Building teacher leadership for equitably accessible distance science learning in a school district during COVID-19

Coralie Delhaye, Hilda Borko, Matthew Wilsey, Emily Reigh, Jonathan Osborne
Stanford University, Graduate School of education

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Stanford University, Center to support Excellence in teaching, Graduate School of Education
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1) The project: Who & Why?

School District — The Lawrence Hall of Science — Stanford GRADUATE SCHOOL OF EDUCATION

Improving Practice Together

DRK-12 Collaborative Project
Santa Clara Unified School District
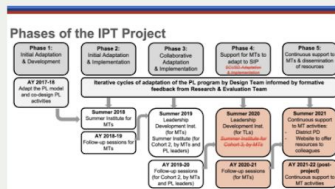Lawrence Hall of Science
Stanford University

Click on the image above to make it larger.

The Improving Practice Together (IPT) project is a three-way research-practice partnership between a school district (Santa Clara Unified

OPEN

2) The project: How?

Phases of the IPT Project

Click on the image above to make it larger

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3) The paper: Intro and RQs

Since the COVID-19 pandemic partnership activities changed to address partners' urgent needs, including the emergence of new challenges for teachers in implementing the science curriculum in distance learning that are notably equity-related.

Instead of facilitating a Summer Institute for a third cohort of teachers, we decided as a project to further support the mentor teachers in meeting the new challenges posed by the pandemic, through an online Leadership Institute.

The changes demanded by COVID-19 provide an opportunity to understand affordances and constraints of distance contexts for professional learning. We investigate the following research questions (RQs):

RQ1: What challenges or affordances emerged during the initial phase of shelter-in-place for mentor teachers, in their roles as teachers and as leaders?

RQ2: :How does the PL team adapt the leadership development goals and experiences to support mentor teachers in their roles as teachers and as leaders in the initial phase of shelter-in-place?

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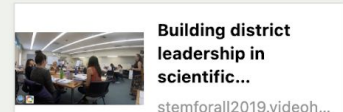## 4) Data

Methods: Data Sources
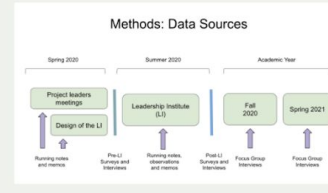
RQ1 - Running notes and memos from project leaders meetings + Pre-LI surveys and interviews
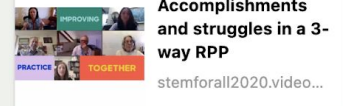RQ2: Running notes and memos from the design

OPEN

5) Results

Other project videos

Building district leadership in scientific...
stemforall2019.videoh...

Accomplishments and struggles in a 3-way RPP
stemforall2020.video...

Take a look at our i-Presentation!

NARRATION | CONTACT AUTHOR | PRINT | GET IPRESENTATION

Improving Practice Together
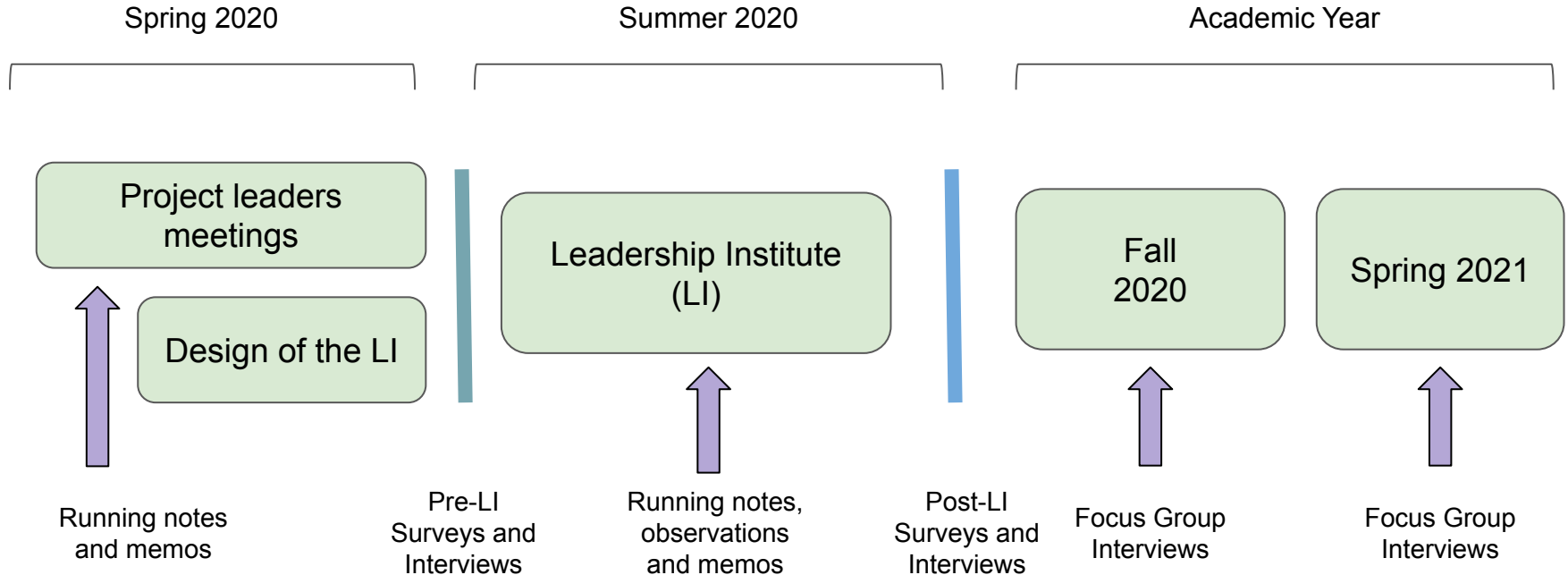
DRK-12 Collaborative Project

RQ1: What challenges or affordances emerged for mentor teachers?

RQ2: How does the PL team adapt the leadership development goals to address the challenges?

RQ3: What outcomes did mentor teachers report?

Methods: Data Sources

Spring 2020   Summer 2020   Academic Year

Project leaders meetings

Design of the LI

Leadership Institute (LI)

Fall 2020

Spring 2021

Running notes and memos

Pre-LI Surveys and Interviews

Running notes, observations and memos

Post-LI Surveys and Interviews

Focus Group Interviews

Focus Group Interviews
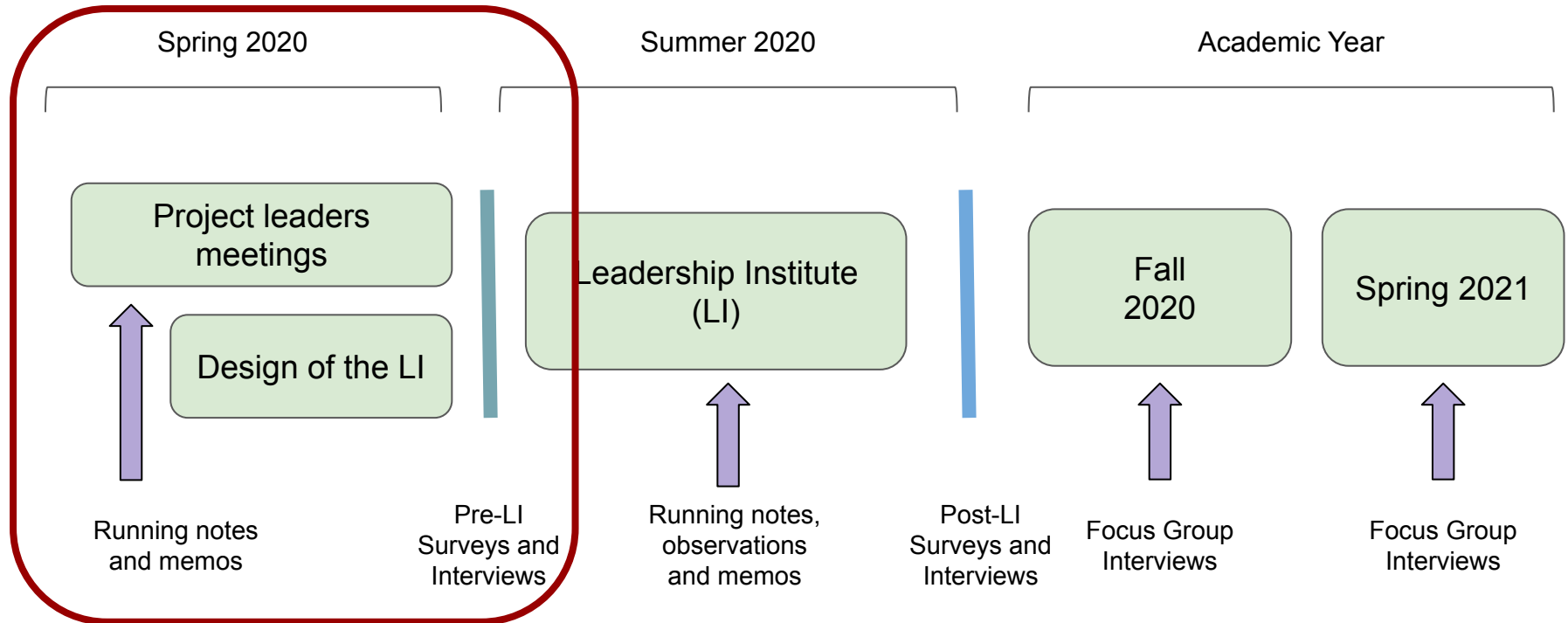
Results

RQ1: What challenges or affordances emerged during the initial phase of shelter-in-place for mentor teachers, in their roles as teachers and as leaders?

Methods: Data Sources

From project leadership meetings

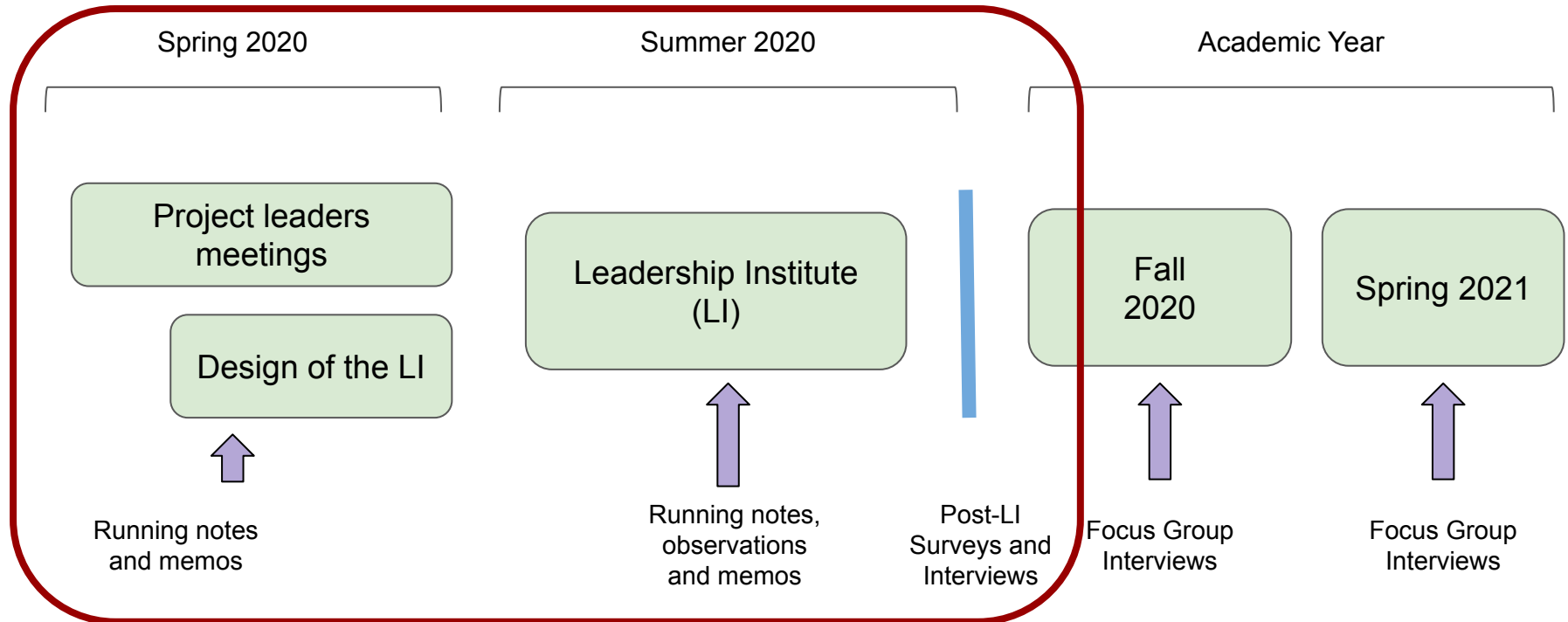| As	Challenges identified in April	Challenges identified in May
Teachers	**Design lessons & teach** in distance learning.	Promote - **SEL** (own and Ss) - **Equity** - **Convergence** (integrating different areas)
Leaders	**Meet new needs of peers** by developing: - **New PL formats** - **Guidance** for distance learning (not only science)	Meet new needs of peers by developing: - **Peer SEL** - **Resources and examples**
Both		End of year fatigue and low morale

From MTs surveys & interviews

Context of teaching science	Challenges as <u>teachers</u>	Affordances as <u>leaders</u>

● **MTs teach some science**
  ○ Variable **amounts of time** dedicated to science (perceived as low priority for the district)
  ○ Ss mostly **watch videos** or engage in **hands-on** activities from home.
	● Lesson design and enactment
	● Confidence
	  ○ **Less confidence** in teaching science compared to other areas due to lack of resources
	● Community
	  ○ **Less collaboration** with peers for science
		Principals push for **collaboration** and sharing **examples/resources**

RQ2: How does the PL team adapt the leadership development goals and experiences to support mentor teachers in their roles as teachers and as leaders in the initial phase of shelter-in-place?

- How did the PL team address the challenges through these adaptations?

Methods: Data Sources

Spring 2020

Project leaders meetings

Design of the LI

Running notes and memos

Summer 2020

Leadership Institute (LI)

Running notes, observations and memos

Post-LI Surveys and Interviews

Academic Year

Fall 2020

Focus Group Interviews

Spring 2021

Focus Group Interviews

Design

	April		May		June
Organization of Leadership Institute	W1: Classroom practice W2: Leading PL	*Input from leadership team*	Week 1: Designing PL Week 2: Facilitating PL		
Role of Science Knowledge	Focus on SMTs' science content knowledge (CK)		Focus on how to develop skills to improve science content knowledge (CK)		Focus on the role of prior knowledge (PCK)
Role of Interpersonal Aspects of Teaching		*Input from district*	New focus on SEL and engagement	*Death of George Floyd*	SEL and equity as organizing principle, acknowledge sociopolitical moment
Role of Teaching Context			MTs will prepare online learning sessions for peers	*Input from R&E team*	MTs will work on fostering engagement and shared experiences in the online setting

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Enactment

	Week 1	Week 2
Facilitators	TOSA participated in design/facilitation as much as other PL team members.	
Goals	Be able to support peers in **building community** in their **distance learning classrooms** (T and L hat)	Be able to **design and facilitate** science distance learning experiences **for peers** (L hat)
Themes	- Attention to **social emotional needs** - Opportunities to **practice leadership** in the form of mutual support, feedback and facilitation - **Agency** over the PL structures and activities - unplanned	

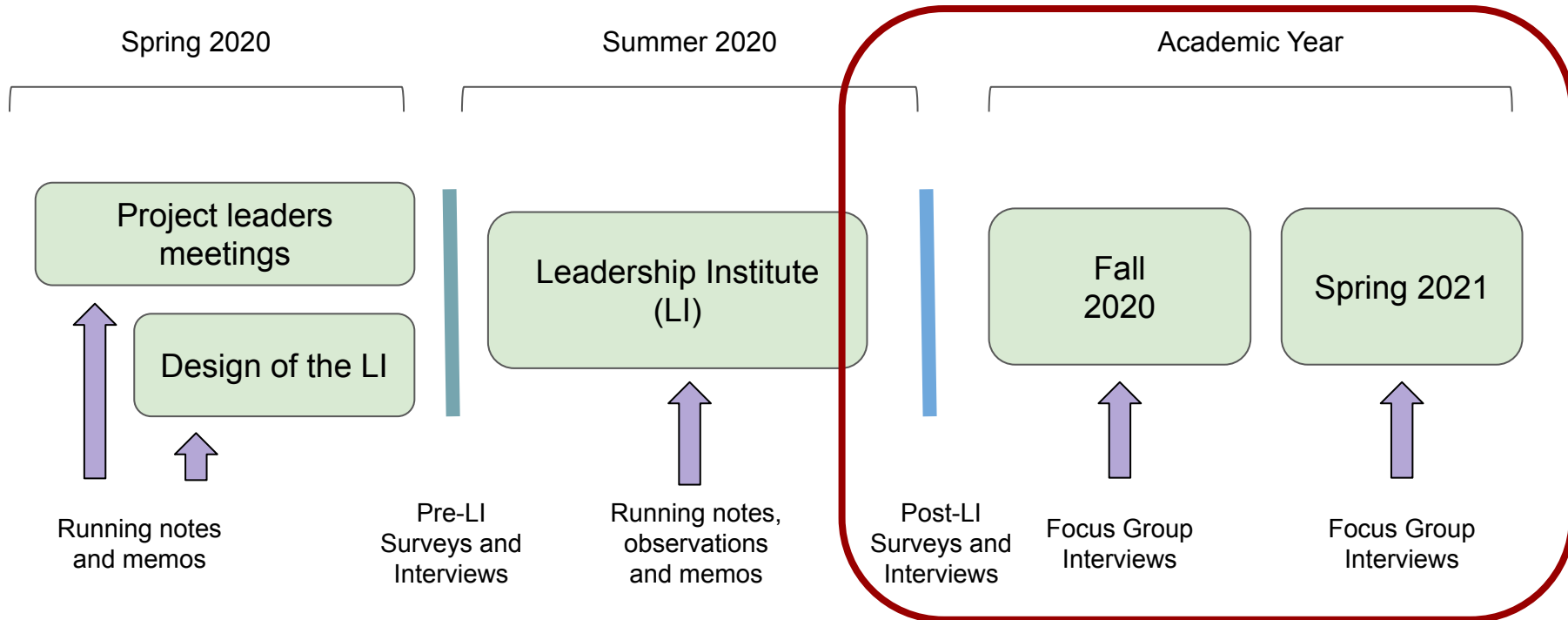# PL team group interview

Rationale for shifts in focus: pivoting to address the realities of the <u>context</u> and offering <u>models</u> of leadership

we had to extend to a whole day the SEL piece, and normally we would do it … (as a warm-up). … it was **because of this context,** that we we had to really amp up and **spend way more time than we would normally do**. But it's definitely a part of, of how we would **model and how we would coach others to do adult learning**.
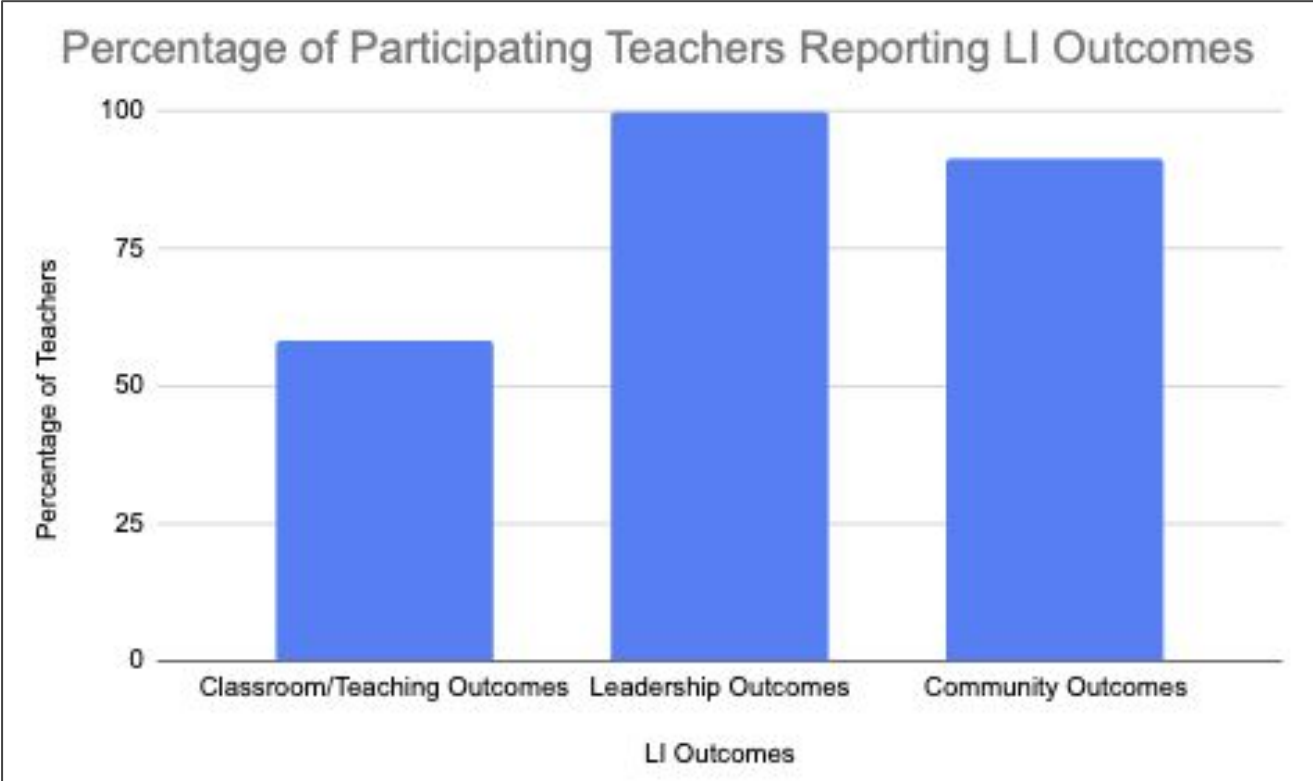
- PL team member in group interview

RQ3: Based on their participation in the Leadership Institute, what outcomes did mentor teachers report?
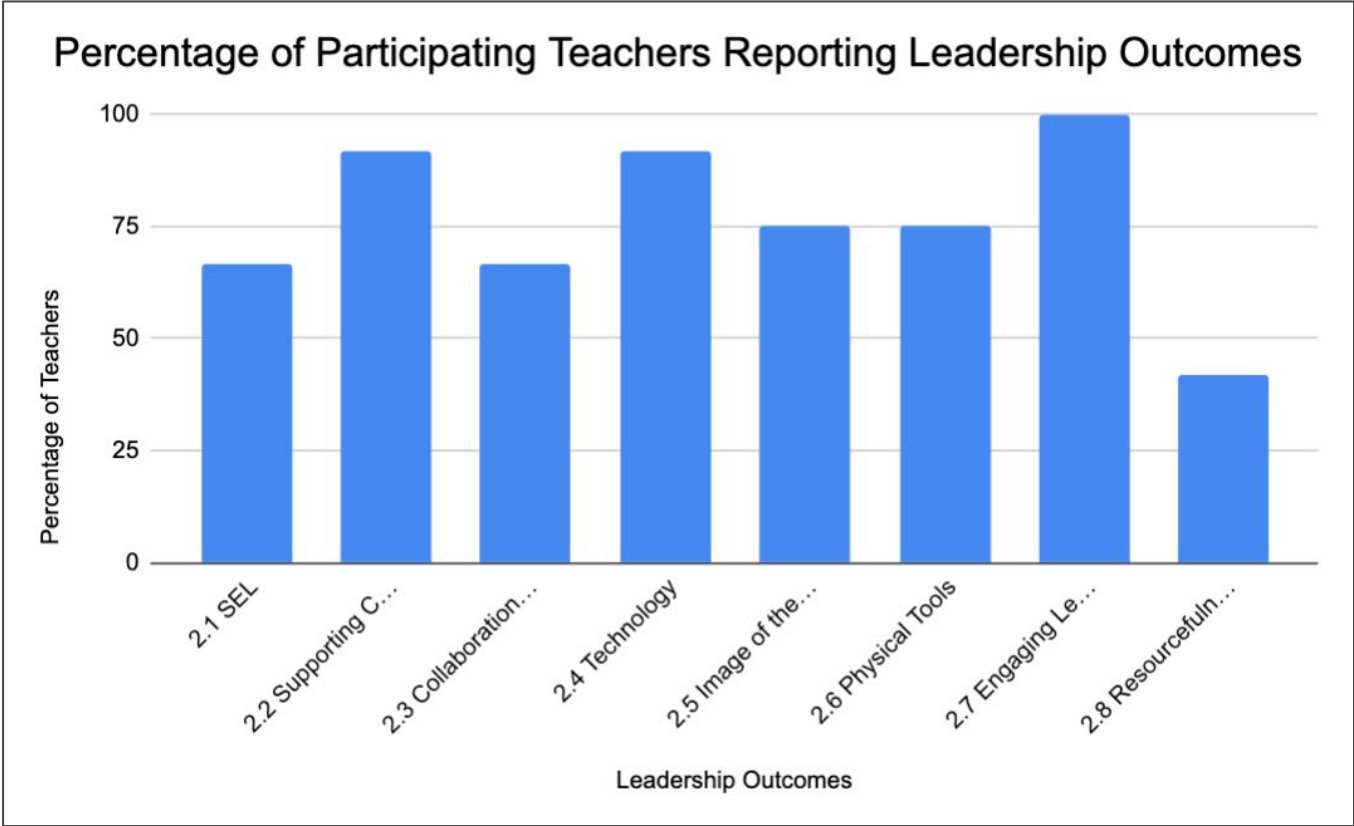
Methods: Data Sources

Spring 2020

- Project leaders meetings
- Design of the LI

Running notes and memos

Pre-LI Surveys and Interviews

Summer 2020

- Leadership Institute (LI)

Running notes, observations and memos

Academic Year

- Fall 2020
- Spring 2021

Post-LI Surveys and Interviews

Focus Group Interviews

Focus Group Interviews

RQ3: Findings

Percentage of Participating Teachers Reporting LI Outcomes

RQ3: Findings - Leadership Outcomes

Percentage of Participating Teachers Reporting Leadership Outcomes

RQ3: Findings - Leadership Outcomes

Percentage of Participating Teachers Reporting Leadership Outcomes

(Bar chart showing Percentage of Teachers on the y-axis from 0 to 100, and Leadership Outcomes on the x-axis: 2.1 SEL, 2.2 Supporting C..., 2.3 Collaboration..., 2.4 Technology, 2.5 Image of the..., 2.6 Physical Tools, 2.7 Engaging Le..., 2.8 Resourcefuln...)

RQ3: Findings - Community

Percentage of Participating Teachers Reporting Community Outcomes

RQ3: Findings - Community

Percentage of Participating Teachers Reporting Community Outcomes

RQ3: Findings - Community

"Because I know that best intentions are always with this group. But it's just I can break down, or I can celebrate, and I know it's okay. You know, I don't have that, this is the only group that I have that. And for me, I don't mind staying in and doing the IPT meeting. And I'll do all the science stuff. **But just knowing that I can go to a group of people that I totally trust to have my back no matter what, it speaks volumes, because I don't have that at my site. So this is my family right now, for my professional life**."

- MT in Focus Group Interview

Implications: Shifts that made the LI successful

- Offering more agency over the PL process and activities
- Reinforcing learning community dispositions
- Focusing on the relational goal of PL
- Using practice-based approaches (Grossman, 2009) - modeling, debriefing, rehearsing the use of technology; collaboration; design; facilitation
- Building on past collective knowledge to focus on other aspects