and explicit goals for equitable outcomes or systems change. Others may seek to support similar types of goals but do so without framing their work in terms of reducing inequities. Still others do not see themselves as explicitly engaging in equity efforts.

There may be variations in the degree to which shared understandings of equity exist within an RPP, and how they are—or are not—reflected in its work. Some partnerships may have a clear vision for equity shared across participants, while others may have a more diverse set of interpretations on if (and how) equity is represented in their work. Explicit discussions of equity in RPP efforts can continue to clarify this dimension of RPP goals and lead to a better understanding of the diversity of views held about equity in specific partnerships and, more broadly, in the field (Henrick et al., 2019).

Partnerships in Action

The following two profiles introduce RPPs with goals that vary in breadth and in how they represent equity. The first is broad in its goals, focusing on equity in terms of reducing achievement gaps linked to race. The second is more narrowly focused on reducing racial disparities in discipline and promoting restorative approaches to community-building within a district.

Strategic Education Research Partnership

The vision for the Strategic Education Research Partnership (SERP) Institute is to foster long-term research, development, and implementation partnerships with school districts to generate lasting improvements in educational practice. SERP's origins trace back to a National Research Council report that called for two-way partnerships between leading researchers and educators in school districts that would function as field sites for the research (Donovan et al., 2003; Donovan & Pellegrino, 2003). Launched in 2003, SERP works with district leaders[13] in its partner districts to identify persistent problems of practice, recruit researchers, organize ways to draw upon the expertise of practitioners, and engage design- ers who can shape ideas into tools and materials for use at scale (Donovan et al., 2013).

SERP's portfolio exemplifies RPPs that take on a broad scope of work. Since district focal issues vary based on local needs, SERP's work represents a broad range of significant issues school districts face, including adolescent literacy (Snow & Lawrence, 2011); mathematics (Booth, Oyer, et al., 2015); science (Henderson et al., 2015); multilingual education (Umansky & Reardon, 2014); and organizational coherence (Forman et al., 2017). As an organization with national reach, SERP encounters different focal areas that reflect the needs of the particular school districts involved. This also means that SERP's district partners potentially can turn to the organization to address a wide range of focus areas—a benefit to part- ners that typically have responsibility for multiple areas. Attending to many focus areas can be challenging since it requires recruiting multiple researchers with rele- vant expertise who want to engage in sustained work in a district setting (Donovan et al., 2013).

SERP addresses equity in several ways. First, it attends to equity in its processes by designing participation structures that account for the status of participating members and seek to maximize the contribution of different groups (Donovan et al., 2013). In its design partnerships, SERP develops structures that bring together and integrate the expertise of district and school leaders, classroom teachers, researchers, and designers. Second, in some of its work, SERP's explicit goal is to address equity in teaching and learning outcomes by iterating on educa- tional practices, designing and testing interventions, and developing new policies. For example, SERP's partnership with the Minority Student Achievement Network

Partnerships in Action

(MSAN) addresses racial achievement gaps in partner districts by developing and testing interventions intended to help close those gaps (Booth, Oyer, et al., 2015). Embedded within existing school systems, these efforts consider current practitioners' needs, constraints, context, and history.

DU-DPS Partnership on Equity in School Discipline

The DU-DPS Partnership on Equity in School Discipline is a collaborative effort that focuses on addressing racial disparities in discipline. The partnership involves local school district leaders at Denver Public Schools (DPS) and the Graduate School of Social Work at the University of Denver (DU), along with meaningful engagement efforts with Padres & Jóvenes Unidos (a multi-issue advocacy organization), the Advancement Project (a national racial justice organization), the Denver Classroom Teachers Association (DCTA), and the National Education Association (NEA).

This RPP illustrates a partnership focused on a single priority: reducing racial disparities in school discipline outcomes. To advance its goal, it conducts research to inform local district policies and practices and identify strategies that can be more broadly disseminated. A sharp focus on school discipline has allowed the partnership to gain a better understanding of how and when restorative practices can be implemented, and outcomes of such strategies (Annamma et al., 2019; Anyon et al., 2016).

Racial equity in partnership processes, outcomes, and systems centrally motivate this work. First, the partnership's membership is intentionally diverse, and includes a range of stakeholders whose voices typically are not heard. The partnership has focused its research on how school discipline policies contribute to inequities in the suspension and expulsion rates of groups that tend to be overrepresented, including boys; students in special education; and Black, Latinx, and Native American youth in general. It also has tracked improvement outcomes among students who have participated in restorative justice practices. Finally, the partnership's efforts have documented these issues from a system perspective, considering the racial, historical, and situated nature of disciplinary outcomes in schools (Anyon et al., 2014). Its current work is focused on punitive in-school suspension rooms.

Composition

Today's RPPs include researchers who work with different types of settings, including universities and research nonprofits in conjunction with partners from state agencies, local school districts, schools, community organizations, families, and youth.[14] Which groups are involved in a partnership matters because each can contribute different and necessary sets of skills, perspectives, and ideas to the RPP's collaborative work.

Organizations involved

Some RPPs involve just a few organizations, as would be the case when a single research team partners with a school district. Other RPP structures can be more complex involving multiple organizations. Of the 28 RPPs IES funded throughout 2013–2015, 19 involved two organizations while nine others involved three or more (Farrell et al., 2018). As one participant who worked in multi-organization RPPs noted, "In all the RPPs I've been involved in, it was never just one organization on the practice side. Sometimes on the research side, there are also multiple institutions, too."

There are benefits and challenges associated with multiple-partner RPPs. On the one hand, multiple partners can greatly expand a partnership's capacity to accomplish ambitious reform goals. They can help the RPP gain access to expertise relevant to the broad range of contexts that shape learning and development (McLaughlin & London, 2013). The involvement of multiple organizations also has the potential to link educational services in a community. Yet with multiple organizations there is a greater possibility of goals coming into conflict, or for organizations in the RPP to find themselves competing for scarce resources (Russell et al., 2013). More resources must be devoted to coordination to ensure coherence (Russell et al., 2015; Drahota et al., 2016).

For some, conceptions of equity centered on the outcomes their partnerships sought to achieve. Other RPPs described their equity goals in terms of addressing the systems that contribute to or reproduce inequality.

Partnerships in Action

The following two profiles examine RPPs that vary in composition in terms of the number of organizations and different stakeholder groups involved in each. The first illustrates a partnership between a school district and a university-based research center. The second highlights a partnership that includes two universities and a professional association comprised of state agency leaders in science education.

Houston Education Research Consortium

The Houston Education Research Consortium (HERC) began as a partnership between the Houston Independent School District (HISD) and Rice University (López-Turley & Stevens, 2015). HERC and other partnerships like it concentrate efforts at a single tier—in this case, among district central office leaders and HERC researchers and staff. Because many of its research findings represent outcomes of implemented policies, HERC focuses on engaging district leaders who can learn from and act upon the findings in future policy efforts.

HERC's composition has shifted over time. Upon its inception, the partnership was relatively small and lean. Central to its launch was the personal relationship between the district's assistant superintendent for research and accountability and a Rice professor, with support from additional staff (López-Turley & Stevens, 2015). Based on its goals, the RPP's leadership determined central office leaders to be the group within the educational system with the greatest stake in the partnership's work.

As the work expanded, so did the partnership. HERC saw greater vertical elaboration of its structure. Its main director now oversees three associate directors: one overseeing regional work, one overseeing HISD research activities, and one handling broader human resources and grant management. Each associate director has a team of senior and junior analysts, graduate students, and undergraduates. HERC also developed new key roles to support coordination efforts between HERC and HISD. One role was a broker tasked with connecting different researchers and research projects in HERC with various departments in the central office. The broker splits time between HISD and HERC. The role is particularly critical in project initiation, helping to cultivate project ideas, connect researchers and district leaders, and facilitate meetings. HERC has also expanded its work not only to focus on HISD but also on ten smaller districts within the Houston metropolitan area.

HERC leaders note that working with HISD central office leaders makes sense since they have decision-making authority around subsequent policy decisions. Focusing at the one tier, however, may mean fewer opportunities for other relevant stakeholder groups whose perspectives may be of value. In the future, HERC intends to expand its work with stakeholders beyond district leaders. In so doing, a learning curve in navigating new roles and relationships will likely arise.

Partnerships in Action

The ACESSE Partnership

The Council of State Science Supervisors is a professional association for science leaders employed by State Education Agencies across the United States. Since 2011, the organization has actively supported implementation of the standards presented in *A Framework for K–12 Science Education* (National Research Council, 2012). These efforts include the development of Advancing Coherent and Equitable Systems of Science Education (ACESSE), an RPP funded by the National Science Foundation. Its focus is to develop and test a suite of professional development resources designed to help educators use classroom assessments that are aligned to science standards and connected to students' interests and identities (Penuel et al., 2018). The partnership more recently defined a set of intersecting equity and justice goals around which codesign efforts are organized, such as disrupting ableism in science education and centering racial justice (Bell et al., 2021).

ACESSE is organized as a networked improvement community with broad horizontal and vertical reach.[15] Its hub consists of two leaders from the Council of State Science Supervisors (CSSS) and researchers from the University of Washington and the University of Colorado Boulder. Its functions include organizing the collaborative design of resources; supporting states in conducting small, rapid tests of change associated with the use of resources; and studying the overall effectiveness of its network. The network includes a core group of 13 state teams that meet twice yearly to collectively engage in design activities. Each team is led by a science supervisor who selects other attendees. Past participants have included district leaders, teacher educators in universities, professional development providers, and individual teachers. Each team creates its own plans for implementing resources in its state. They also investigate the short-term effects of their efforts on educators' visions for teaching and practice, guided by the process of creating "aim statements" that target concrete improvements to practice.

ACESSE is an example of a partnership that includes many types of organizations and spans different levels of educational systems. This breadth is necessary since one of its key purposes is to promote coherence in systems of science education (i.e., alignment of key components of education infrastructure). Its peer network, moreover, has been a strength because it has allowed leaders to arrive at common understandings of equity in science teaching (Kaplan et al., 2019). At the same time, the effort's success depends in part on vertical state teams comprised of leaders at different levels of state systems (Wingert et al., under review). In states with high turnover of team members, progress has been more limited.

Single or multiple tiers

Some RPPs engage with actors from a single layer of an educational system only, such as teachers (Thompson et al., 2019); district leaders (Cobb et al., 2018); or state leaders (Booker et al., 2019). Other RPPs span actors from multiple tiers.

Working with a single tier of the system can enable greater focus since it may allow the RPP to dig deeply into a focal issue or question in a particular setting. The potential downside to deep engagement with a single tier is that most educational issues are embedded within complex systems. Paying less attention to the broader system context may reduce how sustainable a change can be. If the partnership does not engage actors with decision-making responsibility—that is, individuals with authority to act upon findings—it may be difficult for system-wide changes to occur (Coburn et al., 2008; Farrell et al., 2018).

By comparison, working with actors from multiple tiers may better enable vertical coherence to emerge around a common vision for change, in other words, get them on the same page with respect to goals. At the same time, working across a system's various tiers may surface tensions that arise from disparities in power and the goals of actors at distinct levels that must be managed (Johnson et al., 2016). As an RPP leader involved in a multi-tiered partnership described, "When you've got these multilevel and multi-tiered steps of practice partners, there are different roles and positionalities that are played by different organizations in the partnerships" that must be navigated.

Approaches to Research

While all RPPs engage with research as a leading activity, how RPPs structure their research varies by inquiry activity, length and intensity of an engagement, and roles for participants.

Inquiry activities

Today's RPPs reflect a rich methodological diversity as they undertake a broad range of questions and activities (Thompson et al., 2017). RPP research may be descriptive (i.e., aiming to explore or redefine focal areas), or it may be evaluative (i.e., focused on generating causal inferences about the impacts of programs or practices) (Blazar & Kraft, 2019). In other cases, researchers and educational leaders may co-develop and test strategies or tools for improving teaching and learning system-wide. They may use approaches adapted from the learning sciences to conduct research on interventions in classroom, school, or district contexts (Fishman et al., 2013). Other RPPs draw on continuous improvement activities to work on focal areas. In these cases, RPP participants may conduct plan-do-study-act cycles and use other improvement science tools within a NIC (Hannan et al., 2015; Nayfack et al., 2017). Still others may engage in community-based or participatory action research with youth, families, teachers, and communities, seeking to transform traditional assumptions about who holds and creates knowledge (Campano et al., 2016).

In the past, certain research activities have been associated with particular types of RPPs. Improvement science methods, for example, generally have been associated with NICs. However, our recent study of IES-funded RPPs shows there is no longer such a clear-cut association between type of research activity and type of RPP (Farrell et al, 2018). Many RPPs engage in multiple kinds of inquiry activities. This hybridity sometimes emerges from following where the research leads

the team. For instance, one RPP worked closely with district leaders to design structures that supported high-quality mathematics instruction. The work evolved to multi-partnership collaboration to develop practical measures for mathematics instruction—a tool to gather quick, frequent, and useful data with roots in improvement science (Ahn et al., 2019; Jackson et al., 2016).

Embracing methodological diversity can be challenging for partnerships. For example, it may require researchers to develop new skills to meet an emerging need of a partner (Penuel & Gallagher, 2017). It may also require research partners to make sense of unfamiliar forms of data. An RPP that engages its partners in analyzing such data can require additional support to make sense of the data and use it to inform subsequent decisions (Kaplan et al., 2019). A partnership can also struggle to center the life experiences of partners who come from marginalized communities, or even to hear their perspectives if offered in ways not readily recognized by powerful groups within the RPP (O'Connor et al., 2011).

Intensity and timing of collaborative work

The nature of inquiry activities has implications for the intensity and timing of an RPP's collaborative work. For instance, evaluative research may require more punctuated collaborative work that takes place at specific intervals. In these cases, collaboration may be the most intensive at the start of a study when groups negotiate a research agenda or a set of questions, and at the end when practitioners respond and react to findings. This arrangement may require less of busy practitioners or community members, but it may also mean the partnership's work is not as connected to the day-to-day work of its practice partner(s).

By contrast, collaborative design work requires intensive and continuous joint work. The need for ongoing collaboration is particularly high with this type of work (Penuel, 2018). Higher demands can be placed on practitioners' time;

When lines are blurred, a trust may develop that allows partners to see each other as critical to their own success.

not only may they be required to participate in designing and implementing innovations but also in collecting data to inform rapid cycles of redesign (Hannan et al., 2015). Taking on these roles may require the RPP to help participants to develop new dispositions and capacities, or entail changes to organizational roles and norms (Russell et al., 2017). Yet intensive joint work activities can be beneficial for developing trust and a shared identity that motivates persistence in often challenging and ambitious joint work projects (Mehta et al., 2018).

Views of appropriate roles

In some RPP inquiry efforts, researchers and practitioners take on conventional roles. In these cases, data collection or analysis efforts rarely involve practice partners, and researchers tend not to play a large role in conversations around policy responses or solutions. The rationale for traditional roles lies in a commitment to maintaining independence for researchers so research finding objectivity is not compromised. An RPP may further hold that researchers are in the best position to make decisions about research methods. Finally, there may be political benefits to having an RPP's researchers seen as independent, as this distance can add credibility to their work in the eyes of stakeholders (Connolly et al., 2012). The perspective that comes with a more traditional researcher role may provide a source of independent judgment about the value or worth of policies and programs. In addition, it may be easier for those new to an RPP to enter collaborative work through more familiar roles.

In other RPPs, partners are asked to undertake roles that require them to engage in ways that blur the lines between research and practice (Ghiso et al., 2019). In many RPPs, teachers, administrators, and community members take on new roles in gathering data, analyzing results, and drawing conclusions (Cohen-Vogel et al., 2015; Harrison et al., 2019; Ghiso et al., 2019; Hannan et al., 2015). In still other RPPs, researchers are active participants in decisions on implementation and adaptation,

quite unlike traditional research projects where they keep implementation at arm's length for fear of disrupting results (Henrick et al., 2016). Still other RPP researchers may take on the role of advocate for community priorities (Oakes & Rogers, 2007). As one RPP participant explained:

One of the important dynamics in shifts when you start taking on equity deeply in an RPP is to recognize how you make room for real learning within this work. If people are learning and growing, then their roles should shift, not only for practitioners, but also researchers.

When lines are blurred, a trust may develop that allows partners to see each other as critical to their own success. Closer work may also foster greater learning and capacity-building for all parties in the partnership (Schenke et al., 2017). Engaging others in knowledge-building can carry the potential benefits of building relationships with partners, gaining a better sense of the challenges of implementation, and understanding how politics and policy are likely to influence RPP work (Russell et al., 2017). Finally, a commitment to close engagement can reflect different assumptions about how the knowledge developed in an RPP is linked to identities and positions of members of society (Campano, Ghiso, & Welch, 2015).

A downside to the blurring of boundaries is that it requires more active management of bias (Kirshner, 2010). When participants are directly engaged in research, the team may find it difficult to criticize actions of partners or render negative evaluations of policies and programs. Educators, youth, and community members engaged in research may find data collection efforts burdensome and experience confusion about their roles (Hannan et al., 2015; Penuel et al., 2007). Finally, confusion around roles or ambiguity about who partners are and what they bring to the table may stall collaborative work efforts, requiring the partnership to reestablish a shared vision of roles (Farrell, Harrison, & Coburn, 2019).

The following two profiles illustrate the variety of research and inquiry activities RPPs might engage in. The first RPP uses a mixture of large-scale analyses of administrative data and improvement science methods. The second primarily relies on participatory action research approaches.

CORE Districts Improvement Communities and the CORE-PACE Partnership

The CORE Districts partnership (CORE) represents eight large California school districts comprised of over one million students.[16] CORE started with two joint proposals submitted to the federal government: the first an unsuccessful 2010 proposal for federal Race to the Top funds and the second a successful waiver to the No Child Left Behind Act (Gallagher & Cottingham, 2019). Along the way, CORE joined with Policy Analysis for California Education (PACE), a team of cross-institutional researchers, to launch a partnership to support the districts' continuous improvement efforts as well as California's broader policy and practice communities

The CORE partnership has taken several approaches to research over the years. Early on, CORE Districts drew on ideas from improvement science to identify a shared problem of practice: improving mathematics achievement in fourth through eighth grade among African American and Latinx students. It next engaged in systems analysis activities to understand the issue within and across its eight districts (Nayfack et al., 2017). In its second year of collaborative improvement work, CORE supported five districts to launch local improvement teams at schools. The teams used improvement science tools and protocols to identify strategies that could impact the focal area, to test ideas, and to gather data about the impact of those change ideas through plan-do-study-act cycles (Gallagher et al., 2019).

Today, research informs the CORE Districts' efforts through the partnership in three additional ways. First, CORE and its partners at PACE and Education Analytics manage a student-level longitudinal database of data gathered from the eight districts. PACE helps support the development of research questions from researchers and/or districts and oversees an approval process that allows district staff to opt-in. The studies represent a range of policy- and practice-relevant questions on topics such as social-emotional learning and the effects of policies on student outcomes (e.g., the impact of transitional kindergarten on student outcomes in middle grades). The work is shared in multiple formats, including policy briefs and peer-reviewed journal articles that outline longer-term outcomes for districts, schools, and students. Second, PACE research partners are involved in developmental evaluation efforts, typically drawing on qualitative methods to explore different aspects of implementation of the CORE Districts' continuous improvement communities. Finally, CORE-PACE partnership staff provide more

Partnerships in Action

Partnerships in Action

immediate feedback and support, serving as researchers "on speed dial" when needed (Penuel & Gallagher, 2017). This type of work involves sharing just-in-time summaries of bodies of research or weighing in on questions of data collection and measurement.

The different approaches to inquiry have changed over time as the goals of the CORE Districts have evolved. Like many RPPs, CORE-PACE's research activities have been influenced by personnel turnover, as well as an evolving sense of the most useful role for the partnership itself. While it may be challenging for any RPP to navigate new roles and different paces of work, adapting helps ensure continued collaboration.

Aquinas Center-Penn Partnership

The partnership between researchers from the University of Pennsylvania and Teachers College, Columbia University, plus a school, a Catholic parish, and a community center is an example of an RPP that employs participatory research methods. Begun in 2010, the partnership supports families and youth from Philadelphia's Indonesian, Vietnamese, Latinx, and Black communities. Its focus is on investigating and acting upon educational inequities they face from a human rights perspective. Among the RPP's projects are the design and implementation of an after-school comics club for elementary students, a youth research group, and action research by parents focused on the city's high school admissions process (Low & Campano, 2013; Campano, Ngo, & Player, 2015; Campano et al., 2016).

To ensure that all voices are heard, each project is co-defined by researchers and participants from the project's partner organizations (Ghiso et al., 2019). The RPP draws on a tradition of practitioner-oriented research that regards everyone involved as fully capable of taking on the overlapping roles of designer, implementer, and researcher. Long-standing power dynamics can be quite durable, so partner organizations must explicitly address them and create participation structures that enable typically marginalized voices to be heard.

The norms that guide the work are explicit, and partners are mentored by both university faculty and community partners in practices that reflect those norms (Campano, Ghiso, & Welch, 2015; Ghiso et al., 2019). The RPP names the asymmetry of power that exists between the university and community partners, thus arguing for methods that take participants' knowledge, experiences, and perspectives as a critical and privileged starting point for the research. The norms demand that participants take a critical stance toward the research, asking questions about who benefits from it—and how. The partnership is guided by norms of transparency and the power of partners to co-construct research questions and findings. The RPP draws on decolonial and feminist theoretical perspectives that reflect its commitments. It engages younger scholars with these perspectives and provides experiences of working in partnership to support them in developing hybrid identities as scholar-activists and scholar-advocates.

Funding Sources

Many RPPs are dependent upon external funding (see Table 1 for examples). To date, the U.S. Department of Education, the National Science Foundation, the Spencer Foundation, the William T. Grant Foundation, the Hewlett Foundation, and the Bill & Melinda Gates Foundation have supported research in partnership. Many local and regional foundations also have supported partnerships as part of place-based investments in the infrastructure for research-informed education in their local communities, including in Baltimore, Chicago, Philadelphia, Houston, and other locations. In some cases, funder programs specifically focus on developing or sustaining RPPs; in others, a funding source supports specific research projects for which RPPs are eligible to apply. Available funding from different sources not only broadly enables RPP work to proceed (or not), but it can shape the nature of the work in other ways, too.

Areas of focus

Funders set priorities for areas of focus. To successfully apply for funding, RPPs must describe their partnership activities in terms of a funder's priorities. In some cases, funders have specific investment priorities intended to spur research in a particular area. One recent example is the National Science Foundation's CSforALL initiative, which has invested millions of dollars in dozens of RPPs focused on computer science education.[17] Other funders support a range of topics and research questions that RPPs pursue, as long as they fall under the broader focus areas. In this case, RPPs wishing to apply to conduct research need to focus on the broad priorities set by the funding agency. Similarly, funders may differ in their willingness to fund various types of research or inquiry. For example, a funder interested in causal inference research may fund partnership projects with randomized control trials or quasi-experimental

designs but not design-based research or improvement science efforts.

Some RPP leaders we interviewed greatly appreciated the increase in funding available for RPPs. Many were happy that dedicated funding lines exist to support research and local improvement through RPPs. However, they also noted the trade-offs that come with burgeoning grant opportunities. First, as with any grant application, these new opportunities require time and effort, thus taking attention away from ongoing efforts. This was particularly challenging for leaders of newer RPPs who felt it was difficult to develop proposals for continued work before they had had sufficient time to establish routines for communication and coordinating work (Farrell et al., 2017). Second, some RPPs found themselves stretching to propose lines of work that aligned with a funder's priorities, even though they were not necessarily a focus for the local community. This was a particular sticking point for those that felt RPP efforts need to be driven by local questions, not the interests of funders.

Structure and limitations placed on what funding can support

As with traditional research, funding for RPPs can vary in amount given and the level of overhead allowed during a particular time frame. Funding amount directly affects the scope of proposed research. It greatly influences which goals a partnership may have the capacity to work toward. It also can influence how many staff members the partnership can afford or how often partners come together to engage in joint work.

In some cases, funders cap grants at a standard amount (e.g., up to $400,000) for a particular time frame (e.g., two to three years). Other grant programs take a differentiated approach to RPP funding. Here, different goals, timelines, and funding amounts apply to newer partnerships looking to establish work compared to well-established partnerships that are prepared to engage in substantial, longer-term projects.[18] Grants with shorter time

frames may help launch joint work within an RPP, although it also means the partnership must return to grant writing sooner in order to extend it. Grant programs that support larger amounts of funding with more extended time frames may be better positioned to support an RPP's longer-term goals. However, the challenge with developing longer-term grant proposals is the degree of planning and detail needed from the onset to win the proposal. Executing a detailed five-year plan may be difficult for an RPP, particularly when emerging priorities or problems come to the fore, changes in leadership occur, or organizational turnover requires revisiting the direction of the work. Third, only a few funding opportunities allow partnerships to use funds to build the infrastructure required to support themselves over the long term—a key need for partnerships.

Level of involvement

Funders have different levels of involvement with grantees once projects are awarded. Some take a hands-on approach to shaping and managing projects, particularly publications. For example, in 2011 the IES created new guidelines for the Regional Education Laboratories (RELs) it funds to provide research and support to school districts and states. The guidelines required the RELs to adopt several RPP qualities, including forming long-term relationships with educational agencies that focus on core problems identified by educators. The goal was to make evidence-based decisions to improve outcomes. As several of the REL leaders we interviewed explained, each REL had a portfolio of projects—some of which would classify as work in RPPs. Per federal guidelines, the IES requires all REL research and technical assistance products to undergo an external peer review process. Thus, as a REL funder, the IES is centrally involved in the review and publication of research products for its RPPs in ways that other funders are not. In other cases, funders may influence the level of autonomy a partnership has in adjusting its

course when changes inevitably arise (Penuel & Gallagher, 2017). At various points in the work, the partnership will likely encounter changes, such as personnel turnover or a shift in organizational priorities. The funder may need to be informed of, or in some cases approve, changes in direction.

Interviewees reported that greater funder involvement can provide benefits. When a foundation has a portfolio of RPPs, it can connect different partnerships that are unaware of their common challenges in order to share findings or spark future work. Funders can also act as thought partners for partnerships as they seek additional funding or determine next steps. There are some drawbacks to a heavily involved funder, however. More funder constraints may threaten the direction partners have set, introducing a "third party" that limits the ability of the partnership to respond to emergent problems. With flexibility lessened, the individual or organization that holds the funding has an increased responsibility to explain funder requirements to other partners. This may result in tensions or confusion for partners that also must be managed.

TABLE 1. EXAMPLES OF FUNDING SOURCES FOR RPPS *

Funding Source	Type of Funder	Focus Area	Support Structure
Spencer Foundation's RPP Program	National, private foundation	Educational research (broadly), plus local focus in Chicago	Grants of up to $400,000 over 3 years
William T. Grant Foundation's Institutional Challenge Grant	National, private foundation	Supports research institutions to build sustained RPPs with public agencies or nonprofit organizations in order to reduce inequality in youth outcomes	Grants of up to $650,000 over 3 years
National Science Foundation's Computer Science for All (CSforALL)	Federal agency	Computer sciences and computational thinking in K–12 schools	SMALL PROPOSALS (maximum of $250,000 for up to 2 years) designed to support initial steps in establishing an RPP. MEDIUM PROPOSALS (maximum of $600,000 for up to 3 years), designed to support modest scaling of a promising approach. LARGE PROPOSALS (maximum of $1,000,000 for up to 4 years), designed to support the widespread scaling of an evidence-based approach
Research alliances organized under Institute of Education Sciences' (IES) Regional Education Laboratories (REL)	Federal agency	Ten RELs carry out research and technical assistance in the United States. A REL's portfolio of work may include RPPs.	Each REL has a 5-year contract with the IES, and appropriations for the overall REL program is approximately $60 million annually
Houston Endowment	Local, private foundation	(Broadly) supports the Houston metropolitan region, including support of the Houston Education Research Consortium	Grants of varying sizes and time frames
William Penn Foundation	Local, private foundation	(Broadly) supports the Greater Philadelphia region, including the Philadelphia Education Research Consortium	Grants of varying sizes and time frames

* Information is current as of Spring 2021. The U.S. Department of Education intends to hold a competition for the next round of REL contracts in 2022.

Pressing Issues Moving Forward

Since RPPs were first established, they have moved from existing as a handful of isolated partnerships to a developing field—a community of diverse individuals and organizations with shared commitments to support local educational efforts through engagement with research. In our interviews, RPP leaders shared four pressing issues for the field to address: 1) questions of RPPs' progress toward their goals; 2) the next generation of RPP leaders; 3) RPP operational capacity; and 4) learning at the boundaries of other forms of collaborative research. In the following section we outline each of these issues and offer ideas on how the field can collectively work to address them moving forward.

Understanding RPP Progress Toward Goals in Context

As RPPs grow in number, understanding how well they meet their goals and the conditions that support or hinder their progress becomes increasingly important. Questions related to RPP effectiveness are appropriate, given investments in time, energy, and financial support (Penuel & Hill, 2019). However, with the many forms RPPs can take and the various goals partnerships identify for themselves, it is not easy to arrive at a shared definition of what constitutes "effectiveness," let alone a common way to measure progress toward those aims.

As a field, RPP leaders and scholars have begun to conceptualize the broad, shared goals that RPPs hold. One recent framework developed from interviews with RPP leaders in the field identified five outcomes for education RPPs, including goals on both process and outcomes (Henrick et al., 2017). These include building trust and cultivating relationships; conducting rigorous research to inform action; supporting practice organizations in achieving their goals; producing knowledge that more broadly informs educational improvement; and building the capacity of participating individuals and organizations. Henrick et al. (2017) is one of several frameworks on thinking about partnership efforts and conditions for success.[19] These frameworks may be useful in designing studies that focus on RPP outcomes which reflect a broad consensus in the field about what RPPs are (or should be) accomplishing.

To make these frameworks useful for supporting RPP progress, the field needs a set of measurement tools, along with a clear sense of their purposes and potential uses. For example, an individual RPP may want individualized measures to gather feedback for formative purposes that would test its theory of action or refine its strategies as an RPP so the partnership can work more effectively

and efficiently (Cooper et al., 2020; Nayfack et al., 2017; Scholz et al., 2021; Tseng, 2017). In contrast, common measures may be useful when considering a portfolio of investments made by funders in multiple RPPs. An RPP funder may be interested in understanding return on its investment or focusing on outcome(s) related to its organization's overarching mission (Schneider, 2018; Tseng, 2017). The funder may want to evaluate whether RPPs are a good long-term "bet," or to guide future funding investments by learning to distinguish strong, promising RPPs from those that are struggling and likely to fail. To advance the field, it is important to have multiple measures of success that are useful to a range of stakeholders, including researchers, policymakers, funders, and local communities.

The field needs a better understanding of the ways that variability in the design features outlined in this paper are consequential for different outcomes (Stake, 2005). In our own recent work, we compared three RPPs focused on supporting mathematics instruction in school districts (Brown & Allen, 2021; Penuel et al., 2020). We strategically chose partnerships that varied by the nature of their research activities, among other dimensions. Practice partners in the two RPPs with intensive design activities reported that their research partners had more broadly influenced the design of programs and practices compared to the RPP that did not engage in design activities. At the same time, the in-depth design work required regular engagement and extensive amounts of time spent together, a drawback for some busy educational leaders. Rather than determining which design feature is "best," the field needs to continue to advance its understanding of when, under which conditions, for whom, and with what tradeoffs RPPs make progress toward their goals.

It is also critical that we ask broader questions about the wider ecologies of RPPs and the underlying conditions they require to succeed, given the complexity of RPP work and dynamics. RPPs have long contended with navigating complex political and power dynamics (Gutiérrez & Jurow, 2016;

Philip et al., 2018), and we need a better understanding of how these different dynamics shape their work and success (Peurach, 2016; Weddle et al., 2021). Local conditions are not just "background" for an RPP; understanding the evolving concerns of local partners and adapting to changing conditions is essential to RPP work (Donovan & Snow, 2018; Farrell et al., 2021). Indeed, the field should place questions about an RPP's efforts within the context of the local educational ecosystem and with attention to historical, political, and cultural dynamics of that setting (Oakes et al., 2008; Philip et al., 2018; Warren, 2018).

ISSUE 2

Cultivating the Next Generation of RPP Leaders

RPP leaders we interviewed shared their belief that growing future leaders is critical to building and sustaining the field.[20] The field has begun to coalesce around the range of skills, knowledge, dispositions, and orientations needed to engage in partnership efforts (Biag & Sherer, 2021; Campano, Ghiso, & Welch, 2015; Cohen-Vogel et al., 2015; Warren et al., 2016; Ghiso et al., 2019). Depending upon the particulars of an RPP, the skill set likely includes how to find partners and develop relationships, collaboratively identify focal issues with partners, develop a plan for how insights from research can support educational change and transformation efforts, and facilitate conversations across different stakeholder groups.

For researchers, graduate programs are a core site for developing these skills. Nascent efforts support these goals. For example, several institutions offer courses on preparing graduate students to engage in RPPs, improvement science efforts, and design-based implementation research.[21] Some institutions have come up with new apprenticeship models in partnerships that include creative

funding strategies.[22] Still other universities have made commitments to specific communities and districts to support local, place-based RPPs.[23]

Yet our interviewees were clear that support for faculty members at *all* stages of their careers may be necessary to encourage the growth of RPPs. Changing tenure and promotion policies to support more partnership work is one main shift (Fischman et al., 2018). Such a change would require new guidance for promotion that honors RPP efforts, as well as training on how to assess RPP efforts as a part of tenure packages. Additional incentives for faculty may be needed to create greater connections to practice and community partners. Universities can also provide physical space, time commitments by faculty and staff, and funding for graduate student researchers.

These types of changes are likely to create tensions. For one, it may be difficult to reconcile the traditional demands for research productivity with the time needed to develop and sustain an RPP. As one researcher stated:

There is often a misalignment between how we evaluate one another for promotion and tenure—where we prioritize scholarly publications and grants—and the realities of partnership work, where relationships take time to develop. Finding the sweet spot between impacting a local problem while also making a contribution to intellectual "ideas" is nontrivial and hard to do.

Explicit guidance on faculty peer evaluation, as well as a cultural change, may be needed. Another tension is related to the funding dimensions of research. Funding in both nonprofit research organizations and universities are highly skewed toward projects rather than toward ongoing partnerships, making it hard to establish the relatively open-ended mutual commitments that define RPPs.

Learning opportunities for community members, educators, leaders, policymakers, and practitioners looking to develop or engage in RPP work are also needed. Partnering skills needed for

practice and community partners might include how to help facilitate collaborative design, develop timelines and internal supports for implementation, secure resources and support for RPP work, and broker access to people and sites for research (Penuel & Gallagher, 2017). In this vein, the Carnegie Foundation for the Advancement of Teaching has launched an initiative to transform educational leadership programs to develop practice leaders' skills in these areas (Velásquez et al., 2019). There are also other online courses for educators and community members focused on research and inquiry work that is rooted in local issues.[24] Beyond formal professional development, RPPs themselves can create learning, apprenticeship, and training opportunities for their practice and community partners as part of the RPP's own joint work (Kaplan et al., 2019).

Overall, our interviewees were clear: In contrast to the infrastructure that supports the traditional research and development pipeline, the infrastructure for preparing and supporting people for partnership work is relatively weak at present (Peurach et al., 2019). More funding and infrastructure for training of future RPP leaders is necessary in the long run if they are to thrive.

ISSUE 03

Building Operational Capacity for RPPs

Dedicated funding can foster the development of any field. Since the publication of the original white paper in 2013, there has been a notable increase of funding opportunities for RPPs. This expansion has brought new individuals and organizations into RPP work and has increased the resources available to fund them. Some of these funding streams provide resources for building partnership infrastructure. For example, the Spencer Foundation's RPP program provides grants that allow funding for elements such as building a data infrastructure. Similarly, the William T. Grant

Rather than determining which design feature is "best," the field needs to continue to advance its understanding of when, under which conditions, for whom, and with what tradeoffs RPPs make progress toward their goals.

Foundation's Institutional Challenge Grant calls for significant changes to policies and investments in university infrastructure to enable research within partnerships.

Despite these developments, some RPP leaders we interviewed pointed out that long-term sustainability remains a pressing issue. It can be difficult for partners to maintain long-term commitments if funding ebbs and flows based on project-specific grants, or if funders decide to move away from their support of RPP efforts altogether. RPPs may need to creatively engage with universities or other local organizations to secure investments to support the work over the long term.

Other interviewees expressed feelings of tension about the link between a focus area identified in a call for funding and an RPP's own goals. In some cases, leaders worried that RPPs must follow the funding opportunities at the expense of being responsive to local issues. The uncertainty of funding and difficulties in navigating funding opportunities alongside local goals remain vexing issues for individual RPPs and the RPP community.

Learning at the Boundaries with Other Forms of Collaborative Research

The boundaries between RPPs and other traditions of collaborative research have become more permeable in recent years (York et al., 2020). Many conversations now ensue about the shared commitments and differences between RPPs and public scholarship (Oakes, 2018); collaborative community-engaged research (Warren, 2018); community research collaboratives (York et al., 2020); participatory action research (Whyte, 1991); youth participatory action research (Cammarota & Fine, 2010); participatory design research (Bang & Vossoughi, 2016), and other forms of collaborative work to transform institutions to work toward more just futures (Gutiérrez et al., 2020).

As the RPP field grapples with these boundaries, many opportunities for learning arise. For example, some traditions of collaborative work could help RPPs more fully conceptualize equity and power in central ways. The field of community-based research (CBR) historically has committed to transforming society through participatory research coupled with actions to improve conditions for marginalized groups (Israel et al., 1998). CBR upends dominant ways of conducting research since it is led by and centers the expertise of individuals whose lived experiences often provide the greatest insights into issues. People with training in research methods use these skills in service of an agenda collectively set or led by the community members and/or youth most impacted by the issue under investigation. Attentive to power both within the dynamics of the research work and in broader society, the practice leverages resources that allow historically marginalized groups to enact collective power in claiming expertise about their daily lives, as well as to transform conditions under which they live, learn, and work.

Several notable priorities for this family of approaches could be shared by those in the RPP field. First, there is the explicit attention to participation by those most affected by issues or challenges. Indeed, as one CBR leader noted, CBR challenges the "hierarchy of knowledge production and valu[es] the knowledge, experience, and expertise of families, students, communities. It's not just professionals who are engaged in the effort to do research or build a practice-based knowledge." A second commitment of these approaches is the focus on power— both in how it operates in the formulation of a research agenda and subsequent action plans, as well as how change efforts around community or policy issues unfold within a political context. Finally, the goal of these efforts is not only to engage in research endeavors but also to provide participants with a transformative educational experience. The process of involvement in these activities, then, means that research engagement becomes a tool for educational justice.

Such cross-pollination of ideas, strategies, and techniques may be a useful way to respond to calls to continue to democratize evidence use efforts (Tseng et al., 2018). More RPPs could likely benefit from an explicit focus on how to support participation of stakeholders from marginalized groups in ways that are attentive to power and to histories of inequity, oppression, and marginalization.

In these conversations, however, the RPP field needs to acknowledge and recognize past efforts and traditions. As one community-based researcher noted:

There is a whole robust body of work of folks doing community organizing in partnerships and folks who have been working with community-based organizations, working with young people and doing action research. Sometimes we can get caught up in defining things as new in ways that can inadvertently obscure existing work that we can learn from.

Indeed, the commitments, theories, and methods of CBRs intersect with, but also diverge from, those of many RPP scholars. Some community-based researchers consider themselves a part of the RPP tradition while others we have interviewed do not.

Even so, we see dialogue about the meanings of equity and justice with scholars working in those fields as both critical and beneficial for the future of RPPs, particularly as our wider educational system continues to grapple with the systemic inequalities of both opportunities and outcomes. RPPs have a potential role to play in addressing them if they develop clarity about the sources of inequity and commit to developing and testing strategies to overcome them. Particularly as compared to traditional research and design infrastructure, there likely is more in these collaborative research traditions that unites the RPP field than divides it.

Particularly as compared to traditional research and design infrastructure, there likely is more in collaborative research traditions that unites the RPP field than divides it.

Concluding Thoughts

RPPs aspire to organize the research and development enterprise in ways that transform relationships among research, policy, and practice in service of students, educators, families, and communities. In the wake of COVID-19 and longstanding inequities in education, these efforts have never been more critical. In this systematic mapping of the RPP field, we see the possibilities of contemporary RPPs. These partnerships are rooted in long-term commitments to support educational improvement or transformation efforts. They support not only the production of research but also partner engagement with and use of research-based findings, tools, and ideas. RPPs draw on the unique perspectives of a range of diverse stakeholders in education systems, taking care to challenge power dynamics to ensure that participants have a say in the direction of those efforts.

Today's RPPs no longer fit neatly into clear-cut categories, nor should we expect them to look the same or follow the same strategies. Instead, today's RPPs represent different configurations of goals, membership, research approaches, and research activities. Along with these design features comes different trade-offs to be considered and navigated by partners.

The RPP field will need to address certain challenges as it moves ahead.[25] First, the field needs a better understanding of the outcomes, conditions, and consequences of different design decisions by RPP leaders. It also needs the infrastructure for developing the RPP leaders of tomorrow to ensure that a wider range of communities and institutions have access to people who are "partnership ready." Navigating funding for RPP sustainability remains a hurdle as well. Finally, the RPP field can and should explore intersections with other collaborative research traditions, particularly around issues of equity, power, and voice.

As we look to the future, the RPP community will continue to evolve. We imagine that the ideas presented here will contribute to these efforts in multiple ways. Prospective partners can use the ideas to inform how they may organize an RPP, while existing RPPs may draw upon the ideas in conversations about the nature and development of their partnerships. For funders and policy makers, we hope these ideas help clarify what RPPs are— and what they are not—and cast a wider net as to what may count as an RPP in terms of partnering organizations, goals, and modes of inquiry. In conclusion, the challenges we call out are meant to provoke the RPP field to develop in ways that ultimately foster more equitable outcomes for children and youth, their families, and their communities.

Appendix A

Definitions, characteristics, and typology of research-practice partnerships from *Research-Practice Partnerships: A Strategy for Leveraging Research for Educational Improvement in School Districts:*

RPP DEFINITION

Long-term, mutualistic collaborations between practitioners and researchers that are intentionally organized to investigate problems of practice and solutions for improving district outcomes.

RPP CHARACTERISTICS

Research-practice partnerships:
- Are long-term
- Focus on the problem of practice
- Are committed to mutualism
- Use intentional strategies to foster partnership
- Produce original analyses

RPP TYPOLOGY

A *research alliance* is a partnership between a local education agency and a research organization focused on local policy and practice questions.

In *design partnerships*, the aim is to build and study solutions in real-world contexts, typically focusing on developing and testing instructional materials.

Networked improvement communities (NICs) are networks of individuals or organizations that seek to leverage diverse experiences in multiple settings to understand what change strategies work—where, when, and under what conditions.

Endnotes

1. For other efforts, see: York et al. (2020); Warren (2018); Bryk et al. (2015); National Research Council (2012); Philip et al. (2018); and Oakes (2018).
2. For example, King et al. (2010); Metzler et al. (2003); and Palinkas et al. (2017).
3. See, for example: Cobb et al. (2018); Lawrence et al. (2015); DeBarger et al. (2017); and Anyon et al. (2016).
4. See Patton (2001) for more on snowball sampling.
5. Our review focused on empirical studies of RPPs in education conducted between 2013–2020. We defined "empirical" as studies that met the criteria of (1) engaging in systematic data collection and analysis, and (2) where conclusions were supported by evidence (National Research Council, 2002). We included pieces that were written by outside scholars who study RPPs, as well as those written by members of RPPs themselves—if the pieces included empirical research. To gather empirical analyses of RPPs, we used five different databases to identify the studies: Scholar Google, ProQuest, PsychNet, ERIC, and JSTOR. Using a fixed set of search terms (e.g., "research practice partnership," "research-practice partnership," "research use," etc.), we identified a range of studies that appeared in journals, books, and book chapters, and as technical reports. From selected studies from the initial search results we gathered abstracts of all unique studies. To meet inclusion criteria, studies needed to be empirical articles on RPPs in education. We excluded articles that presented research findings done within an RPP setting but that were primarily focused on the results of the study rather than the RPP itself. From this initial search, 200 unique studies met our inclusion criteria. We also included preliminary findings from our own studies of district decision-making and RPPs currently underway at the National Center for Research in Policy and Practice. As a next step, we used a survey form to gather information about study purpose, methods, and key findings. For each article we specifically identified whether the study was conducted within a self-described RPP, and, if so, which problem of practice was focal in the study. For each study we summarized any findings related to evidence use from the study, organizational processes, and conditions that supported it in analytic memos. At the conclusion of this analytic process we had created a set of memoranda that identified major themes—whether in support of the theme or contradictory to it.
6. These dimensions serve to name what RPPs, broadly, have in common with one another. However, we recognize they may be aspirational for some RPPs. For example, while RPPs aim to give partners a say in the work they do, not all RPPs are successful in doing so.
7. For additional information about the Redwood City Together partnership, see: https://www.rwc2020.org/.
8. Information does not exist that can address the prevalence of these variations in the population of RPPs. As part of a separate study, our team identified a total of 267 RPPs that were part of an RPP network (NNERPP, URBAN) or that had been funded through different sources: Institute of Education Sciences, Spencer Foundation, William T. Grant Foundation, William and Flora Hewlett Foundation, and National Science Foundation. Of these, based on publicly available abstracts, roughly half included school districts as partners, 25 involved SEAs as states, and 19 involved partners outside of schools. There likely are many more RPPs than those accounted for in this sample of funded RPPs and RPPs that are a part of formal networks.
9. Here we draw on several studies, including a comparative case study of three RPPs focused on codesign between researchers and district partners; a study of RPPs funded by IES from 2013–2015 (Farrell et al., 2017, 2018); and a comparative case study of three RPPs with different designs, all focused on mathematics instruction (Penuel et al., 2020).
10. At present, we do not know the prevalence of partnerships that share particular features. We did not create our study sample to be representative of the distribution of RPP variation in the field but instead to include sufficient breadth to identify variations across RPPs. For additional information on the Research Alliance for New York City Schools, see: https://steinhardt.nyu.edu/research-alliance/research/publications.

11. Ryoo, Choi, and McLeod (2015) found similar categories for equity.
12. To date, SERP has established field sites with Boston Public Schools, the San Francisco Unified School District, districts in the Minority Student Achievement Network, the Oakland Unified School District, Baltimore Public Schools, and District of Columbia Public Schools.
13. The line between who is a research partner or a practice partner can be blurry. For instance, those with a research background can be hired within local agencies or nonprofits, as is the case with district leaders who have research backgrounds in research offices. See Newman et al. (2015) for further details.
14. Some RPPs organize as networked improvement communities (NICs) and engage in continuous improvement research. NICs are networks of people and organizations that can span multiple jurisdictions (e.g., districts, universities) and are organized to achieve common improvement aims.
15. The eight CORE districts are the Fresno Unified School District, Garden Grove Unified School District, Long Beach Unified School District, Los Angeles Unified School District, Oakland Unified School District, Sacramento City School District, San Francisco Unified School District, and Santa Ana Unified School District.
16. For additional information on CSforALL, see: https://www.csforall.org/.
17. For example, the National Science Foundation's CSforALL competition offered small, medium, and large grants with different timelines. Small proposals (e.g., a maximum of $250,000 for up to two years) are designed to support the initial steps in establishing a strong and well-integrated RPP team that could successfully compete for a medium or large proposal in the near future. Medium proposals (e.g., a maximum of $600,000 for up to three years) are designed to support the modest scaling of a promising approach by a well-defined RPP team. Large proposals (e.g., a maximum of $1,000,000 for up to four years) are designed to support the widespread scaling of an evidence-based approach by an RPP team that builds on prior collaboration.
18. For other frameworks, see: Sherer et al. (2020); Russell et al. (2017); and Yurkofsky et al. (2020).
19. This same focus emerged out of several convenings hosted over the past five years by the Spencer Foundation and the William T. Grant Foundation; the National Network of Education Research-Practice Partnerships (NNERPP); the National Center for Research in Policy and Practice; Design-Based Implementation Research (DBIR) faculty members; and as part of the Carnegie Foundation's iLEAD network.
20. Including the Stanford University School of Education, University of Colorado Boulder, and University of Michigan, among others.
21. See, for example, the University of Washington's Community Scholars Program.
22. Including schools or graduate programs of education at University of Colorado Boulder, Northwestern University, University of Pittsburgh, Stanford University, the University of California Irvine, and the University of California Berkeley.
23. See, for example, the certificate for improvement science offered by the University of Michigan. Details are available at: https://online.umich.edu/courses/improvement-science-in-education/.
24. Groups like the National Network for Education Research-Practice Partnerships will likely play a critical role in addressing these issues. They already have played a role in helping support the development of new norms and practices for organizing RPPs between higher education institutions and local education systems (Eddy-Spicer et al., 2021). NNERPP currently has 50 member RPPs that represent the various types of RPPs documented in this paper. Through its Annual Forums, newsletter, and monthly virtual brown bags, NNERPP provides venues where members can share research findings, dilemmas, and innovative approaches.

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