



# EVALUATION OF THE CCSSO EARLY LEARNING NETWORKED IMPROVEMENT COMMUNITY (NIC)

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and Intervention*

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## Executive Summary

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The Council of Chief State School Officers (CCSSO) has emphasized the importance of utilizing evidence-based and research-informed instructional practices in PreK through third grade classrooms. To this end, they created opportunities for state chiefs and their staffs to “develop a shared vision of high quality, equity-promoting early learning” (CCSSO, 2017). Formed as an Early Learning Networked Improvement Community (NIC), and grounded in the six principles of Improvement Science, four state teams worked collectively to identify a specific issue related to early childhood instruction, called the ‘problem of practice’ (PoP), and to promote policies and practices that address that PoP. The project’s final overall PoP was: *“to increase the effectiveness of instruction and student achievement in early grades, states need to study the effectiveness of current policy and test the impact of innovative strategies to increase teacher knowledge and capacity to deliver evidence-based instructional practice in mathematics, literacy, and other content areas in the PreK through third grade classroom.”*

The goal of the NIC project was to support teams in addressing the problem of practice by giving educators the knowledge and capacity to consistently use evidence-based instructional practices in mathematics and literacy (CCSSO, 2017). More specifically, this project aimed to facilitate collaborations focused on dissecting and analyzing the problem, devising strategies for improvement, enacting those strategies, and then measuring the effect of the implemented changes. To achieve this objective, CCSSO held four convenings with NIC members, experts in Improvement Science and experts in both early childhood mathematics and literacy. CCSSO also provided mini-grants to the states to support them in implementing

policies to improve the use of evidence-based instruction in PreK to third grade classrooms, thus facilitating an approach toward improving high quality instruction grounded in the principles of Improvement Science. Lastly, CCSSO provided regular support to NIC participants through monthly calls with state project leads and the provision of consultants in Improvement Science.

The Center for Early Childhood Education and Intervention (CECEI) served as the external evaluator for the CCSSO NIC project. The researchers used the six principles of Improvement Science as the evaluation framework. Improvement Science is defined as “the systematic study of improvement strategies to identify promising practices for addressing issues in complex systems” (Improvement Science Research Network, 2016). Specifically, the evaluation addressed the overall problem of practice (i.e., high quality early childhood instruction), each State Education Agency’s (SEA) strategic goals, engagement across the four NIC states, and the processes and relationships established between SEA members and system/school-based Inquiry Teams. The intent of the evaluation was to document accomplishments, identify common/disparate themes across the four participating states, and provide recommendations for the establishment and support of future CCSSO Network Improvement Communities. CECEI used the following data sources to inform the external evaluation report: baseline (pre) survey, post NIC convening evaluation, follow-up (post) survey, survey of Inquiry Team members, focus groups with Coordinating HUB and Inquiry Team members, Inquiry Team small group activity, site visits, and classroom observations.

Key accomplishments identified by NIC participants fell into five broad categories:

1. implementation of evidence-based instructional strategies;

2. engagement in data-driven decision-making;
3. collaboration between the state education team, district leaders, and school administrators/specialists/teachers;
4. increased content knowledge for state and district leaders through collaboration with practitioners; and
5. cross-state collaboration.

An examination of NIC-related accomplishments in the context of Improvement Science showed that HUBs and Inquiry Teams made their work problem-specific and user-centered, examined variation in performance as the core problem to address, examined local conditions at the state/district/school level in an effort to fully understand the problem, relied on data to determine baseline performance and collected data to determine the effectiveness of instructional change, utilized iterations of Plan, Do, Study, Act (PDSA) cycles to test change, and commenced the process of bringing the results of their work to scale within school buildings and districts.

Based on a review of all data sources, the overarching recommendation of the CECEI External Evaluation team is to concentrate on building a robust, high quality, data-driven model within and across the current NIC states prior to expanding the NIC to additional states or establishing a second NIC. Specific recommendations were divided into two categories: Establishing a Model Early Learning NIC and Early Learning NIC Expansion. In an effort to establish a Model Early Learning NIC, the recommendations were as follows: increased access to consistent experts with a focus on differentiated, data-driven small group learning opportunities, robust cross-state collaborations, documentation of processes, and an

examination of the evidence. When scaling the NIC to include additional states or creating an entirely new NIC, the recommendations were as follows: early engagement of Inquiry Team members, logistical revisions, and strengthening cross-network collaborations.

Overall, the data showed that the CCSSO Early Learning NIC facilitated the professional development of all stakeholders through engagement with content experts and support from both the HUB and Inquiry Teams. In addition, the CCSSO NIC project facilitated multi-directional collaboration across the state education agency, school districts and schools grounded in the principles of Improvement Science. As a result, four states are now focused on increasing the effectiveness of instruction and student achievement in early grades, through an examination of the effectiveness of current state policy and assessment of the impact of innovative strategies to increase teacher knowledge and capacity to deliver evidence-based instructional practice in mathematics, literacy and other content areas in the PreK through third grade classroom.

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## Chapter 6: Conclusions and Recommendations

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In this final chapter, we present overarching conclusions about the success of the Early Learning Networked Improvement Community in the context of the six principles of Improvement Science. We also offer recommendations for Phase II of the work relative to establishing a model Early Learning NIC and expansion of the current NIC beyond the partner states in Phase I.

### Conclusions Grounded in the Six Principles of Improvement Science

The goal of the Early Learning Networked Improvement Community (NIC) project was to support teams in four participating states in addressing the problem of practice – giving educators the knowledge and capacity to consistently use evidence-based instructional practices in mathematics and literacy (CCSSO, 2017). More specifically, this project aimed to facilitate collaborations focused on dissecting and analyzing the problem, devising strategies for improvement, enacting those strategies, and then measuring the effect of the implemented changes. In this section, we briefly summarize the data presented in this report and draw conclusions about the implementation of the Early Learning NIC based on the six principles of Improvement Science.

#### Problem-specific and User-centered

The first principle of Improvement Science is “***Make the work problem-specific and user-centered.***” This principle ensures that participants are active contributors and developers, leading to more engagement with the improvement process. Overall, considering their progress

throughout the project, the Early Learning NIC did successfully achieve the goals of this principle.

Although defining a specific aim was a time-consuming process, the aims of all 4 states became quite specific and user-centered by the end of the project. Initially, the states' aims were broad, but they became more targeted and problem-specific as they evolved over the course of the project. Whereas the HUBs initially chose the broad aim for their state during the first and second NIC convenings, the Inquiry Teams helped narrow the aims to be measurable and achievable during the second and third NIC convenings. Therefore, once the Inquiry Teams joined the NIC meetings and became more involved in the project, their contributions served the dual purposes of making the aims more problem-specific while also giving them a sense of ownership over the problem.

Additionally, the aims of all states were user-centered, as they appeared to address the needs of multiple stakeholders. In fact, the majority of Inquiry Team participants reported that they would not change the problem of practice if they had been given the choice because they felt that it addressed a real need in their classrooms and with their students. Moreover, the majority of Coordinating HUB members also reported that they would not change the problem of practice, as they felt it was an important focus for their state and specific district(s).

Although the process through which the specific aims were identified and refined seemed to be influenced by both Inquiry Team and HUB members, as reported by the participants themselves, participants from multiple states also indicated that the Inquiry Team should have been involved in the process earlier and more often. Including teachers in the process of selecting the specific problem would have increased buy-in even further, achieving

the goal of this principle: to ensure that participants are active contributors and developers, leading to more engagement with the improvement process. As one Inquiry Team member said about the NIC convening in Fall 2018: *“It was really helpful to be present as a member of the school-based part of the Inquiry Team. I learned so much about the process from this two day experience.”*

## Variation in Performance

The second principle is ***“Variation in performance is the core problem to address.”*** This principle addresses the critical issue of what works for whom and under what set of conditions, in order to advance efficacy reliably at scale (Carnegie Foundation, 2019). Overall, states did address variation in performance as a core problem. To do this, they used data to examine the problem through the lens of stakeholders and across contexts.

Both the Coordinating HUB and Inquiry Teams collected multiple data sources to examine variation in student performance in all states and within all participating schools. More than half of all HUB members reported examining all available PreK through third grade data collected by the schools and districts, and almost half reported examining all available data for their NIC targeted grade level and/or school- or teacher-provided aggregate data. Some HUBs also reported requesting specific data reports from the district research/data office. By the end of the NIC project, the majority of HUB members reported that the Inquiry Team examined the problem through the lens of stakeholders in the following ways: 1) assessing student needs or defining specific student outcomes to assess; 2) assessing teacher instruction; and 3) discussing the problem among the Inquiry Team.



In addition to examining variation in student performance themselves, the HUB also supported the Inquiry Team in examining student variation within and across classrooms/schools/districts. More than half of all HUB members reported participating in Inquiry Team meetings, conducting classroom observations, and funding access to experts as a means to support the Inquiry Teams in achieving this goal (e.g., this support was described by one HUB member: *“The analysis of data from the COEMET observations in conjunction with the video reflections should provide solid baseline data moving forward”*).

### Systemic Influences

The third principle is **“See the system that produces the current outcomes.”** Because it is difficult to improve what is not fully understood, it is important to observe local conditions and how they shape work processes. The guiding belief behind this principle is that higher levels of educational leadership must view problems in education from the ground up in order to get a clearer view of the system generating the current outcomes. Thus, a primary goal of this evaluation was to detect changes and improvements in within-state communication and collaboration. Overall, there was significant improvement in intra-organizational collaboration among the various levels (state, district, and local) to understand the problem of practice and identify and address the systemic issues inhibiting high quality instruction.

To understand local conditions, HUB members reported improving intra-organizational collaboration to support the local districts around the PoP by creating new social connections, strengthening existing connections, encouraging/facilitating collaborative meetings or discussions, engaging educators, and providing support, resources, or information. In some states, SEA even visited local schools to meet with teachers about their NIC-related work. In

addition, almost half of all Inquiry Team members also reported improving intra-organizational collaboration by strengthening existing connections. All HUB members in 3 of the 4 states unanimously reported that coordination with their Inquiry Team was a true partnership, and 92% of HUB members and 86% of Inquiry Team members reported strongly agreeing or agreeing that the meetings with each other were a productive use of their time. Inquiry Team members unanimously felt that collaborating with state level NIC participants was mutually beneficial, giving SEA a new perspective and giving teachers a broader context for their work.

During the HUB focus groups, a primary theme to emerge from HUB members' discussion around the third principle of Improvement Science was related to lessons they had learned through interactions with local schools and districts: the importance of acknowledging variability across classroom contexts and the importance of close collaboration with local team members. One HUB member said, *"I think having the ability to have these rich discussions with the district and having the focus of the conversations, that was a huge piece...But I think the big accomplishment was coming together as a group and learning from each other."*

To identify and address the systemic issues inhibiting high quality instruction, the Coordinating HUBs used the Driver Diagrams as tools. Almost all HUB members reported soliciting input into the systemic issues identified in their Driver Diagram from, and sharing that information with, a variety of stakeholders, suggesting that the state teams viewed the creation of the Driver Diagrams as a collaborative tool.

Although intra-organization collaboration and bi-directional state-local influences were evident overall, there was also significant variability among states based on the role of leadership in each state. States' progress depended on the investment of their leaders in the

NIC project. For example, one district made more progress than others on their PDSA cycles despite less involvement from their Inquiry Team, presumably due to the strong culture of learning and support from the leadership in this state. This finding is supported by another theme expressed during the HUB focus groups' discussion around the third principle of Improvement Science: the importance of leadership and building capacity in leaders. One HUB member said, *"Leadership matters. A strong, committed leadership team that understands the challenges and that are instructional leaders, as opposed to managers, are necessary for affecting improvement in early childhood classrooms."* During the final NIC convening, Inquiry Team members also voiced the importance of leadership (and leadership buy-in) as a systemic change essential to addressing high quality instruction (see Appendix J).

## Measurement

The fourth principle is ***"We cannot improve at scale what we cannot measure."*** In order to track whether specific changes resulted in improvement, measures of key outcomes and measures of unintended consequences must be part of the process.

During the course of this project, there were two categories of data examined: one was focused on measures of child progress, and the other was focused on measures of teachers' instructional practices. Overall, it seems as though states have successfully integrated formative assessment data of either one or both types into the PDSA process; however, given that states are still in the early phases of enacting PDSA cycles, and that they are each at different stages of this process, it is unclear whether these data were the result of NIC-related instructional changes or simply baseline data to inform future instruction. Therefore, there is not yet clear evidence of the effectiveness of teachers' NIC-related instructional changes, nor clear evidence

that teachers have the requisite knowledge to use data in this way. Additionally, some data from this evaluation suggest the need for more support around teachers' analysis of their data.

States significantly differed in their approaches to data collection and analysis and are progressing at different rates. For instance, one state collected baseline data on student performance using multiple grade-appropriate and quantitative assessment tools. Although they have not yet completed a full PDSA cycle, the HUB has plans to use this baseline data as a means to measure NIC-related improvements in each classroom. Another state collected multiple types of data: they used an observation-based assessment tool to document children's learning over time (i.e., TS Gold), video-recordings of instruction for teachers to self-reflect on their teaching, and an observational assessment for observing early mathematics teaching and environment (i.e., the COEMET). They reported that once the first PDSA cycle has been completed, these data will drive the rest of their process. Another state used TS Gold and teacher surveys; based on the results from these data sources, they made decisions about whether to adapt, adopt, or abandon current change ideas for the next iteration of the PDSA cycle.

Therefore, all states have clearly begun examining at least some formative assessment data to inform instructional changes; however, whether states have progressed to the point where they are able to examine improved student performance data as a result of teachers' participation in the Early Learning NIC is not clear.

## Disciplined Inquiry

The fifth principle is "***Anchor practice improvement in disciplined inquiry.***" Disciplined, systematic inquiry involves iterative cycles of testing change (e.g., PDSA cycles) and learning

from them. All states engaged in disciplined inquiry through the activity of their local Inquiry Teams and the collaboration between the HUB and Inquiry Teams, which involved multiple strategies to address the problem of practice. However, the extent to which the local teams engaged in disciplined inquiry, how often they met, and how much the HUB collaborated and supported the Inquiry Team was variable across the states.

For example, one state Inquiry Team reported meeting weekly, whereas another reported meeting every 2 months. In one state, the SEA solely determined the Inquiry Team meeting agenda, whereas in another state, members reported that teachers contributed to the agenda items. In some cases, HUB members met weekly with the local team and in other cases, they met monthly or every 2 months (and one person said “never”). In all states, teachers (unless part of the HUB) were not brought to the NIC convenings until the third convening in Fall 2018, and so the engagement of the Inquiry Teams with the broader NIC was limited until the later stages of the project. Moreover, when teachers were invited to these meetings, there were not many in attendance (and in one state, no teachers ever attended).

Despite limited involvement during the early stages, the Inquiry Team members in all states enacted multiple strategies to address the problem of practice, and it was clear that their involvement in the NIC project strongly influenced most of the teachers and their instruction. For example, Inquiry Teams used the PDSA to examine their existing practices and select instructional priorities; nearly all HUB members from all states reported that the Inquiry Team collected both classroom observational and local assessment data. Teachers reported doing book studies, helping with the development of new resources, learning from each other through instructional rounds, and receiving extensive training, coaching, and professional

learning opportunities that improved their content knowledge and ability to meet the needs of their students.

Thus, the evidence suggests that all states have certainly commenced the disciplined inquiry process, but there was great variability in the intensity of each state team's efforts, leading to differing amounts of progress in the PDSA cycles. Often, Inquiry Team members stated that it was too early in the process to answer certain questions, even at the end of the Phase I (e.g., *"The inquiry group is just now scratching the surface"*). For example, one state reported on their Scaling Up worksheet that it was *"too early in PDSA cycle to have built confidence in the processes and content; we'll determine this through the process of analyzing data; teachers have expressed uncertainty about what we're doing."*

### Acceleration through NICs (Bringing it to Scale)

The sixth principle is ***"Accelerate improvements through networked communities."*** By capitalizing on the wisdom of crowds (Carnegie Foundation, 2019), more and better learning from the improvement process is possible. In general, all states reported extensive learning from the improvement process as a result of networking within the NIC, and as a result, they felt confident in their ability to scale their work to the next level. However, they also recognized that more relationship building among the states is needed to embrace the true purpose of a Networked Improvement Community; moreover, they felt that it was too early still to scale beyond school-wide expansion (i.e., throughout the entire district or state).

Both the HUBs and the Inquiry Teams discussed during the focus groups all of their key accomplishments to date, and overall they spoke positively about how participation in the NIC was beneficial and a productive use of their time. Inquiry Team members also reported wanting

to bring forward much of what they learned from Phase I into the next new school year. They mentioned the power of team learning through the PDSA process and wanting to share their learnings with others. They also wanted to continue to use data to guide their instruction. Among HUB members, 83% reported feeling confident or very confident in the ability of their state to scale this project to the next level.

However, participants from all states also recognized the need for more cross-state integration to create a true NIC. One Coordinating HUB member commented on the post survey about the overall project impact: *“I hope that this work continues with scrutiny on how to best make the network a cohesive entity (since multiple, distinct sub-units are involved) and not just a gathering of separate state networks. I think more relationship building among the states is needed, and a way to ensure that the theory of improvement is shared among the states (rather than a collection of separate Driver Diagrams).”* When asked how often they had communicated with someone from another state outside of a NIC convening, 66% of HUB members and 86% of Inquiry Team members said they never had. In addition, only 1 person across all states said that they reached out to members of other state teams when they had a NIC-related question or concern.

Given that the progress of Phase I was mostly limited to a local level, it is not surprising that all states believed it was too early to expand district- or state-wide at this stage. When asked at what point their NIC-based work should be brought to scale throughout the entire school, the majority of HUB members said that they would be ready at the start of the next school year; however, the majority also believed they should wait to scale at the district level until a school has data to demonstrate the success of the initiative. In addition, there was much

uncertainty about scaling at the state level, suggesting that scaling at this level has not been extensively discussed or agreed upon at this stage. On the Scaling Up worksheets, one state's HUB reported, *"we are still very small scale right now with the actual changes. While confident in the Improvement Science processes, when it comes to actual innovations produced and readiness for scaling them we are still very much in an emerging stage."*

## Recommendations for High Quality Early Learning Networked

### Improvement Communities

Based on a review of all data sources, the overarching recommendation of the CECEI External Evaluation team is to concentrate on building a robust, high quality, data-driven model within and across the current NIC states prior to expanding the NIC to additional states or establishing a second NIC. In fact, as previously stated, participant data suggest a higher degree of comfort scaling within a school than a district or state, with the majority indicating scaling should be determined based on data demonstrating the success of the NIC initiatives. Therefore, our recommendations are divided into two categories: 1) Establishing a Model Early Learning NIC and 2) Early Learning NIC Expansion.

### Establishing a Model Early Learning NIC

The data clearly indicate participation in the CCSSO Early Learning NIC facilitated increased collaboration between state education agencies, district school systems, and school building personnel. In fact, HUB members indicated they had expanded their own knowledge through their interactions with practitioners. Furthermore, data indicate district and school level personnel increased their awareness of young children's developmental trajectories when



learning mathematics and literacy. Moreover, at the classroom level, NIC participation resulted in the incorporation of small group learning opportunities, or work stations, as the basis of delivering knowledge and practicing skills. However, data indicate that implementation of new and appropriate assessments, as well as evidence-based instructional strategies, are in the early phases of implementation. To date, there are no data that document changes in child outcomes/student achievement as a result of these efforts. As stated by several participants, the work is only in the most initial stage, with a focus on a specific instructional issues, versus the systemic issues addressed in the Driver Diagrams. Moreover, as one participant stated, *“It has shown us that it is important to do things correctly before you scale. The PDSA cycles are showing us improvement, but we are still tweaking and learning from them.”*

Consequently, scaling should be based on evidence of high quality, data-driven instructional role models, who can serve as mentors for those new to the NIC and Improvement Science processes. Therefore, in an effort to support the establishment of a high quality, data-driven Early Learning NIC model, we recommend: increased access to experts with a focus on differentiated, data-driven small group learning opportunities, robust cross-state collaborations, documentation of processes, and an examination of the evidence.

### **Increase Access to Consistent Experts**

The data indicate that access to content experts, notably Drs. Doug Clements and Nell Duke, was a highlight of participants’ NIC experience. Drs. Clements and Duke provided members with critical developmental information on the learning trajectories, as well as an array of evidence-based strategies that were ultimately employed in all four NIC states. However, as previously stated, school-based personnel are in the early phases of implementing

instructional assessments and strategies with which they were previously unfamiliar. As the work progresses to the next phase, it would be beneficial to engage the same experts (preferably Drs. Clements and Duke) for all NIC convenings and to offer grant funding to support state-based consultations by those same experts. Furthermore, participants would benefit from a strong focus on differentiated, small group, meaningful learning opportunities as the basis of data-driven instruction at future NIC convenings. More specifically, attention to providing children with small group learning opportunities that are heterogeneous in structure and include opportunities for peer modeling and teaching could likely move teachers toward high quality, data-driven instructional practices. Furthermore, guidance on the development of small group learning opportunities with high level, on-task engagement, which are used as formative assessments, will allow NIC teachers to elevate their instruction to the levels one would expect in a model Early Learning NIC. Additionally, one HUB member suggested including a researcher from a local university on the HUB and/or Inquiry Team to increase within-state support for educational reforms and to bring the work of the state/district/school into the higher education arena, notably within teacher education programs.

### **Facilitate Robust Cross-state Collaborations**

Data indicate that the cross-state sharing opportunities were highly valued by NIC participants, with the exception of the only state that solely focused on literacy. Even then, that state articulated a strong desire to add a state to the NIC with a focus on literacy so that they too could benefit from the collaborative process. However, evaluation data also indicate there was limited cross-network collaboration outside of the CCSSO NIC convenings. During the small group activity at the final NIC convening, participants indicated a systemic change essential to

addressing high quality instruction is the creation of a peer teacher learning community both within and across NIC states. Therefore, we recommend that cross-state collaborations should be an expectation of NIC participation and, therefore, supported with a robust infrastructure. Moreover, as suggested by one respondent on the post survey, there should be an increased focus on relationship-building across states to increase the likelihood of true, non-NIC convening, collaboration.

One such structural change would be the inclusion of an Inquiry Team member (as the state co-lead) in the monthly project calls between the CCSSO Project Associate and state team representatives. Having the perspective of an Inquiry Team member would ensure the practitioner voice is represented in all discussions and decision-making. Furthermore, having an Inquiry Team member on the calls will likely increase the transmission of the information to Inquiry Team members relative to NIC convenings, evidence-based practices and Improvement Science. In addition, we recommend seeking ways to obtain state level updates outside of monthly calls so those meetings can be substantive, conversational, and collaborative in nature (e.g., problem solving, sharing of successes/challenges/advice).

As modeled by one NIC state, 'virtual rounds' are a powerful means of engaging multiple people in a classroom observation regardless of their geographic location. Therefore, virtual rounds could be included as an expectation of continued NIC participation, perhaps starting with one observation per state for Phase II of this project. In the event some are unable to join the observation and discussion live, the recording could be saved and posted for later access.

Cross-state collaborations would be greatly enhanced through opportunities for all team members to engage with each other via a discussion board, webinars, and direct

communications. Establishing a moderated discussion board affords members, across states/districts/schools, the opportunity to both post and receive NIC-related information according to their own schedules. Quarterly webinars on topics identified by NIC participants would bring people together across states/districts/schools to learn about and discuss assessment and instructional strategies. Webinars could include experts and/or serve as networking opportunities for NIC members. In addition, Inquiry Team members requested access to a master list of NIC participants to more easily facilitate cross-network collaborations across states/districts/schools. Lastly, participants requested the inclusion of team building activities at NIC convenings to foster the establishment of cross-state, HUB, and Inquiry Team level relationships.

### **Document NIC-related Processes**

Several NIC participants indicated that they would have benefitted by hearing from and interacting with other educators who had successfully navigated the PDSA cycles, notably around their processes and procedures. Therefore, we recommend that NIC participants in Phase I of this work be supported in documenting their process as part of Phase II. This documentation would address their use of Root Cause Analysis, identification of the Problem of Practice, data collected and analyzed, as well as overall learnings and suggestions for new states/districts/schools. Fully documenting the process and progress was seen as an important step in building a sustainable PDSA process for scaling within a grade level, school, district, or state. Moreover, such documentation could be the basis of developing criterion for school/classroom participation, thereby addressing teachers' concerns that they were unprepared for the level of work required in this project.

To minimize the burden on a school/district/state, this information could be prepared in the form of a PowerPoint presentation (rather than as a report), which can be shared with current and future NIC participants. Alternatively or additionally, CCSSO might contract with a consultant to create a case study of the NIC process, which could be used for future projects.

### **Examine Evidence**

Given that awareness and implementation of evidence-based instructional strategies do not guarantee student achievement, it is important for Phase II of this work to include a focused examination of the evidence in the form of student achievement data. This point was affirmed in the October 2018 NIC convening evaluation data where respondents requested support around data evaluation. The point was also affirmed in the post survey where the majority of respondents believed scaling at the district level should be determined based on data supporting the effectiveness of NIC-related instructional strategies and assessments.

More specifically, NIC members would benefit from a deeper dive into data analysis as the basis of instructional planning. In fact, one HUB member suggested a data analyst be included on each HUB team. Responses from HUB and Inquiry Team members on the post survey also suggested support for using data from Phase I as the basis of determining when and how to scale the project within a school/district/state.

Moreover, site visit observational data suggest that teachers would benefit from a scaffolded examination of their own formative assessment data in order to plan responsive instruction, notably around small group learning opportunities. Modeling of this process, with non-NIC-related data, would be an important first step. Evidence suggests that teachers are more likely to implement changes on a sustained basis when their learning experiences are

personalized for their own classrooms. Therefore, a portion of a NIC convening could be focused on data analysis, with time allocated for small group, cross-state, (de-identified) data sharing and analysis.

As previously stated, one NIC district incorporated ‘virtual rounds’ as a professional development strategy for the members of their Inquiry Team. This same approach could be used to facilitate classroom observations followed by a discussion focused on the formative assessment aspect of the lesson, with an eye toward instructional planning the next day and week.

### **Early Learning NIC Expansion**

As previously stated, we recommend that the expansion of the Early Learning Networked Community, either by adding states or establishment of a new NIC, be based on evidence of success for those states/districts/schools participating in Phase I of this project. Beyond that overarching recommendation, we have drawn upon all evaluation data sources as the basis of our recommendations relative to NIC expansion: early engagement of Inquiry Team members, logistical revisions, and strengthening cross-network collaborations.

### **Early Engagement of Inquiry Team Members**

The majority of Inquiry Team members believed that teachers should be actively involved in the NIC processes as early as possible. Consequently, the recommendation is to include teachers on the HUB team from the onset of the new project. In order to implement this process, one suggestion was for CCSSO to identify the content area of focus as a means of recruiting states/districts/schools to participate in the NIC project. In that case, all states would focus on either mathematics, literacy, social emotional development, or another content area.

A further suggestion was for states to be encouraged to identify high-level SEA members who have the authority to effect change and who would commit to the project for the duration. Another suggestion was for districts to be guided to identify innovative, committed teachers/specialists to participate from the beginning of the project. It was believed that early participation of teachers in the NIC process would engage teachers in identifying the drivers of the Problem of Practice, which would likely result in greater ownership on the part of the Inquiry Team and make the process more meaningful (while adhering to the Principles of Adult Learning Theory).

### **Logistical Revisions**

Our data indicate a preference for more advanced planning around all aspects of the NIC project. More specifically, two common themes that were expressed by many participants in the focus groups were: providing new NIC members with sufficient information early in the process (such as pre-work, Driver Diagram explanations, examples of PDSA cycles from other states, models, and free online courses on Improvement Science), and starting the process early enough to give teams sufficient time to collaborate.

Where possible, identify and inform participants of all meeting dates for the entire academic year well in advance. Secure consistent content experts for all NIC convenings to ensure consistent messaging and eliminate the need for states to have to orient new experts to their NIC-related work. In addition, explore the possibility of rotating meeting locations to minimize the travel time and burden on states that come from the greatest distances. Plan a meeting agenda that consistently includes education-based examples of NIC processes and

successes (e.g., case studies, presenters with lived NIC experiences) and provides opportunities for cross-state problem solving.

An additional recommendation is to establish a clear line of communication between and among all stakeholders (e.g., CCSSO, HUB members, district personnel and school-based personnel). As evidenced by Inquiry Team members' inability to define Improvement Science, reliance on HUB members to transmit important content and research information to Inquiry Team members was problematic. Finally, the establishment of group norms for communication (across all forms) at the onset and at each convening will increase the likelihood that all voices are heard, messages are respected, and all are engaged in the process. Although few in number, there were Inquiry Team respondents who felt they were not heard and even one who felt disrespected/dismissed by a member of the SEA.

Lastly, engage current HUB and Inquiry team members in the NIC recruitment process. There are multiple examples of successes in the current NIC, where the principles of Improvement Science were followed as the means through which policies were examined and instruction became evidence-based. Hence, including participants in the recruitment process will not only provide actual examples of success but encouragement from those who have experienced the process.

### **Strengthen Cross-Network Engagement**

As stated in the first part of the recommendation section (facilitate robust cross-state collaborations) NIC participants in Phase I valued the opportunity to engage with other states around their shared Problems of Practice. In addition to having state co-leads (one HUB member and one Inquiry Team member), utilizing virtual rounds, establishing a discussion



board, and offering webinars, future networks should be constructed to ensure that all or at least two or more states share the same content area in the PoP.

Finally, if states join an existing NIC, a formal onboarding process would be an important first step. That process would include a solid grounding in Improvement Science and consultation with the relevant (mathematics or literacy) expert. Our data also suggest a new state would benefit from CCSSO staff facilitating a partnership with another state's HUB and school's Inquiry Team, both of which could mentor the new state through the processes.

In conclusion, the evaluation data reflected in this report strongly suggest participants grew as professionals as a direct result of their participation in the NIC project, resulting in an increased focus on the effectiveness of instruction and student achievement in the early grades, as well as an examination of state/district policies. The aforementioned recommendations do not diminish that finding. Instead, the recommendations are intended to expand and highlight the accomplishments of the original NIC states/districts/schools while at the same time sharing the perceptions and experiences of participants in an effort to inform the future phases of this work.

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