PBLWorks Research & Evidence Strategic Priority Plan 2023

~ WE KNOW PBL WORKS; NOW, WE NEED TO SHOW THAT OUR WORK AT PBLWORKS WORKS ~

Introduction

This plan describes the work to be done through 2023 to advance *Research & Evidence at PBLWorks.*

In alignment with PBLWorks vision, mission, beliefs, and racial equity imperative, this plan includes strategic and enabling actions for research and evidence to support PBLWorks ambitions to make a positive impact on district and school leaders, teachers, and all students, especially Black and Brown students, using Gold Standard PBL. This plan is also designed to guide and support the implementation of internal and external strategic actions. As such, on an ongoing basis, the plan will be updated based on changing demands, resources, and learning; annually, progress will be analyzed, and updates will be made for the subsequent fiscal year.

Vision
All students, especially Black and Brown students, have access to quality Project Based Learning to deepen their learning and achieve success in college, career, and life.

Mission
Build the capacity of teachers to design and facilitate quality Project Based Learning and the capacity of school and system leaders to set the conditions for teachers to implement great projects with all students

Our Commitment to Advancing Racial Equity
Racial equity for all students will be achieved when race and ethnicity no longer predict the outcome of a young person's educational future. The board, leadership team, PBLWorks staff and National Faculty commit to identify and dismantle racial inequities, and provide equity-based support, so that students furthest from opportunity can achieve their full potential.
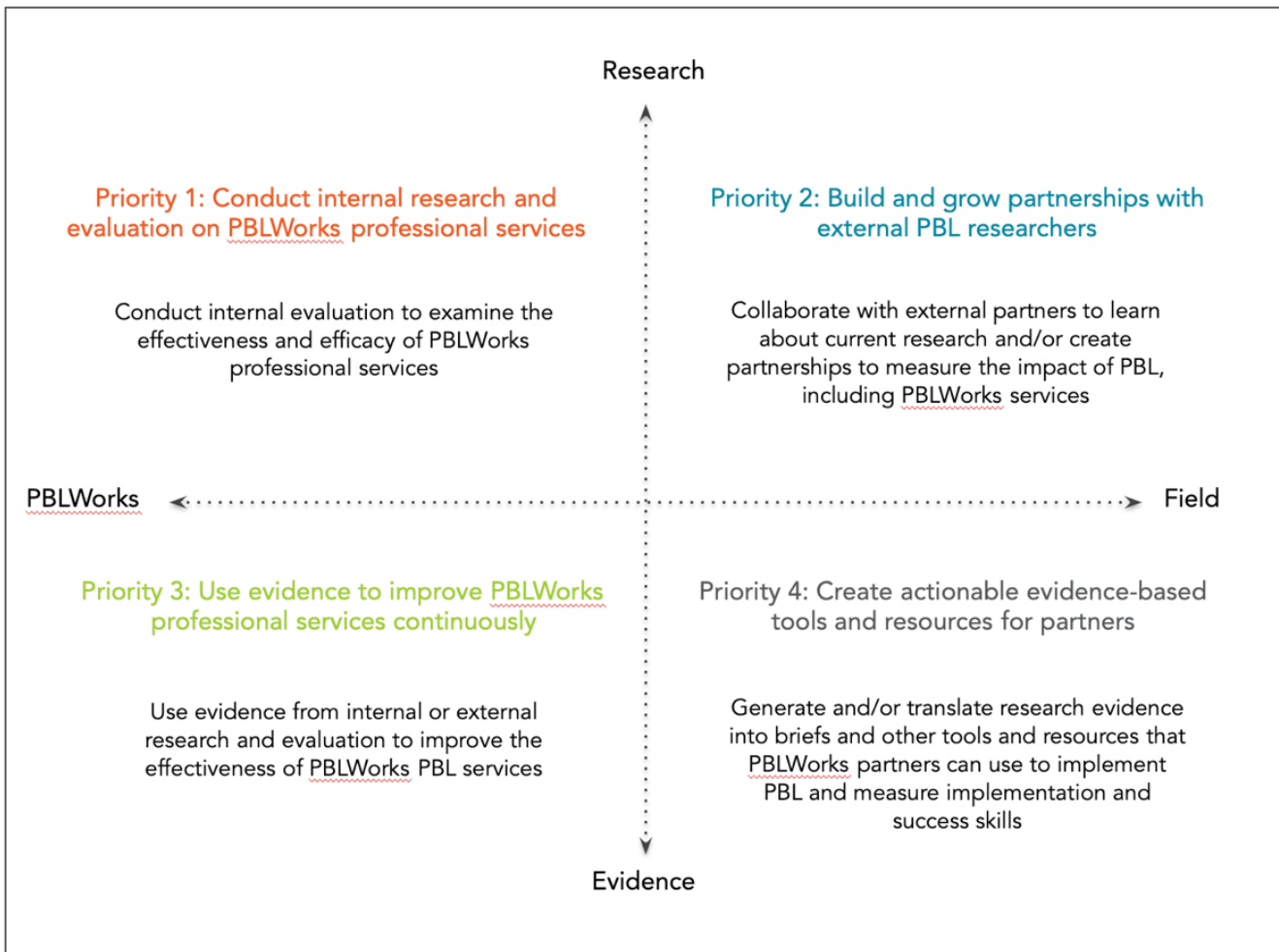
Beliefs
- Transforms students by inspiring them to think differently about themselves as learners, collaborators, and leaders
- Prepares students for success in college, career, and life
- Leads students to master core academic content and builds success skills
- Advances educational equity and empowers youth furthest from opportunity
- Enables teachers to make a difference in their students' lives
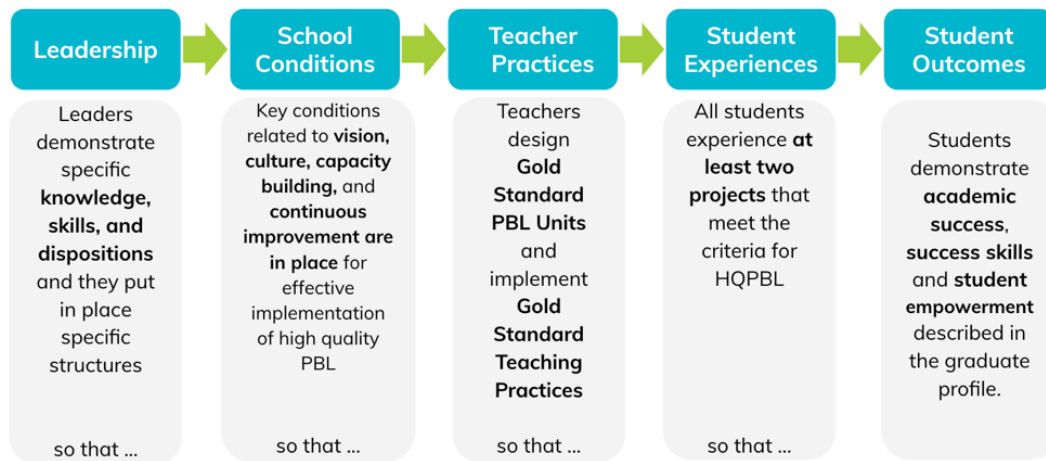
Plan Organization

Research & Evidence Framework

The PBLWorks Research and Evidence team uses a matrix framework to design and guide the focus of the work over time, based on four distinct priorities. We designed this framework in 2017 as part of a strategic planning process to clarify the purpose of the work of the research and evidence team; and, design, orient, and focus PBLWorks research and evidence work for greater impact. This matrix is based on key insights, risks, and research questions gathered from the management team, project leadership team, board members, and key staff members; and external stakeholders, including national PBL experts and PBL researchers.

Research

Priority 1: Conduct internal research and evaluation on PBLWorks professional services

Conduct internal evaluation to examine the effectiveness and efficacy of PBLWorks professional services

Priority 2: Build and grow partnerships with external PBL researchers

Collaborate with external partners to learn about current research and/or create partnerships to measure the impact of PBL, including PBLWorks services

PBLWorks ← — → Field

Priority 3: Use evidence to improve PBLWorks professional services continuously

Use evidence from internal or external research and evaluation to improve the effectiveness of PBLWorks PBL services

Priority 4: Create actionable evidence-based tools and resources for partners

Generate and/or translate research evidence into briefs and other tools and resources that PBLWorks partners can use to implement PBL and measure implementation and success skills

Evidence

Priority 1: Conduct internal research and evaluation on PBLWorks professional services

To deliver on the promise of our vision, mission, and racial equity imperative, we will prioritize establishing an evidence base to show the effectiveness and efficacy of PBLWorks professional services. PBLWorks will continue to conduct internal research and evaluation to answer key relevant questions at student, teacher, leader, and school levels in alignment with the PBLWorks *Theory of Action* and based on high priority questions identified by staff and board members and ongoing scans of current PBL research.

Leadership	School Conditions	Teacher Practices	Student Experiences	Student Outcomes
Leaders demonstrate specific **knowledge, skills, and dispositions** and they put in place specific structures	Key conditions related to **vision, culture, capacity building,** and **continuous improvement are in place** for effective implementation of high quality PBL	Teachers design **Gold Standard PBL Units** and implement **Gold Standard Teaching Practices**	All students experience **at least two projects** that meet the criteria for HQPBL	Students demonstrate **academic success, success skills** and **student empowerment** described in the graduate profile.
so that ...	so that ...	so that ...	so that ...	

Priority 2: Build partnerships with external PBL researchers

Rigorous research on the efficacy of Project Based Learning (PBL) made a huge leap forward in 2022 as a result of key rigorous research studies supported by Lucas Education Research (LER), including the Knowledge in Action (KIA) study, in which PBLWorks designed and facilitated professional services. Prior to these studies, research on PBL was considered "promising and not proven." The most recent PBL literature review (Condliffe, et al., 2017) points to key areas of research needed; specifically: (a) rigorous PBL research, specifically randomized control studies; (b) studies examining non-academic competencies; (c) studies that examine the effect of PBL on mathematics and literacy skills; and (d) efficacy of PBL on varying subgroups. With this new elevated foundation for PBL research, the PBLWorks research team is focused on partnering with external researchers to garner support to examine the efficacy of our professional services on outcomes for all students, especially Black and Brown students.

Priority 3: Use evidence to improve PBLWorks professional services continuously

The need for continuous improvement is widely recognized by staff members as essential for achieving PBLWorks vision and fulfilling the mission and our racial equity imperative. In this work, PBLWorks seeks to put in place a predictable and systematic process for analyzing, reflecting on, and making improvements from a broad array of evidence collected through research projects, PBL research conducted by partners, service surveys, and authentic artifacts.

Priority 4: Create actionable evidence-based tools and resources for partners

Non-profit organizations are considered by educators are viable sources of valid research (*Education Perspectives Research Survey,* 2018). One of the most pressing, and often urgent, needs expressed by educators in PBLWorks growing network is evidence that PBL works. In the next three years, PBLWorks will seek innovative ways to identify and generate valid and reliable evidence that pushes the current

boundaries on what counts to show what students know and can do, using a broad array of evidence, including state assessment results and alternative authentic measures of student success that describe the whole child. The literature suggests that for research to be used in practice, it must be relevant and integrated into practice. PBLWorks will use human-centered design principles to design tools and resources tailored for the specific and unique needs of educational stakeholder groups: district and school leaders, parents, and teachers.

Enabling Conditions: Create capacity to support research and evidence priorities

The growth and sustainability of research and evidence at PBLWorks is dependent on internal capacity and external support. As this work has historically been supported through grants from private foundations, PBLWorks will need to prepare to be best situated to take advantage of funding opportunities that support Priorities 1-4. Other enabling actions include increasing staffing and learning as well as designing new systems of support.

Aspirations for 2023

By 2023, we aspire to accomplish the following:
1. Prioritize internal and external evaluation of our services conducted in districts and schools serving at least 50% students of color
2. Create a systematic and trustworthy method for counting and tracking outputs, including participants
3. Define, operationalize, and agree-upon key constructs related to our services
4. Design and test instruments that we and our partners can use to measure impact across our theory of action
5. Conduct at least one rigorous external study to examine the effectiveness or efficacy of our services
6. Partner with researchers of color and researchers who use culturally responsive research approaches
7. Establish and use a systemic and systematic approach to engaging in internal evaluation of services data and use formative and summative (end-of-year) data to improve, including making space for emerging questions
8. Align and optimize systems that support data collection, analysis, and reporting (e.g., Salesforce, Form Assembly, Conga)
9. Establish a system(s) to identify and report on schools and districts that have evidence of improved outcomes due to engagement in our services

2023 Research & Evidence Priorities

Based on the *PBLWorks Research & Evidence Frame*, the priorities for 2023 are described below.

Priority 1: Internal Research & Evaluation	Priority 2: Build External Research Partnerships
• REVISED PBL 101. Investigate the effectiveness of the revised PBL 101 workshop (and adapt strategy). Identify bright spots where implementation is high. • PBL 101+ FOLLOW UP SERVICES. Examine the impact of an identified combination of services on project quality and implementation.	RIGOROUS RESEARCH STUDIES ON PBLWORKS. Continue to leverage our partnership with USC's Center for Applied Research in Education to pursue grant opportunities designed to examine the impact of our PBL model on leader, teacher, and student outcomes.
Priority 3: Use Evidence to Improve PBLWorks Services	**Priority 4: Create Actionable Evidence-Based Tools and Resources**
• EMERGING QUESTIONS. Leverage the data party process to identify workshop(s) that require a deeper dive in aligned with the Design & Innovation team revision schedule. • IMPLEMENTATION FACTORS. Utilize existing data to investigate factors that may impact implementation (readiness, confidence, design approach), including from case studies. • RESEARCH SPOTLIGHTS. Share highlights from internal research and evaluation findings with PBLWorks staff.	• TOOLKITS. Revise and publish the School PBL Evidence Framework Toolkit. Update the District PBL Evidence Framework Toolkit (as needed) based on case study findings. • CASE STUDIES. Publish the School and District Evidence Framework Case studies. • EVIDENCE BRIEFS. Publish two Evidence Briefs on emerging relevant K-12 issues and PBL (e.g., mindsets, teacher retention).

Risks and Mitigation Strategies

The Research and Evidence (R&E) team acknowledges key risks associated with this plan and will solve for them in the following ways:

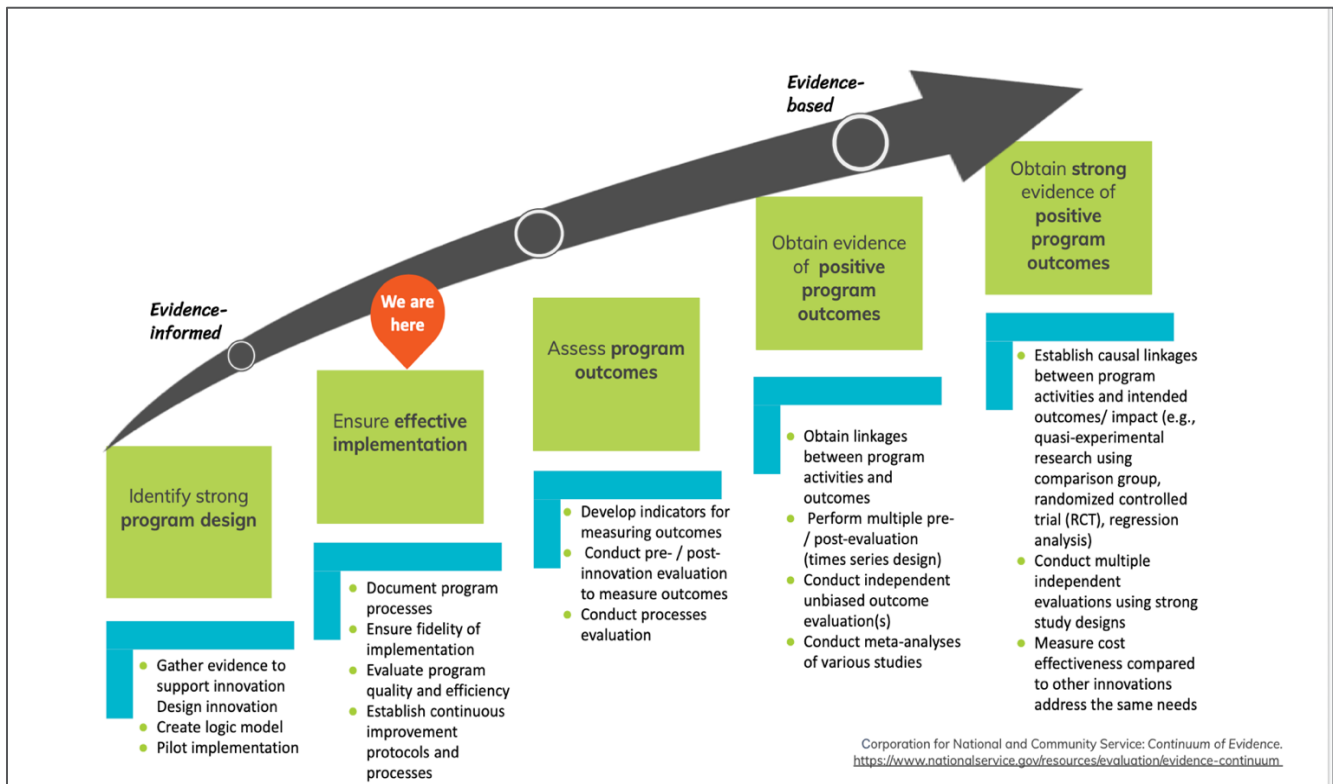| Risk	Mitigation Strategies
Overreaching focus on student outcomes: PBLWorks has direct influence over educators; not students. Making the case for improved student outcomes in schools where PBLWorks trained teachers and leaders work is hard to do.	This plan includes research agenda that looks at a variety of outcomes: leader, teacher, and student. We will selectively identify opportunities to conduct external rigorous research in sites where PBLWorks has a deep impact and can show a causal relationship between services and outcomes. We will focus on internal work on teacher-level outcomes.
Insufficient dosage of teacher services to achieve results: Currently, teacher service offerings (e.g., PBL 101 and SSVs) may be insufficient in dosage to ensure achievement of student outcomes, based on research.	With the addition of virtual follow-up services (online modules, online courses, teacher online consultancy), including expanded Sustained Support Visit (SSV) offerings, the potential dosage of teacher services is increased. This provides an opportunity for even greater

	alignment of services with research on professional development and student achievement (Yoon, 2007, Joyce & Showers, 2002).
Lack of fidelity of implementation in services: Currently, there is variation across services in facilitation and content. This is likely to increase as PBLWorks grows.	This continues to be an area of focus with increasing fidelity through the development of codified service and delivery models designed to ensure a consistent participant experience aligned to outcomes.
Findings show no evidence: It is possible that we engage in rigorous research to determine the effectiveness and efficacy of our services; then, what?	We plan to frame rigorous research as both an opportunity for showing what works and learning about what we need to improve as dual outcomes that matter.
Build and they may *not* come: It is well documented that translating research into practice is a challenge. This will be true for PBLWorks efforts to share PBL research with practitioners.	We will use human-centered design strategies understand practitioners' evidence needs as an initial step in the design process for all evidence-based tools created to respond to their pressing need to show that PBL works.
Readiness for change: Conducting research and evaluation on PBLWorks services is a new and more focused approach to the work. Findings from these studies will likely point to areas of improvement. This change will need to be managed thoughtfully.	The R&E team will collaborate closely with the Design & Innovation and Partnership Advancement teams to support readiness for systematic use of research and evidence to improve services and plan forward together.
Limitations of internal feedback: Using our internal feedback from facilitators and staff (who are innovators) is necessary and insufficient in understanding and continuously improving our professional services for greater impact. We need solid feedback from our K-12 partners (who are mostly early adopters) to ensure that our work meets their adult learning needs.	The R&E team will continue to include internal and external evaluation activities that focus on gathering feedback from K-12 educators who participate in our services to inform our work.
Plan creep: This plan is a living document, which will provide the flexibility needed to align implementation to available resources. This is a strength of the plan and could pose a risk in that other work could creep, based on shifting priorities and resources.	This plan is designed as a living document. The R&E team will adopt a regular cycle for updating the plan with set timelines, protocols, and the inclusion of input from the Design and Innovation, Partnership Advancement, and Leadership teams.

Background

This section provides important background information as context for the current research and evidence plan to promote shared understanding about where we are on the Evidence Continuum, key assumptions underlying the work, and a record of key milestones accomplished to date.

Our Journey on the Evidence Continuum

We are taking a modularized approach to our internal research and evaluation work to move along the Continuum, based on prioritization of key questions identified by internal teams and what we are learning from internal and external research and evaluation. To show that PBLWorks professional services constitute an evidence-based practice, we continue to partner with external researchers to procure funding to support a randomized controlled trial (RCT) of our district partnership services. This would significantly accelerate our journey on the continuum.

Evidence-based

Obtain **strong** evidence of **positive program outcomes**

- Establish causal linkages between program activities and intended outcomes/ impact (e.g., quasi-experimental research using comparison group, randomized controlled trial (RCT), regression analysis)
- Conduct multiple independent evaluations using strong study designs
- Measure cost effectiveness compared to other innovations address the same needs

Obtain evidence of **positive program outcomes**

- Obtain linkages between program activities and outcomes
- Perform multiple pre- / post-evaluation (times series design)
- Conduct independent unbiased outcome evaluation(s)
- Conduct meta-analyses of various studies

Assess **program outcomes**

- Develop indicators for measuring outcomes
- Conduct pre- / post-innovation evaluation to measure outcomes
- Conduct processes evaluation

We are here

Ensure **effective implementation**

- Document program processes
- Ensure fidelity of implementation
- Evaluate program quality and efficiency
- Establish continuous improvement protocols and processes

Evidence-informed

Identify strong **program design**

- Gather evidence to support innovation Design innovation
- Create logic model
- Pilot implementation

Corporation for National and Community Service: Continuum of Evidence.
https://www.nationalservice.gov/resources/evaluation/evidence-continuum

Assumptions

- *Focusing research internally on PBLWorks services.* PBLWorks has high aspirations for transforming student experiences and outcomes through PBL, as expressed in PBLWorks vision and beliefs. PBLWorks mission is squarely focused on teachers and leaders who are within PBLWorks professional services reach. Getting results for students through professional development is a challenge and not impossible. Research shows that professional development can result in student achievement (e.g., Yoon, 2007). PBLWorks will prioritize research that focuses on the effectiveness and efficacy of PBLWorks professional services to gather evidence of what works, improve the quality of services, and inform partners and the field. PBLWorks will partner with other organizations (e.g., Lucas Education Research) focused on PBL research to support the dissemination and use of their findings.

- *Racial Equity.* Racial inequities exist and are perpetuated in research and evaluation. Researchers of color and the use of culturally responsive research and evaluation practices are far from being the norm. As a small team of white women, the PBLWorks research and evidence team recognizes the need to increase our capacity to conduct culturally responsible

and equitable research and evaluation in partnership with researchers and evaluators of color so that we support and promote the success of all students to achieve positive outcomes.

- *Inclusive Evidence:* New better evidence is needed to provide a holistic understanding of what all students, including and especially students of color, know and can do as a result of engaging in PBL (and learning in general). The current practice of using composite scores (i.e., standardized state assessments or survey results) as shorthand for sizing up students, teachers, schools, and districts is a structural inequity that reduces students to a single number, obscuring their growth and progress in success skills that matter for college, career, and life. More importantly, this practice significantly hurts our most vulnerable students (i.e., students of color and students whose families are living in poverty) who lack equitable access to educational opportunities needed for higher level learning. PBLWorks will push the boundaries of what counts as evidence by testing out alternative authentic measures to show progress, success, and achievement; partnering with others who are committed to equity; and elevating this conversation nationally.

- *Actionable research and evidence.* Educators need actionable research and evidence for decision making, implementation, and continuous improvement. This is a top priority identified by PBLWorks staff members and partners. In collaboration with them, PBLWorks will design easy to consume PBL research and evidence tools and resources tailored to partner needs.

- *Modularization of research and evidence.* Moving from evidence-informed to evidence-based will likely not be a sequential set of actions. The research and evidence team will focus its efforts on organizational areas of focus and pay close attention to emergent needs and aligned funding opportunities along the evidence continuum. For example, the team might go after an external *evidence-based* research project before completely assessing *program outcomes*, two steps prior on the continuum.

Key Milestones: 2017-2022
In 2016, PBLWorks identified a new research and evidence strategic priority as part of PBLWorks *Strategic Plan 2016-2020: Preparing all students for success in college, career, and life, through high-quality Project Based Learning.* Since that time, our research and evidence team has achieved key milestones since its launch in 2017:

Year	Key Milestones
2022	✓ Partnered with external researchers on a grant proposal to the National Science Foundation (NSF) for a randomized controlled trial (RCT) study of PBLWorks district partnership model ✓ Supported the dissemination of rigorous research results supported by Lucas Education Research (LER) showing that PBL works for all students, including Black and Brown students: *Knowledge in Action, Multiple-Literacies and PBL, Putting PBL to the Test, Learning through Performance in Middle School* and *Science* ✓ Completed research conducted by external researchers: ○ A review of PBL Studies and ESSA Evidence Levels ✓ Completed evaluation conducted by internal senior researcher: ○ Quarterly workshop data review ○ Data Deep Dives (Project Slice, PBL 101, Sustained Support Visits, SEL in PBL, PBL World) ○ Data collection and implementation of a new *Adapt* Strategy

	○ Launched school and district Evidence Framework case studies
	✓ Created tools for PBLWorks and partners:
	    ○ Summarized research from the field to support DDSL and Sales teams to address client FAQs
	    ○ Drafted the School PBL Evidence Framework Toolkit
	    ○ Created, revised, and/or updated Salesforce comprehensive reports, facilitator reports, and dashboards to support formative data check-ins
	  ✓ Wrote and published *PBL Evidence Matters Brief: PBL & ESSA Evidence Levels*
	  ✓ Design and published a first-ever *Annual Report: PBL Works 2021 Year End Review*

2021	✓ Partnered with external researchers on a grant proposal to the National Science Foundation (NSF) for a randomized controlled trial (RCT) study of PBLWorks district partnership model
	✓ Completed research conducted by external researchers:
	    ○ *Out of the Gate* Case Study Report
	    ○ *The State of Project Based Learning* White Paper
	    ○ *The Knowledge in Action* Study (KIA)
	✓ Collaborated with external researchers to create and publish:
	    ○ Literature Reviews: Creativity and Project Management
	    ○ Research-Based Teacher and Student Rubrics: Creativity and Project Management
	✓ Completed evaluation conducted by internal senior researcher:
	    ○ PBLWorks Data Party protocol was developed and adopted to support evidence-based discussions and data deep dives: Project Designer, PBL 101, Online Courses, Marin Promise, Teacher Online Consultancies, and In-person vs. Online Workshops.
	✓ Created tools for PBLWorks and partners:
	    ○ Published the District PBL Evidence Framework Toolkit
	    ○ Refreshed surveys to streamline the participant experience and align with workshop outcomes
	    ○ Developed a process to monitor and report partner organization FFO

2020	✓ Partnered with external researchers on a grant proposal to the US Department of Education for an Education Innovation Research (EIR) supported randomized controlled trial (RCT) study of PBLWorks district partnership model
	✓ Completed research conducted by external researchers:
	    ○ *Out of the Gate* Final Report
	    ○ *Scaling HQPBL for Deeper Learning Impact* Final Report
	    ○ Collaborated with *Project Tomorrow's Speak Up Research*
	    ○ Contributed to the curriculum market scan
	✓ Collaborated with external researchers to create and publish:
	    ○ Literature Reviews: Collaboration, Complex Communication, and Self-Directed Learning
	    ○ Research-Based Teacher and Student Rubrics: Collaboration, Complex Communication, and Self-Directed Learning
	✓ Completed evaluation conducted by internal researcher:
	    ○ Curriculum prototype
	    ○ Products and services review
	    ○ Online Facilitated HQPBL Project
	    ○ PBL 101
	    ○ Online Sustained Support Visits (SSVs)
	✓ Created tools for PBLWorks and partners:

	○ Refreshed surveys with a focus on consistency across workshops ○ Published a Summary of the Lindsay Unified School District Teacher and School Leader Initiative ○ Supported the launch of the PBLWorks Webinar Series

2019	✓ Hired Researcher
	✓ Completed research conducted by external researchers:
	    ○ *Scaling HQPBL for Deeper Learning Impact* FY19 Annual Report
	    ○ *Out of the Gate* Annual Report
	    ○ *Exploratory Study of the Use of Adolescent Development Research in PBL 101*
	    ○ *Critical Thinking Literature Review*
	    ○ *Critical Thinking Teacher and Student Rubrics (V1)*
	    ○ *Single Case Study of PBLWorks Teacher Professional Services to Implementation*
	    ○ *Project Designer Marketing Research*
	✓ Completed evaluation conducted by internal researcher:
	    ○ Post-PBL 101 project implementation
	    ○ Project library testing
	    ○ Post 101 workshop services examination
	    ○ Project quality review process prototype and testing
	✓ Created tools for PBLWorks and partners:
	    ○ Tracking tool for implementation of at least 2 high quality projects per student per year, including students of color
	    ○ HQPBL Teacher and Student Self-Reporting Tool (V1)
	    ○ Contracted with Qualtrics
	    ○ Refreshed surveys

2018	✓ Partnered with external researchers on a grant proposal to the US Department of Education for an Education Innovation Research (EIR) supported randomized controlled trial (RCT) study of PBLWorks district partnership model
	✓ Completed research conducted by external researchers:
	    ○ *PBL Leadership Progression of Practice* design and validation study
	    ○ *Knowledge In Action* randomized control research study
	    ○ *Hawaii Innovative Leadership Network* evaluation
	    ○ *Scaling HQPBL for Deeper Learning Impact* Baseline Report
	✓ Launched the *Scaling HQPBL for Deeper Learning Impact* research project
	✓ Published *PBL Evidence Matters (V1.N1): Project Based Learning & Student Achievement: What does the Research Tell Us?*
	✓ Designed pilot *PBL Evidence Framework* prototype to be tested in 2019
	✓ Revised and created services surveys aligned to a research-based evaluation framework

2017	✓ Hired Senior Director of Research and Evidence ✓ Launched the *Out of the Gate: Preparing Preservice Teachers to Use PBL through PBL* research project ✓ Completed external retrospective analysis of *Katherine Smith Elementary School* student outcomes ✓ Revised and created services surveys aligned to a research-based evaluation framework