Networks for School Improvement

Formative Evaluation

Year 1 Analysis
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Executive Summary

This report, the second in a series of four reports to the Bill and Melinda Gates Foundation (“the Foundation”), presents the Center for Public Research and Leadership's (“CPRL”) emerging analysis of the data collected for the formative evaluation of the Foundation’s Networks for School Improvement (“NSI”) strategy. This report will directly address the first of two primary formative evaluation research questions, namely: “How are intermediaries implementing the NSI strategy?” The second research question, “What are the characteristics of effective networks and intermediaries?” will be addressed in the final report to the Foundation in Summer 2020.

Overview of emerging analysis

CPRL examined the first year of implementation -- referred to throughout the report as “network initiation”-- in networks set up by seven intermediaries¹ (three Type 1 grantees and four Type 2 grantees) to better understand the actions taken by intermediaries and network participants, the inputs required for network launch and operation, and the challenges they faced. Given the complexity of building networks and launching disciplined continuous improvement processes, it was not surprising that CPRL found that no two intermediaries took the same approach to network implementation. All seven intermediaries in CPRL’s sample, however, were unified in prioritizing four primary workstreams: (1) organizing participant relationships; (2) implementing the approach to continuous improvement; (3) building buy-in from all key stakeholders including school team participants, districts, and other partners; and (4) developing the capacities of network participants. Each intermediary's approach to these workstreams was impacted by three critical inputs: (a) intermediary experience, (b) time, and (c) district relationships.

Critical inputs

Three critical inputs shaped how intermediaries enacted the four primary workstreams during the initiation year.

First, intermediaries’ network design and execution efforts were influenced by the experience they brought to the work. Intermediaries drew upon existing resources, including staff and organizational experience; relationships with districts and partners; and proprietary tools, processes, and protocols. CPRL has identified five critical domains of intermediary expertise in the sample: (1) continuous improvement; (2) running a network; (3) the network-selected problem of practice; (4) data and measurement; and (5) DEI. To

¹ CPRL’s sample originally included 8 intermediaries, but one of these intermediaries is excluded from this analysis given that data collection for Year 1 is not yet complete.
differing degrees, the intermediary's prior experience and expertise shaped the way intermediaries prioritized network objectives and implemented each of the four primary workstreams.

Intermediaries’ approach to the core work was also shaped by time. CPRL considered the influence of time in two ways: (1) the time available for participants to understand, practice, and participate in continuous improvement and other network activities and (2) insufficient prioritization of CI work in the face of competing school-level demands. Even though all intermediaries expressed time as a major challenge in their work, its effect on intermediary strategy varied across networks.

Finally, the strength of relationships between intermediaries and the school district(s) in their networks had several implications for network initiation. In particular, these relationships emerged as a critical factor for the level of access intermediaries had to district-, school-, and student-level data in their networks. In several cases, challenges with data access led to shifts in strategy during the initiation year. CPRL’s sample fell into three types of intermediary-district relationships: (1) purposeful connection (the district and intermediary function as the hub); (2) limited engagement (the district primarily acts by creating the context in which the network operates); and (3) uneven engagement (the intermediary engages at differing levels with each district in the network).

**Primary workstreams**

In the initiation year, all seven intermediaries prioritized the following workstreams:

1. **Organizing participant relationships**: In this initiation work, all intermediaries designed their network’s relational structure to facilitate progress toward participant learning goals. With only one exception, intermediaries implemented a “spiderweb-style” network structure in which participants interacted regularly not only with the hub, but also with one another. This style is intended to foster a climate in which ideas can be tested and spread quickly through collective learning. The spiderweb structure impacted the design of network activities at convenings and during action periods.

2. **Implementation of the continuous improvement approach**: Intermediaries designed context-appropriate approaches to the continuous improvement process. Four intermediaries used a “fast initiation” process; they led participants through one or more disciplined cycles of inquiry. Interestingly, all four intermediaries that chose to implement a “fast initiation” process had prior experience with continuous improvement. The other three networks opted for a “slow initiation” to improvement and spent their first year setting the stage for future work by developing the network’s understanding of the problem of practice. Regardless of pace of initiation into the CI work, all seven intermediaries leveraged the problem understanding stage of their processes to give participants
ownership over the work. In all seven networks, time emerged as a challenge; when school teams did not have enabling school structures (e.g., compensation to meet after school expressly about network activities), they struggled to complete CI work during the action periods between whole network convenings.

3. **Building buy-in from stakeholders**: Intermediaries prioritized design decisions that generated buy-in and relational trust among participants and stakeholders (e.g., district leaders). Intermediaries leveraged new and existing relationships with stakeholders to invite feedback and collaboration before and during the early stages of network launch, hoping to garner early investment in the NSI work. While nearly all networks \((n=6)\) used an “opt-in” strategy for membership, four of the six intermediaries also selected network members using additional criteria in order to bolster participant and institutional buy-in. For the most part, intermediaries with more time (i.e., longer grant periods) chose to use additional criteria in selecting participants who would have a higher degree of buy-in at the outset. Both the stakeholder engagement and participant selection efforts were designed to set the stage for high levels of investment in NSI goals and activities.

4. **Developing CI, problem of practice, and DEI capacities of network participants**: Finally, intermediaries sought to leverage and amplify early buy-in and to influence behavioral change in participants through the design of capacity-building activities. These activities focused on developing skills and competencies related to continuous improvement, their selected problem of practice and, in several cases, Diversity, Equity, and Inclusion (“DEI”). Intermediaries’ experience played a major role in determining these capacity-building priorities; the focus tended to be in areas in which the intermediary already had expertise or experience. Intermediaries used an array of mechanisms to build capacity, including network convenings, site visits, and coaching. The particular combination of strategies diverged across networks.

**Implications for intermediaries**

Given the complexity of network implementation, during the initiation period intermediaries should be attentive to the following implications while being mindful of the nuances of their local context:

1. Being intentional about designing structures to **facilitate hub-participant as well as participant-participant interactions**.
2. Prioritizing **building and nurturing relationships with district staff**.
3. **Obtaining and maintaining buy-in from multiple stakeholders** including, but not limited to, network participants, school leaders, and district leaders.
4. Securing **multiple types of experience and expertise** to launch and sustain a network and building that expertise through staff development, hiring, and/or partnership.
Implications for The Bill and Melinda Gates Foundation

Intermediaries do not operate in isolation and they have access to a number of resources not investigated in this study, including the ongoing assistance of Foundation staff, the NSI Community of Practice, and a suite of Support Partners who enable intermediaries to increase capacity, organize and access data, and measure network health. While all of these supports no doubt provide additional value to the intermediaries, CPRL would like to draw the Foundation’s attention to three additional considerations that may further support effective network initiation:

1. **Use the Foundation’s RFP and application process to build and support intermediary-district relationships.** Support intermediaries by: a) developing tools that allow intermediaries to assess district capacity (or districts to self-assess); b) encouraging more meaningful intermediary-district hub relationships during the RFP process; c) using the RFP process to help preemptively address challenges expressed by early stage networks, specifically time and competing priorities; and d) offering an extended network initiation period for those interested in developing new district partnerships in emerging networks.

2. **Extend the duration of network grants.** Intermediaries’ decisions were bound by time (both time as prescribed by the grant period, as well as the time available for participants to understand and practice continuous improvement and other network activities). One question to consider is whether allowing intermediaries longer lead time to build the infrastructure and relationships required for network initiation may alleviate some of the decision juggling or fatigue intermediaries have encountered at the critical early stages of this work. Allowing for a longer grant duration would further forefront the importance of relationship-building and securing buy-in from relevant stakeholders prior to the official launch of the network. Extending grant periods would also be an acknowledgement that this work is complex, and that it takes time to successfully initiate a network.

3. **Align supports to network development phase and high priority workstreams.** As the Foundation moves into future cohorts of grantees, maintain awareness of the supports that intermediaries in the initiation phase may need and how those differ from intermediaries that are supporting more mature networks. Suggestions for supports during the initiation phase include, but are not limited to:
   a) Highlighting various mechanisms intermediaries use to develop participant-to-participant relationships as well as intermediary-to-participant relationships (e.g., pairing schools or mixed school teams at network convenings).
   b) Supporting intermediaries as they build their own capacity in continuous improvement (e.g., through the sharing and developing of improvement tools); the problem of practice (e.g., sharing among intermediaries that have strong experience in these domains or...
bringing outside expertise to enhance intermediary knowledge); and DEI (e.g., continuing to create space to reflect on the DEI conversations that are happening in networks).

c) Supporting intermediaries as they develop buy-in of various stakeholders by a) using the convening power of the Foundation to bring stakeholders to the table; b) adjusting expectations of outcomes in the initiation phase to allow time for relationships to develop; and c) sharing tactics between intermediaries about how to overcome challenges like competing priorities.

d) Continuing to emphasize the core parameters of CI. As networks develop their own approaches to CI, it will be important to remember the essential elements that make up a disciplined improvement process and make available tools that will more readily support implementation of these elements (e.g., PDSA templates, tools to perform root cause analysis, etc.).

e) Supporting intermediaries in accessing both levels of data necessary to effectively a) support school level cycles of inquiry and b) evaluate the efficacy of the overall improvement. In addition to the support already provided by Double Line to access aggregated district-level data to evaluate outcomes, the Foundation may also consider supporting intermediaries in accessing and making meaning of data for improvement cycles. Though these data are generally more accessible to school team participants (e.g., classroom assessment data; college application completion rates, etc.), support may be needed in a) helping school team participants identify which types of data are appropriate for cycles of inquiry and b) generating templates or systems to aggregate and store improvement data.

Variables for future consideration

As intermediaries move into Year 2 of implementation, CPRL will continue to investigate how network initiation inputs and workstreams affect network progress toward and achievement of outcomes. Additionally, CPRL is interested in further exploring the relationship between network progress and the following key network initiation variables:

1. **The pace at which networks introduce continuous improvement concepts, especially disciplined cycles of inquiry.** Intermediaries chose “fast-initiation” of continuous improvement or “slow-initiation”. Does the pace of implementation affect (a) participant engagement and understanding of continuous improvement and (b) the quality of change ideas and outcomes?

2. **The role of district administrators and school leaders.** As data collection moves to the school level in Year 2, CPRL will be able to more closely observe the role school leaders play in removing
obstacles to network participation and enabling school team participants to effectively engage in the network.

3. **The quality of change ideas.** Network participants are generating change ideas grounded either in their own experience (“participant-based”) or research-based practices supplied by the intermediary. Do either of these approaches lead to an increased likelihood of achieving hypothesized improvements, greater buy-in, increased capacity among participants, and/or better student outcomes?

4. **The role of DEI.** Intermediaries approach DEI in two distinct ways: (1) as an issue of student achievement or attainment mapped by race and/or class or (2) as an issue of student attainment as driven or conditioned by systemic or structural barriers that create gaps in student achievement or attainment mapped by race and/or class. Do the different approaches more effectively lead to higher participant engagement, increased participant capacity, and/or improved outcomes?
Introduction

In August 2018, The Bill and Melinda Gates Foundation (“the Foundation”) launched its Networks for School Improvement (“NSI”) strategy with grants to a first cohort of 21 intermediary organizations (“intermediaries”). These 21 intermediaries used the grant awards to launch and support networks of schools and school support organizations that collaboratively solve shared problems using context-appropriate evidence-based interventions. In doing so, the networks engage in data-driven continuous learning to facilitate ongoing improvement and progress toward student achievement goals.

To support its own continuous learning and that of the field and its grantees, the Foundation engaged the Columbia University Center for Public Research and Leadership (“CPRL”) to conduct a formative evaluation of the NSI strategy that investigates two main research questions:

1. How are intermediaries implementing the NSI strategy?
2. What are the characteristics of effective networks and intermediaries?

In this report, CPRL examines the work of intermediaries and their networks to identify common elements and themes with respect to how intermediaries are implementing the NSI strategy. Ultimately, CPRL hopes the lessons learned from this study will help the Foundation clarify the core elements of one or more NSI models that can be further tested in future cohorts of networks. While this study relies on an in-depth examination of the sample, it is not an analysis of any individual network or intermediary. Instead, it presents aggregate findings that emerge from an analysis across the sample. Therefore, throughout the report, CPRL refers to the intermediaries and networks simply as “intermediary” or “network.” Where an intermediary is working in close collaboration with a district or external partner on grant-specific work, the team is called the “hub.”

The formative evaluation employs qualitative research methods including interviews, observations of network convenings, and analysis of documents and artifacts from network activities. At the time of this report, CPRL has conducted over 60 interviews, observed 17 network convenings, and collected hundreds of documents for analysis.

The sample examined in this study includes seven networks that represent a diverse set of characteristics including, among other things, the size of the network, the problem of practice, the geographic location, and

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2 Though CPRL has taken steps to anonymize the intermediaries and networks, identifiers may remain in the text.
the approach to continuous improvement. Throughout the paper, there will be references made to particular network characteristics relevant to the analysis, including Foundation grant type (i.e. Type 1 or Type 2), network structure, problem of practice, and number and type (i.e. single or multi) of districts participating in the network. Figure 1 below displays the distribution of intermediaries by each key characteristic, with particular attention paid to Foundation grant type.
Figure 1. Infographic of key network characteristics in CPRL’s sample

**Network Structure**

Six of the intermediaries in the sample organized participant-participant relationships and participant-intermediary relationships following a spiderweb structure. One intermediary instead used a hub-and-spoke structure (Barletta, Comes, Perkal, Shumaker, Wallenstein, and Yang, 2018; Wohlstetter, Houston, and Buck, 2014).

**Problem of Practice**

The sample contains two categories of problems of practice: three networks are working on increasing college access and success while four total networks have chosen a problem of practice related to teaching and learning – two networks are focused on improving middle school math outcomes, and the remaining two are tackling 9th grade on-track outcomes (i.e., literacy and 9th grade on track indicators.)

**Number of Districts**

Five networks operate in single-state, single-district contexts; two networks operate in single-state, multiple-district contexts.
While networks are designed to draw upon the strengths and capacities of all participating bodies, the success of an NSI ultimately rests most heavily upon the ability of the intermediary to design, implement, and support contextually-appropriate network structures and activities. Intermediaries have five chief objectives: (1) build member capacity on improvement methods; (2) orchestrate learning by creating and facilitating strategies for knowledge sharing; (3) cultivate a strong network community; (4) engage the network in site-level improvement routines, such as analyzing and acting on data; and (5) measure the network by collecting data and monitoring its health (Carnegie Foundation, 2019).

As CPRL expected, all intermediaries in the sample took steps to perform these core functions to varying degrees during the first several months of their network’s life cycle, or “initiation phase.” During this time, intermediaries built internal and participant capacities to fully perform these core functions, including by focusing on four workstreams, common across all seven intermediaries: (1) organizing participant relationships; (2) implementing the approach to continuous improvement (“CI”); (3) getting buy-in of all major stakeholders including school team participants, districts, and other organizational partners; and (4) building the capacities of school team participants in continuous improvement, the problem of practice, and/or in Diversity, Equity, and Inclusion (DEI). How intermediaries enacted each of these four workstreams was dependent on many contextual factors, or inputs, three of which were notable across all seven networks: (a) intermediary experience, (b) time, and (c) district relationships.

The report that follows first describes the three critical inputs that proved to be highly influential during the network initiation phase. Then, the report discusses how the intermediaries approached the four priority workstreams, highlighting ways in which varying inputs affected the nature of the enacted work. The report concludes with a discussion of major themes and implications, as well as considerations for the Foundation’s work moving forward.
Inputs Highly Relevant to Network Initiation

Intermediaries enacted the NSI strategy in varying ways and across varying contexts. In this first year, three contextual factors, or inputs, emerged as highly relevant to the ways intermediaries engaged in network initiation: (1) intermediary experience, (2) time, and (3) district relationships.

**Input 1: Intermediary experience**

To design and execute their network strategies, intermediaries drew upon a number of existing resources, including staff and organizational experience; relationships with districts and partners; and proprietary tools, processes, and protocols. In addition, all intermediaries took steps to grow capacity in areas where they observed organizational gaps in order to best position themselves as experts in the operation of networks and essential content areas (e.g., the problem of practice, DEI, etc.) and to engender buy-in and trust from participants and other stakeholders.

Because intermediaries essentially designed their networks from the ground up, experience in and knowledge about five primary domains related to network design and implementation were critical throughout Year 1:

- **Continuous improvement:** The intermediary and/or staff have knowledge about and experience in implementing improvement efforts within or outside of their organization.
- **Networks:** The intermediary and/or staff have experience running networks, and ideally networks for school improvement.
- **Problem of practice:** The intermediary and/or staff have knowledge about and experience in the NSI’s focal content area.
- **Data and measurement:** The intermediary and/or staff have experience collecting, organizing, and/or analyzing data, ideally in the context of school improvement.
- **Diversity, Equity, and Inclusion (DEI):** The intermediary and/or staff have experience in addressing DEI, ideally in the context of schools and NSIs.

The Foundation’s grantee selection process was rigorous and competitive, so, unsurprisingly, all intermediaries came to this work with extensive experience in at least one of these five domains.
Continuous Improvement expertise: Five intermediaries launched their networks with some degree of CI expertise. Some intermediaries ran previous improvement networks, while others had staff who had done so in other contexts. This expertise proved crucial throughout initiation. Two of these intermediaries have developed proprietary methodologies that they have used with past networks. In two cases, various intermediary staff members expressed having past training and experience with respect to improvement methodology. The two remaining intermediaries in the sample had limited experience with CI relative to others in the sample. One of these intermediaries is managing this gap by working with an external partner to build CI expertise. The other intermediary is still in the midst of developing its CI approach, so how they manage this gap will emerge in Year 2 of this study.

Network expertise: Five out of seven sample intermediaries brought experience in running networks to the current NSI project. As noted above, four intermediaries ran improvement-focused networks before applying to the Foundation’s NSI initiative. The fifth had more general experience running networks via the current structure of their college success work.

Problem of practice expertise: Content-matter expertise is also crucial to gaining buy-in from and supporting practitioner participants in improvement cycles. As such, five intermediaries ³ intentionally selected problems of practice in which the staff or the organization at-large had deep expertise. Typically, the locus of content-matter experience sat with individuals on the network initiation team rather than with the organization as a whole. In one intermediary, for example, both leadership and school support staff members had extensive experience teaching and coaching in mathematics (the network’s problem of practice), though the organization is not explicitly math-focused. Staff subject-matter expertise has fostered a sense of trust for participants, who report feeling that the intermediary team is able to provide useful and credible subject-matter support.

³ Intermediaries selected problems of practice during the Foundation’s RFP process. Problems of practice were refined and narrowed through root cause analysis, but focal areas did not change.

"Because I was a middle school math teacher, I think that was supremely beneficial for me because I have a lot of experience in this content...I know some of the things that these folks are facing and can speak to it at an informed level."
**Data and measurement expertise:** Data and measurement is yet another domain that is crucial to the initiation period and within which many intermediaries \((n=5)\) leveraged previous experience. In three of these cases, intermediaries designated specific staff members as “data experts,” who provided generalized data-based expertise and support for the network. In one network, that staff member has taken on the bulk of data infrastructure planning and participant support, work that comprises a large proportion of overall network activities. For other intermediaries, data expertise is spread across their entire team. In one intermediary, all staff have experience in data management and analysis from their previous work and education. In two other networks, the intermediary has experience with the districts’ and participants’ data infrastructure. For example, one intermediary team is well-versed in the portal used to track district-level data and plans on making use of this portal in later stages of the work.

**DEI expertise:** Though not as prevalent, DEI fluency is a fifth domain of expertise evident in network initiation. Although no intermediaries present themselves as DEI experts, two networks brought a higher level of expertise than the other five in the sample. One of these supported staff to attend trainings and other professional development around DEI, speaking to a larger organizational commitment to social justice. And for the other intermediary, staff commitment to and experience in DEI, more than any foundational organizational ethos, seems to be the driving impetus for the network’s equity focus. In both cases, the stated expertise led the intermediary to design processes that more deeply considered and integrated DEI into the structure of network activities than was observed in other NSIs.

**Efforts to increase experiential capacity in stated domains**

Intermediaries took steps to build capacity in domains in which they had less expertise and in domains where they simply needed additional staff to handle the volume of work. Capacity-building efforts generally fell into three categories that are not mutually exclusive: (1) hiring new staff; (2) hiring consultants or partners; and (3) training new and continuing staff.

**Hiring new staff:** Five intermediaries used grant funding to hire additional staff. In all cases, hiring was motivated in part by the straightforward necessity to execute the work at the intermediary level. But, across the board, intermediaries took advantage of the opportunity by also seeking hires that would grow the experiential capacity of the intermediary team in the domains discussed above. Interestingly, intermediaries did not only look for staff with expertise in areas in which they considered their teams lacking; in fact, in five cases, newly onboarded staff members added additional capacity in areas where intermediaries already held some expertise. This approach is logical, as intermediaries tended to design networks that drew heavily upon domains in which they already excelled; new hires needed a skillset and disposition that would allow them to jump quickly into the work since, in most cases, the cadence of grant disbursement, hiring, and launch was condensed during this initiation phase. That said, in fewer cases \((n=2)\), new hires were also brought in to add
new expertise in weaker domains. In one intermediary’s case, for example, a team of literacy coaches were hired to work in schools to fill both an expertise and capacity gap in the problem of practice domain. Given these factors, as discussed further below, some intermediaries opted instead to hire new partners or consultants, rather than full-time hires, to supplement areas of weaker expertise.

**Bringing on new TA partners or consultants:** Intermediaries also chose to bring on technical assistance partners and consultants to fill intermediaries’ more significant knowledge and experience gaps. One intermediary determined that they would need a great deal of support to launch an effective improvement network and hired a continuous improvement partner. As the initiation activities are rolled out, staff will learn alongside participants in the hope that, in future years, the intermediary has the internal capacity to run the CI work independently.4

Some intermediaries (n=5) chose to bring on or continue working with consultants. As was the case with hiring new staff, consultants typically added support in domains where intermediaries already had some level of expertise. For example, one intermediary came to the network with a wealth of staff experience in improvement methods, but also chose to bring on a consultant who trained the larger team and assisted network leadership with how to “apply [improvement science] and make it live in the context of [their] network.” Consultants bought an experiential value-add to the network at a lower cost than hiring a new staff member with a similar level of expertise.

**Training new and continuing staff:** To build internal capacity, intermediaries trained and offered professional development to both new and existing staff. Several intermediaries sent staff to national trainings and convenings, for example the annual Carnegie Foundation for the Advancement of Teaching (CFAT) Summit on Improvement in Education. Other intermediaries offered both formal and informal training to support staff development in needed domains. As mentioned above, two intermediaries hired consultants and partners in part to train their staff. In many cases, because network initiation launched so soon after funding was received, staff learned new skills and content knowledge alongside participants.

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4 This is fairly typical in new NICs in the early stages of NIC formation, as initiation teams must build their internal capacity at the same time as supporting participants’ capacity in continuous improvement (Russell, et al. 2017).
participants had available for network activities. When network members lack the time needed to understand and practice continuous improvement and to engage in network activities, distrust, resistance, and a lack of knowledge throughout the network can arise (Barletta, et. al 2018). Time challenges manifested for network participants in two ways: (1) insufficient dedicated, consistent meeting time for school teams to conduct the CI work at schools and (2) insufficient prioritization of CI work in the face of competing school-level demands.

To begin, six out of seven intermediaries reported a lack of sufficient dedicated, consistent time experienced by school staff to work on continuous improvement. This lack of time can result in teams not being able to work together during their action periods to plan, conduct, and study their tests. Intermediaries described two common factors that contributed to this challenge: (1) a lack of funds for extended contract time so school teams could meet and (2) a lack of already-established time for school teams to meet (e.g., dedicated meeting or co-planning periods).

These same six intermediaries also experienced challenges navigating competing priorities in the schools that interrupted the network’s continuous improvement work. Five of these intermediaries noted that competing priorities led to inconsistent participant attendance at network events. In some cases, it was difficult for a principal to release the school team during the school day for the network meetings. Some school teams consisted of entire content departments, which could mean the loss of content instruction for the entire school, cumulatively, for several days during the school year. In one case, due to district policies about non-instructional staff, network participants did not have enough release time for professional development activities to attend many network meeting events that occurred during the school day.

Three intermediaries also noted that unexpected events, like fire drills and inclement weather, had interrupted school professionals’ schedules and that meetings dedicated to CI work had been reprioritized for other work. These types of issues present a challenge for networks, as participants already have limited time for NSI work due to the intensity of their primary professional responsibilities. In one example of this tension, a network participant noted that if a network event coincided with a district event (e.g., administering or grading state assessments), she felt it more important to attend to the district rather than the network commitment.

Intermediaries made various efforts to try to mitigate this challenge. These efforts, which might prove useful to other intermediaries initiating networks, included:

- **Tailoring supports to fit the existing parameters of district or school commitments** (e.g., utilizing time allocated during district professional learning days, coordinating event scheduling
with the district, and modifying meeting times so they are outside of school time or other professional conflicts).

- **Repurposing network activities** (e.g., scheduled coaching meetings) to create dedicated time for school teams to meet and work together.
- **Generating buy-in** to the network’s work among school professionals/leaders.

Even accounting for these interventions, time will likely persist as a factor that shapes intermediaries’ strategies as the NSIs continue their work in Year 2.

**Input 3: District relationships**

Intermediary organizations considered how best to engage the relevant school district(s) when developing and enacting their strategies. Three patterns of district-network relationships (see Figure 2) emerged in this sample: (1) purposeful connection (the district and intermediary act together as the hub); (2) limited engagement (the district primarily acts by creating the context in which the network operates); and (3) uneven engagement (the intermediary engages at differing levels with each district in the network). These intermediary-district relationships are critical for several reasons, including because they enable logistical coordination for network-related activities and they allow intermediaries to access relevant data.

**Figure 2. Intermediary-District Relationship Typologies**

**Type 1: Purposeful connection (the district and intermediary act together as the hub)**

In these networks, the district shares the role of hub with an intermediary, working in close partnership to design the network strategy, implement the network activities, and respond to network needs. Sharing the role of the hub allows for increased logistical coordination to reduce burden on network participants to negotiate competing priorities. Hub partners hold regular meetings to discuss the design and desired
outcomes of the network, and district staff are present at convenings. This coordination afforded participants more time to complete network activities, increased the ease of communication among all stakeholders, and increased the alignment of intermediary and district goals.

“The hub partners in these three networks have all had prior relationships due to previous collaborations, and these pre-existing relationships were a primary factor in selecting district partners. These prior relationships included data-sharing agreements between the partners, which were extended for this work. In these networks, the intermediary’s decision to form or continue a close relationship with the district allowed easy access to data. In one network, the district facilitated full access to data, allowing participants access to district-aggregated platform through which schools could see both school- and district-level data. One advantage of this approach is that participants do not need to become literate in a new data or communication system to be able to do the work of the network or access key learnings.

**Type 2: Limited engagement (the district primarily acts by creating the context in which the network operates)**

In the second model of intermediary-district relationships, the district is not an integral part of the network. It does, however, create a policy context for the NSI work, and the intermediary communicates with district personnel to keep them informed of network activity. Two networks fall into this category. Both intermediaries had pre-existing relationships with their networks’ districts and kept the district offices abreast of what they were planning and executing and made efforts to align that work with district objectives. These intermediaries only had contacts with district personnel who had no control over school schedules or release time to engage in the network’s work.

Despite their relationships and communication, intermediaries did not necessarily have easy access to district data. One intermediary struggled with the district’s strict bureaucratic policies regarding data access. As a result, the intermediary created a workaround by gathering the data from individual school teams and
building leaders. Without a strong, network-associated advocate on the district side, getting access to school-level, comparative data was difficult.

A staff member from the other intermediary in this category describes the relationship with the district as follows:

“Our existing data sharing arrangement with the DOE is unique among school support and improvement organizations in [city]. We receive regular and comprehensive feeds of data from DOE source systems, which enable us to update data in our tools [i.e., Data Portal] on a daily basis, on schools’ behalf and to their benefit. Changes in this arrangement could have a detrimental effect on our ability to capture and use near-real-time data about student and school performance.”

**Type 3: Uneven engagement (the intermediary engages at differing levels with each district in the multi-district network)**

Two networks worked with multiple districts and established different relationships with each district partner. Some districts are involved as close, hub-like partners in the networks and others only connect to the network through school teams. Districts that operated as hub-like partners typically had district personnel specifically assigned to work as liaisons to coordinate the work of the network.

The strength of this relationship lays the foundation for how, if at all, the intermediary will be able to gain access to district-level data and manage other logistical tasks. Accessing and making use of district data proved difficult in both cases. In one network, the participating districts did not use the same data systems. As a result, the intermediary faced challenges in helping the network create standardized data approaches that facilitated cross-team learning. In the other network, the intermediary faced challenges with securing data from the districts. Initially, the intermediary planned to work with district data staff to develop systems for collecting the needed data but found that doing so was harder than anticipated. This intermediary circumvented the districts and worked directly with the school teams to secure a route to the data.
To conclude, whether networks choose to organize in collaboration with districts or simply keep districts informed of the work, intermediary staff need to establish relationships and consistent routines with district personnel, and particularly those responsible for data, in order to advance the work of the network. While this is also true for multi-district networks, these intermediaries need to take the additional step of creating structures that help network participants standardize information across districts and data systems so teams can learn from each other.

“What we need from schools is an exported list of all their seniors with some key demographic fields. And it turns out that people at the site level can produce that, like the assistant principal has access to the [student information system] and can export that file and knows how.”
Priority Workstreams During Network Initiation

CPRL observed a high degree of variability in how intermediaries initiated their networks. Despite this variability, intermediaries engaged in four common workstreams to launch and support their networks: 1) Organizing participant relationships; 2) Implementing the approach to continuous improvement; 3) Building/cultivating buy-in among key stakeholders; and 4) Developing participants’ capacities. How each intermediary enacted these workstreams was dependent on the three critical factors discussed in the previous section.

Workstream 1
Organizing participant relationships

Among the first decisions intermediaries made was determining how to structure the network to create the desired relationships between and among network participants and the intermediary. NSIs are typically organized in one of three structures: hub-and-spoke, spiderweb, or cascade (Wohlstetter, et al., 2014; Barletta, et al., 2018).

- **Hub-and-spoke** networks are typified by a strong relationship between the hub and participants and very little meaningful interaction between participants.
- Alternatively, the defining characteristic of **spiderweb** networks is the purposeful facilitation of various forms of participant interaction.
- **Cascade** networks feature a strong relationship between the hub and a select group of participants, who then filter learnings to more peripheral network members.

*Figure 3. Network structure typologies*
Six networks exhibited a spiderweb structure, while one was more reflective of the hub-and-spoke design. At this stage, no networks are using a cascade structure, though this may be a feature of exploring network structure during the initiation year as these design decisions can change in future years of the network (i.e. as the network grows and matures and the needs of the network may shift). It is also not clear, at this stage, which of these models is more effective in enabling networks to achieve their desired outcomes. In this workstream, intermediary experience surfaced as the most influential contextual factor regarding how intermediaries made decisions about the network and participant collaboration structure.

**Spiderweb**

Spiderweb-style networks are defined by an attention to relationship-building between participants. Intermediaries in these types of networks expect that open communication and cohesive, cooperative thinking will lead to quicker learning and, eventually, stronger network outcomes (Wohlstetter, et al., 2014). Russell, et al. (2019) propose that trust -- or what Bryk and Schneider (2002) call an acknowledgement of “respect, personal regard, competence in core responsibilities, and personal integrity” -- is a particularly foundational element in building networks where participants are able to learn from and with other participants and the intermediary. Trusting relationships do not typically materialize organically; instead, they require intentional infrastructure that spurs and supports continued cross-team interaction. Six networks take this form and the intermediaries have designed the networks to launch and sustain the relationship- and trust-building at convenings, during the action periods\(^5\), or both.

All six spiderweb-style networks have designed convening activities to encourage participants to interact with others outside of their school teams. Some networks \((n=4)\) pair schools at tables throughout convenings to encourage collaborative discussion. Others \((n=3)\) reserve significant blocks of time at each convening for collaborative, cross-team work time. For example, one intermediary holds space at each monthly convening for teachers to break into grade-level teams across schools to co-plan. The degree to which networking is emphasized at convenings differs across the six NSIs, but invariably, these activities reflect an aspiration to build stronger cross-team relationships and trust. An intermediary staff leader described this approach as follows at one of their convenings:

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\(^5\) Action periods are the time periods between network meetings or convenings where school teams are expected to conduct continuous improvement work, such as implementing the tests of change ideas.
Five intermediaries have also supported cross-team participant relationship building beyond convenings and into the action period. One intermediary designed a robust buddy-school relationship where each participant team is paired with one or two other schools; during the action periods, a representative from each team attends a bi-weekly group coaching call with their buddy school(s) to share progress and advice. Two other networks have also taken to pairing schools; directly connecting teams that express interest in working collaboratively. Three networks have additionally opted to introduce network-specific technology platforms that allow participants to communicate between convenings. In all of these examples, intermediaries have taken steps to address the challenge of maintaining network connections beyond the convening space.

As expected in this early stage of network development, movement towards a fully-realized spiderweb-style structure is still underway in all six networks. Even in networks where fairly robust cross-team relationship building is occurring, participant interaction is moderated by the intermediaries and/or hubs; at this time, there is little evidence of participant-initiated networking happening outside of designed activities. Additionally, at this point in the study, it is difficult to assess the degree to which intermediary-designed activities and organizing structure has actually fostered inter-team trust. In Year 2, past the initiation phase, intermediaries are expected to continue their efforts to develop cross-network ties, allowing CPRL the opportunity to learn more about this domain from the perspective of participants.

**Hub-and-Spoke**

In hub-and-spoke networks, participants interact predominantly with the hub, rather than with other schools. Only one network currently exhibits a hub-and-spoke structure. For this intermediary, the hub-and-spoke structure is an intentional design decision reflective of pre-existing relationships between partner organizations, including the district. As such, school-level network participants have virtually no meaningful network-facilitated contact with one another, beyond some

> We want to be really transparent about these next few days. We have you sitting in your teams, eating breakfast, and some of you don’t get to see each other often. And so we know that you want to connect with your own team, but we’re also going to disrupt that a bit for the first day. We’re going to make you a little uncomfortable, some of you. People walk away from these things wishing they had more connections, we don’t want to miss out on any of that value. Today, you’ll be doing a bunch of mixed grouping.
informal interaction at bi-annual network trainings. Whether this structure persists as the network moves beyond the exploratory, early-stage improvement work they are currently undertaking remains to be seen in Year 2.

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Workstream 2
Implementing the approach to CI

The second workstream that all intermediaries focused on during network initiation was developing and implementing their continuous improvement approach.

Networks engaged in continuous improvement (CI) need to be “clear about their expectations for what they will do and what change will result, and then about what actually happens when they implement their plans, [so that] they can learn and improve by studying positive and negative discrepancies between expectations and results” (Barletta, et al., 2018, p. 6).

The Foundation articulated a list of six core parameters of continuous improvement:

1. An **understanding of the problem**, the systems that produce current inequitable outcomes, and the opportunities and assets of the community and their students.
2. A **clear and specific aim** centered on achieving equitable outcomes for Black, Latino, and/or low-income students.
3. An **equity-centered theory of practice** for how to reach the aim.
4. **Disciplined inquiry cycles** to test interventions and collect and analyze data to assess if changes are an improvement.
5. Collaborative and diverse teams comprised of people with time, expertise, experience, and will to tackle the problem.
6. Use of locally relevant and valued data from multiple sources, relevant research, and measurement as keys to improvement.

For the purposes of this analysis, CPRL focuses its discussion of the CI approach on the first four items, the creation and practice of which make up a disciplined CI process. The remaining core parameters are critical to the constitution and implementation of continuous improvement, and will be examined in other sections of this paper.

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6 This is not to say that participants have no relationships across schools, only that these relationships have not been enabled directly by the hub’s network design; the network is composed of high schools in a single large district, and as such, it is likely that some participants have pre-existing professional and personal relationships.
Out of the seven networks in this study, only three networks fully engaged participants in the four stages of a disciplined continuous improvement process. One additional network has established a clear and measurable aim, completed root cause analysis, and engaged participants in disciplined cycles of inquiry. This network did not develop a theory of practice, but may do so at a later time. These four networks are referred to as having a **fast initiation pace**, due to the decision to engage participants in disciplined cycles of inquiry during network initiation. The three remaining networks have focused on building the foundations of continuous improvement, most significantly working with participants to understand the root causes of the problem of practice, and are referred to as having a **slow initiation pace**.

The three remaining networks, two of which are led by Type 2 grantees and one by a Type 1 grantee, have focused on building the foundations of continuous improvement, most significantly through working with participants to understand the root causes of the problem of practice. These networks have not yet started their testing cycles. With respect to whether Type 1 or 2 grantees were more likely to engage in the majority of the CI processes in this network initiation year, there is no discernible pattern.

Table 1 below maps networks approach to implementing continuous improvement (fast or slow initiation) against which elements of the CI process were completed thus far during the initiation year, indicated by the blue shading.

*Table 1. Implementation of Continuous Improvement*

<table>
<thead>
<tr>
<th>Speed of Initiation</th>
<th>Fast Initiation <em>(started testing cycles in initiation year)</em></th>
<th>Slow Initiation <em>(no testing cycles in initiation year)</em></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Network</strong></td>
<td>Network A Type 1</td>
<td>Network E Type 2</td>
</tr>
<tr>
<td></td>
<td>Network B Type 2</td>
<td>Network F Type 1</td>
</tr>
<tr>
<td></td>
<td>Network C Type 2</td>
<td>Network G Type 2</td>
</tr>
<tr>
<td><strong>Aim</strong></td>
<td><strong>Fast Initiation</strong></td>
<td><strong>Slow Initiation</strong></td>
</tr>
<tr>
<td></td>
<td>(started testing cycles in initiation year)</td>
<td><em>(no testing cycles in initiation year)</em></td>
</tr>
<tr>
<td><strong>Problem Understanding</strong></td>
<td><strong>Fast Initiation</strong></td>
<td><strong>Slow Initiation</strong></td>
</tr>
<tr>
<td></td>
<td><em>(started testing cycles in initiation year)</em></td>
<td><em>(no testing cycles in initiation year)</em></td>
</tr>
<tr>
<td><strong>Theory of Practice</strong></td>
<td><strong>Fast Initiation</strong></td>
<td><strong>Slow Initiation</strong></td>
</tr>
<tr>
<td></td>
<td><em>(started testing cycles in initiation year)</em></td>
<td><em>(no testing cycles in initiation year)</em></td>
</tr>
<tr>
<td><strong>Disciplined Cycles of Inquiry</strong></td>
<td><strong>Fast Initiation</strong></td>
<td><strong>Slow Initiation</strong></td>
</tr>
<tr>
<td></td>
<td><em>(started testing cycles in initiation year)</em></td>
<td><em>(no testing cycles in initiation year)</em></td>
</tr>
</tbody>
</table>
Three key findings surface when analyzing the networks' CI approaches (1) intermediaries used root cause analyses to understand the problem and generate participant ownership over the network's work, (2) intermediaries paced the work differently depending on network initiation objectives and intermediary capacity and context, and (3) intermediaries used varying data sources and approaches to source and select change ideas.

**Root cause analyses: opportunity for participant-ownership**

The first theme with respect to CI implementation is that participants in all seven networks conducted root cause analyses to deepen their understanding of the problem of practice. Even though all intermediaries completed an internal process to determine potential root causes for the problem of practice during the grant application process, all intermediaries continued this work with participants after network launch. Interestingly, the networks’ root cause analyses were where participants across the entire sample had the most ownership over the work, meaning participants led the creation of artifacts with support from the intermediary rather than at the direction of the intermediary.

Participants in all seven networks used a variety of continuous improvement tools and interrogated a variety of information types to conduct their root cause analyses. All intermediaries facilitated the participants’ use of at least one of the following improvement science tools: 5 Whys protocol, system process maps, or fishbone diagrams. Additionally, intermediaries helped participants examine a wide range of data and information:

- School level data (n=4; e.g., empathy interviews)
- District level data (n=3; e.g., student math GPA disaggregated by socio-economic status)
- National level data (n=2; e.g., the college enrollment rates of students of different economic status)
- Field expertise (n=3; e.g., research reports)
- Participant expertise (n=7; e.g., teachers’ understanding of school conditions)

To support participants’ root cause analyses, all intermediaries supplied participants with relevant data as well as created space for participants to draw on their expertise and lived-experience of the problem of practice. By incorporating participant voice in the process to understand the problem, intermediaries helped to develop participant ownership over the work.

Intermediaries also approached root cause analysis at two different levels: school-level and network-level. In three networks, participants conducted school-level root cause analyses (i.e., analyzing data from their schools and creating an artifact that would later be used to build change ideas that are relevant to their local context) with intermediaries to support this process. In three other networks, participants worked together
to generate a network-level understanding of the problem. In these networks, network participants selected from network-wide fishbone diagram “bones” and then generated driver diagrams for how to tackle their selected bone(s). Participants then organized their solutions-testing around particular drivers. In this way, the network-wide fishbone diagram served as the shared bedrock from which the network’s CI work is built.

The final network used a hybrid approach where school teams generated both school-level and network-level fishbone diagrams. School teams were first trained to conduct their own root cause analyses and create school-level fishbone diagrams. Then, at a network convening, school teams collaborated on synthesizing all of the school-level fishbone diagrams into one network-level fishbone diagram. This network intends to use this fishbone diagram to generate a driver diagram that will ultimately guide their cycles of improvement. This intermediary, therefore, designed the network such that the first year was focused on developing the network’s problem understanding and theory of practice.

In sum, all intermediaries found the root cause analysis process a critical element of initiating participants into continuous improvement; namely connecting participants’ expertise and lived-experience with analyzing data to develop understandings about the problem of practice.

**Disciplined cycles of inquiry: fast versus slow initiation**

Intermediaries initiated participants to their disciplined cycles of inquiry through either a fast or slow pace. Fast initiation refers to networks where participants completed one or more disciplined cycles of inquiry during the network initiation phase. To date, four networks fit into the fast initiation category. The intermediaries for these four networks all had prior experience supporting school professionals in the continuous improvement process. The reasons intermediaries chose to move at a faster pace vary from managing their grant’s limited time frame to amplifying participant enthusiasm by jumping into the work quickly.

Intermediaries in the slow initiation category (n=3) are in networks that have not yet completed a disciplined cycle of inquiry. All three intermediaries expressed a desire to build a strong foundation from which participants could launch into the continuous improvement cycles. In one case, that meant building the necessary tools (e.g., a student tracker), in a second case, it meant building the empirical basis for the work (e.g., spending the year conducting empathy interviews and analyzing the data to deeply understand the problem), and in the third case, it meant strengthening participants’ professional capacities (e.g., basic formative assessment skills) in order for the network to engage in disciplined cycles of improvement. This last intermediary decided to de-prioritize a complete implementation of the CI process this year due to time constraints, district priorities, and staffing challenges within the intermediary organization. Instead, this intermediary privileged building participant capacity around the problem of practice.
Change ideas and data for testing cycles: data types and basis for the change ideas

The four networks that have been engaged in “fast-paced” CI initiation have followed network-wide protocols to structure inquiry work. The networks vary, however, with respect to the tests themselves: the intermediaries supporting these networks have all focused on building participant capacity to run improvement cycles, but have made different decisions about implementing processes around both the use of data for testing cycles and the type of change idea selected.

Network participants navigate between two major classes of data for CI work: (1) data for the testing cycles collected by school teams and (2) data for evaluating efficacy of the overall working theory collected at the district-level.7 The data collected by school teams for improvement cycles tend to be individual student data (for the targeted student population) that is easily accessible to practitioners (e.g., classroom assessments, attendance data, application completion rates, etc.). Data collected by intermediaries for the purposes of evaluating the working theory, on the other hand, tend to be aggregated at the school or district level and requires access to data management systems often managed by districts.

Intermediaries provided school teams support for gathering, organizing, and storing data needed for improvement cycle tests as well as district-level data. With respect to the improvement cycle data, the support varied. While all four networks used forms for teams to manage the information related to their tests (e.g., PDSA forms), the data management systems for the minutiae of the testing cycles varied and, in some cases, was left to the participants to manage. In all four cases, intermediaries provided infrastructure support to participants for accessing and organizing relevant district data.

One final area of decision-making revolved around the content of the change ideas, or solutions, to be tested. In the four networks where disciplined cycles of inquiry have been initiated, teams decided on what general change ideas they would test and customized those ideas to target particular groups of focus students. These solutions fell into two general categories: research-based or participant-generated solutions.

Research-based solutions are change ideas that are backed by empirical research. In two networks, participants selected from a suite of research-based solutions that had been curated by the intermediary to target particular levers of change articulated in the network’s theory of practice. In these two networks, the intermediaries had expertise in the problem of practice that they demonstrated by developing change idea packages (i.e., summaries of best practices and the research or theoretical ideas to support those best practices).

7 In cases where access to district data is challenging for the intermediary, the intermediary may find alternate ways (i.e. workarounds) to access that same type of data.
Participant-based solutions, alternatively, are primarily rooted in participants’ experience, expertise, or interests. These ideas may or may not converge with research-based solutions, and the connection of these solutions to a network’s theory of practice is variable. Participants in these two networks used this approach in developing change ideas. In one network, the intermediary allowed participants to test ideas that did not tightly align with research-backed practices in order to support a network-wide spirit of innovation. One intermediary staff member said,

“

There’s the theoretical evidence base and there’s... our lived-evidence base. [We look at] which of our schools are jamming, what were they doing, and let’s elevate that to the network... Not just the [intermediary’s] ideas, which is usually a lot of other people’s ideas, but what’s working within our network and find[ing] ways to elevate those thoughts.

"}

This intermediary allowed one school team to test an idea the team developed (providing pizza as an incentive for completing a task) because the team seemed very invested in that idea, even though it was contrary to the intermediary’s understanding of the research on whether incentives are sufficient for removing systemic barriers. The hope was that by allowing the school team to test out an idea they were committed to, there was an opportunity for the school team to feel stronger ownership over the work. As noted in the quote above, the intermediary was willing to let the testing data help the network determine what works.

Developing change ideas via participant-based solutions resulted in a wide array of solutions that tackled different levers of change (e.g., changing classroom instructional practice or changing socio-emotional learning supports the school provides). These intermediaries did not present school teams with a suite of resources and learning supports prior to the testing cycles. Instead, they waited to understand which common root causes school teams found important to work on in order to determine the types of resources to gather and deploy. For example, after seeing many school teams identify helping students develop study skills as a solution, one intermediary compiled and presented a packet of information at a network convening to help school teams learn more about tools for and research about helping students with study skills. In this case, the participant-based solutions were supplemented by the intermediary connecting participants back to an evidence base to support their interventions.
In sum, while there is a great deal of variation in how CI is implemented in the networks, root cause analysis appears to be a critical element to engage school team participants in during the network initiation phase, both to build a deep understanding of the problem of practice and to generate participant buy-in to the CI process. Intermediaries approached the work at varying paces and can be categorized into two groups: (1) fast initiation into disciplined cycles of inquiry and (2) slow initiation into disciplined cycles of inquiry.

Workstream 3
Building buy-in among key stakeholders

Another foundational consideration during the initiation year was how intermediaries could most effectively galvanize participant and stakeholder buy-in. In order for network activities to motivate significant changes in student, school, and network-level outcomes, participants need to be both (a) invested enough to spend significant time learning new skills and participating in team activities, and (b) operating within a school/district context and culture that lends support to this change work. If condition (a) is to be understood as personal buy-in on the part of the participant, then (b) can be understood as institutional buy-in on the part of the school or district within which participants work.

In the sample, earning both types of buy-in has often been a complex design challenge. Before and in the early stages of launch, intermediaries made efforts to (1) engage stakeholders to select a problem of practice and network strategy that would be compelling for participants and, often more importantly, their schools and districts. To gain the trust of those participants and stakeholders, the problem of practice and approach also needed to ideally be within the wheelhouse of the intermediary or hub’s own expertise and experience. Then, intermediaries had to (2) determine how best to build a cohort of participants that would be both committed to the work and have the necessary support from the institutions they would be working within.

Selecting a relevant problem of practice

The selection of an appropriate problem of practice and network strategy (e.g., approach to improvement work and networking) was among the first steps intermediaries took to preemptively set the conditions for participant buy-in. With many competing priorities, institutions and their staff had to be invested in the direction the network was headed if they were going to opt into participation. Simultaneously, intermediaries ideally needed to have some degree of expertise in either the problem of practice or elements of the network approach (e.g., continuous improvement), as perceived competence is a foundational element of the type of relational trust that spurs buy-in (Russell, et al., 2019). As such, intermediaries (1) engaged stakeholders to determine the needs of districts/schools and (2) selected topics in which they had particular experience.
All intermediaries prioritized this work -- selecting an appropriate and relevant problem of practice as a means of gaining buy-in and matching that to areas of intermediary expertise.

**Stakeholder engagement**

Involving stakeholders early in network planning was critical to ensuring that networks were well-aligned to the needs of future participants. In the context of networks for school improvement, stakeholders may include school-level participants, school district leaders, non-profit organizations, students and other experts or partner organizations (Barron et al., 2015; Proger et al., 2017; Bodilly et al., 2011). Six intermediaries engaged with different groups of stakeholders prior to launch to gain feedback on their strategy and choice of focus.

School districts can be valuable partners to an intermediary when conducting NSI work. In cases where districts are strongly engaged, intermediaries may have an easier time building the institutional buy-in needed to easily access data, schedule convenings, and increase participant engagement.

> And then we worked that with them and brought it to some assistant superintendents and principals here in the district and we said, ’These tend to be what our schools are most challenged with and we’d like to bring some network that focuses on a problem or practice of importance to schools here in locally. Do these resonate with you? Do you all foresee these challenges, and if so, which ones take priority for you?”

> [Meeting with district personnel] informed what [other coaches] and I drafted as the problem statement and also we did a first sketch of the fishbone. And then in August at the two-day team lead convening we brought a draft of it to them and they spent at least an hour and a half where the team leads basically broke it apart added to it to make sure that aligned to the root cause challenges they were seeing within their context.
All six applicable intermediaries used pre-launch engagement with school districts to build institutional buy-in. Of these, four intermediaries had prior working relationships with their stakeholder districts that were conducive to co-planning. Those intermediaries (n=2) that did not have substantive formal relationships with districts before launch were still able to use the initiation phase to set the stage for buy-in. In one example, an intermediary simply leveraged personal relationships, by soliciting feedback about potential problems of practice that the network could tackle. By consulting with districts, intermediaries across the sample aimed to make their NSI approach and topic as compelling as possible to an essential partner in the work.

Five intermediaries engaged with school-level participants to shape strategy and the problem of practice. For example, at their pre-launch convening, one intermediary brought together team leads, including school-level participants, to provide feedback on the network’s fishbone diagram that was under development by the intermediary. Another intermediary engaged with school-level participants both on a planning and informational level. One staff member said: “[W]e hosted some trainings, got feedback from the different stakeholders about what were the roles and responsibilities that a counselor should have versus a [partner organization] member.” Again, intermediaries used this engagement as a method of building buy-in, ensuring that the NSI work would be as relevant as possible to participants.

**Intermediary experience**

Another essential element of gaining trust and buy-in from participants was selecting a network approach and problem of practice in which the intermediary brought experience and expertise. Relational trust rests upon a number of criteria, not least of which is the degree to which participants believe that the intermediary brings essential competencies to the core NSI work (Bryk & Schneider, 2002). All intermediaries designed their strategies around the domains in which they had experience, including: continuous improvement, networks, the selected problem of practice, data and measurement, and DEI.

**Selecting network districts, schools, and participants**

Another crucial initiation task for any intermediary is selecting an appropriately committed pool of districts, schools, and participants (Russell et al., 2019). A number of factors including the length and size of the Foundation grants, the intermediaries’ objectives in launching the network, and the intermediaries’ internal capacities played a role in determining how the intermediaries chose to recruit and select schools and districts into their networks.

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8 One intermediary is omitted from this subsection as they are both the intermediary and the district.
Ultimately, intermediaries made the decision to take one of two general approaches: selective \( (n=4) \) or non-selective \( (n=3) \) shown in Table 2 below. In most cases \( (n=6) \), both selective and non-selective networks only included schools and districts that had actively opted-into the NSI; intermediaries were thus able to assume, with some degree of certainty, that these schools and districts -- or at least some key participants within those schools and districts -- were bought into the initial conceit of the network. The major distinction between these two selection typologies emerged instead around the ability of intermediaries in selective networks to identify and choose participating schools or districts who seemed better prepared to operationalize their commitment to the work.

**Table 2. Selection approach by intermediary type**

<table>
<thead>
<tr>
<th></th>
<th>Network A</th>
<th>Network B</th>
<th>Network C</th>
<th>Network D</th>
<th>Network E</th>
<th>Network F</th>
<th>Network G</th>
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</thead>
<tbody>
<tr>
<td>Selective</td>
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</table>

**Selective:** Four networks used a selective approach so they could curate a pool of schools and districts that met their internal criteria for network participation. Intermediaries that used a selective approach noted that it was important to choose schools that had strong team and school conditions that would support the work. While unified in the use of a selective application, all four networks approached selection in distinct ways based on their differing needs and capacity.

Within the group, three selection subtypes emerged: (1) two intermediaries selected schools via an application specifically for the Gates-funded NSI; (2) an intermediary selected schools from a pool of participants that had applied and been selected for a project that launched before the Gates NSI work; and (3) an intermediary worked with a district to hand-select schools. Two intermediaries recruited schools to participate specifically in a network associated with the Foundation grant. One found a pool of participants to choose from by employing a hybrid open/targeted recruitment model, both sending out e-blasts to their existing network and leveraging relationships with state partners, the Foundation, and internal staff to target specific districts and schools that seemed “poised to run with this stuff and also [serve] the demographic [they] were after” (Staff interview). In the second typology, one intermediary pulled their network participants from a pool of schools that had already gone through an intensive application and selection process to join an ongoing district project. A final selective network used the third approach; having worked
closely with their district in a previous network, the intermediary's existing relationship with several district staffers gave them the informational and political resources they needed to choose appropriate participants for the network without an application.

**Selection criteria in selective networks**

Staff at the four intermediaries that chose to select schools articulated an array of criteria they used to evaluate applicants’ ability to undertake the work effectively:

- **Supportive district/school/team environment**: Schools/districts and the teams of staff/faculty that will participate in the network demonstrate the right culture and relational environment.
- **Buy-in and commitment**: Network participants demonstrate commitment and dedication to the work being undertaken and/or methodology being used by the network.
- **Continuous improvement capacity**: Schools/districts have the necessary training and experience using improvement methods.
- **Data capacity**: Schools/districts have the necessary data experience, routines, and infrastructure.
- **Demonstrated need**: The intermediary and/or school/district believes that the school/district would benefit from organizing as a network to tackle the problem of practice.
- **Learning stance**: Applicants demonstrate the type of humility and reflectiveness necessary to engage in adult learning effectively.
- **Student demographic match**: The school/district serves a dominantly Black, Latinx, and/or low-income student population in line with the requirements of the Foundation grant.

All four intermediaries made different choices about which of the above criteria to prioritize based on their unique network needs and organizational capacity. Two of these criteria emerged as important to all four intermediaries: (1) buy-in and commitment to the work and (2) supportive school/district/team environment. As discussed above, these two criteria are inherently linked; operationalizing buy-in requires an institutional climate that supports individual and team change efforts.

**Selection criteria in selective networks: Buy-in and commitment**

Participant commitment or buy-in to network goals and activities is framed as a prerequisite to engaging in collective problem-solving and networking. All four selective intermediaries have extended this concept to participant selection, anticipating that preselecting for buy-in might provide a firm foundation for successful network initiation and continued enthusiasm for the work.

Three of these four intermediaries looked for commitment across applicant teams. One intermediary only admitted schools that had demonstrated buy-in from at least 80% of their entire school staff. Another
intermediary repeatedly articulated emphasizing team enthusiasm for the network methodology in their evaluation process, looking for teams that “were excited about [making progress] with others and learning from each other.” Another intermediary selected based on principal commitment. Implicit in their application process was the assumption that effective principals would be able to motivate enthusiasm for the work in their staff:

“We know that ultimately, the principal needs to really be able to own this and support their team around it, so [we wanted] to make sure that we started the first year with principals that we knew had the capacity to be able to get staff...to support the project.”

This intermediary did not, therefore, take steps to assess the commitment levels of non-leadership participants during the application period.

Selection criteria in selective networks: Supportive district/school/team environment

Another prerequisite for participation by all four intermediaries was a supportive district, school, or team environment that would allow effective collaboration.

“One of the questions we asked [on the initial application] was...who would be on your team and what are the structures already in place to support that team in working together? And if you don’t currently have structure, what might they be or what could they look like?...A lot of the schools that we ended up admitting were really specific about who was gonna be on the team. They were naming names and so it was really clear that they had concrete ideas about who that team would be and they also have structures that they could identify in their systems where those people could meet to collaborate well.”
To different degrees, intermediaries used this criterion to preemptively address some of the factors most connected to network successes in the literature.

- Research suggests that networks need some degree of relational trust among participants and hub organizations in order to engage effectively in collaborative work (Barletta, Comes, Perkal, Shumaker, Wallenstein, and Yang, 2018). Ensuring that school teams demonstrated this type of trust within their own team was one approach to ensuring a firm foundation to build trusting relationships across the network.
- Similarly, improvement-based networks benefit from governance systems that break down bureaucratic barriers rooted in accountability (Barletta et al, 2018). To help facilitate such an atmosphere, several networks requested that applicants select teams that include members from different levels of positional authority in the school and/or district, and then subsequently assessed their capacity to work together cohesively when selecting participants. Another intermediary chose schools within a district with whom they had already done work to start addressing a bureaucratic, compliance-oriented culture.
- Finally, some networks took steps during the application period to address the concern that network members often do not have adequate time to internalize improvement methodology and participate fully in network activities, a condition that can lead to feelings of ineptitude and frustration (Barletta et al, 2018). One network selected participant schools that demonstrated that they had time to take on the work.

Though approaches varied, selective networks all used the selection process to mobilize at the outset around at least one of these three conditions for success.

Non-selective: Three networks, all intermediaries who received a Type 2 grant, did not use a selective process to recruit applicants. The intermediaries’ motivations for not using an application and their approaches to school selection were distinct. Like the selective networks discussed above, participation in two of these NSIs was completely voluntary; all three intermediaries in these cases, however, chose not to design processes that included a rigorous evaluation of participant capacity. One intermediary was continuing a partnership with a district and made the choice to include nearly every school in the district in the new work. In another case, the intermediary used staff knowledge of and relationships within the district to hand-select schools based on availability and responsiveness, rather than any concrete evaluation of school

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9 Relational trust is referred to as the structure and quality of the connections between network members. This trust facilitates collaboration, learning, and collective action. As a result, relational trust can increase the likelihood of positive network outcomes (see: Bryk & Schneider, 2002; Russell, et. al, 2019).

10 The one exception was a school in a charter network that is engaging in another Gates-funded NSI project.
or team capacity. The leadership of this intermediary felt the stress of a “relatively small window of time to recruit and onboard new schools,” so prioritized schools with which they had existing relationships, favoring those schools that were quick to respond to communication from staff. The last intermediary opted not to have a selective application because they wanted their network to be as inclusive as possible. Staff put out an “open call with some targeted follow-up, particularly with [the] biggest districts, to get people to say yes.” In two of these cases, these processes allowed the intermediaries to build participant pools that had opted into network activity; unlike the selective networks, though, all of these intermediaries did not assess whether those opting in were indeed well-positioned to take on the extra work.

In sum, intermediaries used two primary approaches to build buy-in and foundational trust into the conceit of the network. First, intermediaries engaged stakeholders, both before and early in the process of launch, using their guidance to hone their respective NSI strategies and choose compelling problems of practice. Buy-in was also prioritized through the selection of engaged and institutionally-supported cohorts of participants. The larger strategy of developing engagement was not abandoned after launch, but was instead woven into the design of the capacity-building efforts discussed in the following section.

Workstream 4
Developing CI, problem of practice, and DEI capacities of network participants

Each intermediary set goals of increasing school-team participant capacity in at least one of three domains: continuous improvement, the problem of practice, and DEI. In most cases, these capacity building efforts were focused on domains in which the hub had expertise, and intermediaries scaffolded capacity building to both support participant learning and encourage trust and buy-in. These supportive structures were designed, in part, to allow intermediaries to demonstrate their dedication to addressing the problem of practice, a move that intermediaries hoped might generate participant investment.

Overview of support approaches

Across the sample, intermediaries offered support in three primary settings: at network convenings, during site visits, and through regular coaching calls.

- Network convenings (n=7) were used across the sample to offer generalized training on key support domains, like CI, the problems of practice, and DEI. These were scheduled meetings where either all network participants or a subgroup of teams (e.g., a cohort) gathered at an event designed
by the intermediary. In this setting, participants were also able to informally pursue support from intermediary staff and other participants.

- **Site visits** \((n=6)\) were used by intermediary staff to check in with participants during action periods to gain a deeper understanding of how work was being executed at each school site and what supports teams needed.

- **Regular coaching calls**, though used more sparingly across the sample \((n=3)\), were used to monitor team progress and address challenges between site visits and convenings, especially for multi-district networks. These were typically conducted by intermediary staff via a phone or video call. While most intermediaries did not offer scheduled calls, all intermediaries \((n=7)\) offered ad hoc virtual coaching support \((e.g.,\) email, phone, video\) upon participant request.

All three support settings offered intermediaries the time to develop relationships with participants while also demonstrating their organizational commitment to the work. Intermediaries differed in the degree to which support was immediately responsive to the differing needs and capacity of participants. In some cases \((n=2)\) the intermediary made the choice to invest resources in "boutique-style" support, through which participants received tailored coaching that was highly-customized to individual needs and context. For one intermediary, this was a major feature of early efforts to demonstrate their own commitment to the work. As one staff member explained, "For us as coaches, what we wanted to do was create a relationship with our partnering schools, so they could feel like we were gonna die on a hill for them. Because we would. But they need to feel that."

In the other networks \((n=5)\), the intermediary did not offer participants highly-customized support, choosing instead to divert resources elsewhere. These intermediaries created or modified standard processes and protocols to adjust for emergent network needs rather than creating boutique support structures. For example, one intermediary saw that many school teams struggled with analyzing data collected for their testing cycles. This intermediary piloted three different approaches to help participants make sense of their data with three school teams. The intent was to determine a standardized way to deepen participants’ use of data in their CI work \((i.e.,\) deepening their CI capacities). The intermediary’s rationale for this approach was to maximize their limited time and resources to address an emergent network need.

The section that follows describes themes that related to the three main areas of participant capacity building:

1. Two main tenets of **CI capacity** building emerged as important: (a) designing and conducting disciplined cycles of inquiry and (b) network knowledge management;
2. In order to develop **problem of practice capacity**, intermediaries strategically provided capacity building opportunities either before or after the initiation of the testing cycles; and

3. **DEI capacity** was approached as either (a) an issue of student achievement or attainment mapped by race and/or class or (b) an issue driven by systemic and structural barriers that creates the gaps.

**Domains for participant capacity development**

Across these settings (network convenings, site visits, coaching calls), intermediaries supported capacity development in three main domains: (1) continuous improvement; (2) the network’s problem of practice; and (3) Diversity, Equity, and Inclusion (DEI). Networks had differing focal domains for capacity building, most often in areas in which the hub (which in some networks includes not only the intermediary but the district and/or other partners) had expertise. In most networks, the capacity building efforts were taken up by the intermediary, and thus were contingent on the intermediary’s expertise. In two networks, the intermediaries partnered with organizations that had particular expertise in order to fill the gaps in the hub’s capacity to meet the needs of the network. This suggests that, in areas of particular importance to the NSI’s effort, the intermediary will need to ensure it has the right capacities or partner with others to fill those gaps. Chosen domains for participant capacity-building also varied in level of alignment with district priorities. For example, in one network, the district selected partners that would provide participants with capacity building support for tackling the problem of practice.

**Continuous improvement capacity building:** All intermediaries are working to varying degrees on building participant capacity in continuous improvement, an effort which is, in part, dictated by what components of the CI process participants have engaged in thus far. Intermediaries used a mix of improvement science tools, network meeting activities, and coaching for capacity building.

The four fast initiation networks have engaged in additional CI capacity building topics with participants. This additional development has largely fallen into two categories: 1) designing and conducting disciplined cycles of inquiry, particularly around data collection and analysis, and 2) developing competency in knowledge management.

Participants engaging in disciplined cycles of improvement may experience challenges identifying and using data throughout the continuous improvement process, and in particular may struggle with the types of process data that CI often requires (Barletta, et al., 2018). In order to build capacity to conduct disciplined cycles of inquiry, three out of four intermediaries worked with school teams to identify appropriate measures and, subsequently, collect corresponding data for tests. CI coaches have been heavily involved in this process, asking participants in the planning stages to consider what types of data they would need to collect to
determine the success of their interventions. Coaches also provided training on data collection tools and approaches. For example, one coach trained school teams on taking low inference transcript notes to help them better record observations of classroom change idea implementation.

With respect to building the capacity of school teams to interact with data more efficiently, all four intermediaries in this set managed data storage and display systems for the network. Two of these intermediaries created complex data storage and display infrastructures that allowed school teams to generate graphical displays and filter or disaggregate data on their own. The other two intermediaries are currently building more sophisticated support, but are relying on more rudimentary methods of data storage and display. These two intermediaries recognize the power of helping school teams easily access and organize their own data. As a leader from one of these latter two intermediaries noted, these systems allow for “data literacy,” which is a way to “support teams to better use data for decision making to best serve students, particularly those most marginalized by the system.”

In this initiation year, efforts to develop capacity around knowledge management were primarily focused on tool development and use. The four intermediaries in fast initiation networks provided school teams with tools, like PDSA forms, to help catalog their experiments. These forms provided guiding questions that helped participants identify what was important to document. Improvement coaches also assisted school teams in filling out these forms, either during full network convenings or coaching meetings. In two of the fast initiation networks, documentation of CI work was more successful than in the other two, in large part because coaches visited school teams at their school sites and not only helped teams with refining their processes for documentation but also helped them develop an understanding for how the documentation could help school teams with their specific CI work. These two networks were also single-district networks. In the other two networks (both multi-district), school teams struggled with documentation and coaches provided less support on this area. As a result, the records of test data were variable and school teams had difficulty sharing their work with the network. This suggests that coaching may be an important tool during network initiation to build participants’ capacities for documentation of their continuous improvement efforts in order to spur individual school team learning as well as network learning. Additionally, this may mean that networks that span multi-districts may struggle to effectively support school teams with the necessary record-keeping if the networks span large geographic regions. In such cases, intensive support for school teams in record keeping (i.e. through coaching, site visits, or other methods) during the initiation year is critical.

Problem of practice capacity building: All networks were oriented toward the goal of “significantly increas[ing] the number of Black, Latino, and low-income students who earn a high school diploma, enroll in a postsecondary institution, and are on track in their first year to earn a credential with labor-market
To make this work feasible, networks narrowed their equity focus, first through the identification of the problem of practice and then via the selection of types of solutions to be tested.

Six out of seven intermediaries made efforts to build participants’ capacities to tackle the problem of practice. Intermediaries have approached this work in one of two ways: by providing capacity building supports either prior to the disciplined cycles of testing (n=4) or after those cycles began (n=2).

As discussed above, four intermediaries, two in fast initiation networks and two in slow initiation networks, provided capacity building support for the networks’ problems of practice prior to the start of testing cycles. The intermediaries in the fast initiation networks focused on building capacities specific to the change ideas being tested. These two networks curated research-based practices and created a suite of solution (i.e. change idea) packages for participants. These packages contained the relevant research and resources needed to enable participants to modify the solutions to meet their local conditions. Additionally, both intermediaries provided coaching support to help build participants’ capacities around the solution strategies while simultaneously preparing participants to engage in cycles of continuous improvement.

In the slow initiation networks, intermediaries’ capacity-building is focused on building a strong and somewhat broad foundation for the problem of practice. In one network, the intermediary has focused on helping participants make sense of the research and common language from the field in order to ensure the network has a shared understanding of the problem. In another, the intermediary opted to focus on building strong instructional foundations in participant schools before engaging in the full CI process. As one staff member noted,

“[Participants] don’t need to up their logic muscles around [improvement science]. Sure you can start with the problem of practice. I absolutely believe that’s true, but you have to have then a pivot strategy… PDSA cycles [are] not the first thing you do. You get them to stop doing the terrible things. You get them to stop having low expectations of children. You get them to stop wasting their professional learning time on grading and griping.”

In all four of these networks, the intermediaries connected participants with research to expand their professional knowledge in the service of the successful implementation of solution ideas.

Two intermediaries began building capacity around problems of practice after school teams initiated their testing cycles. Both intermediaries initiated the continuous improvement work by letting participants
identify what they wanted to tackle, an approach that resulted in a wide array of solution types. Unlike other networks, these intermediaries did not present school teams with a suite of resources and learning supports prior to the testing cycles. Instead, they waited to understand what areas school teams found important to tackle before determining the types of support resources to gather and deploy. For example, after seeing many school teams bring up the need to help students develop study skills, one intermediary pulled together a packet of information to help school teams learn more about the topic. Both intermediaries wanted participants to have high-levels of ownership over the solutions, in part because they were interested in understanding what school teams found most relevant to their work.

**DEI capacity building:** Intermediaries framed DEI work in one of two ways: (1) as an issue of student achievement or attainment mapped by race and/or class or (2) as an issue of student attainment as driven or conditioned by systemic or structural barriers that create gaps in student achievement or attainment mapped by race and/or class.

While all intermediaries have addressed Diversity, Equity, and Inclusion (DEI) within their network aim, intermediaries approached DEI capacity building efforts in various ways. Three intermediaries addressed DEI by framing the network aim in terms of racial/ethnic disparities in achievement. In all three cases, these statements referenced Black, Latinx, and low-income students, the priority subgroups identified in the grant, as the targets of network improvement work. In doing so, these intermediaries positioned progress toward rectifying an “achievement gap” as a barometer of success for the network. Of these three intermediaries, only one provided participants with explicit guidance on focal student selection to ensure that solutions were tested on students from the target population. Beyond focal student selection, discussions of Diversity, Equity, and Inclusion issues were taken up only if and when the participants articulated its importance, either through their solution designs or through their analysis of local challenges.

The remaining four intermediaries in the sample identified structural or institutional barriers that have prevented access to underserved groups and explicitly included the removal of those barriers in their aim statements. For these four intermediaries, DEI is a central organizing component of designing network convening activities and associated tools/resources. Three of these intermediaries positioned the use of empathy interviews as integral to understanding the problem the networks are tackling. Intermediaries also introduced other approaches to help expand participants’ beliefs about their students, including using asset-based, rather than deficit-based, mindsets with regard to students. One intermediary featured a segment on asset/deficit language and thinking that provided participants practical tools, including a role play, to help recognize and interrupt deficit thinking. A staff member at another intermediary described this mindset shift as follows:
Finally, three of these four intermediaries developed participants’ DEI capacity through their coaching structures. For all three of these intermediaries, DEI was not a designed component of the coaching relationship at the outset, but staff found that the structure inherently allowed for opportunities to develop participants’ equity mindsets. Multiple staff members, however, mentioned that the relationship also allowed for the necessary step of shifting adult mindsets, particularly around deficit orientations to students’ abilities. As one intermediary coach described, “the through line we’ve found in our work, our regional aim, and [school] contexts – it’s about shifting adult practices, and has nothing to do with fixing kids.”

In summary, intermediaries implemented participant capacity-building quite differently based on the varying needs and competencies of their networks. That said, they converged around an overlapping set of support structures and learning domains, all using a combination of networking convenings and supportive action period coaching to develop capacity in continuous improvement, the problem of practice, and DEI.
Conclusion

Discussion

Themes and implications

In sum, this report directly addresses the research question: How are intermediaries implementing the NSI strategy? In this first year of network initiation, intermediary organizations implemented the strategy in a variety of ways, each unique in its approach. All seven intermediaries, however, prioritized four key workstreams: (1) organizing participant relationships; (2) implementing the approach to continuous improvement; (3) building buy-in from all major stakeholders including school team participants, districts, and other partners; and (4) developing the capacities of school team participants in continuous improvement, the problem of practice, or in Diversity, Equity, and Inclusion (DEI). The way each intermediary enacted these four workstreams was impacted by three inputs: (a) intermediary experience, (b) time, and (c) district relationships.

As anticipated, the work of initiating networks for school improvement is as varied as it is complex. At the conclusion of this initiation year, it is too early to tell whether all decisions intermediaries made will lead to their network’s success. There are themes, however, that suggest early indicators of effectiveness and raise implications for both intermediaries and the Foundation with respect to enacting and sustaining the work of the NSI strategy.

1. **Intermediaries should be intentional about designing structures that facilitate participant-participant as well as hub-participant interactions.** Extant literature on building strong networks proposes that establishing trust between participants and school teams that otherwise do not collaborate regularly requires intentional networking infrastructure (Russell, et al., 2019). Although it is too early to evaluate whether the network structures chosen by sample intermediaries are effective, gathered evidence highlights how critical it is that intermediaries organize participant relationships with consideration to what avenues of communication and collaboration are necessary and contextually appropriate to advance the work of the network.

2. **Intermediaries should prioritize building and nurturing relationships with district staff.** Intermediaries that had close working relationships with district partners prior to network launch had an easier time building institutional buy-in that allowed for access to district-, school- and student-level data; minimal conflict in scheduling network convenings; and increased participant
engagement. As some intermediaries experienced, it was particularly beneficial to have pre-existing relationships with district partners as trust was already established and it helped to expedite integration of the network work with district priorities. Relatedly, participants in schools that had structures (as facilitated by the district) to support network-related work (i.e., paid time to meet with the school team to work on network activities outside of school time) were more likely to complete and/or engage fully with the network objectives.

3. **Securing buy-in from multiple stakeholders including, but not limited to, network participants, school leaders, and district leaders, is important to the implementation and sustainability of the network and requires ongoing effort.** All intermediaries prioritized generating buy-in from and developing relational trust among key stakeholders. To do so, intermediaries used a variety of strategies, including engaging with multiple stakeholders to determine the problem of practice, designing school selection processes that privileged buy-in, and designing network events to ensure maximum participation of and relevance to network participants. Intermediaries continue to be attentive to stakeholder buy-in, utilizing regular meetings with district and school leadership to keep them abreast of the work, and adjusting network participant supports based on feedback.

4. **Intermediaries require multiple types of experience and expertise to launch and sustain a network and should focus on building that expertise through staff development, hiring, and/or partnerships.** The domains in which intermediaries require experience are: (1) continuous improvement; (2) network management; (3) content related to the network-selected problem of practice; (4) data and measurement; and potentially (5) Diversity, Equity, and Inclusion (“DEI”). As part of the Foundation’s rigorous RFP process, intermediaries in the sample assessed their own capacity and were able to use grant resources to fill or increase capacity in areas in which they had identified organizational gaps in essential domains. As observed in this first year, network needs will continue to change over time. In keeping with continuous improvement practices, intermediaries should continue to assess their own capacity against network needs and address gaps accordingly.

As intermediaries move into Year 2 of implementation, CPRL will continue to investigate how network initiation inputs and workstreams affect network progress toward and achievement of outcomes. Additionally, CPRL is interested in further exploring the relationship between network progress and the following key network initiation variables:

1. **The pace at which networks introduce continuous improvement concepts, especially disciplined cycles of inquiry.** In Year 1, four networks engaged in fast initiation, choosing to conduct one or more disciplined cycles of inquiry. Three networks chose a slow initiation pace, using additional time to build a strong foundation from which participants could launch into the
continuous improvement cycles. CPRL is interested in exploring whether the pace of implementation affects (a) participant engagement and understanding of continuous improvement and (b) the quality of change ideas and outcomes.

2. **The role of district administrators and school leaders.** During network initiation, CPRL identified the important role of district administrators in creating enabling conditions for network success. As data collection moves to the school level in Year 2, CPRL will be able to more closely observe the role school leaders play in removing obstacles to network participation and progress and enabling school team participants to effectively engage in the network.

3. **The quality of change ideas.** Network participants that engaged in cycles of inquiry generated change ideas using either their own experience (“participant-based”) or research-based practices supplied by the intermediary. Going forward, CPRL will explore cycles of inquiry from the participant perspective and investigate whether either approach leads to an increased likelihood of achieving hypothesized improvements, greater buy-in, increased capacity among participants, and/or better student outcomes.

4. **The role of DEI.** Intermediaries approached DEI in two distinct ways, (1) as an issue of student achievement or attainment mapped by race and/or class or (2) as an issue of student attainment as driven or conditioned by systemic or structural barriers that create gaps in student achievement or attainment mapped by race and/or class. CPRL is interested in whether either of these approaches more effectively lead to higher participant engagement, increased participant capacity, and/or improved outcomes.

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**Considerations for the Foundation**

Intermediaries do not operate in isolation and they have access to a number of resources not investigated in this study, including the ongoing assistance of Foundation staff, the NSI Community of Practice, and a suite of Support Partners who enable intermediaries to increase capacity, organize and access data, and measure network health. While all of these supports no doubt provide additional value to the intermediaries, CPRL would like to draw the Foundation’s attention to three additional considerations that may further support effective network initiation:

1. **Build and support intermediary-district relationships:** The Foundation’s RFP and application processes can play a powerful role in bringing stakeholders to the table and assessing stakeholder capacity. Given the apparent importance of district-intermediary relationships and the opportunities available to explore additional district roles, CRPL encourages the Foundation to support intermediaries in establishing these relationships early and more robustly.
Specific ideas include, but are not limited to: a) developing tools that allow intermediaries to assess district capacity (or districts to self-assess); b) encouraging more meaningful intermediary-district hub relationships during the RFP process; c) using the RFP process to help districts preemptively address challenges expressed by early stage networks, specifically time and competing priorities; and d) offering an extended network initiation period for those interested in developing new district partnerships in emerging networks.

2. **Extend the duration of network grants:**

   As discussed, intermediaries' decisions were bound by time (both time as prescribed by the grant period, as well as the time available for participants to understand, practice, and participate in continuous improvement and other network activities). One question to consider, given the immediacy and urgency around decision-making, is whether allowing for longer lead time to build the infrastructure and relationships required for network initiation may alleviate some of the decision juggling or fatigue intermediaries may encounter at the early, critical stages of this work. Allowing for a longer grant duration would further forefront the importance of relationship building and securing buy-in from relevant stakeholders prior to the official launch of the network. Extending grant periods may also simply acknowledge that this work is complex, and it takes time to successfully initiate a network.

3. **Align supports to network development phase and high priority workstreams:**

   As the Foundation moves into future cohorts of grantees, continue to maintain awareness of the supports that intermediaries in the initiation phase may need and how those differ from intermediaries that are or will be supporting more mature networks. The workstreams identified in this paper were prioritized by intermediaries launching networks. The following suggestions include thoughts on how the Foundation may align supports to networks specifically in the initiation phase:

   a) Highlight various mechanisms intermediaries use to develop participant-to-participant relationships as well as intermediary-to-participant relationships (e.g., pairing schools or mixed school teams at network convenings).

   b) Support intermediaries as they build their own capacity in continuous improvement (e.g., through the sharing and developing of improvement tools); the problem of practice (e.g., sharing among intermediaries that have strong experience in these domains or bringing outside expertise to enhance intermediary knowledge); and DEI (e.g., continue to create space to reflect on the DEI conversations that are happening in networks).

   c) Support intermediaries as they develop buy-in of various stakeholders by a) using the convening power of the Foundation to bring stakeholders to the table; b) adjusting
expectations of outcomes in the initiation phase to allow time for relationships to develop; and c) sharing tactics between intermediaries about how to overcome challenges like competing priorities.

d) Continue to emphasize the core parameters of CI. As networks develop their own approaches to and identity around CI, it will be important to remember the essential elements that make up a disciplined improvement process and make available tools that will more readily support implementation of these elements (eg., PDSA templates; tools to perform root cause analysis).

e) Supporting intermediaries in accessing both levels of data necessary to effectively a) support school level cycles of inquiry and b) evaluate the efficacy of the overall improvement. In addition to the support already provided by Double Line to access aggregated district-level data to evaluate outcomes, the Foundation may also consider supporting intermediaries in accessing and making meaning of data for improvement cycles. Though these data are generally more accessible to school team participants (e.g., classroom assessment data; college application completion rates, etc.), support may be needed in a) helping school team participants identify which types of data are appropriate for cycles of inquiry and b) generating templates or systems to aggregate and store improvement data.
References


https://cprl.law.columbia.edu/sites/default/files/content/CPRL-Gates%20Report-082318-FINAL.pdf


Appendix A

Formative Evaluation Research Questions

The evaluation is designed to answer the Foundation's learning agenda critical questions as articulated through CPRL’s primary and secondary research questions below. Left outside the scope of the evaluation are learning agenda critical questions related to the Foundation’s performance management, as well as questions better-positioned for summative evaluation.

CPRL’s formative evaluation focuses on the following research questions:11

1. How are intermediaries implementing the NSI strategy?
   a. How are school networks selecting schools? To what extent do the chosen schools represent the populations the Foundation is looking to serve?*
   b. What are NSIs’ implied and/or explicit theories of action/delivery models?
      i. In what activities do NSIs engage to achieve their objectives?
      ii. In what ways do NSIs measure or intend to measure their progress toward intended outcomes?
      iii. What challenges do NSIs encounter?
   c. At the outset, how much variation exists in the strength of distributed leadership and capacity for continuous improvement?*
   d. What are the commonalities and differences in target setting among intermediaries? To what extent do those who meet targets set similar targets to those who do not?*
   e. What conditions in the enabling environment (leadership, data infrastructure, accountability/incentives for data use, and resource flexibility) need to be in place for model uptake and networks to be successful?*
   f. How do outcomes vary by different characteristics, such as entering intermediary capacity needs, LEA scale, intermediary type, geography, outcome/indicator type, and network size?

2. What are the characteristics of effective networks and intermediaries?*
   a. What makes an effective intermediary?
   b. To what extent do individual NSIs’ implicit and explicit theories of action align with the NSI logic model and to what extent are they coherent?
   c. How do effective intermediaries support school-led efforts to improve?*
   d. What are the main areas of variation among intermediaries?

11 An asterisk denotes learning agenda critical questions articulated by the Foundation. Some questions have been changed from past to present tense for the sake of consistency.
i. In what ways do intermediary capacity needs, LEA scale, intermediary type, geography, outcome/indicator type, and network size contribute to variation in outcomes?

ii. What characteristics, processes, and conditions contribute to variation in outcomes?

e. What actions and enabling conditions support intermediary growth and development to scale network capacity and engage in continuous improvement?
Appendix B
Foundation’s Six Core Parameters of Continuous Improvement

To clarify what the CI process should look like under the NSI strategy, the Foundation articulated a list of six core parameters of continuous improvement. These parameters outline the Foundation’s current thinking as to what components are required if networks are to use continuous improvement to bring about intended student outcomes. These core parameters, which shaped the way intermediaries applied for funding to support their NSI strategies, are as follows:

1. An understanding of the problem,* the systems that produce current inequitable outcomes, and the opportunities and assets of the community and their students.
2. A clear and specific aim* centered on achieving equitable outcomes for Black, Latino, and/or low-income students.
3. An equity-centered theory of practice improvement* for how to reach the aim.
4. Disciplined inquiry cycles to test interventions* and collect and analyze data to assess if changes are an improvement.
5. Collaborative and diverse teams comprised of people with time, expertise, experience, and will to tackle the problem.
6. Use of locally relevant and valued data from multiple sources, relevant research, and measurement as keys to improvement.

*These are anchored in multiple forms of data, an understanding of relevant research, and the specific needs and assets of the students and their communities.

(Bill and Melinda Gates Foundation, 2019)
Appendix C
Year 2 Research Design and Data Collection Plan

Focus and scope of year 2 evaluation

In Year 1, CPRL’s data collection strategy was primarily focused on examining the characteristics of intermediaries and how intermediaries were implementing the NSI strategy. In Year 2, the data collection will focus on understanding whether the choices made in this first year lead to the outcomes desired by the intermediaries and relatedly, whether school teams experience positive changes/improvements as a result of the network experience. Adding these two areas of data will allow CPRL to examine which networks are showing early promise and in those promising networks, how do districts and schools experience network participation as well as contribute to network efforts?

Year 2’s data collection strategy is based on certain logical assumptions CPRL is making about how the ultimate impact on Black, Latinx, and low-income students will be produced by the networks. Here are the relevant pieces of those assumptions:

A healthy network focused on school improvement will generate change at the school-level, which will ultimately create the conditions for Black, Latinx, and low-income students to achieve post-secondary success. At the school-level, CPRL anticipates that changes in the behaviors and dispositions of the adults will precede changes in the behaviors and dispositions of students.

By examining how school teams are experiencing the work and the early indicators of success from each network in our sample, we will be able to elucidate the extent to which network activities have impacted school teams and schools.

Data collection plan

The table below delineates the data collection plan for networks that are either in Year 1 or Year 2 of their NSI work. From Fall 2019-Spring 2020, CPRL will follow the Year 2 Collection plan for the seven networks currently in the sample and will, concurrently, follow Year 1 Collection plan for any new networks added to the sample. For those new additions, CPRL will focus on examining the intermediary’s implementation of network strategies.
<table>
<thead>
<tr>
<th>Data Collection Method</th>
<th>Year 1 Collection (Cohort 1-b)</th>
<th>Year 2 Collection</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Observations</strong></td>
<td>Conduct 1-2 Observations of Network Meetings + Convenings</td>
<td>Only attend final network convening (to observe for sustainability). Continue/finish any remaining observations from Year 1.</td>
</tr>
</tbody>
</table>
| **Interviews**         | 8-18 Per Network through June 2019; spanning Intermediary, District and school-levels | **3-10 School Team-Level Interviews** Per Network through Spring 2020  
- Interviews with members of school teams across network (Interviewees to be chosen in consultation with Intermediary)  
- 2-3 Interviews with school administrative leaders per network  
- 2-3 Interviews with relevant district leaders  
- 1-2 Intermediary staff interviews (i.e., intermediary coaches) |
| **Document Collection**| Request Documents | Documents connected to **school team-based work** (to be customized per site with input from intermediaries).  
- Intermediary coaching notes/rubrics (*optional, depends on Intermediary agreement*)  
- Documents from convenings (agendas, artifacts, worksheets, etc.)  
- Access to platforms where participants are sharing information  
- Materials created to support inter-site visits and/or cross-school learning  
- Artifacts from the school teams’ CI processes, including but not limited to PDSA forms (*optional, depends on Intermediary agreement*)  
- Resources associated with district/stakeholder communications  
- Gates Foundation Grantee Data (e.g., Grantee Results Tracker, Network Health Survey Results) |