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EXTRA

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By Paula Arce-Trigatti | NNERPP

WELCOME TO OUR SPRING EDITION

Welcome to the first edition of Volume 5 of NNERPP Extra! It's hard to believe that this is our fifth year producing this magazine. Because it felt like a momentous occasion to mark and celebrate, we thought we would take a breath last quarter to evaluate, reflect on, and make some updates to the magazine. We are thrilled to be back with a fresh new look! Along with the new design, we are pleased to share a special expanded issue this round, which includes no fewer than six brand-new articles. A special thank you goes to our wonderful guest authors who contributed to this issue.

Happy reading!

NNERPP | Extra Online
Be sure to check out the NNERPP | Extra website if you'd like to explore this issue's articles (and more!) online.

About NNERPP
NNERPP aims to develop, support, and connect research-practice partnerships in education to improve their productivity. Please visit our website at **nnerpp.rice.edu** and find us on Twitter: **@RPP_Network.**

INTEGRATING COMPUTER SCIENCE LEARNING IN RURAL CLASSROOMS: FROM BARRIERS TO OPPORTUNITIES

By Kate Kastelein and Brittney Nickerson | Maine Mathematics and Science Alliance, Rhonda Tate | STEM Workforce Ready 2030, and Jess Wilkey | Maine School Administrative District 44
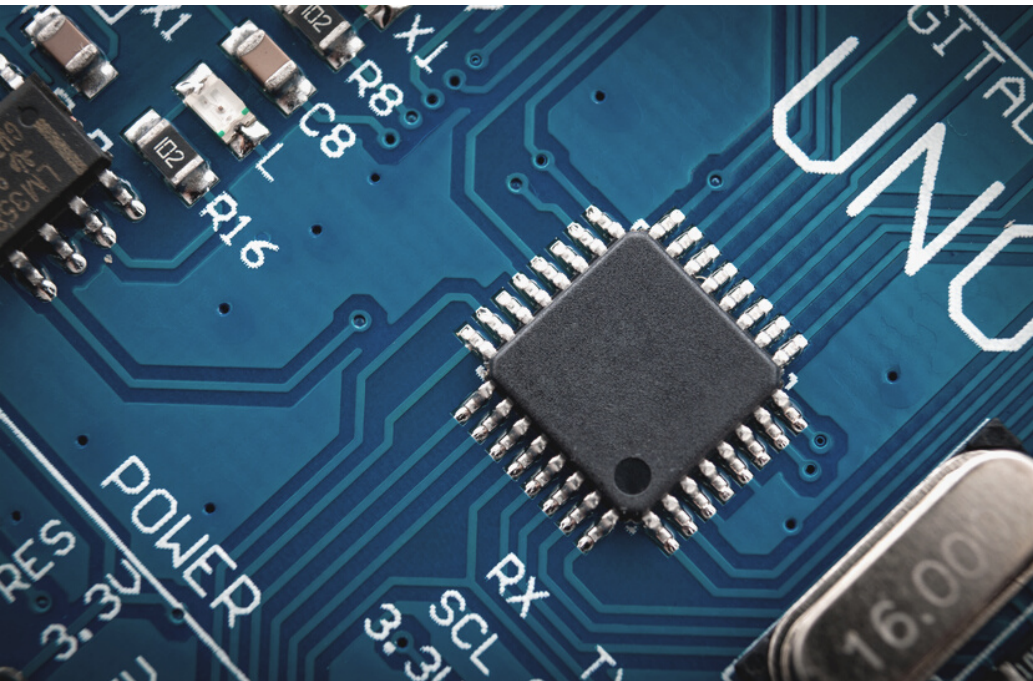
A QUICK OVERVIEW

THE RESEARCH ARTIFACT

"From Barriers to Opportunities: A Network Analysis Approach to Visualizing CS Integration" (not currently publicly available)

THE RPP: WHO, WHAT, WHY, WHEN

The STEM Workforce Ready 2030 (WFR) RPP is creating a network of teacher leaders across Maine committed to increasing equitable access to computer science (CS) learning in rural PreK-8 classrooms. Expanding access to computer science has been a mission of the Maine Mathematics and Science Alliance (MMSA) for the last decade. The RPP structure has been a key component of successful change in Maine, where schools are locally controlled. Our current RPP is a continuation of an earlier RPP funded by an NSF planning grant through CSforALL. That project, the i2i RPP (Integrate-2-Innovate, NSF #1837262), discovered that the barriers to broad implementation of CS could be prioritized and understood through a network analysis map (Nickerson et al., 2021). Those

findings and the ongoing commitment of the three initial school district partners was the catalyst for establishing our current RPP, **STEM Workforce Ready 2030 RPP (WFR)**, funded by the Harold Alfond Foundation. The RPP currently includes 33 educators and nine administrators from eight school districts across Maine to **train CS Integration Teacher Leaders** and forms a solid anchor for expansion throughout the state. These districts represent diverse economic and geographical regions. Currently, our RPP consists of district teams, each of which includes an administrator, K-8 classroom teachers, technology directors/integrators, special educators, and paraprofessionals.

WHY THIS WORK

Rural communities nationwide hunger for highly engaging learning experiences integrating computer science across disciplines. With a lack of qualified teachers and slim resources, however, the thought of new standards, such as the Next Generation Science Standards or Computer Science Standards, immediately puts educators and administrators on the defensive. The integration of CS into existing curriculum, backed by growing evidence, is a viable solution for resource-strapped districts.

WHAT THE WORK EXAMINES

The initial research question of our foundational RPP (i2i) was: "What are the key elements needed to support rural K-8 educators' integration of CS into math and science instruction?" Over the course of 18 months, 30 i2i participants identified, discussed, and iterated on the barriers to integration of CS in the classroom. That work culminated in the Barriers Map, a network analysis map highlighting the barriers to CS integration and, more importantly, the connections between these barriers. From these connections, we identified critical levers to focus on and crafted new research questions that informed the work of the expanded RPP, WFR. At the culmination of i2i, we were left with a fully developed Barriers Map, a list of potential research questions, and a hope for more funding. Two years and a pandemic later, we secured funding to continue and expand the work of i2i into WFR.

Identifying Barriers to CS Integration

During the first iteration of our RPP (i2i) answered the research question "What are the key elements needed to support rural K-8 educators' integration of CS into math and science instruction?", by employing Design Based Research Methodology (DBR) as a means to gather, analyze, and share data. The network map was created after the completion of three project stages. During stage one, participants brainstormed possible barriers to CS integration, based on their own experiences. In stage two of the process, participants voted on

which barriers were most prevalent. The three main barriers that emerged after the voting process were:

> 1) lack of common understanding of CS/CT
> 2) lack of planning time for integration
> 3) lack of examples of CS integration

In stage three, semi-structured interviews and surveys of 30 i2i teachers and administrators were created to unearth new barriers and to gain an in-depth understanding of the identified barriers. Data gathered from these sources was analyzed using a mixed-methods approach, and the results were coded and analyzed using Gephi software. From the interviews and focus groups, another barrier, lack of teacher buy-in, emerged as being equally important as the previous three barriers identified.

Creating the Barriers Network Map

Next, the research team at MMSA created the Barriers Network Map, which was shared with the i2i participants. Small groups worked to discuss and refine the map, and the discussion and data helped create research questions for the next phase of the project. Our current iteration of the RPP, Workforce Ready 2030, which began two years after the conclusion of i2i, focuses on workforce development as an outcome related to CS development. However, we were able to use data gathered from our previous work to inform our current project and continue investigating research questions that emerged previously.

INITIAL FINDINGS

Sharing the Findings

In addition to disseminating findings through the RPPforCS network online conference, WFR participants led a Virtual Learning Series in May 2020 that summarized the findings of the initial stages of the work for a broader audience of teachers, researchers, community members, and business owners. Researchers have reflected that the network analysis approach might be challenging for participants to utilize. It was evident, however, through the participant-designed and -led learning series, that the network approach was not only well within their grasp, but also allowed them to communicate their findings directly to a broad audience, which was powerful.

Overview of the Findings

RPP participant Jess Wilkey, a teaching principal from Bethel, Maine, constructed the following findings:

An initial ranking system identified lack of common understanding, lack of planning time, and lack of CS integration examples as the three most prominent barriers to CS integration in the three participating districts. In-depth interviews with teachers, administrators, and tech integrators across all three districts uncovered underlying connections to other problems of practice.

This network analysis represents the results. Lines represent connections. Thicker lines illustrate more connections, and larger nodes illustrate that more people mentioned it as a barrier.

Problems of Practice (Barriers)

Figure 1: Barriers
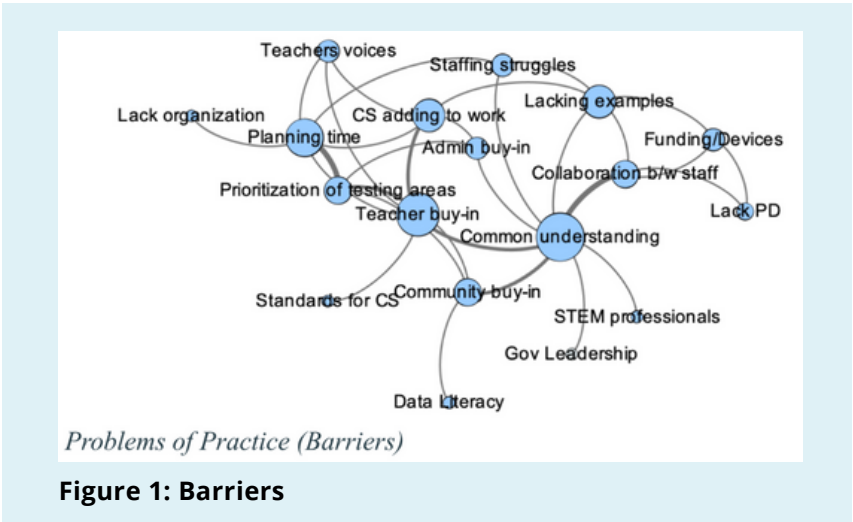
This next rendition highlights the connections between the seven most connected barriers. Understanding the connections between these frequently identified barriers can lead to a better understanding of where to begin CS integration efforts.
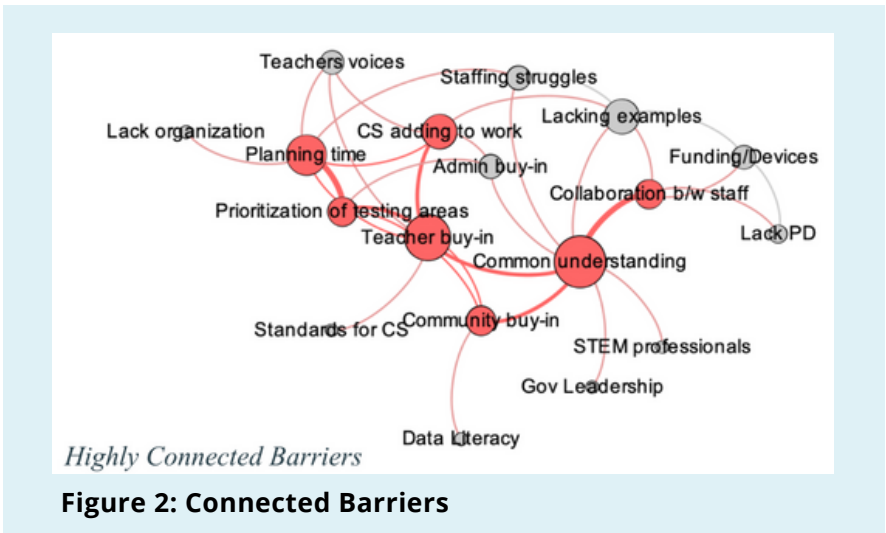
Highly Connected Barriers

Figure 2: Connected Barriers

Once identified, connections between barriers can represent potential pathways for advancing CS integration. The rendition below shows the three main areas: Blue = lacking planning time, red = lacking common understanding, yellow = lacking CS integration examples. These three pillars can be foundational for CS integration efforts. Progress and/or success in one area suddenly provides access to a much larger section of the network analysis map (ie. progress towards solving/mitigating other barriers).
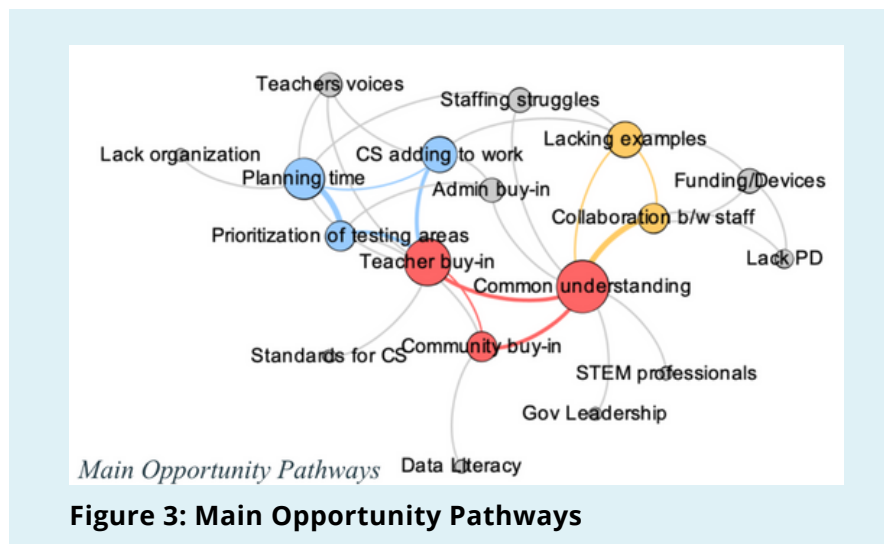

Figure 3: Main Opportunity Pathways

The network mapping approach allows us to see myriad factors, both in and out of school, that contribute to the current rural landscape of CS integration and how those factors relate to one another. For example, teachers find it easy to identify barriers, but understanding the context and impact of the barriers is a challenge. This step can be made easier by the boundary mapping approach. For example, "Lack of Planning Time" was frequently cited as a barrier in initial surveys, but thoughtful discussions and analyses among the participants revealed that the problem of not having enough time was not just about the number of hours in a day. Instead, it was revealed through the mapping approach that "Lack of Planning Time" is largely impacted by (i) the prioritization of specific subject areas that are tested by the state and (ii) a belief that CS learning has to be born out of nothing (note, however, that integration can be a lighter lift once an educator recognizes connections between CS content and already existing practices and learning requirements). The boundary mapping approach thus deepens the understanding of the most interconnected and impactful barriers (represented by colored nodes), which in turn, represent boundaries that we understand to be related to successful integration strategies.

Arriving at the Current Research Questions

The research questions we are currently focused on, particularly question 3, are a direct result of

previous work on the network map.

1) How do educators and business leaders identify and prioritize CS workforce skills and practices they see as important for students to learn?

2) What supports need to be in place to enable and empower the integration of CS workforce skills into existing classroom activities?

3) How does the RPP process allow us to develop a better understanding of the barriers surrounding CS integration in the rural classroom?
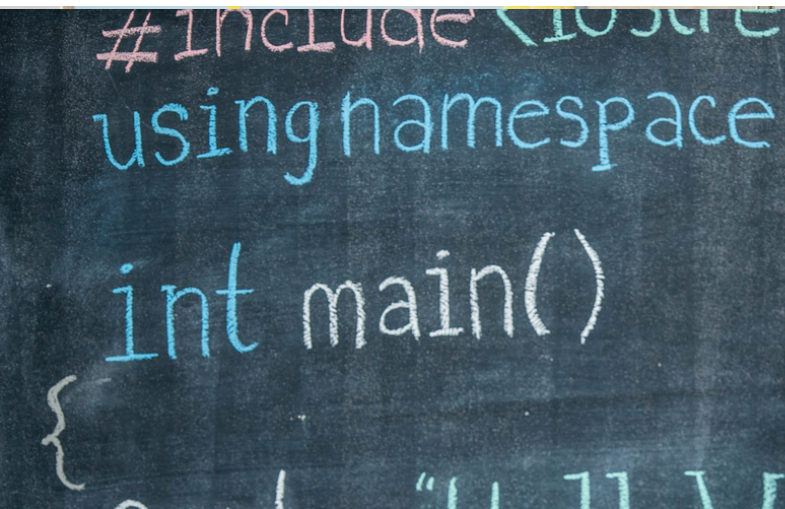
IMPACT AND USE OF THE WORK

The network analysis graph allowed the participants to shift their thinking about CS integration from a problem-focused approach to an opportunity-focused approach. As participants grew more knowledgeable, they were able to identify tools and professional learning to increase CS integration. Key tools identified included model CS Integrated lessons, Classroom Observation Protocols for identifying opportunities for integration, and more opportunities for engaging with local businesses to increase community buy-in. As participants' understanding increased, so did their ability to communicate their ideas to their peers, generating more conversations about CS integration and laying the groundwork for school and community engagement. Connections between barriers were reexamined as potential pathways for CS integration.

During a planning meeting for stage 2 of the project, previous i2i participants were invited to a one-day workshop at the MMSA office in Augusta, Maine. As part of the retreat, a small group revisited the network map, which had been created two years previously (pre-Covid).

They noted that some of the barriers had changed; for example, one district noted that lack of technology was no longer a barrier for them as Covid funding had allowed them to purchase needed equipment. A large part of the discussion centered around using the word "barriers." It was noted that "barrier" connoted an insurmountable task. It was suggested during this meeting that going forward, the word "problem" should replace "barrier" since a problem is something that could be solved. Additionally, it was suggested that in addition to asking new RPP participants to brainstorm barriers (problems) during their project team onboarding to the RPP, they also think about what solutions and/or an ideal situation may look like. Finally, districts acknowledged that as the RPP continues its work, new problems may emerge, some may be solved, and not all districts encounter the same problems at the same time, and some may not encounter the same at all.

expressed interest in asset-based models and what visualizing solutions to the problems presented in the map might look like. Moving forward, we recognize that the network map is not a static document, but one to be revisited, updated, and discussed. It has proven to be a map in the truest sense of the word in that it shows us where we have been and where we are going.

Kate Kastelein and Brittney Nickerson are Research Associates at Maine Mathematics and Science Alliance; Rhonda Tate is Principal Investigator at STEM Workforce Ready 2030 and the study discussed in this article; and Jess Wilkey is Teaching Principal at Maine School Administrative District 44 (MSAD 44).

NEXT STEPS

In August 2022 we held a 2-day retreat where we welcomed 15 returning i2i participants and 25 new participants to kick off the new iteration of the RPP, STEM Workforce 2030. During that retreat all 33 members were asked to complete a survey which included Likert scale measures for rating barriers previously identified by the i2i RPP, as well as areas where they could add additional barriers that were not listed. Currently, we are creating a new version of the map using data from these surveys. In the next few months, the new map will be presented to participants and discussed. Participants have

PRE-KINDERGARTEN TEACHER WELL-BEING IN RURAL WEST TEXAS

By Cynthia A. Wiltshire | The University of Texas at El Paso, Holly Fields | Paso del Norte Partnership for Education Research, and Sanga Kim | The University of Texas at El Paso
In collaboration with school district partners (anonymous)

A QUICK OVERVIEW

THE RESEARCH ARTIFACT

Study examining Pre-K teachers' stress (not currently publicly available)

THE RPP: WHO, WHAT, WHY, WHEN

Housed in the University of Texas at El Paso's (UTEP) College of Education, the Paso del Norte Partnership for Education Research (PDNPER) was founded in 2020 to create a sustainable and impactful education research model for the region. Once launched, the PDNPER and local independent school districts formed partnerships through memoranda of understanding, enabling research- and practice-side participants to identify critical concerns worthy of research. Meeting together, K-12 partners identified educator and student well-being as a priority, resulting in the Symposium for Understanding and Improving Educator Well-Being: A Hybrid Event on K12 Mental Health Needs in the Paso del Norte Region (Fall 2021).

WHY THIS WORK

Seemingly minor, the distinction between kindergarten and pre-kindergarten (pre-k) teachers is important given variability in stress they may experience. A well-examined mechanism of teacher stress is compensation. Preschool teachers are usually paid less than kindergarten teachers (Barnett, 2003; Bassok et al., 2021; Darling-Hammond, 2001; Deery-Schmidt & Todd, 1995; Farley & Chamberlain, 2021), which is important when considering stress and potential outcomes of children in their care. The literature demonstrates that 1) preschool teacher pay is positively related to children's positive emotional expression and classroom behaviors (King et al., 2015), 2) teacher stress may result in a negative and cyclical dynamic with students (Raver et al., 2008; Zhai et al., 2011), and 3) such disconnect between teachers and children considered to be at risk of school failure may compound the potential for school failure (Ladd & Burgess, 2001).

Our RPP's 2021 Symposium for Understanding and Improving Educator Well-Being: A Hybrid Event on K12 Mental Health Needs in the Paso del Norte Region provided 1) regional mental health data, 2) secondary trauma, burnout, and stress insights, and 3) an opportunity for mindfulness. Given the impacts of COVID-19, district leaders and partners prioritized teacher well-being, requesting research in this area. In response, we launched an ongoing study examining teacher well-being with one rural school district partner in West Texas. We collaboratively determined to focus on early childhood education (ECE) teacher (i.e., pre-k)

stress, specifically beginning with pre-k teachers.

WHAT THE WORK EXAMINES

To begin, university researchers met with district partners, listening to questions and concerns about teacher well-being. With their support, we examined teacher stress in the district's sample of pre-k teachers (N = 17) using an explanatory, sequential, mixed-method design (Creswell & Creswell, 2017) in three[1] timepoints (T1, T2, T3). At T1, we implemented both self-reported instruments of perceived stress (i.e., Perceived Stress Scale; Cohen et al., 1983) and physiological measures of stress (i.e., hair cortisol concentration). The hair sample will allow us to understand chronic stress, that which gets "under the skin." Following preliminary analyses of survey and demographic data, a qualitative semi-structured, individual interview (Bogdan & Biklen, 2007) protocol was developed to record participating pre-k teachers' lived experiences, histories and stories (T2), asking pre-k teachers:

> 1) In what ways are personal and professional stress intertwined for you?
>
> 2) By what means do you cope?
>
> 3) How can our RPP convey well-being as a priority to pre-k administration?

FINDINGS

We are still continuing to collect data for this

sequential study. For the purposes of this article, we share data collected at T1 and T2, respectively:

Timepoint	Tasks of Timepoint	Participation Period
Timepoint 1 (T1)	Self-reported instruments of perceived stress and physiological measures of stress	May-August 2022
Timepoint 2 (T2)	Individual, semi-structured interviews	September-December 2022
Timepoint 3 (T3) – in process	Focus group interviews	January-March 2023

Measuring Pre-K Teachers' Perceived Stress

Lazarus and Folkman's (1984) Transactional Theory of Stress characterizes teachers according to their conception of resources and demands as either being balanced (resources and demands are equal), resourced (resources outweigh demands), or demanded (demands outweigh resources). Using this theoretical framework as a lens, we describe how teachers reported stress, operationalized as resources, demands, and control, the three domains of the Childcare Worker Job Stress Inventory (CCW-JSI; Curbow et al., 2000).

Childcare Worker Job Stress Inventory (Curbow et al., 2000)
Scale: 1 = rarely/never, 5 = most of the time

Domain	Example Question *17 items in each domain*	Mean	Standard Deviation	Range
Resources	"I know the children are happy with me."	4.39	0.42	3.52-5
Demands	"I feel there are major sources of stress in the children's lives that I can't do anything about."	3.77	0.63	2.94-4.87
Control	"When daily activities take place."	2.7	0.88	1.35-4.43

Results demonstrated that the pre-k teachers in our sample were more resourced than

demanded. We interpreted this cautiously as the sample is small and demands had a wider range and standard deviation. Report of control was demonstrated as average.

To understand personal stress, we operationalized the Beck Anxiety Inventory (BAI; Beck & Steer, 1993), measuring frequency of anxiety symptoms; the Patient Health Questionnaire-9 (PHQ-9; Kroenke et al., 2001), measuring the severity of depression; and the Perceived Stress Scale (PSS; Cohen et al., 1983), measuring perception of stress. Data demonstrated that pre-k teachers were mildly taxed regarding anxiety (Carney et al., 2011), moderately-severely taxed regarding severity of depression (Kroenke et al., 2001), and moderately taxed regarding stress (Cohen et al., 1983).

Beck Anxiety Inventory (Beck & Steer, 1993)
Scale: 0 = not at all, 1 = mildly, 2 = moderately, 3 = severely
Instrument value range: 0-63

Example Question *21 Items*	Mean	Standard Deviation	Range
"In the past week, how often have you been bothered by numbness, feeling terrified, hands shaky?"	18.29	14.00	1-50

PhQ-9 (Kroenke et al., 2001)
Scale: 0 = not at all, 1 = several days, 2 = more than half of the days, 3=nearly every day
Instrument value range: 0-27

Example Question *9 Items*	Mean	Standard Deviation	Range
"In the past two weeks, how often have you felt little interest or pleasure in doing things?"	9.7	7.95	0-26

Perceived Stress Scale (Cohen et al., 1983)
Scale: 0 = never, 1 = almost never, 2 = sometimes, 3 = fairly often, 4 = very often
Instrument value range: 0-40

Example Question *10 Items*	Mean	Standard Deviation	Range
"In the last month, how often have you been upset because of something that happened unexpectedly?"	20.64	6.05	6-32

Examination of demographic data demonstrated home caregiving responsibilities as a fact for many. Nearly the entire sample (n = 15) cared for individuals at home and in addition to their caregiving role in school. One-third of participants cared for an elderly or disabled friend/family member (n = 5); more than half cared for children (n = 10).

We implemented independent samples t-tests to compare professional and personal stress between pre-k teachers without (No) and with (Yes) at-home caregiving responsibilities (i.e., elderly or disabled family/friend, children). Comparing professional stress between pre-k teachers without (No) and with (Yes) at-home caregiving responsibilities for elderly or disabled friend/family member, independent samples t-test demonstrated a statistically significant difference regarding 1) positive perception of supervisor support and 2) supportive perception of school. In both cases, the Yes group was less positive in perceptions. Concerning personal stress between pre-k teachers without (No) and with (Yes) at-home caregiving responsibilities for children, independent samples t-test demonstrated a statistically significant difference regarding self-reported scores on the 1) PSS (Cohen et al., 1983) and 2) PHQ-9 (Kroenke et al., 2001; see Figures 1, 2). In both cases, the Yes group reported higher levels of stress and depressive symptomatology.

Figure 1: Comparing Perceived Stress of PreK Teachers Without and With At-Home Caregiving Responsibilities for Children

Perceived Stress by Caregiving Responsibilities for Children

No: 17.1 Yes: 23.1

Mean PSS Score
Note: No (n=7), Yes (n=10). Independent sample t-test was implemented to analyze the mean of two independent groups. The result is statistically significant at the 0.05 level.
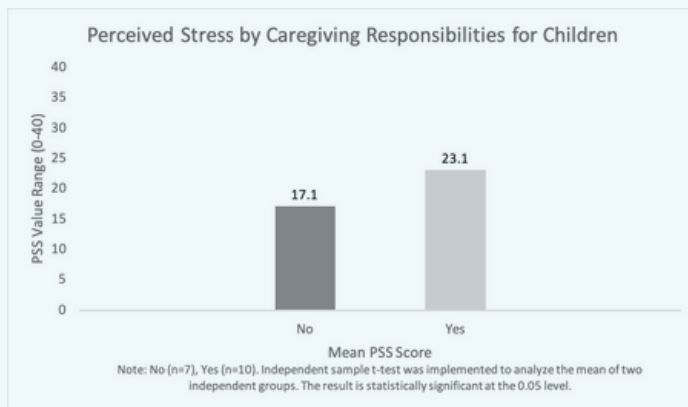
Figure 2: Comparing Depressive Symptomology of PreK Teachers Without and With At-Home Caregiving Responsibilities for Children

Depression Symptomology by Caregiving Responsibilities for Children

No: 3.9 Yes: 13.8

Mean PHQ-9 Score
Note: No (n=7), Yes (n=10). Independent sample t-test was implemented to analyze the mean of two independent groups. The result is statistically significant at the 0.05 level.
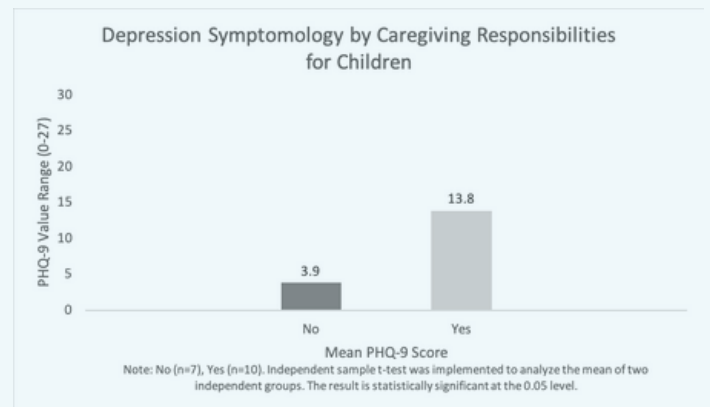
These data informed the development of the semi-structured, individual interview (Bogdan & Biklen, 2007) protocol, paying particular attention to at-home caregiving responsibilities.

Hearing Directly From PreK Teachers

Individual interviews with pre-k teachers (n = 10) revealed the 2021-22 academic year as more challenging when compared to previous years. Several of the teachers we interviewed used the

term "COVID babies" (ID14) to describe the children in this cohort. This label, upon further scrutiny, described these children, at age 4, as experiencing school for the first time. While this is not atypical, the teachers explained that children ordinarily have socio-emotional interactions with adults and peers outside of the family before formal schooling begins. Given COVID-19 closures in 2020-21 however, teachers described children, for example, as having "no knowledge of school" (ID16), "[don't] want to be [in school]" (ID16), and as "displaying language and social delays" (ID10, ID13). These descriptions contrast teachers' previous year's descriptions. "The first…days are usually hard, but after that, the kids are actively engaged. They want to be there. They socialize a lot with the others" (ID02). The most recent year, however, was "difficult" (ID14), "every day is a challenge" (ID07), "see[ing] a big difference from last year to this year" (ID09).

When asked how these differences affected teaching, one teacher described the year as restrictive and their approach to managing the classroom as "teacher-directed; constantly redirecting, redirecting, redirecting" (ID09). Another teacher described implications faced because of these differences as "harder because I know what's headed for [my students] in kinder[garten]…it's not just centers and play anymore and observing things. It's, 'you have to know how to read'" (ID14), indicating that pre-k play-as-learning opportunities will be replaced by mandated/scripted curriculum in kindergarten and subsequent grades.

Revealed distinctions were pursued through additional questions. For example, we asked

pre-k teachers to account for differences they were experiencing because of the difference regarding children, preparedness, and/or the challenge of the year. As one teacher described it:

> "[I] realize that I'm tired sometimes, like I need help, you know? I don't know if it was the stress or what it was, but I was feeling very tense. And because of the whole tension, my body was aching everywhere. And I did not want to admit that it was becoming a problem until I couldn't really deal well with the kids." (ID14)

Teachers also shared that tension at school led to tension at home—school-worries carried over to home. When asked specifically about being a caregiver at school and at home, one teacher replied, "It's very hard. Um, at the end of the day, my patience for my own child is very, very little" (ID02). When asked how they coped, the teacher replied that she instructs her child, "'Give me 45 minutes on my own.' And I tell her what time she can come in [my room…she can] watch TV, play, do whatever she wants in the [other] room."

When we asked pre-k teachers what would be important for researchers to communicate to district partners, they were of one voice: to ensure pre-k teacher well-being, more attention needed to be paid to the importance of pre-k. Teachers expressed an incongruence: They described their knowledge and understanding of pre-k as foundational for children's long-term academic and socio-emotional success, but that they did not feel elevated in a way that aligned with this notion.

Participating teachers felt ancillary to what happens in the rest of the school community rather than as the bedrock of upward success for children. One teacher described, for example, that the "lower grades" were left out of mathematics planning, reserved for upper grades who were most directly affected by state-mandated testing (ID14). Another teacher described rotating staff in pre-k and the subsequent lack of consistency for the children (ID04). PreK teachers also voiced a desire that district leaders understood that principals, although former teachers, had never taught pre-k and/or had not worked in the day-to-day of a classroom in "a long time" (ID14). Teachers understood this as a limitation in how supervisors could support them and empathize with them.

LIMITATIONS AND IMPLICATIONS

The first two phases of our study revealed several limitations and implications that are also informing future directions. First, as this sample was too small to draw generalizable conclusions, we recognize the importance of scale, aiming to increase reach by building relationships with additional school districts.

Despite this limitation, findings demonstrated the status of pre-k teachers, both quantitatively and qualitatively, as burdened by effects of COVID-19, time poverty, and from dual responsibilities of at-school and at-home caregiving.

PreK teachers indicated that greater communication with school leadership could help alleviate some of this burden; that recognition of their voices, the uniqueness of pre-k pedagogy, and their skillset would benefit them.

Our RPP recognizes the potential challenges of results and findings for district leadership. PreK is a product of district public schooling and is informed by rules and regulations that govern all classrooms. While pre-k is important for its focus on play, child choice, and flexibility for child-directed learning, there are systemic obstacles (e.g., testing, curriculum requirements) that may limit aspects of pre-k education. Despite these challenges, we are hopeful that the opportunity to think about future research at the leadership level investigating pre-k teachers' challenges could lead to a future intervention focused on teacher well-being and healing. The results and findings from this study may be important for districts to consider when making pragmatic and programmatic decisions. Perhaps something as innocuous as carving out time for Professional Development training during school hours only may be consequential to a group of teachers who are exceedingly burdened once they arrive at home.

NEXT STEPS

Our RPP team is now turning to the analysis of the physiological measures of stress (T1) and to the forthcoming focus group interviews (T3). We look forward, upon completion of these analyses, to learning what differences between self-reported (i.e., PSS; Cohen et al., 1983) and hair cortisol concentration determinants of stress exist. May it be the case that as good teachers, participating teachers under-report? We also look forward to learning about how pre-k teachers may discuss experiences collectively. It is our hope that in conducting focus group sessions, teachers are empowered to find solutions, to understand how levels of chronic stress may (or may not) differ from perceived stress, and how these may further inform the conversation of pre-k teacher well-being.

The RPP anticipates collectively analyzing data from all three timepoints, thereafter integrating the results and findings to further elevate the voices of pre-k teachers, working toward mutually beneficial solutions that reduce stress and increase resources and control. The research team is grateful to the 17 pre-k teachers who shared their time and insights and to district leaders for their consistent support.

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NOTES

[1] Timepoint 3 will entail focus group interviews (Krueger et al., 2001; Morgan, 1996) in order to understand how the community of PreK teachers in the district coalesce (or not) around particular findings illuminated in T2 individual interviews.

WRITING AND RESEARCHING ABOUT RPPs: AN INVITATION TO REFLECT

By Paula Arce-Trigatti | NNERPP and Alison Fox Resnick | University of Colorado Boulder

Research-practice partnerships (RPPs) are often described as mechanisms that invite disruption or that result in transformation in the education landscape (e.g., Farrell et al., 2021; Penuel & Hill, 2019). In theory, RPPs might be well-situated to meet both of these aims, given their reimagining and repositioning of education researchers, leaders, and community members in the production and use of research. The orientation of many RPPs to co-generate and make sense of knowledge, research, and evidence across individual and organizational boundaries in service of supporting action magnifies this potential. As anyone involved in partnership work knows, however, this potential is challenging to realize. It often requires disruption of long-held roles, relationships, and methods within research processes.

In this article, we build on this idea of "requiring disruption" and extend it to writing and researching about RPPs. In particular, we invite readers to reflect with us on some norms that might need to be revisited as we engage in the written documentation and study of RPPs. We are motivated to start this conversation in a moment of growing awareness of partnership work, which we see reflected in the increasing number of published articles about RPPs. Because building a literature base is so important to the continued growth and understanding of RPPs, we think it equally important to ensure that our writing habits are responsive to the kinds of disruptive thinking we see as critical to impactful partnership work.

In an effort to start this reflective conversation, we consider some of the core tasks that are involved in writing a research manuscript: (1) framing the focal intervention, approach, or challenge, (2) summarizing and drawing on current literature, (3) being specific about the context of a study, and (4) designing inquiry questions. For each, we examine a norm or trend in research articles more broadly that

could be - unintentionally - brought forward into writing about RPPs and consider why this might be problematic. We then imagine what we might do differently.

We see these as considerations not just for those writing, but also those reviewing papers or articles on RPPs. (In fact, reviewers have a special role to play in building the field of RPPs, given their gatekeeper role in what ultimately gets published.) We propose the ideas below as first steps toward future learning as an RPP community and the beginning of a tool for writing, reviewing, and editing articles about the work of RPPs. Let's dive in!

1. Framing the focal intervention, approach, or challenge.

Writing a research article involves choosing how to frame a focal intervention, approach, or challenge. One way in which this is often done in education research more broadly is to justify the focus on a particular intervention or approach using "magic bullet" framing. Such framing can be seen in articles about, for instance, curriculum, professional development approaches, assessment systems, or styles of leadership practice. In all of these cases, magic bullets are put forth as approaches that will "work" no matter the context, are rather simple to implement, and are self-contained in that other layers of an educational system are not implicated. Magic bullet framing also tends to encourage true "believers" of the thing, which can lead to forgetting the possibility that it can fail. Implicit within this framing is a "one-way" benefit to practitioners, often with "savior" undertones to it. Those peddling a new curriculum, for instance, may frame it as benefiting teachers (and students) but typically do not see a reciprocal benefit for their own learning or design of curriculum. We are certainly not the first to articulate these ideas; other approaches to collaborative education research have also grappled with a tendency for researchers to frame the research itself as "saving the day" for the partner group or organization. The underlying logic of this framing is that the tool or approach being suggested is obviously great and will thus fix all the problems if those on the ground simply use it.

Such framing is baked into educational systems, decision-making, and writing and can easily be applied to RPPs. As an illustrative thinking tool, here's a stylized example of "magic bullet" framing of RPPs from ChatGPT:

"Research-practice partnerships are the key to unlocking the full potential of our educational system. By bringing together researchers and practitioners, we can ensure that our policies and practices are based on the best available evidence. RPPs will help us address longstanding educational challenges like achievement gaps, teacher retention, and student engagement. With RPPs, we can finally achieve the kind of results we've been striving for and give every student the education they deserve."

In this stylized example, RPPs are framed as the answer to the complexity of educational problems of practice, which in this case, is the absence of research use, as illustrated in language such as "are the key" and "will help" and "we can finally achieve." Such certainty is inherently at odds with the reality that RPPs are deeply contextual as they work to engage unique partners and organizations in local challenges. The failure to put forth an intentional logic or reasoning that could help readers understand why that magic bullet might have the potential to result in educational improvement reinforces the "magical" aspect of these types of framing.

For RPPs, just because they have the potential to disrupt traditional boundaries between research and practice and/or traditional "research on" approaches or "research for the sake of research" approaches does not mean that research about/on/from/within RPPs inherently does this. A more nuanced example that reflects this aspect of magic bullet thinking: "Because they are designed with power and equity in mind, RPPs are…" To be clear, RPPs in theory can be designed with power and equity in mind. Whether this happens in practice and to what degree is an entirely separate question, however, and should be taken up directly when framing RPPs in written documentation.

Magic bullet framing also tends to imply a "one-way" benefit to those engaging in policy and practice. With RPPs, this might show up as failing to consider how those participating in RPPs from the research-side –and their work– might also be transformed. Writers taking up this call might thus reframe this underlying logic to say "we aim to explore the various ways our RPP influenced different aspects of the research production and use processes, including how the research itself was transformed, which new relationships emerged and why, and systemic barriers that continue to restrict how and whether research is used."

We see two initial implications for our framing of RPPs in articles:

> Notice and avoid "magic bullet" framing by emphasizing that engaging in partnership work is challenging, contextually-specific, and will not necessarily achieve its potential. In addition, it is important to acknowledge that the theoretical conception of RPPs might fall short of its practical realization.

> Notice and avoid "one-way" benefit framing by acknowledging the important potential for partnerships to transform all partners (research, practice, community, and others), as well as all aspects of the work (research, practice, and policy).

2. Summarizing and drawing on current literature.

Another writing task involved in any article involves drawing on and summarizing current literature. This task can range from using current literature to frame a study to full, systematic literature reviews. The norms and standards for peer-reviewed work call on authors to prioritize (and in many cases, limit their references to) other peer-reviewed journal articles coming from high quality journals. This approach to saying "what is known" based on published literature privileges research-based knowledge. While research can absolutely build important knowledge, relying solely on the peer-reviewed literature to establish what is known and not known about a topic can end up conveying assumptions that research is all knowing, neutral, and fully representative of what is happening in educational contexts. Whatever gets said in the literature then continues to get amplified in other literature, acting as an echo chamber of what may or may not be true in reality.

We see this norm as a particularly important one to reconsider as we explore what disruption entails in writing and research about RPPs. Below, we share some initial thinking about how this norm may be harmful when writing about RPPs.

First, privileging research-based knowledge can be inherently contradictory to the "heart" of RPPs. If one of the underlying goals of many RPPs is to value different forms of experiences, wisdom, and knowledge, then relying on peer-reviewed literature to establish what is "known" about RPPs is problematic. Relying on such a narrow slice of RPP-related knowledge means we are relying on the messages of people in RPPs for whom it is both possible and a priority to write peer-reviewed articles. From a systemic perspective, practice-side and community-side members may have limited time to engage in journal article writing given that these types of activities are not typically part of their paid hours. They may also prefer to remain anonymous, which also likely limits their participation in writing. From a partnership perspective, studying and/or writing about one's own partnership activities might not be a priority for the partnership itself, given limited time to work together, which necessitates focusing on pressing action items that have real implications. Adding

to this omission is the lack of stories around RPPs that have sunsetted or perhaps "failed" in some way, leading the literature to reflect an overly positive bias to reporting on RPPs. We should be aware, then, that what ultimately makes it into the peer-reviewed literature is markedly under representative of RPPs everywhere. And note that this observation is true for any research literature that has not been co-produced with a multiplicity and diversity of perspectives.

Carrying forward this norm in our writing about RPPs could also end up conveying that we know something about "all RPPs." This is problematic both practically and conceptually. The boundaries to defining RPPs are still quite fuzzy. Although there is a definition to draw from (e.g., Farrell et al., 2021) as well as frameworks suggesting what may be common dimensions of RPP effectiveness (e.g., Henrick et al., 2017), how and to what extent any of these dimensions apply to a single RPP varies, as it depends on context, goals, organizations involved, and so on. We can see examples of this within NNERPP's network of just over 60 RPPs. Some share a few characteristics, but none are exactly the same – and this is exactly what you would expect, given that RPPs are meant to be customized to and reflective of the local contexts in which they sit. Thus, we don't know how many RPPs there are to be included in generalized statements and the very thought that there might be something that is true for "all RPPs" ignores the immense, unique complexity of partnerships.

Similarly, citing published frameworks related to RPPs can also unintentionally convey that these frameworks speak for "all RPPs." For example,

the phrases "the foundational assumptions of RPPs" or "RPPs by design are…" reflect two such instances where it is easy to rely on the theoretical underpinnings of RPPs to make claims about how they all "are" in practice. Frameworks introduced in the literature may indeed capture some of these "foundational assumptions," but only if they were derived from a large enough sample of RPPs to truly be somewhat representative. And even in those cases, it is still questionable to what extent the frameworks accurately reflect "the entire community of RPPs." Given the challenges described earlier to identifying "who" is in the RPP community, there is the chance that despite the authors' best intentions, these conceptual illustrations could still be quite off.

We see three initial implications regarding our use of existing literature in articles:

Reconsider norms about what kinds of sources are worthy of citing in peer-reviewed literature, especially knowing that not everyone can or wants to publish about their RPP.

Notice and avoid language that casts the existing literature as conveying knowledge about "all RPPs."

Notice and avoid language that cites theoretical frameworks as "facts about all RPPs."

3. Being specific about the context of the study.

A third task involved in writing an article involves describing the study context and viewing the study as deeply context-specific. Depending on research approaches or traditions, there are varying norms for the kinds of information and depth of detail that should be included. This is an area that other collaborative research approaches have also needed to work to define for themselves (e.g., Community-Based Research). In many cases, descriptions of contexts lack the details that actually support readers to make sense of where a study took place. This ends up downplaying the deeply contextual nature of all educational practice, in addition to ignoring how the dynamics of a setting may have played a role in shaping what transpired.

The question for us to grapple with as an RPP community is: What details about an RPP should be included to bring readers into an understanding of how that particular RPP brings various features of RPPs to life, as is possible? [1]

An initial (and incomplete) list of details might include the answers to: Who is involved? What are the RPP's goals? How do partners work together? For how long? On what? How does the RPP negotiate roles? How does the RPP navigate and disrupt power dynamics? How has the collaboration evolved over time? What organizational structures and systems does the RPP work inside of? How is the work supported (financially or otherwise)? Given RPPs' high and necessary variability, these kinds of details should never be assumed to be obvious to anyone outside of the RPP. Such details will support readers to understand the unique partnership in which the study being reported on takes place. Understanding the various dimensions of the context is essential if readers are to make sense of what, if anything, from a particular study is relevant to their own work. Providing more detailed descriptions of RPPs will also add to our collective knowledge of what an RPP "is", what it looks like, what it feels like, how it interacts with its unique context, and how it can evolve over time.

An additional layer of being specific about the context is also being explicit about the limitations of the findings of a study. Neglecting to be clear about such limitations in a given article impedes broader understanding of how the particular dynamics of an RPP's context interacted with what ended up unfolding. Rather than viewing such limitations as weaknesses of a study, we suggest viewing them as useful layers of insight.

We see two initial implications for providing contextual details of the RPP in our writing:

> To the extent possible, consider providing an in-depth look at the underlying components of the RPP, how its mission and values are operationalized, a description of the various partners involved and what they do, and key aspects of the context that influence how the partnership came to be.

> Examine and explicitly unpack the potential limitations of the study context.

4. Designing inquiry questions.

A fourth, and core task of developing research articles is the design of inquiry questions. In any study context, there are a multitude of questions that can be asked and investigated. As we have all experienced, not all inquiry questions are equal in terms of their value to building research knowledge or supporting others' learning. In terms of RPPs, just because it's a question we can ask, or an article we can write, does not mean it is necessarily useful for building knowledge and theory about the complex work of partnerships. Given the urgency of learning how to fundamentally transform our educational systems towards more equitable and just practices, we see this as a call to reconsider the types of inquiry that are most promising in supporting these aims.

In Table 1, we explore possible revisions to inquiry questions that might otherwise be adopted to motivate research on RPPs. Our revisions aim to take simplified versions of questions that often drive inquiry and reimagine them in ways that have the potential to be more useful towards our collective understanding of RPPs.

Table 1. Re-considering powerful inquiry questions.

Simplified inquiry questions that may commonly motivate writing about RPPs	Reframed inquiry questions that have the potential to be more useful for our collective understanding of RPPs
"What works in RPPs?"	• "What works, for whom, under what conditions" • "How can ___ be successfully adapted for particular contexts?" • "Why did ___ work in this context? Why might it not work in other contexts?" • "What does *not* work?"
"What happened here in my RPP?"	• "What happened here and how might that connect to the challenges/dynamics other RPPs are experiencing/grappling with in their unique contexts?" • "How did what happened here interact with the larger local system?"
"What's the answer to fixing our RPP challenge?"	• "How did we get to an answer that worked for us, what helped us figure out that answer in relation to our unique context, partnership, and work (that might also help others figure out their unique answer in their unique context)?"

Table 1. Re-considering powerful inquiry questions, *continued*

Simplified inquiry questions that may commonly motivate writing about RPPs	Reframed inquiry questions that have the potential to be more useful for our collective understanding of RPPs
"What is common across this sample of RPPs?"	• "What is the range of ways in which a sample of RPPs brings to life a common idea, strategy, or practice? How do they decide how to do so given their unique partnership membership and context?"
"What do all RPPs do?"	• "What does ____ lens help us see about the complex work of unique RPPs?" • "Are there common ways in which RPPs adapt to the complexities of their unique contexts?"

The questions shared in the right hand column have the potential to be more useful because they lift up a level to analyze not just what, but how, why, where, and when in a way that takes into account the necessarily relational, political, and context-specific work of partnerships. This requires a translation of trends, reflections, or lessons from a particular context to an articulation of theory or knowledge that could potentially travel to another context. In this vein, we hope to invite thinking on the kinds of knowledge and theory we seek to develop and how we frame the contribution of such knowledge and theory.

We acknowledge here that this is a significant area of necessary learning for the RPP community. Most of us are only involved in one RPP and are so deep in the work we can't always see what might be useful about our context to others. We are curious about the kinds of learning experiences, collaboration between RPPs, and tools that could build our ability as an RPP community to design powerful and useful inquiry questions. We see the examples offered in Table 1 as just a starting point and would welcome further exploration with others.

We see two initial implications for rethinking the types of inquiry questions shaping RPP writing:

> Notice and reconsider inquiry questions that aim to shed light on a surface-level or very context-specific aspect of partnership work. Instead, invite deeper inquiry by acknowledging that potential readers are likely situated in a very different kind of RPP context, and as a result, will likely appreciate efforts to support the transferability of learning.

In choosing inquiry questions, reflect on what the most potentially useful implications are for the broader community of RPPs. In findings and discussion sections, support readers in considering what they might take from the study that could be useful in their unique RPP context.

CONCLUDING THOUGHTS

In this article, we invite the RPP community to intentionally reflect with us on how we research and write about RPPs. Engaging in RPPs typically requires more than just adapting research methods to honor and center collaboration across local practitioners, communities, and researchers. To truly be impactful, a necessary disruption of the status quo is needed. A similar commitment to disruption of habitual ways of writing and researching about RPPs must also apply if we are to engage in systems-level change. On that note, we acknowledge that writers of peer-reviewed literature are typically situated in an academic system in which certain forms of publication are important forms of currency. As such, we recognize that taking action on any of these questions may present challenges that other approaches to collaborative research (e.g., Participatory Action Research) have also encountered. Nonetheless, we think this is necessary work to take on. As we continue to strengthen the work of RPPs, we invite readers to reflect on these initial ideas with us in service of ensuring that literature on RPPs has the potential to support further complex, unique, localized RPP work in other contexts and that it acknowledges the complexity and ever-evolving nature of RPP work.


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NOTES

[1] We include "as is possible" to acknowledge examples in which a partnering organization prefers to remain anonymous. The invitation to be specific about a context does not mean "name all organizations involved." Rather, it is an invitation to share (again, as is possible) the details of how the RPP is structured, what its goals are, what challenges it may face, and so forth.

"WHY AM I ALWAYS BEING RESEARCHED?" AN APPLICATION TO RPPs, PART 2

By Nina Spitzley | NNERPP
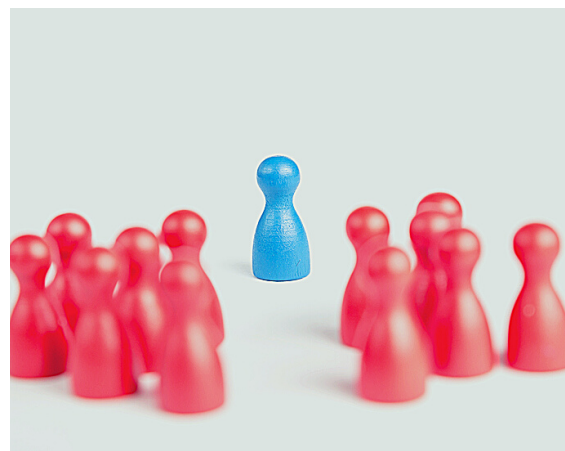
"If evidence matters, we must care how it gets made" (p. 6) is the opening line of the "Why am I always being researched?" guidebook by Chicago Beyond, an impact investor working to provide more equitable access and opportunity for Chicago youth. The authors elaborate: "If we do not address the power dynamic in the creation of research, at best, we are driving decision-making from partial truths. At worst, we are generating inaccurate information that ultimately does more harm than good in our communities." (page 6)

At NNERPP, we first dove into the "Why am I always being researched?" guidebook at the 2020 Annual Forum –our yearly gathering of NNERPP members and friends in the research-practice partnership (RPP) space to come together and learn about all-things-RPP–, recognizing the relevance of the lessons identified in the guidebook for RPPs and wanting to learn from Chicago Beyond's

insights. In particular, the guidebook identifies seven inequities that get in the way of the truth when conducting research –these include access, information, validity, ownership, value, accountability, and authorship– and explores how these inequities can be opportunities for change. Table 1 below gives a brief description of the seven inequities.

At the 2020 Annual Forum, we invited a team from Chicago Beyond to lead us in an initial conversation about these seven inequities. Following that initial session at the Forum, we then invited NNERPP members to a Virtual Brown Bag where we further examined the inequities of "validity" and "access" and their application to RPPs. We captured some reflections from that Virtual Brown Bag in our NNERPP Extra article "Why am I Always Being Researched?" An Application to RPPs, Part 1."

Centering equity in RPPs has certainly been top

of mind for the NNERPP community in the last few years and we have explored many aspects of it as a community – for example, at our most recent Annual Forum this summer, nine sessions were dedicated to exploring the many ways RPPs might center equity in their efforts. Our intent with the second installment in this series is to now come back to the guidebook to continue our examination of the seven inequities. Having dived deeper into "validity" and "access" in our 2020 Virtual Brown Bag, we invited the NNERPP community to join us for a follow-up conversation last fall in a NNERPP workshop dedicated to exploring the inequity of "information."

In this second installment of our multi-part series on applying Chicago Beyond's insights around the seven inequities to RPPs, we share back a synthesis of the ideas and suggestions that surfaced during our October 2022 conversation. Our intention with these pieces is to capture and share the NNERPP community's initial thinking on these topics; we hope to then iterate on these conversations and consider what additional supports might be useful for RPPs wishing to apply these lessons to their work.

Table 1. The Seven Inequities Identified by Chicago Beyond's "Why am I always being researched?"

ACCESS
"Could we be missing out on community wisdom because conversations about research are happening without community meaningfully present at the table?" (p. 7)

INFORMATION
"Can we effectively partner to get to the full truth if information about research options, methods, inputs, costs, benefits, and risks are not shared?" (p. 7)

VALIDITY
"Could we be accepting partial truths as the full picture, because we are not valuing community organizations and community members as valid experts?" (p. 7)

OWNERSHIP
"Are we getting incomplete answers by valuing research processes that take from, rather than build up, community ownership?" (p. 7)

VALUE
"What value is generated, for whom, and at what cost?" (p. 7)

ACCOUNTABILITY
"Are we holding funders and researchers accountable if research designs create harm or do not work? (p. 7)

AUTHORSHIP
"Whose voice is shaping the narrative and is the community fully represented?" (p. 7)

REFLECTIONS ON INFORMATION

As noted in Table 1 above, the Chicago Beyond guidebook provides the following prompt for thinking about equity in information: ***"Can we effectively partner to get to the full truth if information about research options, methods, inputs, costs, benefits, and risks are not shared?"*** (p. 7)

During our conversation last fall, we invited the group to reflect on the following two questions, which are based on this prompt and rephrased in terms of RPPs:

- What kinds of informational biases exist between Rs and Ps (that is, those on the research-side and those on the practice-side of an RPP)?
- Even if you have the right people at the table ("access") + value their expertise ("validity"), can you actually partner effectively if Rs **typically** hold [more power / less risk / more technical knowledge about the research process] relative to Ps?

Building on these, we also posed the following additional questions to invite further reflection and discussion.

- Where is informational power held?
- Can you really have "informed consent" or "equal partnership" if the knowledge re: research approaches may differ dramatically between R and P?
- What are differences in risk associated with research?
- What does it mean to have "full information"?
- Who knows what and who doesn't know what? When does that have implications for partnership decisions?
- How might we equalize unequal informational knowledge? How much "equalization" is necessary?
- What features of the system reinforce these informational asymmetries?

We first invited the group to quietly ponder these prompts and share initial observations in writing on a Jamboard (a digital interactive whiteboard), then opened up the floor to conversation. In the ensuing discussion, the following four themes emerged.

(1) Transparency versus burden

The conversation started off with a more general wondering on information in RPPs: Does everyone have to know everything?
NNERPP members observed that sharing information is time consuming and that within the partnership context, interactions and meetings generally have to be efficient and honor everyone's limited time. This

led the group to the observation that RPPs must strike a balance between transparency versus burden. Transparency gets at the difference between everyone having to know everything and everyone having the opportunity to know everything. If there are barriers that keep certain members of the partnership from knowing certain things in a systematic manner, then that is certainly problematic. But if all participants in the partnership have to be informed of all things all the time, whether it is relevant to their role or not, then this gets burdensome. If there is (i) transparency in how information is shared and how partnership decisions are made; (ii) the opportunity for everyone in the partnership to learn more; and (iii) trust within the partnership, then, the group suggested, partners can partner effectively. This led attendees to these related questions: When do informational asymmetries matter and when might they not? When are informational asymmetries harmful when it comes to equitable participation?

(2) Informational asymmetry in and of itself doesn't have to be a problem

As the group was diving deeper into these questions of informational asymmetry, the conversation also turned to epistemological biases as we reflected on power imbalances in what counts as knowledge and data. Different NNERPP members in the group emphasized the real differences in the research and practice worlds when it comes to knowledge and seeing the world: Research-side participants (Rs) and practice-side participants (Ps) really do not see the world the same way,

and their knowledge base really is not the same. Additionally, even among Rs and Ps, there isn't necessarily agreement when it comes to epistemologies. One participant asked: We can look at the same thing but not see the same thing – so how can we then work together effectively and trustingly, especially when one epistemology might be valued higher than the other?

At this point in the conversation, another participant brought up a new thought, suggesting that the different epistemologies that RPP partners bring to the table can in fact be a strength, and, relatedly, informational asymmetry can be a strength in the RPP context; after all, this is what makes collaboration valuable. In fact, RPPs can be powerful precisely because they unite partners who all bring different knowledge to the table. As the participant noted, we must, however, be careful to be transparent about these asymmetries and we need mechanisms to elicit what each RPP participant knows –as well as what no one knows– in order to make this a strength rather than a source of inequity.

(3) RPPs challenge what is "typical"

We then turned to a new thought brought up by the group, as one participant challenged the second main question we had been considering: Even if you have the right people at the table + value their expertise, can you actually partner effectively *if Rs* **typically** *hold [more power / less risk / more technical knowledge about the research process] relative to Ps?*. As the participant pointed out, RPPs are already atypical, so maybe this question

doesn't quite apply as written: RPPs should generally question power relationships and should be –by definition– not biased toward technical knowledge. Of course, this doesn't mean that RPPs do not struggle with power imbalances and with breaking down some of these assumptions. As another participant added, RPPs need to be intentional in challenging assumptions and shifting dynamics, including assumptions about what makes "good" research: Importantly, what is considered valid and rigorous research on the R-side is not necessarily what makes research useful and used on the P-side.

These thoughts prompted other participants to bring up additional questions, including: Do Rs actually hold more power in an RPP context? On the one hand, the R-side often gets the money for RPP research projects –another norm that we need to continue to challenge– so if power is money, the R-side holds a lot of power. On the other hand, the P-side has significant gatekeeping power: It typically has the data. It is often the R-side that needs to do a lot of work to even be invited to the table by the P-side, which has a lot of decision-making power when it comes to who they choose to partner with, what data they share, and for what kinds of projects. We rounded out these thoughts by stating that there are plenty of opportunities for informational inequity on both sides, which is why the commitment to collaborative work is so important to the potential of RPPs.

(4) Differences in risk might be more problematic than differences in information

Finally, our conversation turned to the political context in which the R- and P-sides operate, and the group shared thoughts on how differences in the political nature of the two sides and the associated differences in risk might be more problematic than differences in information – but might also contribute to informational asymmetries. On the practice side, for example, the political pressures around which findings get shared and how research is used often affect how and which decisions are made. The research-side instead often has their eye on tenure goals and

institutional structures and systems that do not typically incentivize partnership work, worries that are more individual in nature and not subject to a public-facing microscope. These different realities can affect Rs and Ps show up in the partnership, which can then lead to tensions. One participant described the differences in risks associated with RPP work as follows: On the P-side, the risk is doing something that doesn't yield practical knowledge, thus making the partnership research a waste of time, or doing something that exposes you; on the R-side, the risk is also doing research that is waste of time, but in the sense that it doesn't yield publication. Both sides share the goal of producing partnership research that is new information and leading to practical impact. However, they face different risks as they pursue that goal. Each side's perceptions of risk might ultimately be more challenging than asymmetries in information.

IN CONCLUSION

The 60-minute conversation was ultimately too short to explore the different aspects of inequities related to information in RPPs, but our participants nonetheless agreed that it was a rich discussion and a valuable opportunity to reflect on important questions, as well as raise new ones. We are looking forward to continuing to dive into the seven inequities raised by the Chicago Beyond guidebook and to seeing where these conversations take us. As we conclude this reflection piece, we leave you with some additional observations and questions that were raised during our Jamboard activity and that we didn't get to during our conversation

as a group. If these questions / observations or the reflections throughout this article leave you with thoughts you'd like to share, please feel free to reach out to us.

Additional observations and questions to ponder:
- To truly share power at the table, you really need to have a skilled facilitator/broker to help manage the relationships and the flow of info.
- What about the power differential within each partner's organization? Whose voice gets heard? Whose voice is considered valid?
- The time scales Rs and Ps live on are so different. Even if trust and best intentions are there, it is a challenge to conduct research that meets the (external) needs of each.
- You may partner effectively if you regularly question and address power dynamics, assess and address risk, and understand technical knowledge as shared between R and P.

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INTRODUCING THE MILESTONES GUIDE FOR EMERGING RPPs

By Kim Wright | NNERPP

If you Google the simple phrase "things I wish I knew before", you'll get back around 272,000,000 results (!). Advice from others on just about anything you could imagine is without end, from "15 Things I Wish I Knew Before Getting into Teaching" to "20 Things This TikTok User Didn't Know Until He Was In His 30s." If you are in the research-practice partnership (RPP) space, you may very well have been tempted to do a Google search on "RPP things I wish I knew before I got started", or some variation of that phrase. Luckily, the NNERPP community, which consists of RPPers with all kinds of diverse experiences, skill

sets, roles, and backgrounds, is never short on helpful advice and always enthusiastic to share lessons learned. In this issue of NNERPP Extra, we are thrilled to introduce one such artifact sourced from community advice: the new NNERPP Milestones Guide for Emerging RPPs.

BACKGROUND

The Milestones Guide is the culmination of a series of conversations our members held over the past several years to sort through the ups and downs of their own RPP experiences and

distill them into a set of things they wish they knew in the early stages of their RPP. Guided by Beth Vaade of the Madison Metropolitan School District and Madison Education Partnership and Sara Slaughter of the Education Research Alliance for New Orleans at Tulane University, a group of research- and practice-side RPPers collaborated to develop a short list of milestones and stumbling blocks first year RPPers might anticipate and plan for as they embark on their RPP journey. NNERPP members participating in these discussions represented both early-phase and more mature RPPs, spanning a variety of partnership types, structures, and research foci. With this guide, we aim to support emerging RPP teams as they collaboratively plan their work during their first year together.

ROUND 1: COLLECTING AND PRIORITIZING MILESTONES AND STUMBLING BLOCKS

We began our discussions about early RPP milestones with a session at the 2019 NNERPP Annual Forum, which is our yearly gathering of NNERPP members and friends in the RPP space to come together and learn about all-things-RPP. A group of about 15 NNERPP members joined Beth and Sara to sort through a collection of key accomplishments and

stumbling blocks an RPP might expect in their first year, shared by NNERPP members prior to the session at the Forum. The group's task was to sort the submitted advice into common themes and create an initial draft of a checklist of accomplishments and stumbling blocks that seemed to be common across RPPs in year one, years two and three, and year four and beyond. The accomplishments were further divided into things that seemed attainable (common across most RPPs), optimistic (common across a few RPPs), and things that seemed like more of a reach (not commonly mentioned, but important). The approach to grouping the stumbling blocks focused both on how frequently something was mentioned, as well as how impactful it was likely to be, rated on a scale from "small bump" to "giant sinkhole."

ROUND 2: REVISITING AND ITERATING THE MILESTONES AND STUMBLING BLOCKS

Like most of the best laid plans and initial drafts made in 2019, plans for further iteration of the Milestones Guide were put on hold during 2020 and 2021 as we held space for RPPs to think collectively about shifting to a new normal (2020) and thriving in times of

continuous change (2021) throughout the COVID-19 pandemic. We re-launched our Milestones discussions at last year's Annual Forum where the theme was "What Really Matters? An RPP Learning Journey for Now and the Future." With a focus on cutting through the noise of the last couple of chaotic years to refocus on what mattered most in folks' RPP journeys, it made sense to revisit the initial milestones and stumbling blocks draft in light of a world that was both vastly different and utterly the same from the world in which the original set emerged.

Once again led by Beth and Sara, the 2022 Annual Forum session invited participants to use the 2019 milestones and stumbling blocks draft as a starting point and refine its advice, using the lens of balancing the pursuit of numerous partnership activities with the limited capacity felt by all, perhaps more acutely now than prior to COVID. The group's task was to decide whether to keep, cut, or add to each milestone or stumbling block from the 2019 lists. As the group reflected on the initial draft, two major themes emerged in how folks were framing their thinking about how to revise the milestones and stumbling blocks: (1) There are some things that must be perpetually attended to; and (2) The only constant is change. For example, one participant suggested uncoupling the lists from any specific time frame, noting that, "we are doing the same stuff now, and it's year 7," while another participant expressed that, "even if you have something 'figured out' you might still have similar problems and challenges [later on]." Additionally, the group suggested language clarifications to allow for expanded understanding of the various ways

in which a milestone or stumbling block might manifest across various RPP contexts. challenges [later on]." Additionally, the group suggested language clarifications to allow for expanded understanding of the various ways in which a milestone or stumbling block might manifest across various RPP contexts.

FINAL ROUND (FOR NOW!): CREATING THE TOOL

Building on these efforts, the NNERPP team set out in the fall of 2022 to combine the 2019 and 2022 documents into a final version to share with the NNERPP community. Around the same time, we were hearing a need for the creation of more tools to facilitate transfer of new thinking about RPP work more directly into practice. Based on this feedback and the feedback from the 2022 Annual Forum session, we decided to expand what we had taken to referring to as the "milestones document" into a three-part guide focusing on the key year one milestones:

–**Part 1** shares key milestones an RPP may wish to prioritize, organized across three levels of suggested attention (strongly consider doing, nice to do, and leave for later).

–**Part 2** shares potential challenges the RPP may encounter during its beginning phase; we divide these in terms of those likely needing immediate attention and those that could probably wait. Each milestone or potential stumbling block is linked to a relevant reading, resource, or tool from the NNERPP RPP Knowledge Clearinghouse.

–Part 3 shares a discussion protocol and self-reflection activity for RPP teams who may be interested in hosting a collaborative discussion about the milestones and challenges in order to support RPP planning and learning.

The completed guide was then further revised with input from Beth and Sara and audited for uneven or non-liberatory power dynamics in the milestones and language used to describe them (Suarez, 2018).

HOW TO USE THE MILESTONES GUIDE

The primary goal of this guide is to support emerging RPP teams in their first year to navigate and prioritize suggested activities and goals, including bringing awareness to potential challenges that might occur. The milestones and stumbling blocks checklists are designed to encourage RPP teams to consider each list in light of their unique contexts and prioritize each milestone or stumbling block according to their specific needs. Newer RPP teams who feel they have made good progress on several of the year one "Strongly Consider Doing" milestones, might choose to expand their discussion to include examination of the "Nice To Do" and "Leave for Later" milestones, for example. Similarly, if the "Watch Out" stumbling blocks are not of greatest concern to an RPP, teams can expand their discussions beyond the Watch Out list to include the "Be Aware" and "Relax" lists.

More experienced RPP teams might consider using the milestones guide as part of the onboarding process for new RPP members or apply the milestones to a newer project instead of to the partnership itself. Particularly in larger RPP teams that might be onboarding new members or in multi-year partnerships initiating new projects, we hope the checklists can add to the institutional muscle memory that can help integrate new activities in light of all of the hard work and lessons learned by the RPP team previously. Additionally, based on feedback from participants in the 2022 Annual Forum milestones discussion that there are some things that just always need to be kept top of mind, we created the supplemental one-page summary of all of the milestones and pitfalls to be a helpful touchstone that can be printed out and referenced as needed.

IN CONCLUSION

We hope you will find the Milestones Guide as a worthy stand-in for a Google search of "RPP things I wish I knew before I got started." As always, we welcome your feedback, both about how you are using the tool and any secret ingredients that your RPP would like to share with our community, particularly for emerging RPPs.

Kim Wright is Assistant Director of the National Network of Education Research-Practice Partnerships (NNERPP).

IMPROVING IMPROVEMENT: ELEVATING STUDENT VOICE IN IMPROVEMENT WORK

By Amber Humm Patnode | Proving Ground

This is the ninth installment of _Improving Improvement,_ our quarterly series focused on leveraging the power of research-practice partnerships (RPPs) to build schools', districts', and states' capacity to improve. Previously, we shared feedback from current and past partners to determine to what degree their capacity to improve has increased over the last five years, and how we might engage in our own internal continuous improvement efforts to better meet their needs.

In this installment, we share how we strategically embed empathy building activities and student voice to inform our improvement work – and why we are increasingly recognizing the importance of doing so.

I want to share a recent experience that made an impact on me and affirmed the importance of involving students more deliberately in improvement work: At a recent conference I attended (the Impact Florida Education Summit), my personal highlight of the Summit was a student panel comprised of five high school students who shared their experiences and perspectives about what it is like to be a young person in public schools today. During the Q&A portion, an educator asked the students what advice they had for educators on how to connect with youth who may not be as engaged in school. One of the young people shared a response so simple, yet often neglected from a systematic perspective: "ask them". Ask the student what is happening that may be preventing them from engaging and then offer them options for supports based on what they say.

Involving students isn't always at the forefront of improvement efforts. As referenced in our _How to Know an Improvement Effort is Succeeding_ installment, our partners typically complete a continuous improvement self-assessment before beginning improvement work with us that asks respondents to reflect on how well, and how often their organization engages in various improvement activities, and which critical perspectives are included in the process (staff, families, students, community).

The majority of partners report that students are "never" engaged in improvement activities (e.g., identifying root causes of identified problems or selecting and designing interventions aligned to root causes) or that students are "sometimes" engaged, but primarily to provide feedback after decisions have already been made.

ELEVATING STUDENT EXPERIENCE AND STUDENT VOICE

In recent years, Proving Ground began utilizing design thinking more strategically throughout our improvement framework as a means for partners to develop a deep understanding of the experiences and needs of students and/or their families and to elevate their voice within the process. While we have encouraged including students and families in every step (root cause analysis, intervention selection, etc.), historically our partners have used two specific strategies to support the inclusion of students and/or family in intervention design and implementation: journey mapping and prototyping.

Journey Mapping

The first of these strategies is to create a journey map that focuses exclusively on the experiences of the intervention recipients (typically students). The journey map we use is a graphic organizer that identifies the main events within an intervention that students will experience in chronological order. It prompts partners to think about how students may feel in each event, as well as how they want students to experience the intervention and the necessary planning to create that experience. For example, in a restorative/community building circles intervention, the first event students experience should likely be some notification or awareness building that they will be participating in a circle process. Students may feel a variety of emotions: curious, apprehensive, suspicious, or even uncertain about circles, so adults will need to intentionally plan when, where, how, the notification/awareness building event will happen and who will be involved so that

students are reassured about the purpose, rationale, format, and structure of the circles and are comfortable participating.

Prototyping

The second strategy used in the Proving Ground process is prototyping interventions. Once teams have created the intervention journey map, they use the journey map to create a brief "elevator pitch" describing the intervention along with a low fidelity prototype of it, such as a short story board describing the intervention events or a mockup of a tool or platform, to share with the intended recipients. Partners are guided to ask open-ended questions to potential intervention recipients about the things they like or don't like about the interventions represented in the prototypes and their ideas for improving the intervention design. For many educators, these two activities are new ways of approaching intervention design. We frequently receive feedback from our partners about how much they appreciate the opportunity to intentionally design for the experiences they want students to have in the interventions they are offering and to have a structured format for getting student input into the design before implementing. Wanda Lash, Director of Student and Family Services for Akron Public Schools, shared: "Including students… around an issue that involves them allowed us to gain valuable insight from those for whom we were most trying to improve outcomes."

New: Student Shadowing

For our newest Ohio improvement network, partners engaged in an additional empathy building step intended to inform their understanding of student needs and their experiences of school: Student shadowing. Each team member was asked to shadow a student who had membership in the population identified in their problem statement (e.g., chronically absent students in K-2) for a full day and to engage in the same assignments and activities as their identified student throughout the day. While this led to some humorous experiences for some partners, such as the recognition they were no longer able to sit "criss-cross applesauce" or strained muscles while playing at recess, it also led to intense insights about what it was like to be a student in their respective settings.

The multi-tiered system of supports (MTSS) Coordinator for Euclid City Schools, Hendrik Wolfert, shared:

> "The student shadowing experience was eye opening and allowed me to immerse myself into the students' daily routine from their perspective. The lessons learned as an administrator were much different than a 10-15 minute observation walk through and provided insights such as how other students behaviors impact learning throughout the entire day, how students energy and attention levels drop during the day, the relationship between hunger and attention at various points of the day, how a substitute teacher can negatively impact the routine of children without intention, and the amount of 'sit and get' we are expecting our students participate in at such a young age."

He also noted that, "regardless of ability, we have amazing students at all grades levels that want to feel loved and want to be a part of an environment that equally loves and cares for them" and strongly recommends the student shadowing exercise take place in every district and building to allow adults to truly understand how students go about their daily routines and gain a more in depth understanding of what impacts student achievement.

The intention of the shadowing activity is for the insights gained through observation, experience, and conversations with students during shadowing to inform future steps within the improvement process (e.g., root cause analysis, intervention selection). After each team member completes the shadowing activity, the team follows a structured debrief protocol to share experiences, develop a shared understanding, and identify common themes.

LOOKING AHEAD

While student shadowing, journey mapping, and prototyping are steps towards incorporating empathy activities and student voice, there is more work to be done. At Proving Ground, we will continue to provide our partners with efficient but impactful strategies to "ask them"- i.e., ask students and families about their needs and to elevate their ideas and perspectives throughout the entire improvement process.

In our next installment, we will share the progress of the Ohio cohort and how their empathy building and "ask them" activities are informing their improvement work.

Amber Humm Patnode is Acting Director of
Proving Ground.

RESEARCH HEADLINES FROM **NNERPP MEMBERS**

ADULT LEARNERS

GEORGIA POLICY LABS
examines postsecondary outcomes of Georgia's adult learners

BILITERACY

REL SOUTHWEST
examines who earns biliteracy seals and how they impact college outcomes

CTE

RESEARCH ALLIANCE FOR NEW YORK CITY SCHOOLS
examines CTE-dedicated high schools in New York City

COMMUNITY RESOURCES

HOUSTON EDUCATION RESEARCH CONSORTIUM
examines examines wraparound needs

COMPUTER SCIENCE

CHICAGO ALLIANCE FOR EQUITY IN COMPUTER SCIENCE
examines
• impact of the CPS computer science graduation policy on student access and outcomes
• impact of professional learning support for teaching CS remotely during the pandemic

COVID-19

GEORGIA POLICY LABS
examines
• the impact of a summer school program on student achievement
• the pandemic's impact on student achievement growth during SY 21-22

REL SOUTHWEST
examines levels of English proficiency before and during the covid-19 pandemic among English Learner students in grades 3–12 in Texas

CRIME

EDUCATION RESEARCH ALLIANCE FOR NEW ORLEANS
examines how the New Orleans school reforms affected youth crime

CTE

HOUSTON EDUCATION RESEARCH CONSORTIUM
examines equity in CTE program availability and access

EARLY CHILDHOOD EDUCATION

BOSTON P-3 RESEARCH-PRACTICE PARTNERSHIP
examines
• enrollment in pre-k and children's social-emotional and executive functioning skills over time
• variation in learning experiences across children in the same classroom
• factors that sustain the pre-k boost

EDUCATION POLICY INNOVATION COLLABORATIVE
examines
• Read by Grade Three law initial retention decisions for the 2021-22 school year
• 2020-21 retention outcomes under Michigan's Read by Grade Three law
• Michigan's literacy coaching landscape

ENGLISH LEARNERS

HOUSTON EDUCATION RESEARCH CONSORTIUM
examines how the timing of English Learners' reclassification is associated with middle and high school outcomes

EQUITY

DIGITAL PROMISE
examines how to increase digital equity

ILLINOIS WORKFORCE AND EDUCATION RESEARCH COLLABORATIVE
examines socio-demographic equity in Illinois

HIGH SCHOOL

OFFICE FOR EDUCATION POLICY
examines the relationship between course failures for 9th grade students and the grades served in the school buildings they attend
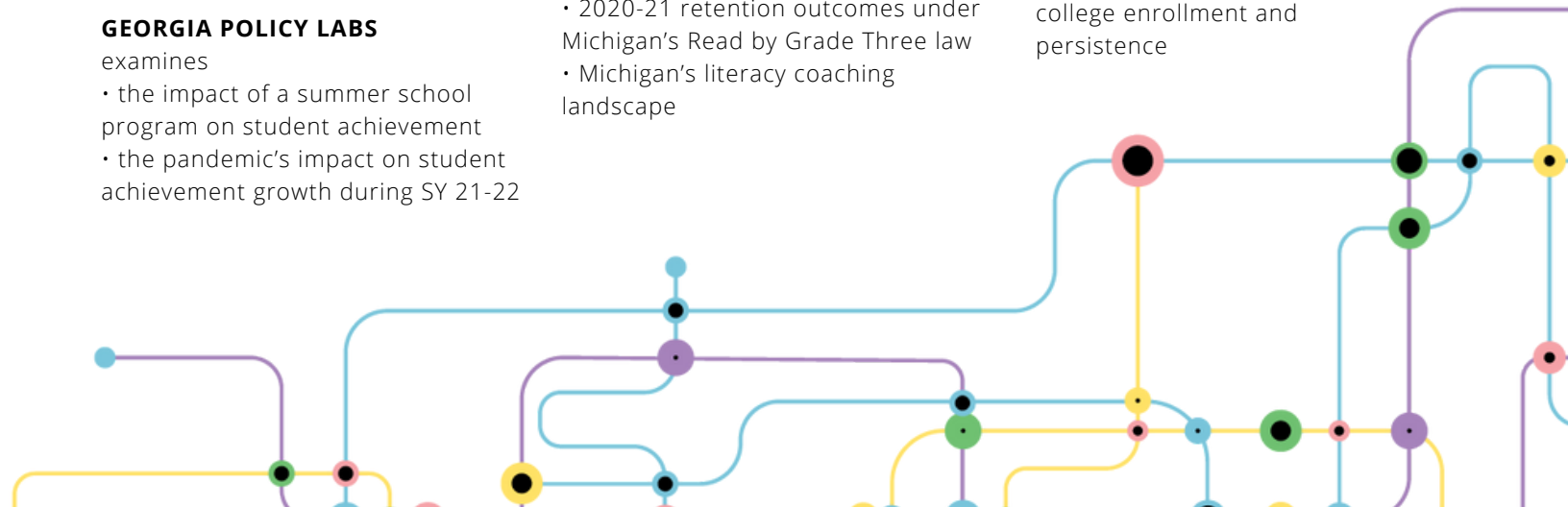
NUDGE COMMUNICATIONS

REL SOUTHWEST
examines the impact of email and text message communications

POSTSECONDARY

GEORGIA POLICY LABS
examines the impact of Achieve Atlanta's scholarship program on college enrollment and persistence

LOS ANGELES EDUCATION RESEARCH INSTITUTE
examines twelfth grade math and college access

REL SOUTHWEST
examines student group differences in Arkansas' indicators of postsecondary readiness and success

UCHICAGO CONSORTIUM
examines the educational attainment of Chicago Public Schools students (2021)

PRINCIPALS

UCHICAGO CONSORTIUM
examines
• the backgrounds, experiences, and supports of Chicago Public School principals as they prepared for the principalship
• Chicago Public School principals' prior experiences

RPPs

DIGITAL PROMISE
shares features and activities of an RPP aiming to promote equity and digital learning

SCHOOL CALENDAR

OFFICE FOR EDUCATION POLICY
examines motivations for adopting a four-day school week or year-round calendar in Arkansas

SCHOOL PERFORMANCE

REL MID-ATLANTIC
examines how to improve the accuracy of accountability measures for small student subgroups

REL SOUTHWEST
examines indicators of school performance in Texas

SCHOOL TURNAROUND

EDUCATION POLICY INNOVATION COLLABORATIVE
examines schools identified for inclusion in Michigan's partnership model for school turnaround

SOCIAL EMOTIONAL LEARNING

HOUSTON EDUCATION RESEARCH CONSORTIUM
examines social and emotional skills of students in the Houston Independent School District

SPECIAL EDUCATION

METROPOLITAN EDUCATIONAL RESEARCH CONSORTIUM
examines teaching writing to middle school students with disabilities

RESEARCH ALLIANCE FOR NEW YORK CITY SCHOOLS
examines educators' perspectives on an innovative model for autistic students

STUDENT MOBILITY

SAINT LOUIS RESEARCH-PRACTICE COLLABORATIVE
examines student mobility in Saint Louis

STUDENTS

EDUCATION RESEARCH ALLIANCE FOR NEW ORLEANS
examines results from a New Orleans citywide youth survey

TEACHERS

DIGITAL PROMISE
shares recruitment and retention solutions designed by teachers of color

GEORGIA POLICY LABS
examines how the pandemic impacted teacher hiring and retention in metro Atlanta

ILLINOIS WORKFORCE AND EDUCATION RESEARCH COLLABORATIVE
examines
• the state of Illinois' system for teacher preparation accountability & transparency
• why Illinois teachers leave or stay in the profession

REL SOUTHWEST
examines efficacy of Louisiana teacher preparation program
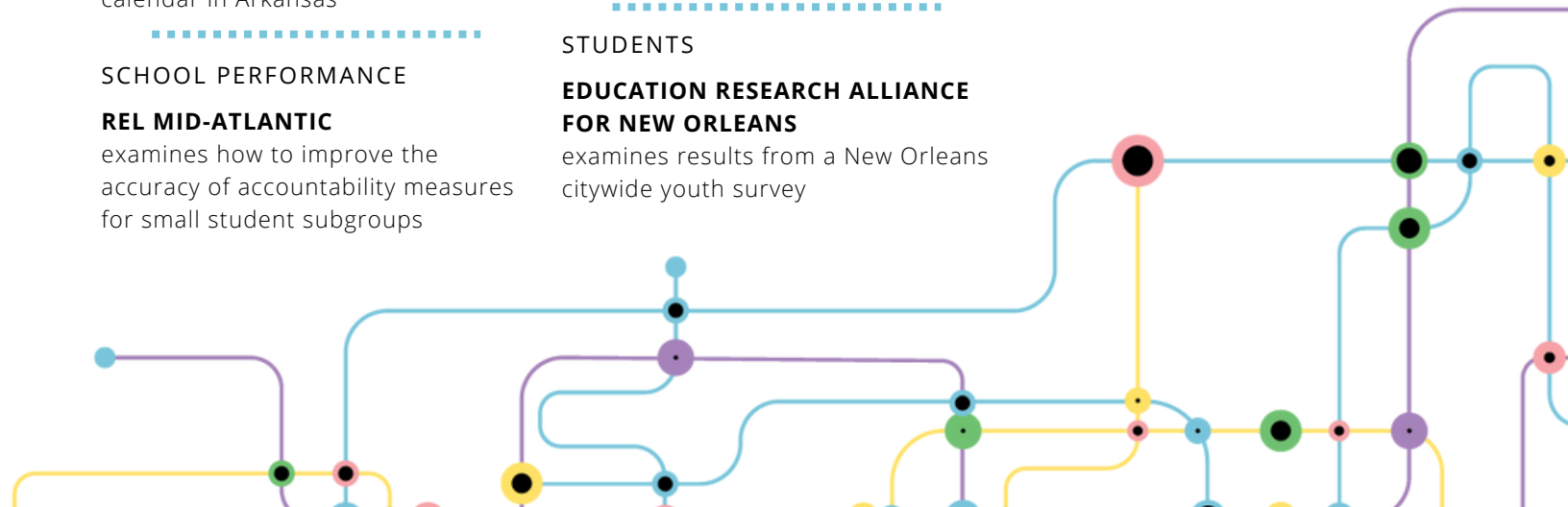
END NOTES

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