

Building a Research Infrastructure for Studying PL: Learnings from RPPL's Early Years



May 8, 2024

Welcome!

**As we wait for folks to join,
please drop in the chat...**

1. Name
2. Organization/district
3. What brings you here today?

How to engage



CHAT your reactions/comments/thoughts/ideas



Use Q&A to ask presenter(s) questions



You'll be muted unless you raise your hand and the presenter calls on you



Reminder: This webinar is recorded

Today's Presenter

Nate Schwartz

he/him

Director of Applied Research
at the Annenberg Institute at
Brown University



Today's Agenda

Introductions	5 min
About RPPL	5 min
Why This Work	5 min
What We've Learned	30 min
Q & A	10 min
Closing	5 min

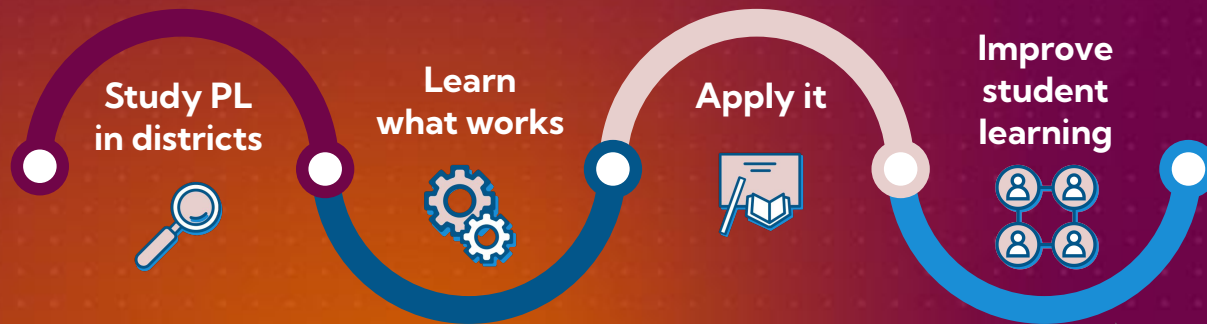
Where we started

Many existing studies of PL look at the overall effects of broad packages of PL within very specific contexts.

- These studies provide little information about how to design new PL going forward.
- Generalizing from these studies to a wider population and understanding context-specific effects can be difficult.
- Hard to know what research tells us about PL design features and the variation across specific contexts and populations.

RPPL's defining question:

What if the providers delivering PL in districts across the country could turn themselves into laboratories through sustained research-practice partnerships to better study what PL design features work, for whom, and under what conditions, to improve educational outcomes for historically marginalized students?



What are we learning...

1

...about the knowledge base on professional learning?

2

...about how to do better research?

3

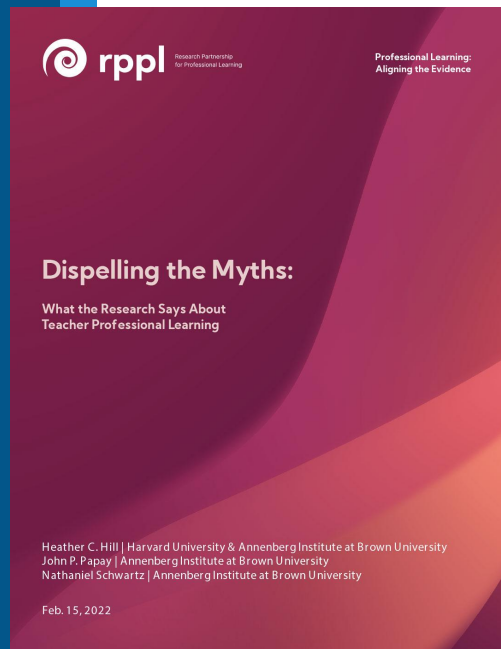
...about where to go from here?



I. Building the PL Knowledge Base



1. The consensus view of what works in PL isn't well supported by recent evidence.



PL program effects aren't always concentrated among beginning teachers - veterans have a lot to gain.



Programs including explicit summer workshop time for teachers outside the school year provide on-average greater gains for students



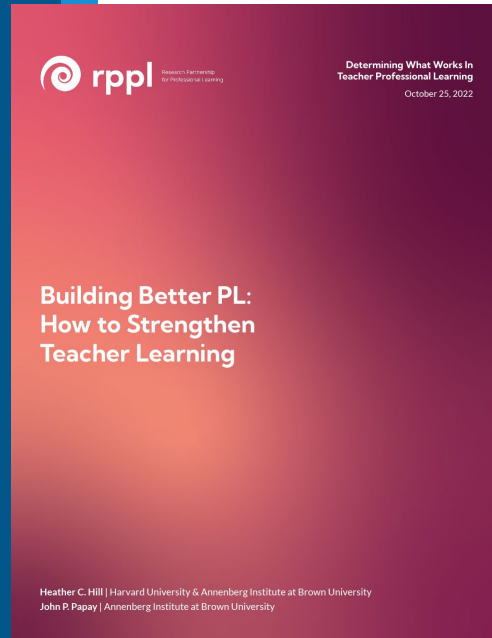
Adaptation - with guardrails - can be more effective than maintaining simple program fidelity.



Shifts in teacher content knowledge are often disconnected from classroom improvement



2. The latest research suggests the importance of PL that creates social accountability for shifting practice and offers content built around teachers' day-to-day interactions.



Significant impacts across programs that contain instructional coaching



Importance of built-in follow-up and checkpoints to support teachers through implementation challenges



Emphasis on modeling, analysis, and rehearsal – and practice-supportive materials



Explicit focus on teacher-student relationships



3. There is a dearth of knowledge about how best to personalize PL to meet individual needs.



Teachers and leaders often have separate ideas about the types of data that should be used to identify PL needs – and this divergence can lead to markedly different views about whether specific PL strategies are most useful and appropriately adapted to school and classroom contexts.



Instructional coaching offers a research-backed way to customize feedback; yet we know relatively little about which elements of a coaching system are most effective and important.



4. Districts have few templates or models to follow as they make decisions on how to allocate resources toward PL.

National Trends in District Spending on Teacher Professional Learning

Arielle Boguslav, John Papay,
Nate Schwartz, Brendon Krall

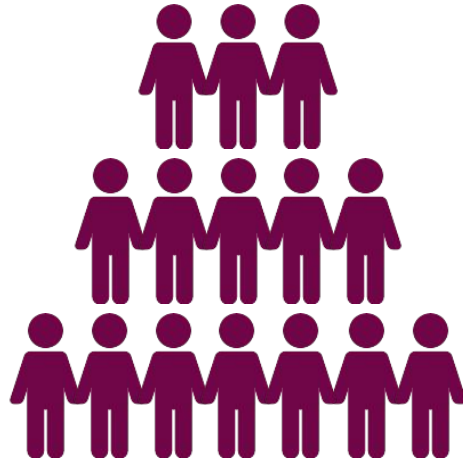


- ➔ Annual spending on PL exceeds \$37B annually with about 70% of the total spent on district staffing
- ➔ Spending on PL has been rising faster than cost-of-living, but commensurate with other education increases
- ➔ There are big differences across districts, and state policies aren't significantly reducing variation
- ➔ Bigger districts spend more per teacher and smaller percentages on outside contracts

II. Building a Stronger Research Infrastructure



1. Multi-layered partnerships let us better understand the PL landscape...



1. RPPL & PL-Orgs
2. PL-Orgs & Districts
3. PL Facilitators & Teachers



1. ...but building investment in PL experimentation on a large scale remains a challenge.

Glossary of Terms

Below are a few key terms defined in the context of this study:

- **What is an RCT?** A Randomized Control Trial (RCT) is a study that randomly assigns participating units to either the **treatment group** (receives an intervention) or the **control group** (does not receive the intervention). Random assignment helps researchers establish causal relationships between the treatment and an outcome. Randomization increases the internal validity of the study as treatment and control groups are balanced on both observable and unobservable characteristics, thus isolating the treatment as the causal factor explaining treatment-control differences in outcomes.
- **What is an A/B experiment?** A/B experiments (or more colloquially, split tests) are a type of randomized experiment where two versions of an intervention or program to determine if one is more effective than the other. In this type of experiment, participants are randomly assigned to either **Treatment A** or **Treatment B**, with differences in outcomes ascribed to differences between the two treatments. As this suggests, careful design of the contrasting treatments is key, but the most important is to vary only along the dimension of interest.
- **What is a nested experiment?** This is a study that includes two stages of random assignment. In the first stage, participants are assigned to either the **treatment group** (receives an intervention) or the **control group** (does not receive the intervention). Then, the subjects within the treatment and control groups are randomly assigned to receive one of two versions of the main treatment, **Treatment A** or **Treatment B**. In the first stage, we can pool results across Treatment A and B to determine if either treatment improve student outcomes? Then, in the second stage we ask the question: Which version of treatment is better at improving student outcomes?
- **What do you mean when you talk about "unit of randomization"?** This refers to the unit which random assignment occurs. For example, in a study with schools as the units randomized to either treatment or control groups (or treatment and control groups). We refer to the total number of units randomized as the **sample size**. A larger sample size means the study has more power, and thus a greater likelihood of detecting a true effect if it exists. Said differently, a larger sample can detect smaller treatment effects.

Talking about research and experimentation

Educators often voice concerns about conducting studies in schools. Concerns typically include the extra burden of data collection or confidentiality (i.e., fear of evaluation). In general, the suggested way to approach these conversations is to listen a lot first, hook their interest in a research question, and then explain why the conditions must be experimental to answer the question.

From Partners, You May Hear...	One Response Might Be...
"The stakes are too high to be experimenting on our kids"	We agree! It is urgent, overdue work to produce more equitable outcomes for students. That's why we can't afford to be approximating and speculating about which services are best suited for you. Teachers spend a lot of time learning to use new curriculum materials by studying them with colleagues, looking at student work from the materials, and so forth. While some studies suggest this activity benefits students, the field doesn't have causal evidence that this activity improves instruction and student outcomes.
"ALL teachers need this service now, we can't leave it to chance whether they get it this year or not"	<p>If A/B Testing:</p> <ul style="list-style-type: none"> • We hear you! In this experiment, one condition will always be business as usual; this will be what teachers would normally get as part of the services we provide. Another condition will be an enhancement suggested by adult learning theory; this will be something we hope will "supercharge" teacher learning. In this way, no services are sacrificed. <p>If Treatment/Control:</p> <ul style="list-style-type: none"> • See "Randomization Approach" section below. Maybe they have more schools that need services than they can afford to support this year; that's a great condition for random assignment. Maybe they have a second initiative going on in schools, and thus rolling them out 50-50 this year is going to help teachers feel less stressed/be able to focus in one area. Maybe in elementary schools, random assignment of schools to receive either K-3 services or K-5 services in the first year could appease capacity concerns. Maybe they can think of this year as a pilot year (e.g., trying out the program in 40 schools to see if it's going to work in their context, then scaling up in a subsequent year if it goes well). (Note that it's unlikely we would have results for students back by September of the following year, so the district would have to determine what to do the following year based on other sources of data).
"Our system and staff are too overloaded"	We know that this is a significant concern, especially after two years of a pandemic! This work does require data collection and this will require an additional effort from educators. However, RPPL has centralized much of the measurement work and is prepared to staff this data collection. For example, RPPL staff conduct a series of classroom walkthroughs, which requires no extra time or effort for the teacher. We are able to offer this value at a large discount and in most cases, compensate your staff for any additional request of their



2. Centering equity in PL research requires attention both to process and outcomes.



RPPL partners and affiliates have thought deeply about what it means to support specific groups of students and to prioritize diverse viewpoints.



We as a network still need to figure out what it means to routinely build this awareness into our research designs. How can we design research that acknowledges diverse expertise? How can we ensure that power and prestige imbalances don't silence important voices?



RFP proposals offered thoughtful frameworks for how to build equity-responsive research, but we see an opportunity to build a common language as a network.



3. Measurement matters...



Measuring Teacher Professional Learning: Why It's Hard and What We Can Do About It

October 11, 2023



Researcher-developed and validated measures are not aligned to the needs of PL orgs and school partners



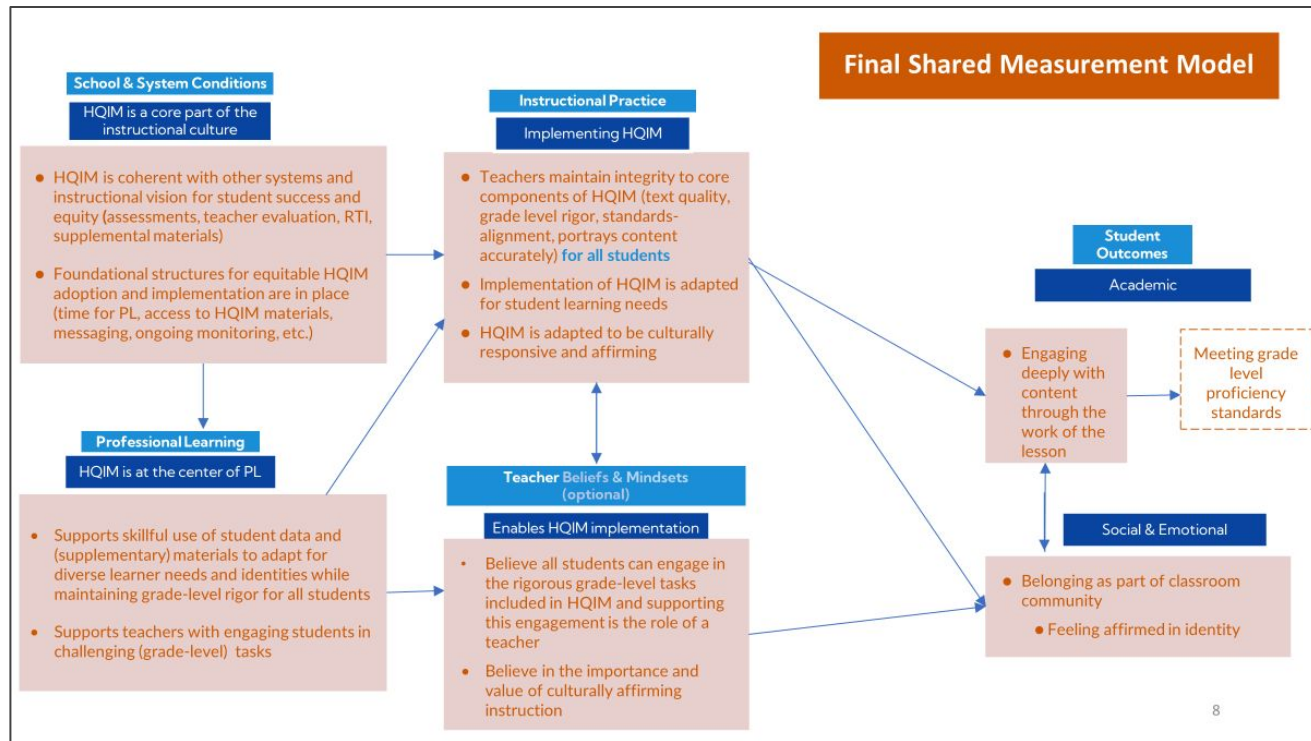
Measures are often not designed to incorporate questions of equity in practices and student experiences



Data collection practices are inconsistent and capacity for data collection and analysis is often limited



3. ...and unless we get better at data collection across our network, we will struggle to accelerate our research efforts.



Collaborative Data Transfer and Use Agreement ("Agreement")	
Project Title:	National Student Support Accelerator: Effects of tutoring at Santa Barbara USD
Agreement Term	Start Date: Effective date is the last date of signature on signature page End Date: 6/30/2022

Terms and Conditions

This Agreement is binding upon the following Parties who have executed the Signature Pages:
Brown University, Santa Barbara Unified School District (Santa Barbara USD), Reading and Math, Inc.,
and ServeMinnesota

- 1) Each Party shall provide the data set(s) described in its respective Signature Page (the "Data") to the other Parties for the research purpose set forth in Attachment 1 (the "Project"). Each Party is a Providing Party when providing Data and a Receiving Party when receiving Data. Providing Party shall retain ownership of any rights it may have in its Data and does not transfer any rights in the Data to the other Parties other than as set forth herein.
- 2) Receiving Party shall not use the Data except as authorized under this Agreement. The Data will be used solely to conduct the Project and solely by Receiving Party's Scientist and Receiving Party's faculty, employees, fellows, students, and agents ("Receiving Party Personnel") and Third Party Personnel (as defined in Attachment 3) that have a need to use, or provide a service in respect of, the Data in connection with the Project and whose obligations of use are consistent with the terms of this Agreement (collectively, "Authorized Persons").
- 3) Except as authorized under this Agreement or otherwise required by law, Receiving Party agrees to retain control over the Data and shall not disclose, release, sell, rent, lease, loan, or otherwise grant access to the Data to any third party, except Authorized Persons, without the prior written consent of Providing Party. Receiving Party agrees to establish appropriate administrative, technical, and physical safeguards to prevent unauthorized use of or access to the Data and comply with any other special requirements relating to safeguarding of the Data as may be set forth in the applicable Attachment 2.
- 4) The Parties agree to use the Data in compliance with all applicable laws, rules, and regulations, as well as all professional standards applicable to such research.
- 5) The Parties are encouraged to make publicly available the results of the Project. Before any Party submits a paper or abstract for publication or otherwise intends to publicly disclose information about the results of the Project, the other Parties will have thirty (30) days from receipt to review proposed manuscripts and ten (10) days from receipt to review proposed abstracts to ensure that the Data is appropriately protected. The Parties contributing to each jointly authored publication will together make decisions on authorship of such publications. Authorship will be in accordance with academic and/or scholarly standards.
- 6) Publishing Parties agree to recognize the contribution of the Providing Parties as the source of the Data in all written, visual, or oral public disclosures concerning research using the Data, as appropriate in accordance with academic and/or scholarly standards and in any specific format that has been indicated in the applicable Providing Party's Signature Page.
- 7) Receiving Party shall follow all Special Instructions included in the relevant Providing Party's Signature Page applicable to the Data that Receiving Party receives.
- 8) This Agreement shall be effective upon the Start Date set forth above, Unless terminated earlier in accordance with this section or extended via a modification in accordance with Section 13, this Agreement shall expire as of the End Date set forth above. All provisions which by their nature are

4. Ownership of PL data can be ambiguous and requires coordination and approval from multiple partners.



III. Where We Go from Here



RPPL members and affiliates are asking crucial questions that have the potential to deepen learning across the network.

Proposals submitted through RPPL's first network RFP competition highlighted the places we have the most to learn

- **Building stronger, more empathetic teacher-student relationships**
 - How can we help math teachers build their capacity to take on the perspectives of their students?
 - How can we support teacher collaboration aimed at deepening relationships to build student academic identities?
- **Individualizing PL to teacher and student needs**
 - What sequence of coaching supports works best for new teachers?
 - How can coaches supplement HQIM with specific, just-in-time information about student misconceptions?
- **Expanding the use of technology to support HQIM**
 - When and how can generative AI best scale PL opportunities?
 - Which types of feedback are best delivered through facilitators and coaches?





Q&A



Thank you for joining us today!



Please take our [survey](#)!



Interested in joining the RPPL network as an affiliate?
Email kmorales@rpplpartnership.org to learn more.



Sign up for [RPPL's newsletter](#) and connect with us on [LinkedIn](#) and [Twitter/X](#) to stay up to date on our latest news.



Research Partnership
for Professional Learning