Using Networked Improvement Communities to Accelerate Improvement

Mass Insight Education's Gateway to College Success Initiative

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Advancing Innovation and Transformational Change

Authors

Brett Lane, INSTLL

Nora Guyer, Mass Insight Education

Hilary Kopp, Mass Insight Education

Mass Insight Education & Research is a Boston-based non-profit that works with schools, districts, and state education agencies nationwide to drive gains in student achievement. Our mission is to provide leadership in closing achievement and opportunity gaps for underserved students by focusing on system transformation and student academic success. www.massinsight.org

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Acknowledgements

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The Gateway to College Success Network

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EXECUTIVE SUMMARY

In 2016, Mass Insight Education had the privilege of partnering with five urban districts who agreed to work together to improve classroom instruction and increase instructional coherence in grades 6-12. We employed *Improvement Science* principles and formed a *Network Improvement Community* (NIC) as a means of accelerating improvement by collaboratively developing, testing, and learning about improvement strategies. As the external support provider and convener of the five-district Network, we (Mass Insight) used this opportunity to explore how intermediary organizations can support districts in becoming effective learning organizations. The work involved multiple cross-district and within-district working sessions, and formally included over 100 educators (e.g., district leaders, principals, coaches, and teachers) from the five districts.

Over the first two years of our Gateway to College Success (GCS) project, we collectively experienced many successes, faced multiple challenges, and learned a great deal about what it takes for districts and schools to **network** for school improvement. This Evaluation Report provides a synthesis of our learnings and suggestions, which we share with the education community to contribute to ongoing strategic thinking around how to improve public education. We share a high-level summary of successes and learnings in this two-page Executive Summary and we encourage readers to review the full report for additional detail and nuances.

Our Experience through Two Years

Using Improvement Science and Networking for Improvement represents a major shift from traditional approaches to improvement, involving new and often unfamiliar ways of thinking and acting and requiring that districts allocate resources and considerable time to support this type of work. We highlight the importance of allocating time and resources for up-front capacity building in districts and schools, to develop shared network expectations and to develop the skills needed to successfully use Improvement Science tools and processes. Extensive up-front planning and collaboration is needed to increase the likelihood of success, especially since collaboration and cross-school learning is not the norm in education. Structures, resources, and willingness to engage in this approach to school improvement needs to be built within and across districts.

After two years, four of the five districts developed new within-district networks of high schools and middle schools and three of the five districts were actively using Improvement Science principles in ways that may be sustainable and are directly impacting teachers' instructional practice.

Learnings and Suggestions for Using Improvement Science and Networking to Accelerate Improvement

Learning 1: Having a student outcome goal shared among all network schools is crucial.
- ✓ Focusing on a specific or precise problem of practice enhances cross-district sharing and use of improvement strategies (e.g., change ideas)[1].
- ✓ Having network schools articulate and agree upon a shared and measurable outcome is needed to ground the testing of change ideas.

Learning 2: Build in time at the start of network development to collect the data on current practice needed to inform development of the shared network aim and instructional vision.
- ✓ Engage stakeholders in year-long process to understand the system that is leading to current outcomes.
- ✓ Employ a data-based root cause analysis at each school involved in the network, focusing on instruction.

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[1] The terms "improvement strategies" and "change ideas" are used interchangeably throughout this report, as a key aspect of our approach involved having teachers reframe their improvement strategies as change ideas, to be tested, studied, and adapted.

Learning 3: The importance of having a shared and deep understanding of high-quality instruction.
- ✓ It is important to have a share understanding of what high quality instruction looks like in classrooms and in student work.
- ✓ Agreeing upon a standard and consistent approach to measuring the goal (e.g., changes in teacher practice, classroom instruction) prior to the start of the project is a non-negotiable.

Learning 4: Leverage the expertise within network schools and recognize when it is necessary to pull in external expertise to build teacher capacity to implement the instructional vision.
- ✓ Cultivate existing expertise while recognizing when external expertise is necessary, and then ensure that the expertise is available and provided.
- ✓ Provide network-level expert training on Improvement Science principles, tools, and processes.

Learning 5: Ensure that all parties are clear on what participation in the network involves, including expectations and data collection efforts.
- ✓ Set expectations for participation, codify these expectations in a network charter, and hold all network participants accountable for these expectations.

Learning 6: Explicitly build teacher and school staff capacity to engage in improvement science.
- ✓ To successfully scale-up change ideas, all teachers, including those not formally in the within-district network need to fully understand the Model for Improvement and the purpose of PDSA cycles.
- ✓ Significant up-front and ongoing support is needed for leaders and teachers to develop meaningful indicators and data collection tools.
- ✓ Mobilizing school-level improvement teams, skilled in Improvement Science and Model for Improvement tools (e.g., PDSA), is a necessary first step.

Learning 7: Strong school and district leadership is needed to successfully engage in improvement work.
- ✓ District-level positional authority is needed to establish and maintain school-level improvement efforts.
- ✓ Anticipate and plan for changes in district leadership.
- ✓ Effective principal leadership and a school's organizational capacity to improve are closely linked.

Learning 8: Develop clear measures and indicators that help participants to see the connections between their actions and goals.
- ✓ Set expectations for and actively use a set of common data collection tools and measures.
- ✓ Standard measures used across districts may not provide actionable data, especially if or when districts do not share a common intervention or change idea.

Learning 9: Understand that creating a successful network involves identifying systemic barriers to collaboration within and across schools and taking the time to address such issues.
- ✓ Directly speak to systemic issues that will influence the ability of schools to use Improvement Science and take steps to provide schools with the conditions needed to engage in successful improvement efforts.
- ✓ Work with district leaders and school administrators to ensure that teachers have dedicated time (weekly, if not daily) to collaborate in teams.

Learning 10: Active use of the Plan-Do-Study-Act (PDSA) cycle supports meaningful teacher collaboration on instructional practice and use of data.
- ✓ PDSA actively supports organizational learning and deep understanding of implementation.
- ✓ Using PDSA leads to meaningful shifts in teacher practice and contributes to collective responsibility.

INTRODUCTION

Over the past 20 years, efforts to improve districts and schools that serve predominately low-income students and students of color have not been as successful as needed to close achievement gaps. Here in Massachusetts, forward progress has been made as a direct result of changes in policy (e.g., fiscal reform, standards and testing, teacher development), a revamped accountability system, and effective state and district leadership; however, many of Massachusetts' urban and Gateway Cities[2] continue to struggle to meet the instructional and social-emotional needs of all students. Explanations as to why districts struggle are many, and there are undoubtedly multiple factors, including having access to equitable funding, that influence a district's ability to ensure that all students receive high quality instruction and are prepared for college and career. As we have partnered with districts, it is clear that district and school leaders do have an acute understanding of the factors, or issues, that need to be addressed; however, the challenge is not in the knowing, it is in the doing.

Districts in Massachusetts and across the nation have not been idle with respect to efforts to improve schools— quite the contrary. Most districts and schools have been very active in "school improvement" and many have taken direct actions to improve student learning, by adopting new initiatives and providing specific professional development to their leaders and teachers, often supported by state policies and funding. However, too often these efforts have not led to expected improvement in teachers' instruction and student performance. Why?

> *Why do so many "research-based" initiatives have limited tangible or sustained impact on teacher practice and student achievement, in our most diverse and economically challenged districts?*

Districts and schools as Learning Organizations. Research on district and school improvement suggests multiple explanations for the limited impact of research-based initiatives. These explanations, such as ineffective leadership, lack of teacher buy-in, teacher turnover, a failure to implement with fidelity, or a lack of time and resources, do make sense and often lead to another round of solutions (e.g., more teacher training on research-based practices, the use of coaching or and instructional supports, increasing instructional time, or new curricula). However, our experience, paralleling the experience of a growing number of researchers, is that a more systemic approach is needed. The approach that we (and others) propose is for districts and schools to become expert *learning organizations* capable of quickly addressing challenges before they undermine improvement efforts and immediately applying what they learn into meaningful actions. *Improvement Science* provides the tools and processes that schools can use to successfully develop and implement improvement strategies. And *Networks* of districts, schools, and educators provide the scaffolding for accelerating learning and sharing of practices within and across districts and schools.

A learning organization has specific goals, employs organizational structures that incentivize sharing and learning, allocates resources (e.g., time, schedules, staffing) accordingly, and has the technical know-how to measure and assess how initiatives/program/strategies are working, leading to immediate modifications. We want to make clear, however, that claiming that "we are a learning organization" is very different than actually engaging in active learning and improvement. Many districts and schools have district- or school-level "PLCs," leadership teams, as well as data systems that can be used to measure progress, yet do not engage in learning that is translated into action.

The premise of a learning organization is not new; the concept and related terms (e.g., PLCs) have permeated academic literature and professional development services. However, despite the pervasiveness of "learning organization" as a concept, what is clear is that the specific practices (e.g., techniques, ways of working together, data strategies) are not

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[2] Gateway Cities are midsize urban centers that, historically, were home to industry; Gateway City mills and manufacturing plants provided residents with good jobs and a "gateway" to the American dream. Today, while most manufacturing has disappeared, Gateway Cities remain anchors for regional economies and increasingly serve as gateways to the state and the country for immigrants from diverse backgrounds. For more information about Gateway Cities, see https://massinc.org/our-work/policy-center/gateway-cities/about-the-gateway-cities/.

well understood nor reinforced in districts and in schools. This is where the use of Improvement Science and accelerating learning through Networks enters the picture and provides a way to break out the seemingly intractable cycle of unsuccessful educational reform and improvement.
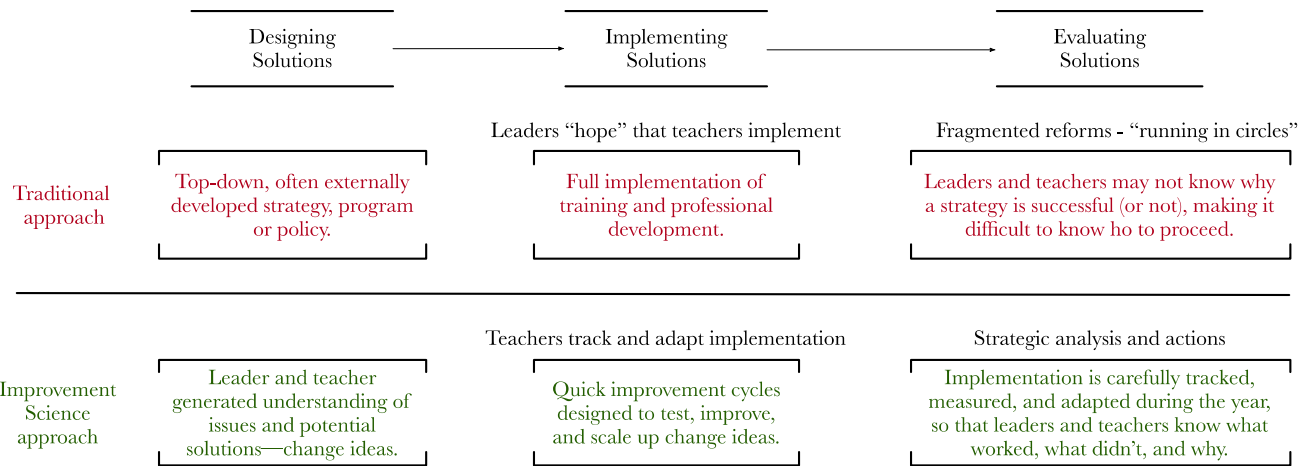
Consider the following scenario, which many will find familiar:

#1: A new initiative—a curriculum, strategy, or program—is adopted in direct response to a pressing issue identified through data (e.g., low reading or math scores or excessive suspensions). Leaders and teachers receive training and are expected to implement the initiative, with support from coaches or ongoing professional development. During the school year, some teachers implement the strategy with success, while other teachers have less success. At the end of the school year, district and school leaders review pertinent data to assess the impact of the initiative and develop a plan for the coming year, which might include additional professional development, tweaks to the program, or perhaps the adoption of another strategy.

Now consider an alternative approach to implementation – an Improvement Science Approach:

#2: The same initiative is implemented, but with a parallel approach to intensive testing of these initiatives (carried out by the district, schools, and individual teachers in teacher teams) and immediate shifts in how the initiative is being implemented based on the results of testing in the <u>first few weeks of the school year</u>, and then weekly, throughout the year. If a strategy or initiative isn't working, leaders and teachers know precisely where and why, and are able to make immediate adjustments.

Display 1. Traditional vs. Improvement Science Approaches to Educational Reform and Improvement

	Designing Solutions	Implementing Solutions	Evaluating Solutions
		Leaders "hope" that teachers implement	Fragmented reforms - "running in circles"
Traditional approach	Top-down, often externally developed strategy, program or policy.	Full implementation of training and professional development.	Leaders and teachers may not know why a strategy is successful (or not), making it difficult to know ho to proceed.
		Teachers track and adapt implementation	Strategic analysis and actions
Improvement Science approach	Leader and teacher generated understanding of issues and potential solutions—change ideas.	Quick improvement cycles designed to test, improve, and scale up change ideas.	Implementation is carefully tracked, measured, and adapted during the year, so that leaders and teachers know what worked, what didn't, and why.

In the first scenario, implementation is a matter of hope—hope that the training will take, that teachers will know how to implement the training or strategies, and that the initiative will work as intended. If schools and teachers do make changes during the school year, it is often in isolation, in individual classrooms or grade-specific, and mostly reactive. No systemic learning occurs.

In the second scenario, educators anticipate (and can predict) bumps in the road; they measure whether and how strategies are being used and they plan for modifications to be made on a weekly basis. Ideally, educators across schools compare data and learnings and use what they learn in their own school or classroom, with continued testing and modification. To the point, a learning organization does not take implementation for granted (or hope for implementation to be successful); rather, they co-construct the black box of implementation. Granted, many leaders and teacher teams do engage in such learning, but they do so in isolation and as a result, districts and schools are often unable to successfully implement initiatives, or understand why practices were successful in one school, but not in another.

Using Networks to Build Learning Organizations. For policymakers, state and local leaders, and support organizations, the challenge is to figure out how to support districts and schools in developing the skills and knowledge to engage in active learning and provide the conditions in which districts and schools can become robust learning organizations. If districts and schools are effective learning organizations, then instruction will improve, and more students will be prepared for college and career. Networking districts and schools working on similar issues and with similar needs leverages expertise and learning.

The approach that we used, and that we share in this brief, is a real-world application of Improvement Science principles (Langley et al., 2009) and Networked Improvement Communities (NICs), as detailed in "Learning to Improve" (Bryk et al., 2015). In brief, this approach calls for the deliberate use of **Improvement Science Principles** (e.g., setting goals, developing problem-based solutions called "change ideas," and careful testing and replication of change ideas) and the use of **Networks** (of districts, schools, individuals) focused on a common problem of practice, to accelerate learning.

- *Improvement Science* is an applied science that emphasizes ***innovation, rapid-cycle testing, and scaling successful practices*** in order to generate learning about what changes, in what contexts, produce improvements.

- *Networked Learning is* a process of ***developing and maintaining connections with people and information, to leverage expertise and knowledge among network members and to maximize the testing of what works***, *so that effective strategies—including the know-how needed to implement such strategies—can quickly spread across individuals, schools, and districts.*

Linking this approach to our Theory of Action. Mass Insight Education's theory of action is grounded in research and a decade of experience supporting school transformation and turnaround. As we approached this work, we saw Improvement Science and Networking as a direct way to build an organization's **collective responsibility** for both the quality of instruction and student learning and success and **focus on instruction** through processes and supports that help teachers collaborate to constantly improve and refine standards-based instructional practice.

Display 1. Mass Insight Theory of Action
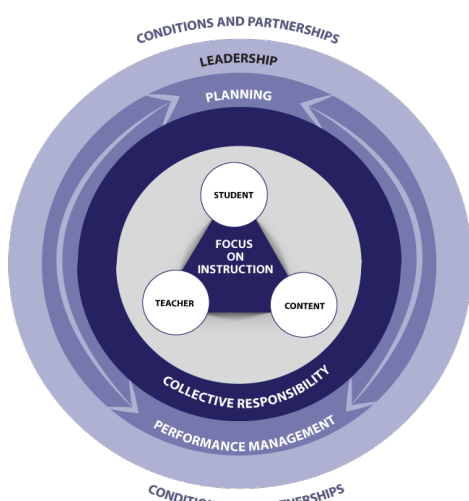
IF we work with schools and districts to provide:

Focus on Instruction: Processes and supports that help teachers work together to constantly improve and refine standards-based instructional practice so that students can engage in deep learning tasks;

Collective Responsibility: The school faculty and staff ensure there is collective responsibility for both the quality of instruction and student learning and success;

Planning: Evidence-based, actionable improvement plans that address the root causes of low performance informed by a review of existing conditions and input from school, district, and community stakeholders;

Performance Management: Consistent processes for using data to measure both implementation and outcomes to determine what's working and inform efforts to improve; and

Leadership: A principal who can manage and communicate complexity while maintaining focus on the school's vision and key priorities;

Conditions: Sufficient school-level control over people, time, money, and program to address the root causes of low performance;

Partnerships: Partnerships that help the school meet the multiple needs of teachers and students,

THEN schools will dramatically improve, and student learning will increase.

Our Partner Districts and Schools. Mass Insight Education partnered with a set of mid-size urban districts in Massachusetts that came together as a Network and agreed to work together to develop, test, and implement strategies to improve teachers' instructional practice, beginning in the 2016-17 school year.

Display 2. Gateway to College Success Partner Districts and Schools

	# of Schools in Network	District Demographics (approximate **percentage**)			
		Economically Disadvantaged	Students with Disabilities	English Language Learners	High Needs
District A	2 HS, 2 MS	~60	~19	~35	~80
District B	1 HS, 3 MS	~70	~21	~30	~80
District C	1 HS, 3 MS	~60	~24	~15	~70
District D	1 HS, 9 MS	~75	~24	~20	~80
District E	1 HS, 1 MS	~75	~22	~15	~80

Display 3. Network Participation

	# of Schools in Network	Direct participation in formal network meeting, by stakeholder group[3]				
		District Leaders	Principals	Coaches	Teachers	Total
District A	2 HS, 2 MS	3	4	4	24	35
District B	1 HS, 3 MS	3	4	4	20	31
District C	1 HS, 3 MS	4	4	4	30	42
District D	1 HS, 9 MS	3	0	0	10	13
District E	1 HS, 1 MS	2	2	3	12	21

Mass Insight Education Staffing and Inputs

Each district received $40,000 each year of the project ($80,000 total) that was used to provide teacher stipends (e.g., for time associated with network meetings and planning) and professional development. Mass Insight Education direct consultative support to districts and schools included approximately 2.5 FTE (full time equivalence) comprised of internal staff (a project director and lead associate) and an external consultant. Funding for this work was provided by the New Ventures Fund and the Gates Foundation, as part of the Networks for School Improvement nationwide initiative.

The following sections of this document provide a snapshot of our work, its impact, and lessons learned for policymakers, districts, and like-minded improvement organizations working on efforts to use networked improvement communities and improvement science principals to accelerate improvement efforts. Following a brief overview of the how the initiative was organized, we share a set of findings and learnings.

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[3] Note: Additional teachers in each district were involved in school-based planning and testing of change ideas, and professional development and all teachers in each school were included in data collection. The intended reach of the project was 1204 teachers, inclusive of all teachers at 24 schools.

BUILDING A NETWORKED IMPROVEMENT COMMUNITY

Since 2008, Mass Insight Education has managed Massachusetts' largest high school academic program—the AP STEM & English program[4]—with the goals of increasing minority and low-income participation and success in Advanced Placement (AP) English, Math, and Science courses and improving college attendance and success (e.g., graduating from a 2- or 4-year college). While the AP STEM & English program has had a significant impact on improving teacher practice and student success in AP courses and in college attendance (Johnson et al., 2018 and Lane & Souvanna, 2013), district leaders observed that gains in AP participation and success, especially in low-income communities and Massachusetts' Gateway Cities, tended to plateau after 3 to 4 years. Mass Insight's leadership and district leaders took stock of what the data was showing and began to ask some hard questions about what it would take to continue to increase students' access to, and success in, AP courses.

Developing a Network Problem of Practice

In early 2016, Mass Insight Education convened a small group of district leaders with schools in Massachusetts's Advanced Placement (AP) STEM & English Program to explore additional approaches to improving student achievement and that would lead to continued growth in AP participation and success rates. We wanted to understand this issue from the viewpoint of district leaders and to explore potential strategies and solutions. District leaders identified a variety of challenges to improving student achievement (e.g., principal leadership, instructional alignment in grades 6-12, teacher turnover) that illustrated the complex nature of the challenge we faced. A key observation made by districts was that although curriculum was mostly in place and aligned, teachers' instruction was not aligned. This first conversation provided the seeds for our Gateway to College Success Network.

In the spring of 2016, we became aware of a funding opportunity through the New Ventures Fund (NVF) that provided an opportunity for our network to work on common issues. In response to the requirements of the NVF funding opportunity, we integrated Improvement Science principles into our theory of action and began to use these principles to develop a shared Problem of Practice. During our spring 2016 Design Session, district leaders refined the core issues and challenges they were grappling with and described their current efforts to improve instruction, subsequently identifying two common issues that became our multi-district, **Network Problems of Practice**.

> Improvement Science Principles
>
> 1. Make the work problem-specific and user-centered
> 2. Focus on variation in performance
> 3. See the system that produces the current outcomes
> 4. We cannot improve at scale what we cannot measure
> 5. Use disciplined inquiry to drive improvement
> 6. Accelerate learning through networked communities
>   *From Learning to Improve* (Bryk et al., 2015)

> Gateway to College Success: Network Problems of Practice
>
> 1. **Aligning teacher and classroom instruction** both vertically and horizontally in grades 6-12 within and across schools so that all teachers are providing rigorous instruction and personalized learning opportunities that enable students to have access to college-level courses while in high school and graduate prepared for college and career.
> 2. **Removing systemic barriers to the time and flexibility required to align instruction** within schools and across schools, so that teachers have the time and opportunity required to form the communities of practice needed to provide rigorous and personalized instruction.

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[4] For additional information on our AP STEM & English program, see http://www.massinsight.org/ourwork/college-success/advanced-academic-success/.

Designing a Networked Improvement Community

Network Initiation. Having successfully applied for external funding, we convened our first Network meeting in August 2016. Participants from five districts included Superintendents, key district leaders, principals from the participating schools, and school staff (e.g., coaches and teachers). Building upon the premise that **instructional coherence**—the vertical and horizontal alignment of instruction—was needed in grades 6-12, each district team included at least one high school and one middle school, ideally within overlapping feeder patterns. The purposes of the Network Initiation meeting were to introduce all the districts to the concept of "Networked Improvement Communities," share the proposed structure and processes by which we would support districts, and to have participants drill down into the problems of practice. In addition to forming relationships among stakeholders across districts, we aimed to clarify the various "drivers" and related assumptions that stakeholders held about what was needed to improve the alignment of instruction within and across schools, grade-levels, and teachers.

The meeting generated urgency and enthusiasm for the work and how networking across districts, and among schools in the same district, could accelerate improvement efforts. This is where the story gets interesting and, we hope, offers lessons for policymakers, districts, and intermediaries interested in using Networks and Improvement Science to improve teacher practice and student achievement.

Structures and Supports. We designed the GCS Network as a Networked Improvement Community (NIC), guided by a common Problem of Practice, that would provide multiple opportunities for stakeholders to meet with each other and share learnings and data both within and across districts. Structures were also put in place to ensure that each district, including school-level administrators and teachers, were actively involved in the work. The Problem of Practice provided the umbrella for collaboration and learning and each district was encouraged to customize improvement strategies to address local need and context.

Formally, the GCS Network was comprised of two network layers (See Display 4 on the following page):

- A **cross-district network** that included superintendents, district leaders, principals, and teachers from each district and participating school.

- **Within-district networks** of participating schools (typically 1 or 2 high schools and 2 to 3 feeder middle schools), represented by principals, administrators, coaches and teachers.

Instructional Coherence

When we first listened to district leaders describe a lack of instructional alignment—distinct from curriculum alignment—we struggled to articulate precisely what they meant. In some instances, leaders described a disconnect between the grade-level instruction (based on grade-level curricular standards) and students' academic needs. Relatedly, we heard that teachers' instruction—their lessons, their strategies for teaching math or writing, and the academic language they used with students—were not aligned nor consistent within and across grade spans.

We landed on the use of three source documents to ground our thinking around instructional coherence and what it means to intentionally align instruction to meet the needs of diverse students, many of whom are academically below grade level and speak a first language other than English.

Organizing Schools for Improvement, pp. 203-208 (Bryk et al, 2010)

Instructional Program Coherence: What it is and Why is should guide school improvement policy (Newmann et al., 2001)

2016 Massachusetts Turnaround Practices Field Guide, pp. 5-7 (Lane et al., 2016)

Display 4. Network Design and Structure

Gateway to College Success
Cross-District Network

District

District

District

Network Hub
Mass insight

District

District

Gateway to College Success
Within-District Network

School Team

School Team

District Network

School Team

School Team
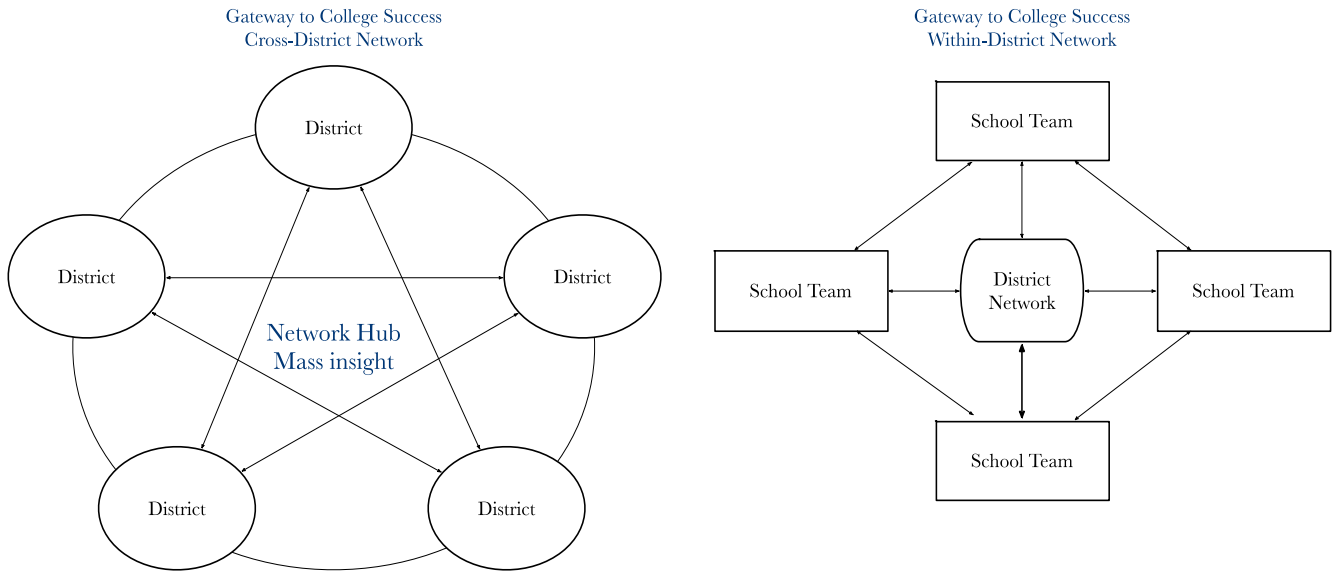
Mass Insight Education served as the Hub of the cross-district network and the convener of each within-district network. We convened the cross-district network 3 to 4 times a year. The cross-district network meetings included time for cross-district sharing, within-district team time (to process information learned and apply to their own work), and specific content intended to build shared understanding of Improvement Science principles and strategies for building a professional learning environment.

Within-district networks met more frequently, from 5 to 7 times a year. Within-district networks also provided dedicated time for district administrators and school leaders to develop change ideas, share data and information on the implementation of their work in their schools, and to immediately apply their learning.
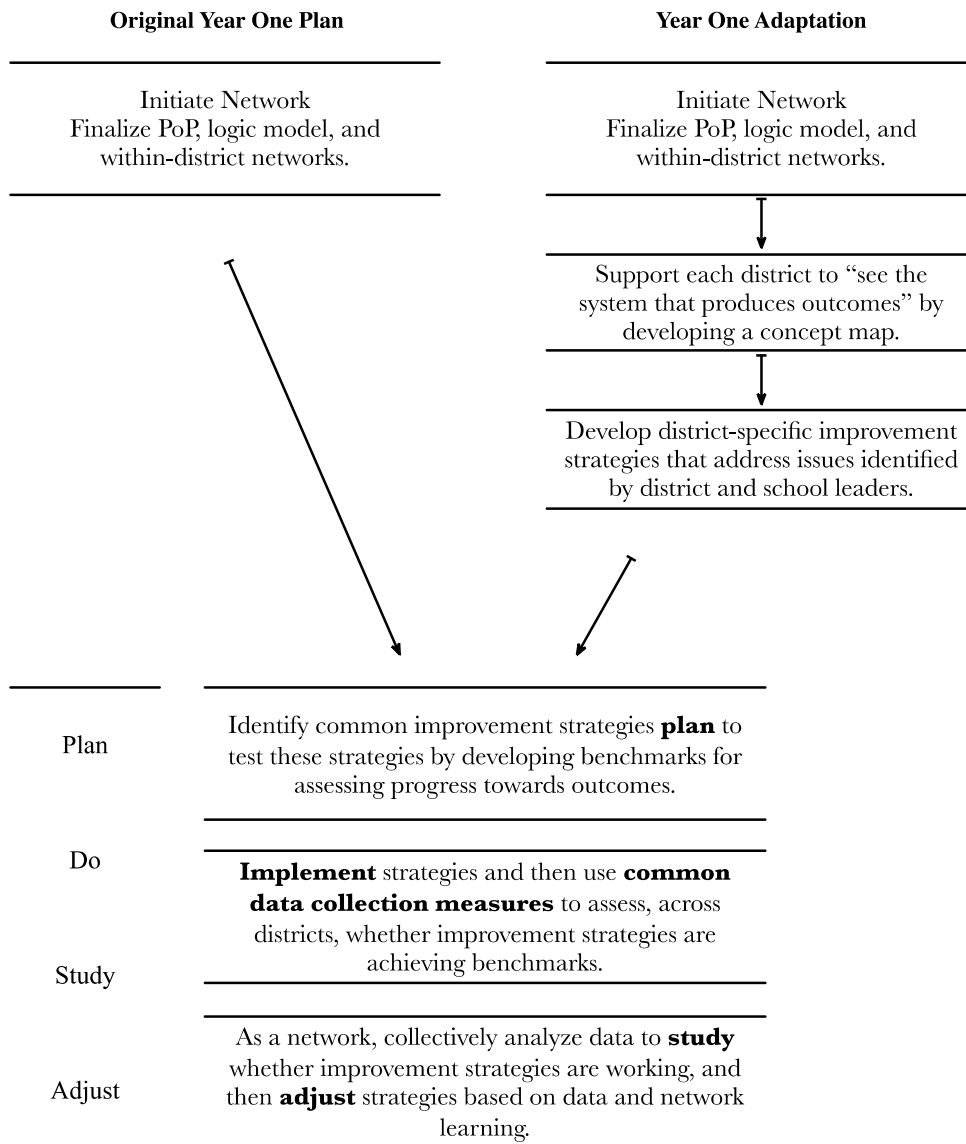
Our initial plan for using NICs to Accelerate Learning. Building upon Improvement Science principles, our initial design involved the identification of a common improvement goal—an improvement "Aim" directly aligned to the Problem of Practice—while allowing for variance in the strategies employed by districts in addressing the problem of practice (Improvement Principle #2). We envisioned and developed a timeline for district teams to develop driver diagrams—a graphical representation of the factors that relate to the problem of practice—and then planned to use similar data collection tools to measure the extent to which their improvement strategies were contributing to the shared goal (Improvement Principles #3 and #4). The within-district and cross-district meetings would provide dedicated time for educators to use data to examine what was working, what wasn't, and to develop and share modifications to their strategies (Improvement Principle #5). And in the best of worlds, if a district found that an improvement strategy was effective, other districts could learn from this and adopt similar strategies in their own district (Improvement Principle #6). Specifically, our initial plan was to identify and build upon strategies that districts were **currently using** and that addressed the Problem of Practice. As an external partner, we would provide direct technical assistance to each district in setting goals, developing data points and benchmarks, and measuring progress towards meeting their district-specific goals and benchmarks and in turn, build each district's capacity as a learning organization.

An assumption that we made was that districts would have existing strategies designed to improve instructional coherence and address systemic barriers. What we found is that many of the districts did not have a strategy focusing on directly improving teachers' instruction both vertically and horizontally, within and across grade spans—what we came to call "instructional coherence". Yes, most districts did have improvement strategies intended to improve

instruction within schools, such as coaching models, inquiry cycles, or related professional development. However, we found that these strategies were either not developed enough to allow for testing and modification or were not being used consistently across schools. A related challenge was that schools (and teachers) from different grade spans had little to no time or capacity to meet together and to develop vertically aligned instructional strategies, academic language, and curriculum; this is what the district leaders meant when they crafted the initial problem of practice— that while curriculum was aligned, instruction was not. Moreover, school-level leaders and teachers often had different understandings of the "root cause" of the lack of instructional coherence and what needed to be addressed to improve instruction.

These challenges emerged in the summer of 2016 and in the first few months of our engagement with each district. As a result, we (in consultation with districts) took a step back and decided to focus on better understanding the system in each district and the subsequent development of agreed-upon change ideas (e.g., improvement strategies), rather than jump right in and try to measure and test existing change ideas that may or may not directly address the problem of practice.

Display 5. Adaptation to our initial program design

Original Year One Plan	Year One Adaptation
Initiate Network Finalize PoP, logic model, and within-district networks.	Initiate Network Finalize PoP, logic model, and within-district networks.
	↓
	Support each district to "see the system that produces outcomes" by developing a concept map.
	↓
	Develop district-specific improvement strategies that address issues identified by district and school leaders.

Plan	Identify common improvement strategies **plan** to test these strategies by developing benchmarks for assessing progress towards outcomes.
Do	**Implement** strategies and then use **common data collection measures** to assess, across districts, whether improvement strategies are achieving benchmarks.
Study	
Adjust	As a network, collectively analyze data to **study** whether improvement strategies are working, and then **adjust** strategies based on data and network learning.

MOVING FROM THEORY TO ACTION
DISTRICT NETWORKS, CROSS-DISTRICT NETWORKS, AND MEASUREMENT

The Gateway to College Success initiative endeavored to use Improvement Science and Networked Improvement Communities (NICs) to accelerate improvement—specifically, to improve teachers' instructional practice by improving vertical alignment of instruction and addressing system barriers to instruction. Our NICs included district-level networks of schools and cross-district networks of participating schools and district leaders. We developed systems to carefully measure and track the progress of the work, through standard data collection measures intended to provide formative feedback to schools and to assess each districts' progress towards its goal.

The following sections provide a chronological account of our approach in each aspect of the project: **District-level Networking**, **Cross-District Networking**, and **Measurement**.

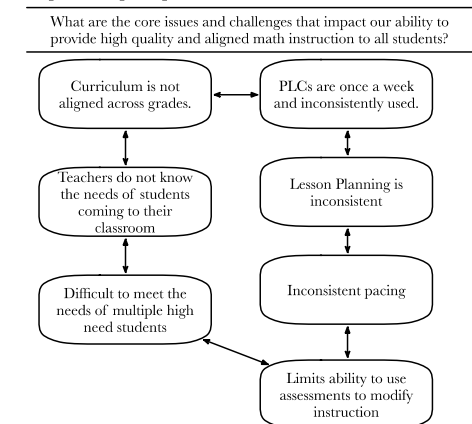**District-Level Networking Activities**

Year One: Developing and understanding of the system and crafting change ideas

Our first step with each district was to understand precisely how the district was supporting schools and how schools were working to improve teachers' instruction. The purpose of collecting data on current practice was to support districts in developing meaningful and targeted change ideas (improvement strategies) rather than jump right in and try to measure and test existing change ideas that may or may not directly address the problem of practice. We began this by: (1) documenting each district's existing system of support (e.g., how they support schools and teachers) followed by (2) a deliberate mapping of the core issues and challenges influencing instructional coherence, as seen by district and school stakeholders. We also conducted formal site visits—School Readiness Assessments—at each school; however, these visits did not occur until midway through the school year and this information was used to inform decisions leading into year two of the initiative.

Documenting the district theory of action[5]**.** We first met with each district's senior leadership to understand their theory of action and related systems of support used to improve teaching and learning. Each district did have a working theory of action, which typically included a variety of district-wide professional development, school-level coaching, and mechanisms though which the district would monitor and/or support schools. Most districts described school-level "PLCs," department meetings, or weekly common planning time for teachers, and some had cross-school networks of principals or coaches. Most districts referenced the state's new educator evaluation system and were implementing literacy and/or math assessments that could be used by school leaders and teachers. However, a common thread among districts was the distinction between their theory of action (on paper) and what was actually occurring in schools. Across the board, districts noted that various components of their system were not as effective as desired, or that the system was working well in some schools but not in others.

Developing Concept Maps – understanding the system[6]**.** Our first few within-district Network meetings consisted of the development of a "concept map" depicting the core issues and challenges (e.g., drivers) that schools perceived as directly impacting their ability to improve instructional coherence and improve student achievement. Each district developed a detailed concept map and prioritized the core issues/drivers that they felt needed to be addressed. The concept map prioritized the core

Sample Concept Map

What are the core issues and challenges that impact our ability to provide high quality and aligned math instruction to all students?

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[5] *Link to Appendix A for an overview of each district's system of support.*
[6] *Link to Appendix B for a summary of core issues and challenges identified by the five districts.*

issues that school leaders and teachers felt needed to be addressed to improve instruction. We prioritized issues that, if addressed, would directly improve instructional coherence as well as issues that teachers felt that they could directly address.

Moving from priorities to change ideas. Once a set of prioritized core issues were identified, we asked each district to form two or three cross-school working groups that were tasked with developing new, and/or identifying existing improvement strategies that addressed the identified issues and could be scaled up. This was hard work for us and for the districts, and conversations among the working groups continued to highlight the need to improve classroom instruction. To focus their efforts, districts tended to identify a single content area (e.g., math, science, or English). Working groups (in each district) met monthly throughout the school year and most of the districts had developed distinct improvement strategies (which came to be called "change ideas") by the end of the school year (June 2017). For instance, one district considered adopting a set of Evidence Based Teaching and Learning (EBTL) strategies used in the high school for use in multiple middle schools. One district developed templates and guidelines for a common lesson planning template and for effective PLC team meetings. Another district developed common guidelines for student groupwork (e.g., protocols, roles, norms) that they felt would support science teachers and students[7].

At the end of year one, four of the five districts had developed change ideas that were ready for implementation and testing in multiple schools. During the spring 2017 within-district Network Meeting, we developed an implementation plan for the summer and an initial set of benchmarks—anticipated changes in teacher and student behavior, discourse, and actions—that we planned to use to measure the progress of the change ideas in the 2017-18 school year.

Year Two: Using Plan-Do-Study-Adjust (PDSA) Cycles to Test Change Ideas

Our work moving into year two was highlighted by two programmatic adjustments and shifts in district context and staffing, which required orientation and training for multiple new teachers and leaders. The adjustments that we made were to: (1) formally adopt specific Improvement Science processes, and in particular the use of PDSA cycles in each district and (2) reconfigure our cross-district measurement tools (see the Measurement section for a description of measurement tools and shifts that we made).

Onboarding of New Leaders and Teachers. The individual leaders and teachers from our partner schools and districts were and are the foundation of the networked improvement communities. While the within- and cross-district meeting structures that we had established provided some stability, it was the relationships among participants, and their understanding of the work, that were integral in moving forward. Entering year two, a few of the districts experienced significant turnover of key participants. In one district, half of the science teachers (who were in the network) left the district or retired. In another district, three of the four principals were new to the network and a new cohort of school-based coaches (newly established in the district) were added to the within-district network, to build capacity and to ensure consistency across schools. And in a third district, the high school principal left and was replaced with the middle school principal (from a network school). Additionally, each within-district network experienced anticipated turnover (and addition of new members), typically about 2 or 3 teachers per district. Only one district maintained consistent membership between year one and year two.

To maintain momentum, we met individually with new principals and staff in each district, to explain the purpose of the work, review the efforts and activities of the past year, and to strategize plans for integrating the proposed change ideas into school-level improvement plans. While the new principals, coaches and teachers were positive about engaging in network activities, the reality was that the new principals had a school to get up a running, and new
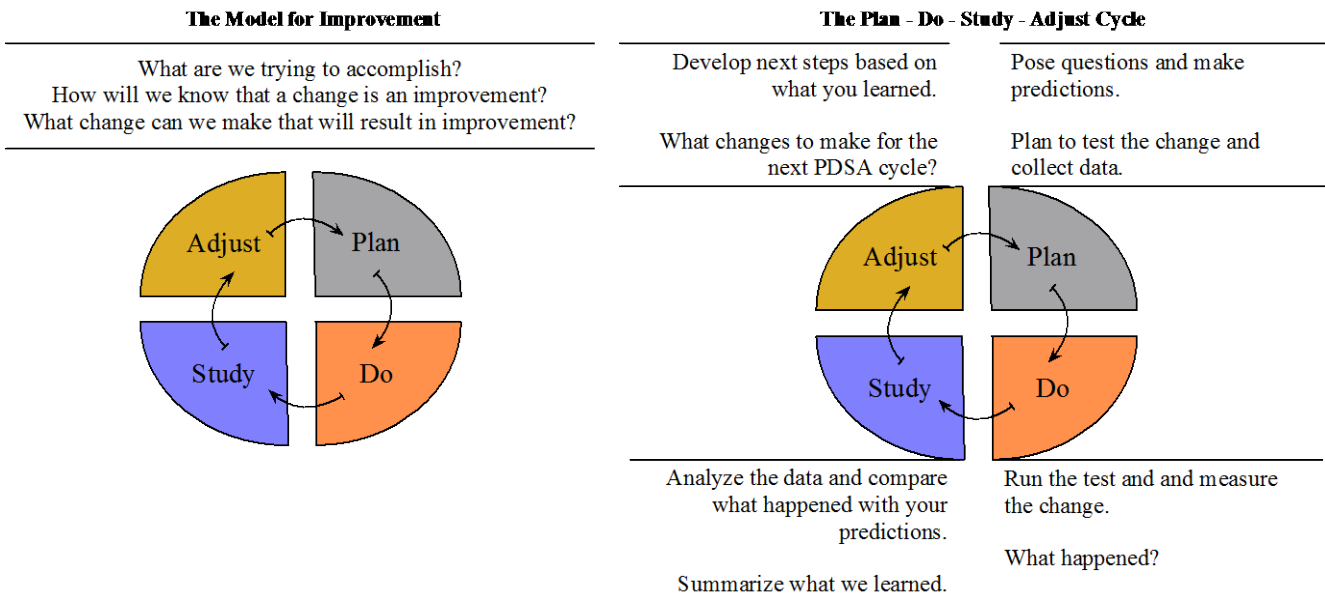
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[7] *Link to Appendix C for a full listing of the change ideas developed by the five districts.*

coaches and teachers were orienting themselves to new roles, and in some cases a new school. The result is that much of the work of year two fell to principals and teacher-leaders who had been in the network the previously year and were fully invested in the initiative—they owned the improvement strategies. While it is difficult to see what we may have done differently, a lesson learned is that intermediaries must plan for and anticipate leadership and teacher turnover, and perhaps adjust expectations accordingly.

Deliberate use of Improvement Science and PDSA Cycles. During the summer of 2017, Mass Insight program staff reflected upon the data we were collecting and our experience with partner districts and schools. As a result of these deliberations and conversations with our support provider (The Rennie Center)[8], we formally adopted the Institute for Healthcare Improvement's *Model for Improvement* and the PDSA cycle as signature components of our approach (Langley et al., 2009). Previously, we had been using Improvement Science Principles and networked improvement communities (Bryk et al., 2015), employing research-based tools developed internally and supporting schools in developing their change ideas. The decision to use the *Model for Improvement* provided access to tools and processes for carefully measuring (e.g., testing) the change ideas that each district had developed[9].

The *Model for Improvement*[10] is a model for **learning and change**, which presents a way of breaking the concept of "continuous improvement" into concrete, manageable steps. Importantly, the *Model for Improvement* emphasizes change for the sake of improvement, not change for change's sake—which educators are all too likely to feel they have already seen often enough. It draws a useful distinction between change and improvement; all improvement requires change, but not all changes are improvements. Ultimately, the *Model for Improvement* is a tool that helps practitioners articulate a goal, identify a potential improvement (or "change idea"), and thoughtfully evaluate whether that change idea in fact resulted in the expected improvement.

The engine of the *Model for Improvement* is the Plan-Do-Study-Adjust (PDSA) cycle. At the heart of the PDSA cycle is the **change idea**, which is a hypothesis about a change that will lead to improvement. PDSA cycles are used to plan testing of a change idea, carry out the testing, analyze the results, and identify next steps.

The Model for Improvement

What are we trying to accomplish?
How will we know that a change is an improvement?
What change can we make that will result in improvement?

Adjust — Plan — Study — Do

The Plan - Do - Study - Adjust Cycle

Develop next steps based on what you learned.

What changes to make for the next PDSA cycle?

Pose questions and make predictions.

Plan to test the change and collect data.

Adjust — Plan — Study — Do

Analyze the data and compare what happened with your predictions.

Summarize what we learned.

Run the test and and measure the change.

What happened?

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[8] The decision to use the Model for Improvement was strongly encouraged by the Rennie Center, as the manager of the three Massachusetts Networks (of which we were one) that had received funding from New Ventures Fund.
[9] See IHE website for additional information and descriptions of the IHE Quality Improvement Toolkit.
[10] Adapted from the Institute for Healthcare Improvement and *The Improvement Guide* (Langley et al., 2009).

PDSA Webinars were held in August and September of 2017 for all districts, followed by multiple district-level meetings to provide additional training and to develop the first round of PDSA cycles. Four of the five districts[11] engaged in multiple (between 4 and 8) PDSA cycles over the course of the school year, with some districts developing different "tracks" of PDSA cycles to test related change ideas, or to test a particular component of a larger change idea.

The quarterly (and sometimes monthly) within-district meetings provided time for the cross-school working groups to share the results of their PDSA cycles, and to engage in the "Study" and "Adjust" portions of the PDSA cycle with their entire cross-school network. Meetings were structured so that each working group responsible for conducting a PDSA cycle would share: (1) how they used the PDSA cycle (e.g., who was involved, how data was collected and examined); (2) their learning about "how to run" PDSA cycles; and (3) a description of the evidence collection, whether the evidence matched predictions, and potential modifications. As we convened the cross-school network meetings across districts, we observed districts engaged in learning about how to use PDSA to better implement strategies (e.g., how to be a learning organization) AND actively using PDSAs to test and modify their change ideas.

When there was full participation by the district and the schools, the use of the PDSA to test change ideas contributed to positive shifts in leader and teacher mindsets and important modifications to change ideas. However, many of the challenges faced in year one, such as teacher turnover, leadership changes, and limited positional authority (in a few districts) tended to reduce the number of teachers actually involved in the within-district networks. The decrease in the number of active teacher participants, coupled with the fact that the PDSA process calls for small-scale tests of change ideas rather than full implementation of a change idea, significantly reduced the scale of our work.

Successes and Lessons Learned from our District-Level Work

- As a five-district Network, we developed and agreed to work together on two shared Problems of Practice.
- Each district formed new "within-district" networks of high schools and middle schools that included district leaders, principals, teachers, and in some cases coaches.
- Four of the five districts articulated concept maps depicting core issues related to instructional improvement, developed change ideas to address high-priority issues, and then used the PDSA process to test and modify the change ideas.
- After two years, three of the five districts had developed networks and were actively using Improvement Science principles in ways that were directly impacting teachers' instructional practice.

We learned that:
- ✓ It is crucial to have a shared understanding of high-quality instruction, and to then be able to measure what high quality instruction looks like in classrooms and in student work.
- ✓ District-level positional authority is necessary to maintain momentum.
- ✓ To successfully scale-up change ideas, all teachers, including those not formally in the within-district network need to fully understand the purpose of PDSA.

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[11] One district did not use the PDSA process due to a more pressing need to support new content area teachers across multiple schools on core instruction and the development of standards-based lessons. This district used funds and Mass Insight support to provide curriculum training to new teachers and to develop a walkthrough tool to be used by the principals.

District Level Lessons Learned

We (districts and Mass Insight Education, as the intermediary) faced several challenges in our effort to develop change ideas that would directly impact teachers' practice. We share these lessons learned about building within-district NICs and using PDSA cycles.

Lessons Learned about building within-district NICs

The importance of having school-level improvement teams AND a cross-school network team. As initially configured, the district working groups included cross-school representatives but did not require school-level improvement teams. As change ideas were developed and subsequently shared with teachers who were not part of formal working groups, districts noted some teacher resistance to using the change ideas, often because they weren't aware of the work or hadn't been included in the development of the change ideas. While this dynamic did not occur in all districts, the lack of full leader and teacher support for the change ideas was a challenge.

The importance of having a shared and deep understanding of high-quality instruction. Most of the districts developed change ideas intended to improve teachers' current instruction. However, some these districts were still in the process of defining what high quality instruction and "instructional rigor" looked like and meant in practice. Without a shared understanding of high-quality instruction, we were concerned whether efforts to change instruction would lead to improved instruction and gains in student achievement. A few of the districts recognized the need to ground their work in a better understanding of the rigor (e.g., instructional content and strategies) of instruction needed in all classrooms and modified their change ideas to include specific training on instructional practices. We wonder, however, whether we should have started with a more focused conversation about high-quality instruction and instruction rigor (including a data-driven root cause analysis), rather than focusing on broader challenges districts faced in implementing high-quality instruction.

The importance of district-level positional authority to maintain momentum. Each district assigned one or more district leaders to oversee and participate in the work. However, the positional authority of these leaders varied, from having significant oversight over schools to limited to no direct oversight. While all the district leaders effectively managed the district working groups, the ability to (re)direct the working groups (when needed) and subsequently more forward with change ideas was challenging when the district leader did not have positional authority and the credibility to push the work forward.

As an intermediary, the importance of having a dedicated, district-specific liaison. Internally, Mass Insight's staffing did not provide for a dedicated liaison, or representative, for each district. Given the way that the project developed and need to refocus our year one efforts on developing district-specific Concept Maps and related change ideas, we think it may have been useful to have a dedicated person working with each district.

Lessons Learned about the use of PDSA to implement and scale up change ideas[12].

The use of the PDSA process requires that participants make specific predictions about what they expect to occur when a change is enacted, and to collect data that will both assess whether predictions are met and provide information as to why and how a change idea is working. The process also calls for the use of small-scale and quick improvement cycles, that could include (at the beginning of the process) a single teacher or grade-level. In working with districts, we found that this way of thinking about how to "implement" was new to many teachers, and that it required significant training and shifts in mindsets. Most leaders and teachers noted that using PDSA was professionally rewarding and many reported that they expected to continue to use PDSA to implement and test

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[12] Observations and lessons learned are based on the site visit data collected during year two, as well as individual conversations with district and school leaders held throughout the year, during within-district network meetings and cross-district network meetings.

improvement strategies. However, we also noticed that some districts used the PDSA process to continue to develop their change ideas (which is commendable) yet were then challenged to find a way to scale up the change idea to other classrooms and teachers, often because those teachers had not been involved in the first set of PDSA cycles. As an intermediary, we found that while PDSA is intuitively simple, actually using and supporting multiple schools (and districts) in using PDSA is a complex endeavor, especially when schools and districts are testing multiple change ideas.

The PDSA process actively supports organizational learning and deep understanding of implementation. PDSA forces teams to reflect on what precisely needs to happen to implement specific strategies, leading teachers/teams to break implementation into discrete steps/actions that need to be taken (and that can also be tested). This way of thinking provided a refreshing way for teachers to think about their instructional strategies, compared to traditional professional development approaches (e.g., training followed by full-scale implementation). The PDSA process also provided a way for school-based instructional coaches to more actively engage teachers in job-embedded professional development and cycles of improvement, by providing a framework and common language. For instance, coaches reported that using PDSA changed how they supported teachers, leading to deeper and more structured conversations and teachers actively modifying instructional strategies (and then testing these modifications).

> **Snapshot Example: Becoming a learning organization.**
>
> In one district, a small set of math teachers used the PDSA process to test the use of a new math instructional strategy, which involved significant group work among students. After their first lesson (their first PDSA cycle), they quickly realized that students had little experience working in groups and that they needed to set expectations for group work. Instead of continuing with the instructional strategy in isolation, teachers identified a problem and co-developed a solution that they used in their next PDSA cycle, within a matter of 1 to 2 weeks. They then shared their experience with other schools.

To successfully scale-up change ideas, all teachers, including those not formally in the within-district network (e.g., working groups), need to fully understand the purpose of PDSA. When coaches and department heads tried to expand the scope of the testing and use of strategies, they often experienced resistance. To address this issue, we worked with districts to develop plans for scaling-up the change ideas to multiple teachers and across schools, with specific timelines and benchmarks.

Significant up-front and ongoing support is needed for leaders and teachers to develop meaningful indicators and data collection tools. Developing indicators and measurement tools that accurately measure the prediction AND can be easily used is a difficult task, especially for teachers that may not have experience in "testing change ideas" and have limited collaborative time. Challenges in developing measures and managing data collection were compounded when working groups, often across schools, wanted to scale up change ideas to multiple teachers. Balancing the importance of scaling of change ideas with the need to collect data from all participants is an important consideration.

Maintaining a common understanding of, and providing training on, the change idea is a crucial consideration. The PDSA process allows for (and in fact encourages) ongoing modifications of the change idea. As a result, there is the possibility that an instructional or coaching strategy—a change idea—may be modified to the extent that it makes it difficult to test and compare results across school. Similarly, teachers may have very different levels of expertise in an instructional strategy, which poses a challenge to "testing" an instructional strategy across teachers with different levels of expertise. Negotiating the tension between rapid testing and modification of a change idea with the importance of using consistent instructional strategies across schools is important to address up front, particularly if the goal of a change idea is to improve instructional alignment and coherence within and across grade-levels and schools.

Snapshot Example: Maintaining Fidelity to the Change Idea

One district developed a "thinking protocol" intended to support teachers in differentiating instruction. As this idea was tested, schools (and teachers) reported using the tool in distinct ways: to inform lesson planning; to have students reflect on their work; to group students; and as a coaching tool.

Another district was working to scale up a research-based instructional strategy. As they proceeded with the work, it became clear that multiple teachers needed training and even with training, that expert use of this strategy takes time to develop. We were uncertain if the PDSA process was the most effective way to scale-up this research-based strategy.

Cross-District Network Activities

The cross-district network was conceptualized as community of like-minded district and school leaders working on a common Problem of Practice (PoP). As a network, district leaders would come together at regular intervals to collectively share their efforts to implement district-specific change ideas and spread the use of best practices—what works and in what contexts—with others. The cross-district network was also a means of providing common content and training across districts and an opportunity to discuss the data collected across districts; in short, to use disciplined inquiry to drive improvement. The success of the cross-district network—using the network to accelerate learning—depended on the building of strong relationships, having a common PoP, and collecting similar data.

We initially expected and encouraged districts to develop different change ideas, so long as the change idea was directly connected to the common PoP and designed to improve teaching practice. However, providing such discretion resulted in districts developing distinct change ideas, often in different content areas. The key lesson that we learned from our efforts to build a cross-district network improvement community is that having too wide of a range of change ideas makes it difficult for districts, and district leaders, to fully access the power of the network to accelerate the sharing and use of effective practices.

> *We hypothesize that if we had set an expectation that districts must collectively decide to use and test a <u>common change idea</u> (e.g., the use of PLCs, the use of instructional coaching, the use of the same instructional strategy), while still allowing for some variation in how districts implemented their work, that learning and sharing of effective practices among districts would have increased.*

Networking Districts – What we did over two years

The cross-district network met together three times in the first year of the project and three times in year two. Each network meeting included time for *cross-district sharing*, *within-district team time* for districts to apply their learning to their own improvement efforts and *specific content* intended to build shared understanding of Improvement Science principles and strategies for building a professional learning environment.

Network meetings in year one provided time for district teams to share their progress in identifying core issues and the change ideas they were developing to address these issues[13]. The January meeting focused on the sharing of potential change ideas and the June meeting focused on further articulation of change ideas and the development of district-specific and cross-district measures to test the change ideas, as well as providing time for districts to plan their summer and fall implementation. During the June meeting, we introduced the concept of Plan-Do-Study-Adjust (PDSA) as a tool for articulating change ideas, making predictions, developing a plan for testing change ideas. The use of PDSA was carried through to year two and emerged as a significant component of our support in each district.

Network meetings in year two mirrored and reinforced the progression of the work in each district, focusing on district-level use of PDSA cycles to test change ideas. Network meetings provided time for district teams to develop and refine their own plans for using PDSA to scale up change ideas, building upon expert training and the experience of fellow districts within Massachusetts and across the country. In year two, our goals were to build district- and school-level capacity to use the PDSA process as a means of implementing change ideas and provide an opportunity for districts to learn from each other about how the PDSA cycle could be used to improve teachers' instruction.

Display 6 (on the following page) provides a summary of the core inputs and training activities conducted during each Network meeting; agendas for each meeting can be viewed in Appendix E.

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[13] *See Appendix D for a summary of how core issues and change ideas developed over the course of the project.*

Display 6. Content and Structure of Cross-District Network Meetings

	Training/Content	Cross-District Sharing	District Team Time
August 2016	Review of common PoP, shared Goal, and overall approach. *Learning to Improve* by Bryk. A (Chap. 1 abstract). *Instructional Coherence* excerpt from *Turnaround Practice Field Guide*. Discussion of Diagnostic tools and data collection expectations.	Developing a common understanding of the PoP. Refining the core issues and drivers that relate to the PoP. Sharing of district-level strategies that address the PoP.	Discussion and identification of district-level strategies that align with/attend to the PoP and core issues.
January 2017	*The Missing Link in School Reform* by Leanna, C. (2011) *Best Practices for Closing the Achievement Gap*, presentation by Andreas Schleicher. Review of Superintendent and District developed core issues related to the PoP.	District sharing of concept maps and proposed change ideas to address PoP Collaborative protocol to share, learn about, and provide feedback on change ideas.	District-specific conversation regarding what constitutes effective PLCs and what changes and/or policy shifts need to occur to support effective PLC development and use in schools.
June 2017	Sharing of cross-district trends and findings from the Site Visits. Introduction to PDSA cycles.	Sharing of efforts to implement current change ideas designed to improve instruction: - Looking at Student Work - Core instructional strategies - Fluency and coherence - Common lesson planning Sharing and identification of areas of expertise, building upon cross-district trends. Sharing of next steps to test change ideas using PDSA cycles.	Reflection and planning based on information gathered during cross-district sharing, focusing on use of PDSA cycles and developing measures.
October 2017	IHE training on PDSA cycles, provided by Rebecca Steinfield	Each district provides an update on their use of PDSA cycles and key challenges.	Key takeaways and plans for using the PDSA process.
January 2018	Florida Implementation Network: How to Initiate and Scale Improvement across multiple districts.	Shifts in teacher practice around student engagement. PDSA cycles as a mechanism for improvement.	Scaffolding PDSAs and planning/scaling up change ideas meet year two objectives and benchmarks.
May 2018	Central Valley Networked Improvement Community: Using PDSAs to build a culture of continuous improvement.	Progress and challenges in implementing improvement efforts and using PDSA cycles.	Strategies for using PDSAs with other district or school improvement efforts.

Network Level Successes and Lessons Learned

Participants found the cross-district Network meetings to be useful in supporting their within-district improvement efforts. Participants noted that they valued having time together as a district team to reflect upon their work and engage in planning; time that was not available in their own district, separate from day-to-day work responsibilities. For instance, participants reported that they enjoyed learning about how the other districts were developing change ideas and then in year two, how their colleagues were using the PDSA cycle in different ways, to test and modify change ideas. Bringing in high-quality external speakers from the Institute for Healthcare Improvement (IHI) and NICs from Florida and California provided expertise and practical information that reinforced the work in each district and illustrated how PDSAs could be used in multiple settings. Reflecting upon the impact of the cross-district Network, we are confident that bringing together districts on a regular basis did provide value to most of our districts, by providing dedicated team time for planning, providing expert training, and creating an opportunity to share and learn about the challenges and successes of fellow districts.

Over time, the cross-district Network emerged as a means of building district-level capacity to use Improvement Science and PDSA cycles to develop and test change ideas, rather than a network characterized by active testing and sharing of improvement strategies among and across districts. We highlight this distinction between a network as a *means of building district capacity* versus a *networked improvement community* that uses Improvement Science to collectively design, test, and spread effective practices, and to collectively address systemic issues *across districts*. Building a cross-district NIC is challenging, and we offer the following thoughts related to cultivating effective NICs that include multiple districts and schools[14].

Focusing on a common and shared change idea (e.g., improvement strategy) increases the potential for cross-district measurement, learning, and sharing of effective practices. Despite identifying common issues related to instructional coherence, districts developed distinct change ideas, often in different content areas. The improvement strategies used each district were so contextually bound that it was unlikely for a district to adopt a strategy used in another district, even if it may have made sense to do so. What districts learned from each other was indirectly applied to their own work.

Successfully addressing broader systemic issues may require a different cross-district network structure that includes additional stakeholders, such as School Board members, teacher unions, and community members. We had limited success in co-developing solutions to the systemic challenges that districts faced, such as how to increase common planning time for teachers, how to require teachers' use of common lesson plans and instructional strategies, and how to increase classroom observations. Each district was in a unique political environment that posed a challenge to the adoption of system-level strategies used in other districts, even if such strategies seemed promising or were producing results. Context matters, and local context not only influenced the change ideas that each district developed, but also limited the extent to which districts were able to adopt ideas developed by other districts.

Expect to spend considerable up-front time developing a cross-district aim, setting expectations for involvement in the Network, and developing a governing board. While we did develop a shared PoP, the urgency to work directly with schools, including principals and teachers, meant that we spent the bulk of our time and resources working with individual districts and schools. As a result, less up-front time was spent with Superintendents and district leaders to develop a data-driven goal (or Improvement Aim) and setting expectations for network involvement. We initiated a Governing Board in year one, with the goal of developing a cross-district Charter; however, the Board did not play a significant role in the work.

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[14] We wonder about the applicability of Improvement Science principles, and Networked Improvement Communities, as a means of supporting improvement efforts **across multiple districts**, and whether such work needs to be restricted to a single district, or more tightly focused.

Measurement

The fourth core principle of Improvement Science is that "we cannot improve at scale what we cannot measure." Building upon this principle, our original design included three standard data collection tools to be used across all schools and districts, in both years of the project. The purpose of collecting standard data was twofold: (1) to assess each district's progress and collectively support districts—as a network—in assessing the efficacy of current and proposed change ideas and (2) to provide formative feedback to districts and schools that could be used to inform planning. In addition to collecting data through our initial interactions with districts, which included the development of a logic model and a concept map, we set expectations for the use of the following data collection tools and measures:

Organizational Data	Teacher Data	Classroom Data
School Readiness Assessment A school-level site visit aligned to the state's accountability system, focusing on a set of Turnaround Practices[15] used by the state to assess organizational features associated with schools engaged in rapid improvement. The site visit included interviews and focus groups with leadership and teachers.	***Survey of Professional Interactions and Organizational Capacity*** This survey, administered by a Communities for Learning[16], was aligned with program goals, components and indicators, focusing on research-based characteristics of professional learning communities, the frequency and content of teachers' interactions, and perceptions of school leadership.	***TriState/Equip Rubric*** A tool designed by a three-state collaborative (Massachusetts, New York, Rhode Island) that includes criterion-based rubrics[17] and review processes to evaluate the quality of lessons and units intended to address the Common Core State Standards for Mathematics and ELA/Literacy.

Site visits and teacher surveys were administered in both years of the project. We were unable to use the TriState/Equip rubric due to the fact that districts were already using their own approaches to principal and teacher evaluation and the anticipated difficulty in having districts employ an additional tool that may have been deemed "evaluative" and not permitted by local collective bargaining agreements. Additionally, site visits and surveys were not administered in a subset of participating schools, due to the fact that districts had existing contracts for site visits and commercially bought surveys.

Despite the difficulty in collecting standard data from all schools, the information gathered through the site visits and surveys—including analysis of data from external sources—was aggregated and shared with the entire network at the end of year one during the June cross-district network meeting. We also met with district leadership (the Superintendent and/or Chief Academic Officer) in the spring of year one to review site visit and survey data, and to examine the extent to which the change ideas, as developed by the working groups, were indeed sufficient to address the core issues (e.g., levers, or drivers) identified during the first year of the work.

In year two, we revised our site visit process to explore how schools were using the PDSA process. Specifically, site visits focused on how schools were using PDSA in their school, the scale of PDSA use, and teachers' perceptions as to whether PDSA was useful as a means of influencing teachers' instruction.

Display 6. Data collection tools administered by year

Data collection tool	Year One	Year Two
Site Visits	21 SRAs; 1 external report	13 SRAs, 1 external report, 8 DNP
Teacher Survey	11 Mass Insight; 9 Panorama	7 Mass Insight, 13 Panorama, 4 DNP

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[15] See the Massachusetts Turnaround Practices site <http://www.doe.mass.edu/turnaround/howitworks/reports.html> for a detailed description of the practices and related research.

[16] See Communities for Learning for additional information and a description of the research-based framework upon which the survey is based.

[17] See engageNY for examples of the lesson planning rubrics.

Key Findings and Themes from our Data Collection

The summary findings from the site visits and surveys, presented below, illustrate the common issues that districts and schools faced in their efforts to improve teacher practice and instructional coherence.

Key findings emerging from the Site Visits

- Collaborative time and planning structures, a key avenue to improving instruction, are mostly in place in middle schools while less prevalent or consistent in high schools.

- Many schools have and actively use an "instructional focus" and/or set of common expectations that provides a foundation for instructional rigor and instructional coherence.

- Teachers want and need more specific, actionable, and consistent feedback on their instructional practice, which is another way to improve instructional coherence.

- The regular use of data to revise, refine, and inform responses to students' needs continues to be an important, but still under developed capacity that has multiple implications for teachers and students.

- Tiered intervention and student supports is often significantly under-developed in middle and high schools, limiting students' ability to move into honors or AP courses and impacting teachers' core instruction.

Key findings from the Teacher Surveys

- Principal and administrative actions to support instruction varied across schools, in terms of the frequency and number of classroom observations, the quality and perceived impact of principals' instructional feedback, and administrative expectations regarding instructional expectations and the use of data.

- Notably, the frequency of principal and administrative classroom visits was positively correlated with teachers' perceptions of principal leadership (across multiple items) and items related to the organizational capacity of the school.

- Teachers tended to report that they did not have adequate time or resources to develop shared lessons and to use data to improve instruction.

- There was wide variance across schools with respect to the frequency of grade-level and/or departmental team meetings and administrator to teacher interactions.

Successes and Lessons Learned from our Measurement Activities

- Conversations with district leaders were useful and those schools that received site visits took care to review the site visit reports. In most cases, district and school leaders used site visit findings (along with their own data) to make staffing decisions, to inform how coaches and leaders interacted with teachers, and to reflect upon district-wide trends.

We learned that:

- ✓ For measurement and data collection activities to truly inform network learning, as well as directly inform the work within each district, it is important to set very clear expectations around the use of standard data collection tools AND support districts in developing customized data collection tools, including developing the capacity to use these tools as part of PDSA cycles.

Measurement Lessons Learned

Our measurement lessons learned are shared here and intended to provide guidance to intermediary organizations and network hubs engaged in using Networked Improvement Communities of to drive improvement among multiple districts.

Lessons Learned about developing and using standard measures to accelerate learning

The importance of knowing, and being able to measure, what high quality instruction looks like in classrooms and in student work. A key lesson learned stems from our efforts to influence teacher practice and to measure changes in instructional practice. A core measurement need across districts was the lack of systematic processes to assess the quality of classroom instruction. While a state's educator evaluation system typically provides a mechanism to collect data on teachers' instruction, we found that district leaders, principals, and teachers needed more specific data and instructional feedback, particularly when working to implement specific instructional strategies. A few of our partner districts developed protocols (e.g., walkthrough tools, looking at student work rubrics) to measure instructional practice; however, none of our districts were able to consistently collect instructional data in a way that could be used to assess whether the change ideas (or other instructional strategies used in the district) were being used effectively across all teachers and classrooms.

Set expectations for and actively use a set of common data collection tools and measures. For a network of districts or schools to fully engage in Improvement Science, there must be a shared and measurable outcome goal and common measures and indicators aligned with leading indicators of change. It is essential to be able to track progress and outcomes similarly across network schools; simply stated, it is important to know whether improvement efforts are working. Our experience attempting to utilize similar measures across districts surfaced a number of challenges. For instance, districts and schools were using different measurement tools (e.g., teacher surveys, classroom observation rubrics, site visits) that restricted the ability of participating schools to use and then examine common data. If each district had been focused on the use of a particular math strategy, a coaching strategy, or the use of PLCs, we imagine that a standard measure could have been more useful in comparing data across districts, and to explore why (and how) certain strategies were working (or not).

For Improvement Science to be effective among a network of schools or districts, participating districts should:
- Develop a shared and measurable outcome goal that provides focus and serves as common measuring stick.
- Formally agree to use compatible measures of leading indicators (e.g., change in teacher practice). Examples of measurement tools include teacher surveys, classroom observation tools, or state assessment data.
- Identify common formative and interim assessments that districts and school may be using and develop data sharing agreements that allow for sharing and joint analysis.

Focus on leadership, as effective principal leadership and a school's organizational capacity to improve are closely linked. Strong leadership at district and school levels builds and supports collective responsibility and models an openness to data use and teacher collaboration. School-level administrators and instructional coaches are key stakeholders; principals provide vision and accountability for the efforts to improve instruction and coaches serve as key conveners of teachers actively testing change ideas. Mirroring the longstanding findings on research on leadership and school improvement (Leithwood et al. 2017), survey data collected during both years of the project reinforced the correlation between effective principal leadership (as reported and perceived by teachers) and organizational capacity. Schools in which teachers rated leaders as more effective (e.g., providing supportive feedback, knowledgeable of instruction, actively promoting the school's instructional focus) tended to be schools which had higher ratings of organizational capacity (e.g., teachers frequently work together, feel responsible for students). And principals that visited classrooms frequently and provided instructional feedback were seen as effective by teachers, across a number of leadership measures.

SUMMARY: BUILDING A LEARNING ORGANIZATION AND CHANGING TEACHER PRACTICE

We share our summary successes, challenges, and learnings within the *Improvement Science Framework* (Bryk et al, 2015) and in reference to the goals of this project – to support districts and schools **develop their capacity as a Learning Organization** and to implement change ideas that would **lead to improved teacher practice**.

Successes	Challenges
Make the work problem-specific and user centered	
Districts collectively developed shared Problems of Practice (PoP) that provided focus and a goal for the work across districts. Four of the five districts (comprised of district leaders, principals, coaches, and teachers) refined the PoP and developed change ideas that were tested in multiple schools and classrooms.	Based on our experience in this project, developing what Carnegie describes as a "robust information infrastructure" requires the development of formal structures, protocols, and resources (e.g., time) at multiple levels (e.g., cross-district, cross-schools, and within-school) of the school system. Developing these structures and ways of working together may need to be formalized prior to using Improvement Science principles to engage in continuous improvement.
Variation in performance is the core problem to address	
Four of the five districts developed a variety of change ideas that were implemented across schools and in varied contexts, and that directly addressed their priority areas for improvement.	Differences in the strategies and change ideas made it difficult: (1) to employ common measures across districts and (2) for districts to quickly share and adopt change ideas used by other districts.
See the system that produces the current outcomes	
Each district (including principals, coaches, and teachers) developed a Concept Map, that depicted the core issues influencing the ability of the district to improve instruction and identified high leverage priority areas for improvement.	Despite spending time articulating the "system" and identifying common issues, we still found it challenging to: (1) develop solutions/changes to address broader system issues and (2) direct attend to an underlying issue—the lack of a consistent understanding of high-quality instruction.
We cannot improve at scale what we cannot measure	
Standard data collection tools (e.g., a formal site visit and teacher survey) were administered in each year of the project. A few districts used this information to make staffing and strategic decisions. Individual districts developed and used measures linked to their change ideas.	Efforts to use data to inform cross-district learning was challenging, due to: - The diversity of change ideas used by districts. - Lack of a standard measure of instructional quality. - Data collection tools already in use by districts. District-level measures were linked to change ideas and did not assess progress towards a broader improvement aim/goal.
Anchor practice improvement in discipline inquiry	
Four of the five districts used PDSA to test change ideas among multiple teachers and in multiple schools. The use of PDSA resulted in the modification of change ideas and shifts in teachers' instructional practice. In some instances, the use of PDSA led to shifts in how leaders, coaches, and teachers engaged in teaming practices and efforts to improve classroom instruction.	To successfully scale-up change ideas, all teachers, including those not formally in the within-district network (e.g., working groups), need to fully understand the purpose of PDSA.
Accelerate improvements through networked communities	
Four of the five districts developed formal networks among High Schools and Middle Schools (inclusive of principals, coaches, and teachers) that did not exist prior to the project. These within-district networks met regularly to develop change ideas and then to test, analyze data, and make improvements.	The within-district networks were more effective than the cross-district Network in sharing information, specifically around the development and testing of changes ideas. More effective within-district networks included district leaders with positional authority and full inclusion of multiple stakeholders from all partner schools.

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Appendix A. Overview of District Systems of Support

	Structure and Use of Time	People (In addition to Principal/AP)	Processes (Described in theory, not always in practice)
District A	**ILT** (schools) **PLCs** (schools) **Data accountability meetings** (schools)	**District liaison** (to each school) **School-based coaches** **School department heads**	**Collaborative Cycle**: Process to be used by PLCs and facilitated by Coach and/or department head. **School-based Learning Walks and Data Walkthroughs**: 1-2 times a year, led by district liaison
District B	**ILT** (schools) **PLCs** (schools)	**Superintendent** and **Chief Academic Officer** (work directly with each school) **Mentor Coaches** (developed in Y2) **Lead/Master teachers** facilitate school-based PLCs.	**Triad/Quartet cross-school visits**: Led by superintendent and including principals; to observe instruction and model instructional feedback. **Regular classroom visits**: Expectation that principals actively visit classroom and provide instructional feedback. **Principal planning sessions**: led by district leaders, to meet with principal and track progress of improvement strategies.
District C	**Common planning time** (CPT) for teachers **Monthly Coaches Meetings** **Principal Network Meetings**	**School-based coaches** **School department heads**	**District coaching initiative:** Structured use of coaches and coaching framework in each school – coaches work with individual teachers and facilitate CPT, focusing on using data to improve instruction.
District D	**ILT** (schools) **PLCs** (schools) **District training** for ILS staff re: coordination with principals/APs and facilitation of PLCs.	**Instructional Learning Specialists** (ILS) in each school (e.g., coaches) High School **Department Heads** District **Content Directors**	**District-wide coaching model**, using ILS as primary coaches in schools, working with principals. **Cycle of Continuous Improvement** used by ILT; started in 2016-17. **Learning Walks** used to collect information used for monitoring and feedback. **Problem solving process** as a way of working; in service of improving pedagogy across content areas.
District E	**Instructional Leadership Teams** (ILTs) meet 1.5 hours 2x/month **PLCs in schools** meet 2x/week **District convenes school-based ILS** 2x/month.	**Instructional Learning Specialists** (ILS) in each school, in Math and ELA: Teach 20% of the time and lead PLCs in schools. **District content directors** **School department heads**	**Principal leads ILT** **School-based Learning walks**: Learning walks (Principal and district content director) inform the work of the ILT in monitoring instructional practice. **ILS leads the PLC teacher teams**: curriculum mapping

Appendix B. Listing of Core Issues and Challenges directly influencing schools' ability to improve instruction

General alignment of high-quality instruction

- Horizontal Alignment: Curriculum/Instruction is different across classrooms in same grade/content.
- Vertical Alignment: Curriculum not aligned with and/or teachers don't know what is taught in other grades; curriculum is different from middle school to high school.

Instructional Coherence

- Units and Lessons are not aligned; inconsistent; or not aligned with standards.
- Inconsistent use of common and effective instructional strategies and academic language.
- Inconsistent pacing (teachers at different places, making it difficult to compare and use assessment).
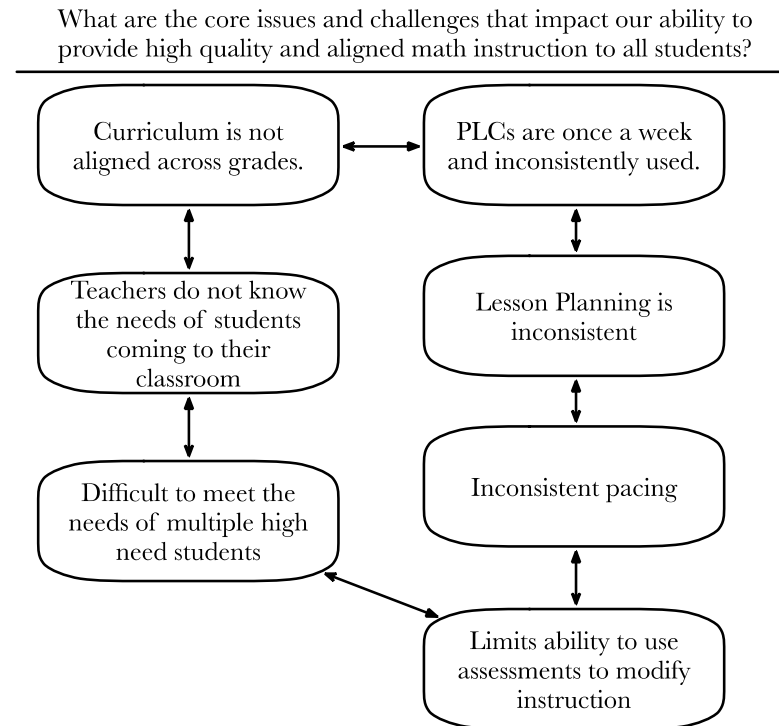
Collaborative Teaming

- Lack of time for common planning and/or PLCs.
- Ineffective use of teaming.

Ability to address needs of all students and provide differentiated instruction

- Teachers struggle to "backfill" and address the gaps in students' knowledge – students come to their grade lacking key skills and content knowledge.
- Teachers often do not know what students have learned or are prepared to do; students come in with big learning gaps and significantly below grade-level.
- Academic language used by teachers is Inconsistent, so students may not understand academic language used from one grade to the next.

Sample Concept Map

What are the core issues and challenges that impact our ability to provide high quality and aligned math instruction to all students?

Appendix C. Summary of Change Ideas developed and used by District Partners

	Core issues to be addressed by change idea	Change Ideas
District A	To improve the rigor and quality of math instruction.	**Math instructional strategies**: Research-based training for teachers and implementation/use of evidence-based strategies (e.g., use of multi-solution problems) among middle school and high school math teachers.
District A	To improve collaborative teaming, focusing on use of time, lesson planning, and use of data.	**PLC protocols and templates:** District-developed protocols to support PLCs, including: - Looking at Student Work Protocol - Unit and Lesson Planning Template - Professional Learning Community Protocols
District B	Improve use of common and effective instructional strategies and academic language.	**Evidence based teaching and learning (EBTL):** Research-based suite of instructional strategies. - Think, Write, Pair, Share - Claim, Evidence, Reasoning
District B	Improve vertical alignment of curriculum from middle school to high school.	**Curriculum Mapping**: District/school development and implementation of a middle school model curriculum map based on high school curriculum and MCAS data.
District C	Improve differentiation of instruction based on students' needs.	**Thinking Protocol**: District-developed tool that teachers use to identify different levels of student need (e.g., green, yellow, red) or that students use to identify own need, which is used: - For teacher lesson planning - For making in-class adjustments
District C	Improve use of common and effective instructional strategies and academic language.	**Number Talks:** A research-based math strategy designed to improve students' understanding of math concepts and computational strategies.
District D	To develop and implement high quality curriculum that provides the foundation for science instruction in grades 6-10.	**Curriculum development:** Professional development and training for science teachers re: science content, curriculum, and lesson planning.
District D	To develop a community of science teachers, reinforced by district systems and by school-level principals.	**Walkthrough protocol**: District-developed walkthrough tool designed to set expectations for high-quality instruction and guide professional feedback to teachers.
District E	Improve use of common and effective instructional strategies and academic language.	**Collaborative Role/Group Protocol:** District/school developed set of group norms and expectations for students to follow and use when engaging in small group work. **Math Vertical Alignment tool**: District/School developed tool to support analysis of standards across grade levels and planning and instruction around vertical alignment of tiered vocabulary across three grade levels.

Appendix D. Development core issues and change ideas over time

Superintendent Generated: Jan 2016	Superintendent and District Leadership Generated: August 2016	District, principal, and teacher generated Core Issues (Concept Maps: Fall 2016)	Issues Identified in Spring 2017 Site Visits	Change Ideas developed to address core issues
Instruction is not aligned: Curriculum is horizontally and vertically aligned but instruction is not. Why? The **Principal** as the key instructional leader. **Changing culture and beliefs** remains a core challenge. Difficult to **recruit and retain** expert teachers.	**Insufficient Time and Structures for common planning**: Teachers in silos; little sharing and risk taking. Time and structures not used as effectively as it could be. **Insufficient Funding** to put into place structures and mechanisms that would support instructional alignment. **Need to shift organizational (and school board) mindset** around why teacher collaboration is important. **High Staff Turnover**, resulting in newer staff needing (re)training.	**Consensus regarding need to improve vertical and horizontal alignment:** Curriculum and instruction is different across classrooms in same grade/content area; teachers don't know what other teachers are doing in same or other grades. **Explanations:** **Use of Collaborative Time** Lack of time for and/or ineffective use of common planning time and PLCs. **Addressing all students' needs and providing differentiated instruction** Students lack content knowledge and teacher have to "backfill" or differentiate. Teachers have different expectations about what students should know. Inconsistent academic language and instructional strategies. **Instructional Coherence** Inconsistent lesson and unit planning. Inconsistent use of common/effective instructional strategies. Inconsistent pacing.	**Five Issues were identified as common across district and most schools.** **Collaborative time and planning structures** are crucial and provide a mechanism to address instructional alignment. **Use of data to revise, refine, and inform responses to student needs** is under developed. **Tiered intervention and supports are significantly underdeveloped** in middle and high schools. **An instructional Focus and/or set of common instructional expectations** provides a foundation. **Instructional Feedback:** Teachers want and need more specific, actionable, and consistent **feedback**.	PLC Reference Guide and Protocols Thinking Protocol Looking at Student Work Prot. Curriculum (Develop/Map) Math Instructional Strategies EBTL Strategies Number Talks Strategy Collaborative Group protocol Math vertical alignment tool Unit and Lesson Plan Template Walkthrough Tool

Appendix E: Impact Results

As part of our grant, we developed a set of outcome measures and indicators intended to measure the impact of the project on teachers' instructional practice. Outcome categories (far left column) and indicators (middle column) were developed and approved by the Rennie Center. Data was tracked on a quarterly basis and submitted quarterly and in a year one annual report and a final (year two) report. Results are presented as a count of the number of schools meeting the benchmark for the listed indicator, and in some instances the number of districts meeting the benchmark for the indicator. Two indicators are measured in terms of the percent of teachers, across all schools, meeting the defined benchmark.

Summary for Final Technical Report		Year One (21 schools)	Year Two (22 schools)
1. Leadership, Shared Responsibility, and Professional Collaboration The school has established a community of practice through leadership, shared responsibility, and professional collaboration.	Effective Leadership Team (# of schools)	9	11
	Shared ownership and collective responsibility for student achievement (% of teachers)	65%	81%
	Use improvement science processes and tools (# of schools)	0	11
	District use of cross-school teaming or network structures to monitor and assess (# of districts)	0	4
2. Autonomy for and Effective Use of Resources and Time Teachers and principals have sufficient resources and time allocated to implementing the MA state standards, professional development, and feedback systems	Teachers have sufficient time and resources to improve instruction (# of schools)	5	12
	Vertical and horizontal teacher teams established (# of schools)	10	17
	Teachers have sufficient time and resources to improve instruction (# of schools)	5	12
	District provides school with operational autonomy and flexibility (# of districts)	2	4
3. Teachers access and use curricula, tools, and materials aligned to the MA state standards	Instructional coherence: Teachers use shared instructional practices, units, and lessons (# of schools)	4	6
	Teacher use of student-specific data to improve instruction and meet students' needs (# of schools)	9	9
4. Teacher Practice Improves	Teachers use common, standards-based instructional practices (% of teachers)	N/A	94%
	Students receive targeted, student-specific instruction and interventions (# of districts)	3	4

Appendix F: Cross-District Network Meeting Agendas

Gateway to College Success Network

Using Networked Communities to accelerate learning and the spread of effective strategies and practices

Initial Network Meeting, June 22, 2016

Pre-reading Assignment:

Please read the introduction and Chapter 1 of *Learning to Improve: How America's Schools Can Get Better at Getting Better*, Bryk, A., et al. (2015). This reading selection provides a good overview of the concept of Networked Improvement Communities, that serves as the model for our proposed work together.

Meeting Outcomes

- **We collectively develop key aspects of the Network Charter**, including:
  - The framing of our Problem of Practice and related Aim Statement
  - Expectations for participation; norms for participation and collaboration
- **Participant have a solid working understanding of the concept of networked improvement communities** and how we are thinking of applying the concept of networked improvement communities to our collective work, including feedback on additional and/or alternative ways of thinking about its application.
- **Participants have with a good understanding of the needs assessment/mapping process** that will be used with the cross-network group (in August) and with each district in the fall.
- And last but definitely not least, **participants leave the meeting excited about the work of the network** and its importance to their districts and committed to accomplishing the work with quality in their districts.

Agenda in Brief

9:00   Introductions and review of outcomes

9: 15   Presentation and Overview of Networked Improvement Communities

The theory behind Networked Improvement Communities

How to activate a Networked Improvement Community – From theory to practice

9:45   Articulating the Problem of Practice

10:00   Modeling the Mapping Process #1: Exploring Core Issues, Strategies, and Outcomes

What are the core challenges to developing rigorous, vertically and horizontally aligned instruction?

10:20   Modeling the Mapping Process #2: Current Strategies that address the Problem of Practice

What are the current initiatives and strategies that you are engaged in that directly or partially attend to the Problem of Practice?

10:40   Break

10:50   Modeling the Mapping Process #3: Anticipated Outcomes and Impact

What will happen when instruction is vertically and horizontally aligned?

11:10   Facilitated Group Sharing: Reflection on the ideas generated and the process as designed

11:30   Open conversation and next steps: Feasibility, representation, expectations, and communication

Presentation and Overview of Networked Improvement Communities

SLIDE 1

   The theory behind Networked Improvement Communities

Collective inquiry on a shared problem of practice will accelerate learning, and support rapid and more effective implementation of what works to improve student learning.

SLIDE 2: Accelerating Learning – Learn Fast to Implement Well

Learning by Doing

Learning by Sharing

Learning through Networks

Individual learning as practice

Teams or schools learning by sharing; organizational learning

Knowledge generated among schools and district by sharing, testing, and refining practices across multiple contexts

Cite this slide as: Bryk et al. (2015)

Gateway to College Success Network
    Using Networked Communities to accelerate learning and the spread of effective strategies and practices

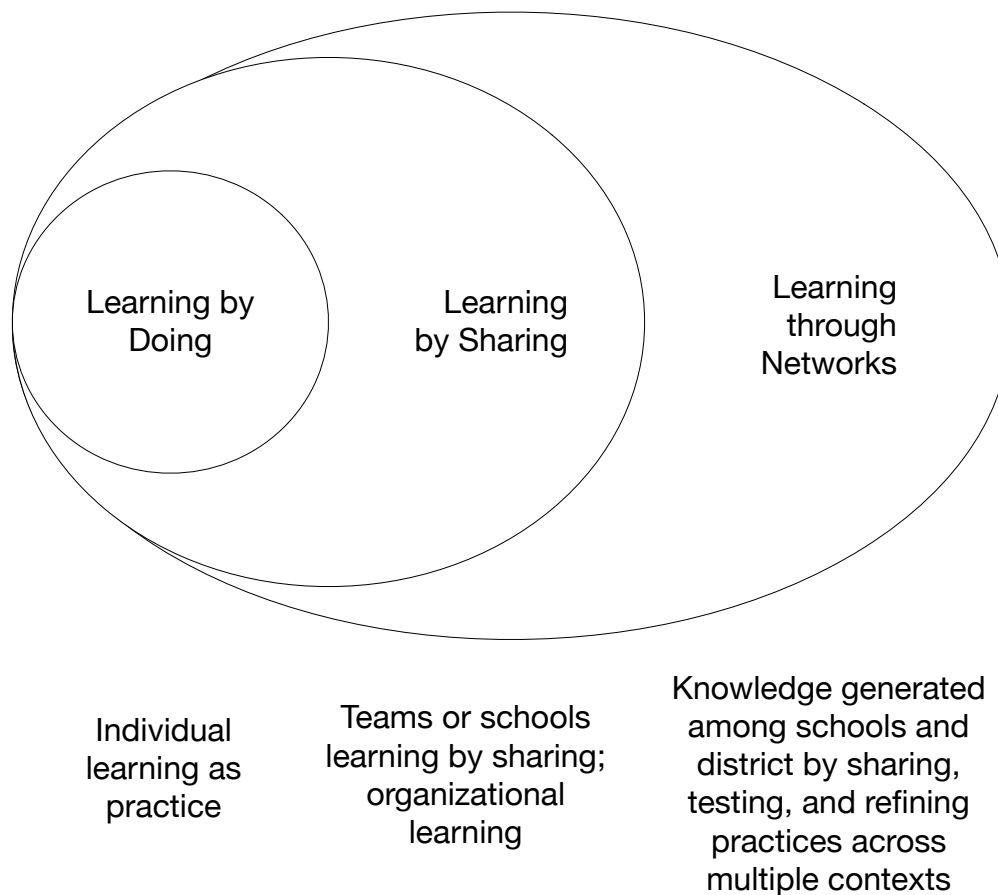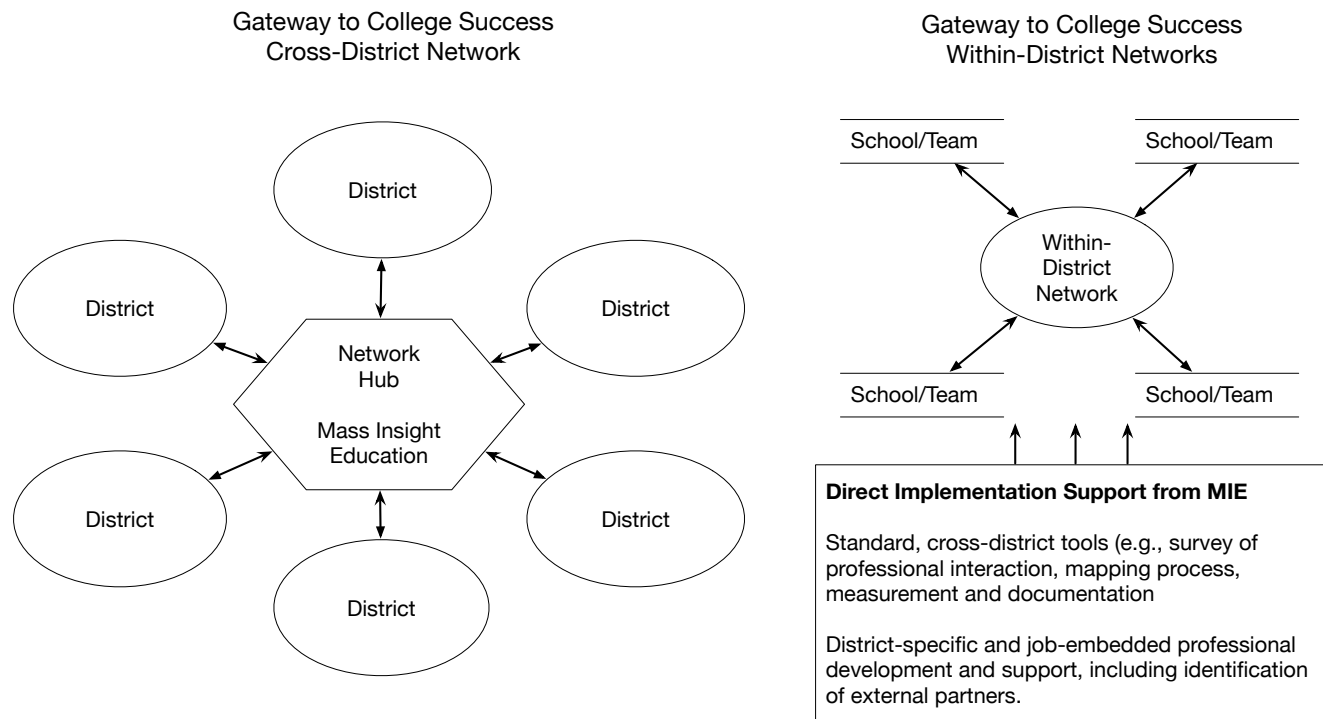## Slide 3: How to activate a Networked Improvement Community – From theory to practice

Gateway to College Success
Cross-District Network

Gateway to College Success
Within-District Networks

Direct Implementation Support from MIE

Standard, cross-district tools (e.g., survey of professional interaction, mapping process, measurement and documentation

District-specific and job-embedded professional development and support, including identification of external partners.

Slide 4: Initiating our Networked Improvement Community – Cross-District Network

Gateway to College Success
Cross-District Network
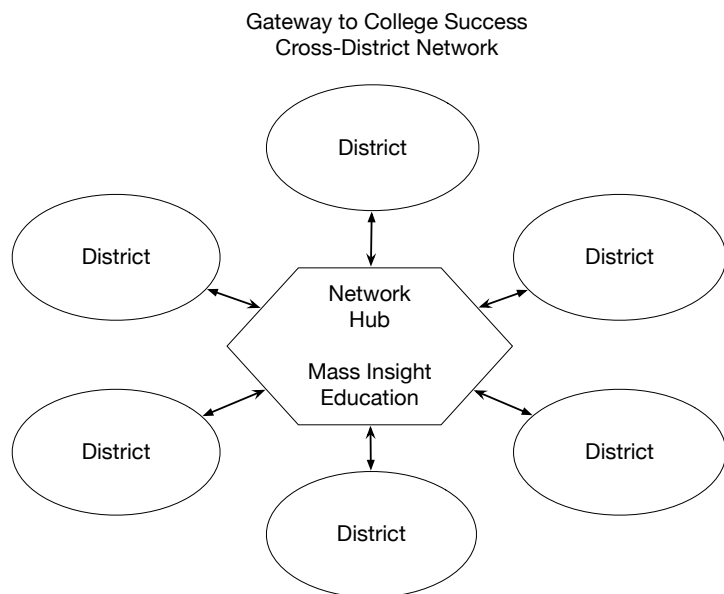
Facilitated by MIE staff, the cross-district network will:

Meet 4 times a year, 3 times during the school year and once in the summer.

Initial "kick-off" of the cross district network will be in August 2016, with a larger cross-district meeting to use the mapping process to initiate the work

The district teams (2 to 3 representatives from each district) will come together to share information on the implementation of their strategies, using data, evidence, and documented experience on what is working and what isn't.

The information generated during these meetings will (hopefully) inform each districts continued implementation and refinement of their own work, as well as add to the overall knowledge-base.

Slide 5: Initiating our Networked Improvement Community – Within-District Network

Gateway to College Success
Within-District Networks

School/Team

School/Team

Within-District
Network

School/Team

School/Team
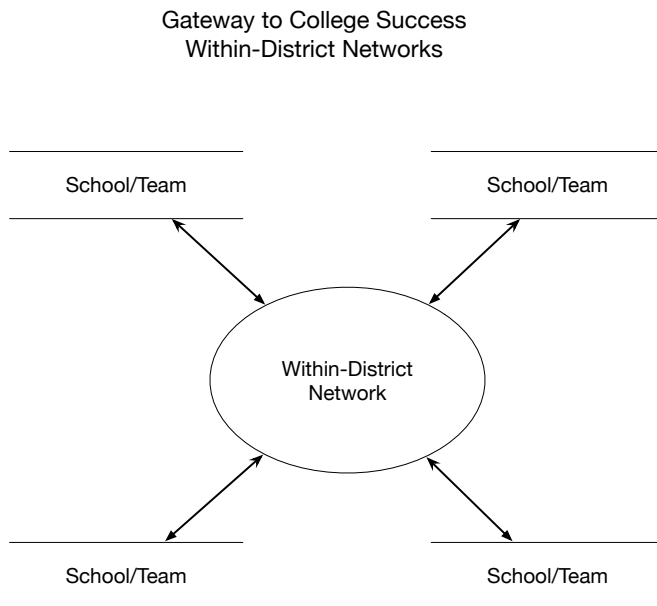
Co-facilitated by MIE staff and district leadership (also members of the cross-district network), the within-district networks will:

Meet approximately 4 times during the school year.

Include key leaders (e.g., principals, instructional coaches, lead teachers, key district staff) from the schools that are directly addressing the problems of practice and implementing a particular approach.

Focus on the implementation of problem-specific strategies and using data and evidence (from cross-district data collection activities and district-specific tools) to facilitate conversations among school and district staff on how to continue to improve.

Slide 8: Reviewing the Problem of Practice

1. **Aligning teacher and classroom instruction** both vertically and horizontally in grades 6-12 within and across schools so that all teachers are providing rigorous instruction and personalized learning opportunities that enable students to have access to college-level courses while in high school and graduate prepared for college and career.

2. **Removing systemic barriers** to the time and flexibility required to align instruction within schools and across schools, so that teachers have the time and opportunity required to form the communities of practice needed to provide rigorous and personalized instruction.

Questions or comments about how the PoP is currently articulated?

Slide 8: Overview of the Mapping Process

Core Issues and Challenges (20m)

What are the core challenges to developing rigorous, vertically and horizontally aligned instruction?

Current Initiatives and Strategies that address the Problem of Practice (20m)

What are the current initiatives and strategies that you are engaged in that directly or partially attend to the Problem of Practice?

Desired Outcomes and Impact (20m)

What will happen when instruction is vertically and horizontally aligned?

Slide 9: Core Issues Impacting the Problem of Practice

In small groups, identify and clarify the core issues impacting the Problem of Practice

What are the core challenges to developing rigorous, vertically and horizontally aligned instruction?

Slide 9: Current Initiatives and Strategies that Address the Problem of Practice

In small groups, briefly describe your current strategies to address the Problem of Practice

What are the current initiatives and strategies that you are engaged in that directly or partially attend to the Problem of Practice?

> *For instance, in you district, what are doing to align high quality and rigorous instructional strategies within and across schools, specifically in grades 6-12.*

> *What organizational practices (e.g. PLCs, data inquiry cycles) are being used that directly/indirectly focus on aligned instructional strategies?*

Slide 9: Anticipated Outcomes and Impact

What will happen when instruction is vertically and horizontally aligned?

> *What will this mean for leaders and leadership structures?*
> *What will this mean organizationally?*
> *What will this mean for teachers' practice?*
> *What will this mean for students?*

Slide 10: Group Conversation and Analysis of Issues, Strategies, and Outcomes

Briefly:

What are some common themes, issues, and strategies?

Shared outcomes and impacts?

Slide 11: Open conversation and next steps: Feasibility, representation, expectations, and communication

Feasibility of this work (time constraints, participation, integration with current initiatives)

Representation at August meeting and next steps

Expectations for participation

Communication

Content

1. Information on the premise and theory behind Networked Improvement Communities, and application to our work
   a. Premise: That collective inquiry on a shared problem of practice will accelerate learning, and support rapid and more effective implementation of what works to improve student learning.
   b. Theory
   c. Application to our work
      i. Mass Insight as network hub (convening, measurement, system building)
      ii. Regular cross-district network meetings (learning through networks)
      iii. Within-district networks (learning by networks and learning by sharing)
      iv. District-specific initiatives (learning by sharing and learning by doing)

2. Elements of the Network Charter
   a. Problem of Practice
      i. System drivers
      ii. Shared theory of practice to address the problem
   b. Aim Statement (General or Specific statement of specific outcomes re: the problem of practice)
   c. Expectations for participation

3. The assessment/mapping process

Mass Insight
E D U C A T I O N

Meeting Agenda
Gateway to College Success Network
August 18-19, 2016
Clark University, Higgins University Center
950 Main Street, Worcester, MA 01610

Pre-reading Assignment:
Please read the introduction and Chapter 1 of *Learning to Improve: How America's Schools Can Get Better at Getting Better* by Bryk, A., et al. (2015). This reading selection provides a good overview of the concept of Networked Improvement Communities, which serves as the model for our proposed work together.

Meeting Outcomes:
- **We collectively develop key aspects of the Network Charter**, including:
    - The framing of our Problem of Practice and related Aim Statement
    - Expectations for participation; norms for participation and collaboration.
- **Participants have a solid working understanding of the concept of networked improvement communities** and how we are thinking of applying the concept of networked improvement communities to our collective work, including feedback on additional and/or alternative ways of thinking about its application.
- **Collectively, districts will leave with a shared understanding of the common challenges** impacting districts' ability to align instruction and the Problem of Practice.
- **Each district will have a better understanding of the strategies their district is using** to address aligning instruction and how those strategies address the core issues, which will then allow districts to address the Problem of Practice.
- **Each district will leave with a clear understanding of the diagnostic tools and data collection** we will use to support the work.
- And last but definitely not least, **participants leave the meeting excited about the work of the network** and its importance to their districts and committed to accomplishing the work with quality in their districts.

AGENDA:
Thursday, August 18th: *The Grace Conference Room, Higgins University Center at Clark University*

4:30pm – 5:30pm	Intro and Explaining the Network and Problem of Practice
6:00pm – 8:00pm	Networking Dinner at One Eleven Chop House *(111 Shrewsbury St, Worcester, MA 01604)*

Friday, August 19th: *The Grace Conference Room, Higgins University Center at Clark University*

8:00am – 8:30am	Breakfast
8:30am – 9:00am	Problem of Practice Overview
9:00am – 10:30am	Core Issues and Challenges
10:30am – 10:45am	Break
10:45am – 11:45am	Within-district conversation of existing strategies and their application to addressing the problem of practice.
11:45am – 12:15pm	Share Out from within-district conversations
12:15pm – 12:45pm	Lunch
12:45pm – 2:15pm	Diagnostic Tools and Data Collection
2:15pm – 2:30pm	Wrap Up and Next Steps

Mass Insight
EDUCATION

Meeting Agenda
Gateway to College Success Network
January 13, 2016, 8:30 AM – 3:00 PM
Worcester Polytechnic Institute (WPI), Campus Center Odeum
100 Institute Road, Worcester, MA 01610

Pre-reading Assignment:
Please read *The Missing Link in School Reform* by Leanna, C. (2011) up to the subheading, *Value of Teacher Experience*, p.34. This article provides an overview of the concept of social capital and its impact on teaming structures within a school.

Goals for the Meeting:
1. To reflect on where we began and the work we are currently engaged in across districts as we build Networked Improvement Communities (NIC's).
2. To share our work on a common problem of practice and thus, accelerate learning and improvement.
3. To explore potential modifications or adaptations to district Networks and to develop indicators that will allow districts to know if their efforts are leading to improvements.
4. To examine our collective understanding of what constitutes an effective professional learning environment (e.g., teaming and collaboration) means and explore current (and potential) strategies for maximizing the effectiveness of PLCs/CPTs as currently configured in your schools and districts.
5. To identify key takeaways and consider any potential adjustments or areas needing more attention to strengthen district Networks.

AGENDA

8:30 – 9:00am   Breakfast and Introduction – Sue Lusi and Janet Strauss

9:00- 9:30am   Cross-District Themes and Challenges – Brett Lane

                                    To set a context for our conversations, we will revisit the cross-district Problem of Practice and connect it to the work being discussed in each of the Gateway Network districts.

9:30 – 11:00am   Sharing Our Work to Accelerate Learning – Janet Strauss and Megan English

                                    Using a modified "fishbowl" activity and a collaborative review protocol, two districts will share their problem of practice, prioritized core issues, and approaches to implementation. Presenting districts will identify questions/challenges that they would like feedback on from the whole group. Participants will provide feedback and use this opportunity to reflect on their own work.

11:00 – 11:15am   Break

11:15 – 12:15pm   Measuring the Effectiveness of Our Efforts - Brett Lane and Hilary Kopp

                                    We will consider, in both district teams and as a whole group, how we can measure the impact of our work in the short term, to know if what we are doing is working.

12:15—1:00pm	Lunch and Networking Break

1:00—1:15pm   Video presentation by Andreas Schleicher – Janet Strauss

This video clip, from the Coleman Report 50th Anniversary Conference hosted by Johns Hopkins University as well as the pre-reading by Leanna (2011) are opportunities to think deeply about the concept of social capital and the importance of professional leanring communities, specificaly in terms of how schools can best be organized to support effective collaborative teaming structures.

1:15—2:45pm   Strengthening Professional Networks - Brett Lane and Janet Strauss

We will engage in full group and district-specific conversations regarding what high performing PLCs look like; how they function, and how they support instructional improvement. District teams will then consider, based on the Teacher Collaboration Assessment Rubric (TCAR), the conversation, and the video and pre-readings, what shifts in district or school organization/configuration might better support the type of professional learning, collaboration, and cultivation of social capital we are looking for.

2:45 - 3:00pm   Next Steps and Wrap-Up

Mass Insight
E D U C A T I O N

Gateway to College Success Network
Cross-District Network Convening
Clarke University
Higgins University Center
Worcester, MA

June 12, 2017
9am to 2pm

Objectives

1. To learn about the different tools and strategies developed by Districts Networks.
2. To share Cross-District findings that support instructional coherence and implications for our work together.
3. To plan for the use of disciplined inquiry to drive our improvement efforts.
4. To design the structure and focus of the Network's Governing Board.

9:00 – 9:20   **Welcome, Introductions and Review of the Agenda**

9:20 – 10:45   **Sharing Work: Cross-District Network Jigsaw**

   I.   **Round One: 2 groups presenting – 30 minutes**
   Looking at Student work – <District> and <District>
   Instructional Strategies - <District> and <District>

   II.   **Round Two: 2 groups presenting – 30 minutes**
   Fluency and Coherence – <District> and <District>
   Common Lesson Planning Approach – <District> and <District>

10:25 – 10:35   **BREAK**

   III.   **Within-District Discussion of key takeaways – 10 minutes**

   IV.   **Whole Group Debrief Discussion – 15 minutes**

11:05 – 12:00   **Sharing Cross-District Trends and Findings**

12:00 – 12:30   **LUNCH**

12:30 to 1:45   **Governing Board Meeting**

12:30 to 1:50   **Network Implementation and Measurement Discussion**

1:50 – 2:00   **Wrap-up and Plus/Delta feedback forms**

Mass Insight
E D U C A T I O N

Agenda
Gateway to College Success Network
Cross-District Network Convening

October 17, 2017
9 am to 3 pm

9:00 – 9:30   **Welcome, Introductions and Review of the Agenda**

9:30 – 11:00   **Rebecca Steinfield, on the PDSA cycle** – Overview of PDSA cycle, an example in the health field followed by cross-district work time to develop a PDSA cycle in education

11:00 – 11:15   **Break**

11:15- 12:30   **Within-District Team Work Time**

12:30 – 1:00   **Lunch**

1:00 – 2:00   **District Updates on their Work**
Districts provide a brief overview (10 minutes per group) of what they are doing, an update on where they are in implementation and the PDSA cycle, and questions they are grappling with right now.

2:00– 2:20   **Ink/Think/Pair/Share: What has been our experiences with assessming changes in teacher practice?**

2:20– 2:45   **District Processing Time**
District team time to process what they have learned – Identify one big take away, one question, and one action using chart paper.

2:45– 3:00   **Whole group wrap-up and Exit Survey**

Agenda
Gateway to College Success Network
Cross-District Network Convening

January 11, 2018
8:30 AM to 3:00 PM

Objectives:
- Take stock of where our work is and where we want it to be at the end of the 2017-2018 school year.
- Articulate what it takes to initiate, embed, and sustain this approach to improvement so that it becomes an integral part of our work.
- Outline specific, concrete next steps we'll take as a result of this convening.
- Consider how specific improvement initiatives connect to the larger goal of improving instructional coherence and vertical alignment to ensure more students can access and succeed in advanced courses.

8:30 – 9:00   **Registration and Continental Breakfast**

9:00 – 9:15   **Welcome, Introductions, and Review of the Agenda**

9:15 – 11:15   **Florida Implementation Network – Learning from Another Network's Experiences**
- Presentation: *Elaine Farber Budish, UPD Consulting, and Diana Fedderman, Assistant Superintendent of Teaching and Learning, School District of Palm Beach County*
  - Initiating and scaling up improvement work.
  - Moving toward embedding and sustaining improvement work at the school, district, and network levels.
- District team work time

11:15 – 11:30   *Break*

11:30- 12:30   **District Team Reflection Time: The Rennie Center's Change Management Framework**

12:30 – 1:00   *Lunch*

1:00 – 2:20   **Cross-District Sharing**
- Discussion #1 – Shifts in Teacher Practice
  - Group A: Shifting teacher practice around student engagement/collaboration – <District> *(Number Talks),* <District>*,* <District> *(Science),* <District>
  - Group B: Supporting teacher planning to increase access to grade-level content and rigor of lessons – <District> *(Thinking Protocol),* <District> *(Math),* <District>*,* <District>

- Discussion #2: PDSA Cycles as a Mechanism for Improvement
  - 3 mixed-district groups

2:20 – 2:50   **District Team Reflection Time: Learnings from the Day and Next Steps**

2:50 – 3:00   **Whole-Group Wrap-up and Exit Survey**

Gateway to College Success Network
Cross-District Network Convening
April 11, 2018
Courtyard by Marriott, 75 Felton Street, Marlborough MA
8:30 AM to 3:00 PM

Objectives:

- Districts and schools will identify how different types of data can inform improvement efforts and assess their own data collection efforts.
- Districts and schools will increase their understanding of how to use PDSA cycles as a general approach for driving continuous improvement.

8:30 – 9:00   Registration and Continental Breakfast

9:00 – 9:15   Welcome, Introductions, and Review of the Agenda

9:15 – 11:35   Learning from Another Network's Experiences: Central Valley Networked Improvement Community (Tulare County, California)
Presentations: We will have a two-part presentation from staff working wih the CVNIC.

- *Arcy Alafa, District Improvement Specialist,* will share the focus and structure of CVNIC's work on improving 5th grade math proficiency across participating districts in the county. Her presentation will focus on data collection and measures used in PDSA cycles.
- *Shelah Feldstein, Director of CVNIC,* will talk about the Network's efforts to build on their network's work to build a culture of continuous improvement at member schools.

District team work time: District teams will have 25 minutes to discuss the takeaways for their district/schools between the two presentations.

Note: *There will be a 10-minute break between team discussion time and Shelah's presentation.*

11:35- 12:20   *Lunch*

12:20-12:25   Overview of Afternoon Discussions

12:25 – 1:40   Cross-District Sharing
Using a consultancy protocol, district teams will meet in pairs to share and discuss progress and challenges they have encountered in implementing improvement efforts and using PDSA cycles.
District pairings:

- Worcester Room: <District> and <District>
- Commonwealth Ballroom: <District> 1 and <District> 1
- Commonwealth Ballroom: <District> 2 and <District> 2 (*tentative*)

1:40- 2:40   District Team Time: Scaling the Use of PDSA Approach

- *Think-Ink-Share*: How does your school typically approach something you want to improve? What is different from/similar to the PDSA approach?
- *Exercise*: Sketch out a new change idea, separate from what you are currently working on, that addresses an area of need in your school or district.
- *Discussion*: How can the PDSA approach be used to support improvement efforts within the school/district?
- Boston Room: <District>
- Commonwealth Ballroom: <District>
- Commonwealth Ballroom**:** <District>
- Worcester Room: <District>

2:40 – 3:00   Whole-Group Wrap-up and Exit Survey