Uniting districts to see their common aim: A unique NIC formation strategy

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Background / Rational
The Institute for School Partnership (ISP) partners with schools in St. Louis to support change in STEM educational inequities. In 2020, we united three school districts working to reduce equity gaps in math outcomes for students by improving mathematics' instruction. In contrast to the traditional approach of recruiting members of a Networked Improvement Community (NIC) to work towards achieving a pre-existing aim, we formed a STEM District Immersion (STEM DI) NIC by leveraging similarities across improvement work the individual districts were designing. We describe two activities used during a two-day summer institute in August 2021 to motivate and organize these three districts towards a common, equity-focused aim and shared purpose.

Constructing our STEM DI NIC driver diagram

In Year 1, each district created an individual district aim and theory of improvement. To increase cross-district collaboration in Year 2, the ISP hub created a partial STEM DI NIC driver diagram with an equity-focused aim and primary drivers shared across the three districts. The ISP hub team first drafted a broad STEM DI NIC aim based on existing equity gaps in Missouri Assessment Program (MAP) math standardized test proficiency rates.

STEM DI NIC District Aims

DISTRICT 1 AIM: By Spring of 2023, all students will have meaningful (high-level) learning opportunities that result in improved mathematical reasoning and engagement.

DISTRICT 2 AIM: By the end of next year, 45% of students will demonstrate measurable improvement in Algebra 1, grades or course pass rates, MAP proficient/advanced rates for target student subgroups while other subgroups stay the same or improve.

DISTRICT 3 AIM: By 2024, we will engage our 11th-grade students in the problem solving strategies, justify their thinking, and reflect on problem solving* by May 2022.

Constructing our STEM DI NIC Driver diagram: Mixed-district groups sorted the primary drivers from all three district driver diagrams and labeled each category of similar drivers. Each group presented their categories, and participants were surprised to see how quickly they came to consensus on four shared primary drivers.

Mixed-District Team Activity

- Categorize similar primary drivers (15 min)
  - Group driver cutoffs into 3-5 categories
  - A driver may be put into more than one category (use post-its to add drivers to multiple categories)
  - Discard pile: Some primary drivers may actually be secondary drivers or change ideas
  - Agree on a name for each category of primary drivers (10 min)
  - Write the names for each category on chart paper and tape the grouped drivers below

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Proposed STEM DI NIC Aim: By Spring 2023, all three STEM DI districts will demonstrate measurable improvement in equitable math outcomes (e.g., enrollment in Algebra 1, grades or course pass rates, MAP proficient/advanced rates) for target student subgroups while other subgroups stay the same or improve.

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STEM DI NIC Initial Proficiency Rates by Race

<table>
<thead>
<tr>
<th>Race</th>
<th>Proficiency Rates</th>
</tr>
</thead>
<tbody>
<tr>
<td>White</td>
<td>70%</td>
</tr>
<tr>
<td>African</td>
<td>50%</td>
</tr>
<tr>
<td>Hispanic</td>
<td>40%</td>
</tr>
<tr>
<td>Asian</td>
<td>30%</td>
</tr>
</tbody>
</table>

We are a group of St. Louis area educators who are committed to providing high-quality, equitable math instruction to every student and making a positive impact on our communities. We believe in encouraging perseverance and productive struggle, in addition to nurturing students' natural wonder, curiosity, and excitement about learning.

In learning math, we value process over product; we meet students where they are; we engage a growth mindset about ourselves and our students. We encourage students to persist through challenge, engage in problem-solving through discourse, and make connections to the real world in order to take student learning beyond the classroom.

We recognize that as educators we are molded by our personal and collective histories, both good and bad, and we are motivated by those experiences. Ultimately, we recognize that we are stronger together, and we value all stakeholders and what they bring to our community.

In pursuing our goal of providing every student with high-quality math experiences, we realize that no one educator can achieve these goals on their own, and thus we seek to build this community around our common vision and commitment to professional growth.

STEM DI NIC Narrative

Feedback from 13 of 20 STEM DI NIC participants who attended the Summer Institute reinforced how these (and other) activities pushed teams to focus on equity and motivated districts to work collaboratively towards a shared aim that no individual could achieve on their own.

The Summer Institute helped me and my district teams more explicitly center equity in our work.

How confident are you that collaborating together as a Networked Improvement Community with a shared purpose focused on equitable math outcomes for students will help your district team achieve its aim?