

# Implementation Strategies for Systems Change: Insights and Lessons Learned

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## INTRODUCTION

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The Effective Implementation Cohort (EIC) initiative, funded by the Bill and Melinda Gates Foundation, was designed to support effective implementation of a high-quality middle school math curriculum in Local Education Agencies (LEAs) across 7 states. As a Learning Partner, the National Implementation Research Network (NIRN) supported the partnerships between providers and school districts in their implementation and measurement efforts. Critical to these efforts is understanding the use and impact of the implementation strategies deployed across system levels to build implementation capacity and increase curriculum uptake.

### LEARNING QUESTION 2 OF 4:

 APPLICATION OF ESTABLISHED PRACTICE

 ENABLING CONTEXTS

 VARIABILITY IN IMPLEMENTATION

 MEASUREMENT

NIRN sought to gain insights into the quality, effectiveness, impact, and key lessons learned related to these strategies using mixed data from a survey and focus groups. The survey was designed to assess the quality and effectiveness of 57 individual strategies, across 7 ERIC-informed strategy clusters, based on responses from the 19 district-provider dyads. The five focus groups, including two sessions with providers and three sessions with districts, aimed to obtain information on the types of strategies used, positive and negative experiences with these strategies, perceived impacts, and lessons learned. Focus group attendees represented 8 curriculum provider organizations and 12 school districts. This brief summarizes what was learned about the implementation strategies used to build implementation capacity for effective curriculum uptake as part of the EIC project.

STRATEGY CLUSTERS	
	<b>Implementation Supports</b> Professional Learning, Coaching, Communities of Practice, Tools and Resources
	<b>Program Integration</b> Navigating politics and priorities, Communication, Adaptation
	<b>Program Recipients Engagement</b>
	<b>Cultivating Relationships</b> Leadership and champions, Teams, Partnering
	<b>Implementation Infrastructure</b>
	<b>Data</b> Data design/development, Data collection, Data analysis/use/reporting
	<b>Financial Incentives</b>



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# ABOUT THE USE OF IMPLEMENTATION STRATEGIES



**Insight #1: All strategies were rated highly in terms of quality and effectiveness.**

Across the 19 district-provider dyads (N=120) based on a 5-point Likert scale survey (for quality, ranging from “very poor,” to “exceptional”; for effectiveness, ranging from “not at all effective” to “extremely effective”). Overall, the average score for quality ranged from 3.6 to 4.1, and for effectiveness from 3.1 to 3.7 (see Table 1).

**TABLE 1: QUALITY AND EFFECTIVENESS OF STRATEGIES – SURVEY DATA**

	Quality		Effectiveness	
	Mean	SD	Mean	SD
Implementation Supports	4.11	0.34	3.71	0.39
Program Integration	3.89	0.58	3.64	0.60
Engagement	3.62	0.51	3.14	0.90
Cultivating Relationships	3.90	0.58	3.74	0.60
Implementation Infrastructure	3.93	0.47	3.56	0.63
Data	3.97	0.39	3.57	0.53
Financial Incentives	4.08	0.38	3.67	0.56
<b>Average Across Strategies</b>	<b>3.93</b>	<b>0.35</b>	<b>3.58</b>	<b>0.47</b>



**Insight # 2: Any strategy in isolation of others will not be effective.** For example, offering PL in isolation of any follow-up through coaching or other types of support will not have the desired impact.

- What makes a difference is access to a package of implementation strategies. There was consensus that a system-wide, multi-level, integrated package of strategies was most successful.

For instance, one provider highlighted the four types of supports that were believed to be impactful when working with districts and schools: intensive, side-by-side coaching with school leaders twice a month; less intensive coaching with school leaders twice/year; a community of practice, with fewer touchpoints and a broader audience; and district support for system change.

One of the districts described its approach to capacity building, which involved partners working with administrators and principals while districts and partners focused on school coaches. School coaches then worked with teachers in the classroom.



**Insight #3:** To be effective, **strategies need to be tailored and contextualized.**

- Operationalization of specific strategies need to be considered and carefully thought through.

For instance, incentives provided directly to teachers to attend PL events were not always effective; however, providing incentives to teacher leads or champions, who then encouraged other teachers to participate in PL, seemed to have a positive impact.

- Effectiveness of strategies is dependent on contextual factors serving as implementation barriers or facilitators (see BOX 1).

For instance, if leadership was stable, taking a “top-down approach” (i.e., ensuring involvement from leadership) alongside a “bottom-up” approach (i.e., involving the teachers) facilitated curriculum adoption; however, in districts with leadership turnover, providers identified a “bottom-up” approach (i.e., starting with the teachers) as much more effective.

**BOX 1: THE IMPORTANCE OF CONTEXT FOR EFFECTIVENESS OF IMPLEMENTATION STRATEGIES**

Contextual factors impacting the effectiveness of implementation strategies included competing commitments, school size, union rule, initiative fatigue in schools, lack of staff (e.g., ratio of coaches to teachers), turnover at all levels and changes in leadership, teacher burnout.

Below are examples of how districts and providers adapted implementation strategies to address challenges and contextual conditions:

In response to the challenges associated with timing of PL delivery (e.g., voluntary, on Saturdays), interviewees identified creative solutions including: (1) having PL during the workday with administrators covering for teachers while they were out of the classroom for their PL session; (2) using student feedback as incentives for teachers to attend the PL sessions; (3) using incentivized teacher champions to encourage teacher participation in PL.

The approach to delivering PL was adjusted based on lessons learned. For instance, one district focused on ensuring that leaders and administrators received PL on the curriculum first, with the hope that the information would be tricking down to the teachers. When this did not happen, the district changed its PL strategy to focus on building teacher capacity.



**Insight #4:** There are **benefits and drawbacks** to all of the strategies, hence the need for a comprehensive approach; for instance, the fastest growth was observed as a result of intensive one-on-one coaching for teachers; however, providing this type of coaching resulted in only a small number of schools impacted.

- When asked about the strategies with the largest payoff, districts/schools and providers identified the following (1) a comprehensive, integrated implementation infrastructure, (2) coaching and PL, and (3) data strategies (e.g., walk-through observation data). Districts/schools also emphasized the importance of having a shared vision (program integration strategy), having access to tools and resources (implementation supports strategy), and developing a community of practice (implementation supports strategy). Providers added the need to work with decision-makers at the district and school levels (cultivating relationships strategies) as a critical precursor of implementation (see BOX 2).

#### BOX 2: STRATEGIES IDENTIFIED AS HAVING THE LARGEST PAYOFF

##### DISTRICTS:

- **Data strategies** – data collection strategies using the preferred methods, such as walkthroughs, classroom observations and coaching cycles; and using those data for multiple purposes
- **Coaching** – across levels of the system (including one-on-one coaching of teachers)
- **PL** – across the levels of the system, with continued opportunity for professional growth offered to teachers in particular
- **Sharing of tools and resources** – including instructional strategies to support use of the curriculum
- **Community of practice** – learning with and from each other
- **Program integration** – vertical alignment through shared vision, shared planning

##### PROVIDERS:

- **Data strategies** – use of data for multiple purposes
- **Coaching** – one-on-one intensive coaching was the most impactful for behavior change of teachers
- **PL** – offered during weekdays, with substitutes for teachers or administrators filling in for teachers in the classrooms
- **Cultivating relationships** – engaging the right level of leadership, meaning those who can influence others; ensuring that decision makers are part of the implementing teams; and obtaining buy-in from teachers
- **Implementation infrastructure** – A system-wide, multi-level, A system-wide, multi-level, and integrated implementation approach



**Insight #5: Strategies are interrelated and impact each other's effectiveness** –

the potential for impact hinges on a complex set of influences among implementation strategies.

- For instance, the use and sharing of data impacted navigating politics and priorities across the system. Including student feedback as part of the data collected influenced involvement in PL held on Saturdays for teachers and changed how the districts approached student engagement.
- Cultivating relationships, champions, and leadership through the identification of a district champion or lead was instrumental to support program integration through priority alignment.
- Navigating politics and priorities (e.g., shared vision, communication) impacted the entirety of the implementation structure and supports needed across levels of the system.



**Insight #6:** A number of **best practices** emerged around each of the implementation strategies (see Appendix – Table 2).

- For instance, PL delivery was reported as being particularly effective when enacted as joint sessions (with teachers, principals, coaches) during the work day.
- One-on-one intensive coaching was most effective, assuming a reasonable coach-to-teacher ratio, with a preference for school-embedded coaches.
- Student engagement occurred as part of the math instruction by the teachers, but also through the provision of feedback and formation of student councils, which served to prompt changes in teachers' and districts' mindsets and behaviors.
- Data served multiple purposes as a strategy, including tailoring capacity building and supports, monitoring progress, demonstrating impact, facilitating communication, encouraging co-learning, shifting behaviors and mindsets, and scaling curriculum adoption.



**Insight #7: Strategy gaps** were identified that should be included in a package of implementation strategies.

- Teachers need additional PL to support students who are not at grade level or have instructional gaps. Guidance was requested on how to intervene without impacting the curriculum and still align with the core instructional strategy.
- Concerns were expressed around the lack of time (with the project only being 3 years) to discuss, review, and enact sustainability strategies.

# ABOUT IMPACT OF IMPLEMENTATION STRATEGIES

## IMPACT ON STUDENTS

- ✔ Increased math proficiency with additional years of implementation
- ✔ Increased engagement of students with math

*“It [Implementation strategies] has shifted the way that students work in the classroom. Teachers, as I like to say, are the facilitators in the classroom.” (District)*

*“We conducted cross campus peer observations, where schools visited each other, and the teachers and the principals went into classrooms to see Eureka math being used. That was really powerful. Teachers were actually seeing other teachers. I think the process either validated some of their feelings, or they walked away with some strategies that they could use in their classroom.” (District)*

## IMPACT ON TEACHERS

- ✔ Increased buy-in and motivation to make behavioral changes related to curriculum adoption
- ✔ Increased understanding of the math curriculum content
- ✔ Increased confidence and capacity to deliver the math curriculum
- ✔ Changed mindsets related to math instruction (student-centered classrooms, encourage math discourse among students)
- ✔ Increased connections with other teachers both within and outside their schools, as well as with leadership and administration
- ✔ Enhanced relationships between teachers and students

*“[Having the right data is] invaluable, not only for a school leader to learn what their role is and shift their implementation, but the most important thing is shifting the mindset of the people above the principals. Reflecting and changing the way they work with schools is essential.”*  
(Provider)

## IMPACT ON ADMINISTRATORS/PRINCIPALS

- ✔ Increased understanding of the math curriculum content and what it takes to deliver it effectively
- ✔ Increased buy-in related to curriculum adoption
- ✔ Changed mindsets related to math instruction

## IMPACT ON SYSTEMS AND STRUCTURES

- ✔ Increased integration into the system
- ✔ Behavioral shifts across the system
- ✔ Changes in mindsets across the system
- ✔ Impact on curriculum adoption

*“The biggest potential for impact is district implementation and systems change work which is the hardest to move.”* (Provider)

*“The leadership behaviors of using data that is the long game towards better student data. That kind of shift is a massive behavioral shift.”*  
(Provider)

*“What we saw was the organic nature of teachers. After we packed up, they’re [the teachers] still conversing and sharing strategies with each other and talking about students. That was to me where the real extra learning was happening. After you were done, you hope that those relationships will continue.”* (Provider)

## IMPACT ON SUSTAINABILITY

- ✔ Increased motivation and commitment of teachers to implement the curriculum beyond the project through the community of learning (by having teachers own the curriculum and connect with each other and administration. Teachers are now coaching themselves) (districts, providers)
- ✔ Increased buy-in, demonstrated growth across the system, and presence of teacher mentors increased likelihood of sustainability (providers)



## ABOUT THE KEY LESSONS LEARNED

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**Lesson #1:** Districts and providers emphasized the **need to adopt a planned and structured approach to implementation** (e.g., timelines, schedule of meetings, implementation plan) as a way to ensure success. They agreed that implementation is a long journey that involves hard work, including changes in mindsets and ways of working, thoughtful allocation of resources, a team effort, and careful planning. One of the keys to success is consistency, with the understanding that it is critical to take the time to plan upfront to be able to increase efficiencies later (“go slow to go fast”).



**Lesson #2:** Districts noted the **importance of external partnerships** with providers and others who can serve as thought partners, facilitate strategic planning and visioning, and help navigate politics and priorities. The intentional selection of these partners was raised as a facilitator, with the willingness to engage in co-design as key to a successful collaboration. Also noted was the time commitment required for these partnerships to ensure alignment with district and school needs.



**Lesson #3:** The importance of **working across classrooms and districts**, with intentional purpose and touchpoints, was highlighted as an important lesson learned for districts. Being able to learn from each other, having teachers observe other classrooms, and creating cross-system collaboratives strengthened buy-in, learning, and capacity development. Providers specifically identified cross-sharing of data demonstrating the impact of the support received (e.g., coaching) as a strategy to encourage other districts to get involved with this work.



**Lesson #4:** The need for **a shared vision (that aligned with the curriculum), effective communication across levels, and growth mindsets**, all of which enhanced buy-in and commitment to the change, were emphasized by districts and providers alike. Buy-in from leadership was facilitated by administrators observing firsthand how the curriculum translated into practice (e.g., through classroom walks). Teachers’ commitment was best achieved by highlighting the components of the curriculum that aligned with their vision of the ideal classroom and having them internalize those components.



**Lesson #5:** The need to **tailor strategies to the needs of the recipients** was identified as a key insight. For instance, one provider stressed the importance of slowly building teacher capacity through feedback and data rather than telling them what to do; followed by a gradual release to encourage internalization of commitment and continuous change. Another emphasized the importance of tailoring coaching to individual teachers' strengths and weaknesses. Accountability for any resulting behavioral change should be encouraged through follow-up coaching sessions.



**Lesson #6:** There was recognition that **cultivating relationships, connecting as humans, and learning from each other** was just as important as having an implementation process to move the work forward. Relationship building had to occur at all socio-ecological levels of the system - between individuals (e.g., teacher-provider, teacher-student), between teams, and between levels of the system (e.g., districts-schools) - and across all groups and roles (administrators and leadership, principals, teachers, students, caregivers). Establishing a web of relationships was identified as a key strategy, especially in light of unexpected challenges (e.g. turnover).



**Lesson #7:** Districts noted the importance of remembering that **students were the intended focus and beneficiaries** of this work. When adopting a new curriculum, students should be at the center of the decision-making process. Parents need to be brought back into the "village of learning" and should be incentivized to work with teachers. Participants repeatedly noted the need for teachers to be provided with student feedback as a way to get motivated and make improvements to their practice.

# APPENDICES

**TABLE 2. EFFECTIVENESS OF IMPLEMENTATION STRATEGIES (BY ROLE) - FOCUS GROUPS DATA**

	What worked?		What did not work? Why?	
	Districts/Schools	Providers	Districts/Schools	Providers
<b>Support Strategies - PL</b>	Multi-level and/or joint approach to PL (teachers, principals, coaches) – with extra training on administrators on how to support teachers – to ensure implementation of shared vision, build buy-in, and impact changes in mindsets	Facilitated through use and sharing of data (especially if student voice/feedback was included for teachers)	PL delivery susceptible to a number of challenges (e.g., union rules, teacher shortages and burnout)  Timing of PL problematic (e.g, voluntary on Saturday with mixed results)  “Train-the trainer” model with reliance on administrators as the trainers does not work	PL delivery susceptible to union rules (only on Sat), resulting in limited attendance (given inability to mandate participation)  PL delivery in isolation, without follow-up or coaching  Offering PL short-term
<b>Support Strategies - Coaching</b>	One-on-one coaching for the teachers  Tailoring coaching to the specific needs of the teachers  Building a coaching framework or system (e.g., coach the coaches, and have the coaches coach the teachers)	Intensive monthly or twice a month side-by-side coaching with school leaders, with less intensive coaching with school leaders twice/year, alongside communities of practice and district support for system change were most impactful  Coaching of school-based embedded coaches  One-on-one coaching seems impactful regardless of modality  Coaching needs to happen across multiple layers of the system (horizontal and vertical)	Effective when there are a sufficient number of coaches available	Over reliance on coaches is problematic given the challenges of coaches-to-teachers ratio
<b>Support Strategies - Community of Learning</b>	Providing opportunities to learn together (teachers, principals, coaches) and from each other (e.g., cross campus classroom observations) to facilitate buy-in and sustainability	Providing support through a community of practice across the system		

	What worked?		What did not work? Why?	
	Districts/Schools	Providers	Districts/Schools	Providers
<b>Support Strategies - Tools and Resources</b>		NIRN-provided implementation planning tool		
<b>Engagement strategies for curriculum beneficiaries (students and families)</b>	Focused on student engagement in the classroom with the math curriculum to increase buy-in with the teachers and create cycle of reinforcement	Importance of involving student feedback as a mechanism for prompting teacher behavior change  Forming student council groups, obtaining student feedback, as a way to making them feel engaged and change district approach to student engagement		Lack of beneficiaries involvement, including students and their families, when deciding to adopt the curriculum impacts curriculum adoption
<b>Program integration strategies - Navigating politics and priorities</b>	Adopting a shared vision (districts, schools) to facilitate buy-in, ownership in classrooms, and serve as a foundation for building the infrastructure for implementation of the math curriculum	Collaborative approach to the work facilitates delivery of implementation strategies in support schools and teachers  Ensuring a shared vision and alignment of priorities with curriculum implementation  Creating accountability mechanisms of district and school leaders	Leadership turnover often made navigating priorities and politics a consuming challenge	Inability to engage instructional leads and principals in simultaneous activities (i.e., together)
<b>Program integration strategies- Communication</b>	Create a communication plan for all levels of the system			Providing supports to supervising principals first as a strategy to ensure consistent messaging to teachers
<b>Program integration - adaptation</b>	Tailoring to supports occurred as a result of data use strategies	Tailoring of strategies to needs of districts/ schools		

	What worked?		What did not work? Why?	
	Districts/Schools	Providers	Districts/Schools	Providers
<b>Cultivating relationships - Leadership and Champions</b>	Identifying a math champion at the district level	<p>Cultivating relationships and identifying champions across the board</p> <p>Identifying the right district leader</p> <p>Having teacher leads or champions</p>		<p>Effectively cultivating leadership and champions hindered by leadership turnover</p> <p>Waiting too late to identify champions</p> <p>Selecting the wrong champions, ie. who are unable to make decisions, understand context and priorities, or use evidence-based information to make decisions</p> <p>Lack of involvement from leadership impacted ownership of the curriculum change (in this case, due to COVID)</p>
<b>Cultivating relationships -Partnerships</b>		Providing opportunities for district-level staff to engage with providers and the work in the classrooms through walkthroughs	Partnering with providers requires considerable amount of time and energy – sometimes it is easier to build capacity in-house	<p>Over-reliance on contractors from curriculum vendors to provide supports – needs to be gradually shifted to staff internal to schools</p> <p>Inability to provide opportunities for district-level staff to engage with providers</p>
<b>Cultivating relationships -Teams</b>	Cross-functioning implementation team (with voices from all levels of the system)		Implementation teams are challenging to stabilize (e.g., turnover)	

	What worked?		What did not work? Why?	
	Districts/Schools	Providers	Districts/Schools	Providers
<b>Data strategies – Data collection</b>	<p>Focus on indicators, walkthroughs/ observations as data methods to (1) facilitate understanding of the day-to-day of implementing math curriculum and help understand the educational practices in action; and (2) build buy-in, involvement, and support (e.g, walkthroughs with principals and leadership team)</p> <p>Instructional rounds and cycles to facilitate understanding of the change in mindset required from teachers (from teacher-focused to student-focused classroom) and encourage teachers in their efforts to implement the curriculum</p>	<p>Cycles of learning conducted by coaches in schools to collect student artifacts</p>	<p>Caution around selecting too many indicators and data sources without prioritizing</p> <p>Data collection without involvement of the school administrators</p>	
<b>Data strategies – Data Analysis, Use and Reporting Strategies</b>	<p>Use of data and feedback to inform and tailor capacity building strategies for the coaches, principals, and teachers</p> <p>Creation of data tools and methods (e.g, data dashboards, apps) to monitor progress and success</p> <p>Use of data strategies to assess impact of curriculum on students, teachers, and administrators</p>	<p>Ability to triangulate data across different activities to gain broad understanding</p> <p>Data use as a strategy to facilitate communication and sharing around curriculum implementation</p> <p>Data use as a strategy to monitor progress and tailor supports provided</p> <p>Data use as way to demonstrate impact and encourage buy-in</p> <p>Data use as a strategy to encourage cross-school learnings, community of practice</p> <p>Data use as a strategy to shift behaviors (especially certain indicators)</p> <p>Data use as a scaling strategy through demonstration of impact (to other schools)</p>		

	What worked?		What did not work? Why?	
	Districts/Schools	Providers	Districts/Schools	Providers
<b>Implementation Infrastructure strategies</b>	A system-wide, multi-level, integrated, vertical and horizontal implementation infrastructure, with teaming across levels	<p>A system-wide, multi-level, integrated, vertical and horizontal implementation infrastructure</p> <p>Clearly articulated program implementation approach and infrastructure (e.g., roles, responsibilities)</p> <p>Developing implementation systems that consider the end user</p>		
<b>Financial strategies</b>		<p>Incentives for data collection</p> <p>Incentives for teacher leads (facilitated continuous PL of other teachers)</p>	Incentives across the board was not effective	Incentives for teachers with stipends to attend PL on Saturdays insufficient as a strategy