REFLECTIONS AND RECOMMENDATIONS:

INSIGHTS FROM THE EIC TEAM'S THREE-YEAR JOURNEY IN MATH CURRICULUM IMPLEMENTATION

SEPTEMBER, 2024

EIC Project Team

INTRODUCTION

The National Implementation Research Network (NIRN) employs a science-based, practical approach to bridge the gap between research and real-world application. We focus on improving outcomes across various human services by effectively implementing evidence-based practices. In 2020, NIRN received funding to launch the Effective Implementation Cohort (EIC) project to effectively enhance school districts' capacity to implement high-quality middle school math curricula. By focusing on districts with a significant population of Black, Latino/a, and English Learner students, the project sought to accelerate learning outcomes for these traditionally underserved populations.

The EIC consisted of two phases. Phase I (2020-2021) focused on implementation planning and creating readiness to implement a high-quality middle-years mathematics curriculum. During Phase II (2021-2024), NIRN provided implementation support to technical assistance (TA) providers and 20 local education agencies (LEAs) to answer the investment's learning questions within the cohort-wide learning agenda. The NIRN EIC team includes several diverse experts, including implementation specialists, researchers, and educators, who bring many perspectives and experiences to the project. This diversity is instrumental in ensuring the team's approach is grounded in rigorous research and practical implementation knowledge. By combining academic expertise with real-world experience, the EIC team is uniquely positioned to enhance our partners' capacity to implement high-quality curricula and improve math education for Black, Latino/a, and English Learner students. This multifaceted approach highlights the team's commitment to a comprehensive and equitable approach to educational improvement.

This brief is a compilation of what was learned over the last three years from the perspectives of the diverse team members at NIRN working on the EIC project. In June 2024, the team reviewed the extensive data obtained during Phase II. The reflection process required the EIC team to investigate data, identify individual biases, and reflect on the team's experiences as researchers, evaluators, and practitioners. The elements of this brief are to be considered not only as reflections but also as potential recommendations for future funders, technical assistance providers, and district/building-level teams.

It is the hope that funding organizations and agencies can use this information to make informed decisions about resource allocation and support structures that will enhance the effective implementation of high-quality math curricula, as well as ensure that investments are directed toward initiatives with a demonstrable impact.

For TA providers, the brief offers valuable insights into the successes, challenges, and gaps in implementation. By familiarizing themselves with these insights, TA providers can tailor their support services to better meet the needs of schools and districts, ultimately leading to more successful adoption and sustained implementation of high-quality instructional material. This knowledge enables TA providers to design and deliver support programs (e.g., professional learning, systems coaching, internalizing of the curriculum) that are both relevant and impactful.

District/building-level administrators and teams will find the information particularly useful as it outlines specific elements that are critical to the implementation of high-quality math curricula, including, but not limited to, the importance of a multi-team approach, collecting and using implementation data, conducting improvement cycles, and the need to identify high-quality support that meets their identified needs.

LESSON LEARNED:
A COHORT MODEL APPROACH TO IMPLEMENTATION LEARNING

The number and diversity of provider-LEA dyads in the EIC allowed a primary strength of the initiative to shine: a cohort model approach to implementation learning. This approach facilitated a variety of intentional and ongoing opportunities for dyads to connect, share experiences, and learn collaboratively with one another throughout their implementation journey. Relationship building is vital to successful implementation and requires intentional effort. As a central convener in the EIC, NIRN co-designed these opportunities to foster relationships and shared learning between dyads. Dyads expressed that these opportunities for networking and connection were highly valuable to their overall understanding and application of implementation, and that learning from LEAs, both similar and different from their own, was beneficial. Several dyads who cultivated relationships with one another through the cohort remain connected today. Engaging in these cross-dyad interactions complemented the tailored technical assistance delivered by NIRN implementation specialists throughout the project. The individualized support and cohort model approach to learning created a path for improving the implementation of high-quality middle-year math curricula in the EIC.

Three central opportunities for cross-dyad connection were offered in the EIC:

Annual Convenings

Cohort-Wide Learning Sessions

Deep Dive Implementation Partnership Sessions

Annual Convenings

In 2023 and 2024, NIRN conducted two multi-day annual convenings in San Diego, CA, and Austin, TX. Implementation teams from each of the 20 dyads attended in person or virtually and engaged with one another through various sessions, activities, and discussions. The convenings celebrated implementation successes, lifted challenges, encouraged collaborative problem-solving, and fostered relationship-building between dyads. Students from participating districts were invited to the convening to share their ideas on improving math learning during panel discussions and actively participated in breakout sessions with dyad teams. During these sessions, students expressed a desire for more hands-on activities and real-world applications in their math classes. This feedback resonated deeply with the dyad teams working diligently to develop more engaging and relevant math lessons. Feedback from the dyad implementation teams expressed that the convenings were a valuable experience for collaborating with others in the cohort, learning about implementation concepts, and taking new insights home to apply to their work.

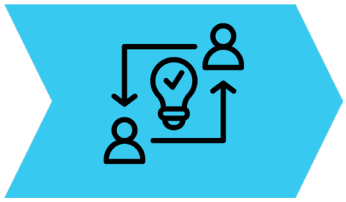
Cohort-Wide Learning Sessions

NIRN held twelve virtual learning sessions for dyads to grow their knowledge of active implementation while continuing to strengthen their connections with each other. Learning sessions provided didactic instruction on a series of frameworks, tools, and resources for effective implementation and purposeful pairing of dyads to network, connect across contexts, and discuss their learnings. Dyads applied the implementation tools, resources, and strategies in practice, sharing their experiences and reflections with the cohort at subsequent learning sessions. Topics of the sessions were as follows:

YEAR ONE

Implementation Teams, Measuring Capacity, Addressing Barriers, & Collaboration

YEAR TWO



Data Discussions, Communications, Teaming, & Sustainability

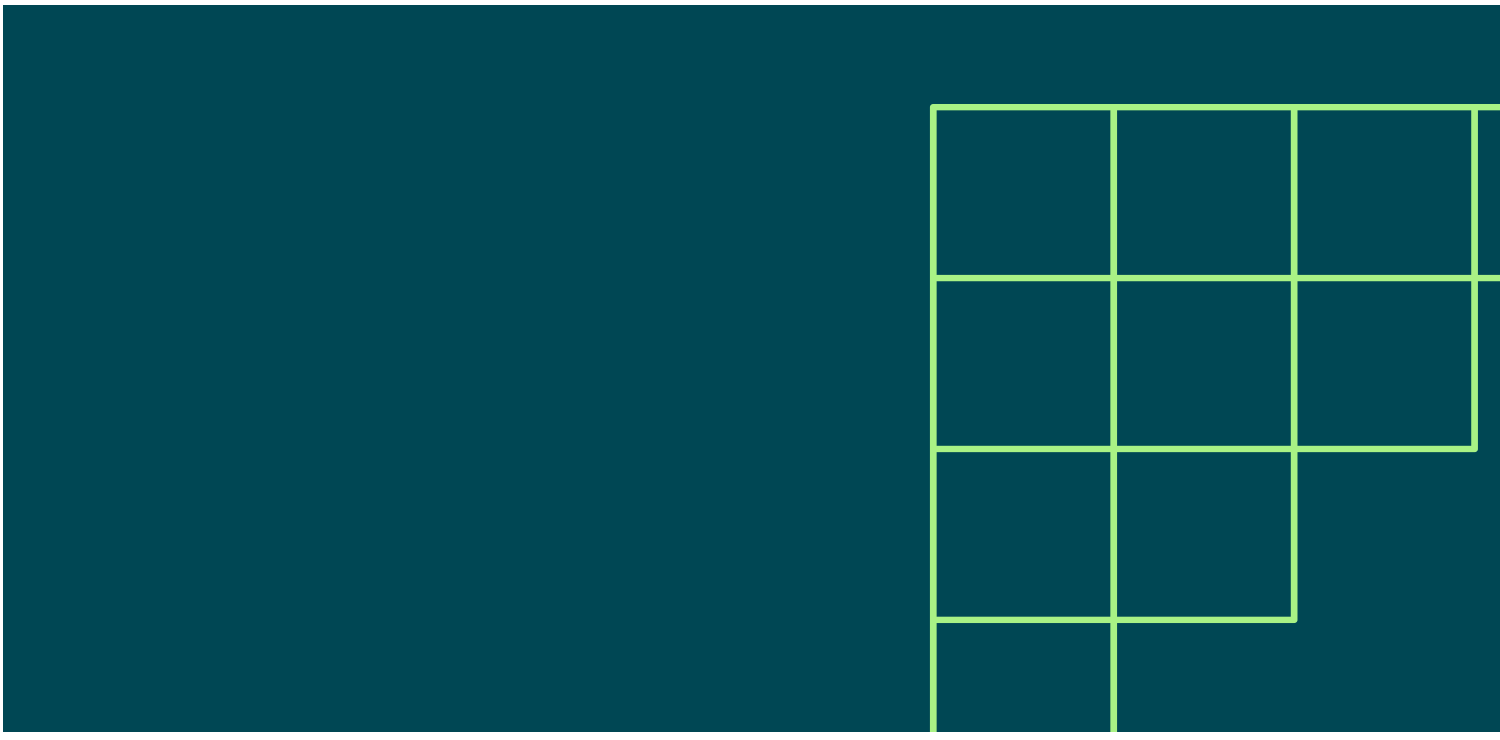
YEAR THREE

Coaching Systems, Coaching Service Plans, & Coaching Effectiveness Data

Deep Dive Implementation Partnership Series

A subset of six dyads opted to participate in the NIRN-led deep dive implementation partnership series, which offered additional virtual learning sessions on active implementation. These optional sessions focused on the foundations, frameworks, and formulas for active implementation to deepen dyads' understanding and ability to apply such an approach to evidence-based practices. This smaller grouping of dyads allowed even more time for cross-dyad connection and shared learning.

The sessions were designed to provide applied learning examples, interactive opportunities, methods, tools, and ideas to support the EIC district partners with effectively implementing their chosen math curriculum. These additional learning opportunities focused on improving teaming structures and using implementation data to strengthen the provider-LEA implementation plans. Deep dive implementation partnership participants met periodically for 90-minute learning sessions via Zoom. These quarterly, 90-minute online sessions focused on applying the five Active Implementation Frameworks (AIF) to the dyad-selected HQMI practices. The AIFs include Usable Innovations, Implementation Stages, Implementation Drivers, Linked Teams, and Improvement Cycles. Each session included applied, practical examples supported by actual data, interactive activities, use of implementation tools/ measures, and opportunities to share their work and ideas. Additionally, because it was a smaller group, dyads had more time to connect and learn from each other's work.



LESSON LEARNED:
IMPLEMENTATION DATA USE

While dyads that participated in the EIC experienced some results, implementation teams (teams responsible for actively driving and supporting the adoption, scaling, and sustainability of evidence-based practices or innovations within an organization or system) faced data collection and usage challenges. These barriers hindered schools' ability to improve their practices and learn from one another systematically and continuously. Schools have often over-relied on student test scores and grades (student outcome data, almost exclusively), limiting their understanding of how changes in teaching and learning impact students system-wide (implementation data). Additionally, the systems used to track progress have yet to be able to quickly and effectively provide rapid feedback to teams looking to assess the immediate and ongoing effects of these changes. Supporting schools to invest in data systems that track student outcomes and implementation data can help address these issues. Implementation data refers to systematic information, including how well adults deliver the practice, which can be used for coaching improvement rather than evaluation. School teams can better understand the relationship between teaching and learning practices and student success by tracking both data types.

Data Challenges for Continuous Improvement

In the early stages of the EIC, District Implementation Teams (DITs) primarily focused on student assessment data, a valuable yet lagging indicator (measures that show how well something has performed after it happened) of successful implementation. While student outcomes are crucial, it's equally important to consider data from the Implementation Drivers. These include sources of information/data informing staff selection/ recruitment, training effectiveness, coaching frequency, practice fidelity, internal and external management of system barriers, and establishing a decision support data system. The District Capacity Assessment (DCA) was the primary measure used to evaluate the growth of these drivers over time as LEA district implementation teams started to measure this infrastructure.

By incorporating implementation data that accurately reflects how well schools deliver the curriculum at the classroom level, DITs can make more informed decisions and foster continuous improvement across local education agencies (LEAs).

Future investments should view implementation as a systemic change effort, encompassing not just student outcomes but also intermediate-level factors. This holistic approach will equip districts to address challenges and drive positive change.

Data Challenges for Implementation Learnings

In addition to acting as a barrier to continuous improvement efforts, challenges associated with established data systems also limited NIRN's ability to effectively measure the potential impact of LEA- , building-, and classroom-level factors on student outcomes across years. Because of limitations in data-system capacity across LEAs, student-level data could not be linked directly to classroom-level data, except in three districts, preventing the ability to examine how teachers' beliefs and practices impact their students' experiences and learning. Similarly, individual students could not be tracked across years, which hindered NIRN's ability to understand how variability in implementation at the LEA level impacts individual student's learning over time.

Bolstering LEA's data systems, explicitly increasing the capacity to link student survey data to teacher-level data and the ability to follow students across years of implementation efforts, will enable more generalizable learning about what implementation factors work best for whom in what context.

LESSON LEARNED:
A FOCUS ON EXPLORATION

NIRN's role as a learning partner allowed the team members to reflect on what could have been done to make the implementation process more effective for each EIC dyad. The stages of implementation (exploration, installation, initial implementation, and full implementation) are the processes and activities that guide organizations through the implementation of a program or practice (Fixsen, Blase, & Van Dyke, 2019). Implementation stages are not linear; therefore, if key activities are missed or skipped, teams need to track back to address (e.g., generating staff and community engagement, building representative teams, systematically selecting an innovation, etc). Exploration stage activities are crucial at the beginning of any project to ensure a solid foundation for successfully executing the program or practice within school districts. The exploration stage activities were not fully executed during Phase I of the project based on the design, shortened timelines, and COVID-19. As a result, the limited time spent on the exploration activities detailed below hindered the implementation process.

Assessing Readiness for Implementation

Assessing readiness for implementation is an essential step in ensuring the successful implementation of a program or practice and an essential function addressed in the exploration stage of implementation work. It involves evaluating the organization's capacity, resources, and commitment to change to prepare them for implementation. Additionally, assessing readiness allows school districts to align their goals, expectations, and timelines to ensure a smooth transition toward implementation. The Wandersman Center Readiness Thinking Tool is an example of a tool that can be used to support organizations in determining if they are ready to begin a new practice or program. Engaging diverse, representative, and critical perspectives in the assessment process is essential to gain valuable insights into the organization's readiness for change. A comprehensive assessment

of readiness can help district and school leaders make informed decisions and develop strategies to overcome challenges and achieve successful implementation. A key component of this preparation is conducting a detailed root cause analysis to identify potential barriers that might hinder the effective adoption of new high-quality instructional materials (HQIM) and instructional strategies.

Assessing Fit & Feasibility

Exploration also includes a thorough assessment of the fit and feasibility of a program or practice within the specific context of the district. This evaluation should include a comprehensive look at the HQIM's alignment with existing standards, its usability, and the district's capacity to implement it successfully. By considering the needs of both students and teachers and the availability of implementation support, the district can ensure that the new HQIM will positively impact teaching and learning. The Hexagon Tool is an example of a valuable tool to help teams assess the fit and feasibility of programs or practices they are considering or currently using. Matching the services of external educational provider partners to the district's specific needs is also a pivotal step to optimizing the impact of the program or practice. This matching process ensures that the supports are relevant and tailored to address the unique challenges faced by the district. It should incorporate the district's strengths and assets to build its capacity to sustain the use of the HQIM. For more support on identifying TA providers, visit the EIC Provider Selection Guidance Tool.

Alignment of Resources

In addition to these assessments, aligning available resources is essential for creating a streamlined approach to implementation. When districts have multiple initiatives and external partners, there can be confusion about which implementation strategies to utilize since each partner brings unique resources and approaches. By collaborating and sharing best practices, these partners can work with district leaders to address the diverse needs of learners and create a more equitable educational system. The Initiative Inventory is an example of a tool that can help map the numerous district- and school-level initiatives, external partners, and each initiative's goals to understand how to align these resources. This involves coordinating financial, human, and material resources to support effective implementation of the HQIM. By pooling resources and expertise, school districts and their education provider partners can achieve a more significant impact and enhance student educational outcomes.

Bi-directional Communication

To support sustainability in the use of the HQIM, it is essential to have a multi-tiered, bi-directional communication protocol. This would include opportunities for interaction among different perspectives through various methods, including face-to-face meetings, focus groups or feedback sessions, and direct emails rather than just disseminating information by posting information on websites or sending letters. Developing clear two-way communication channels fosters collaboration and ensures that all those involved in implementation, including teachers, administrators, students, and community members, are informed and engaged throughout the process. With this transparent communication, the project can adapt to emerging needs and feedback, enhancing the likelihood of successful implementation. Having a clear bi-directional communication protocol allows all parties involved to share a perspective and stay updated on developments, ultimately leading to better outcomes and a stronger sense of ownership over the implementation's success.

KEY TAKEAWAYS:
A PATH FORWARD

By focusing on proactive strategies, "missed opportunities" can turn into areas for growth and improvement. For example, by strengthening collaborative selection processes, school districts and HQIM TA providers can better collaborate to choose materials aligned with the initiative's goals. Similarly, optimizing resource utilization can avoid redundancy and gaps in programming. Finally, by enhancing communication and collaboration, organizations can create a more effective system for addressing issues, ensuring everyone is on the same page, and working toward a common, measurable goal.

Improving educational outcomes requires a sophisticated approach that aligns implementation teams across various levels and provides them with appropriate data—establishing Linked Implementation Teams throughout the educational hierarchy, from district leadership to classroom teachers. Each team should have access to relevant data to make informed decisions and tackle implementation challenges effectively. A data-driven approach should go beyond student outcome measures and ensure implementation measures (e.g., District Capacity Assessment and fidelity assessments) are a part of the process. Triangulating implementation data allows for targeted training, coaching, and consistent curriculum delivery across all districts. These measures must not only gather a diverse range of data but must also be inclusive and reflect all relevant viewpoints.

The use of comprehensive data is crucial in guiding implementation efforts. By analyzing student performance data alongside a broader array of programmatic, fidelity, and capacity measures, implementation teams can identify areas where implementation succeeds and needs improvement. This holistic view allows for more precise interventions and support, ensuring that educators at all levels are equipped to deliver the HQIM as intended. Furthermore, this approach facilitates a feedback loop that continually refines the implementation process, leading to more effective and sustainable practices.

By addressing these implementation challenges head-on, funders, TA providers, and educational agencies can significantly enhance the effectiveness and sustainability of high-quality curricula and pedagogical practices. When practices and programs are implemented as designed, with fidelity and an eye toward longevity, educational agencies create a foundation for lasting improvement in instruction. This, in turn, leads to better student outcomes across the board. The key lies in creating a cohesive system where data and communication flow freely between implementation teams, informing decisions and driving continuous improvement at every level of the educational cascade.

The Effective Implementation Cohort is a project under the National Implementation Research Network project located at the Frank Porter Graham Child Development Institute at the University of North Carolina at Chapel Hill; for more information regarding the project and additional learnings and resources, visit eic.fpg.unc.edu.

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