Michigan’s Focus Networked Improvement Community

Monica P. Bhatt

02 / 17 / 16
Agenda

1. Overview and History of the Michigan Focus Networked Improvement Community

2. Forming a Networked Improvement Community

3. Identifying a Problem

4. Developing a Theory of Action

5. Measuring Progress Through Plan-Do-Study-Act Cycles

6. Next Steps: Moving Toward Sustainability
Regional Educational Laboratories

* The Pacific Region contains Hawaii, pictured on the map, and American Samoa, the Commonwealth of the Northern Mariana Islands, the Federated States of Micronesia (Chuuk, Kosrae, Pohnpei, & Yap), Guam, the Republic of the Marshall Islands, & the Republic of Palau, not pictured on the map.
Research Alliances

College and Career Success
Dropout Prevention
Early Childhood Education
 Educator Effectiveness
Rural
School Turnaround
Urban
Virtual Education
Priority Areas

Early Childhood Education
Educator Effectiveness
College and Career Readiness
Low-Performing Schools and School Improvement
Who, What, When, Where, Why?
Networked Improvement Community (n.): Individuals or organizations that use systematic inquiry to improve practice
“Rather than asking whether an ‘intervention works,’ a network improvement community asks, ‘What works, when, for whom and under what sets of circumstances?’”

— Bryk, Gomez, & Grunow, 2015
In Michigan...

We can use a networked improvement community (NIC) to:

- **Refine supports** for Focus schools
- **Learn from changes to supports** in varied contexts
- **Use data to drive improvement** in practice
Who is at the table?

Focus NIC

MDE
Districts
ISDs
Schools
Research Staff
What are we trying to accomplish?

1. Develop an improvement community.
2. Improve mathematics fluency for focus students.
Michigan’s Focus NIC: Timeline

- **Aug.**
  - Participant Recruitment

- **Sept.**
  - Participant Recruitment

- **Oct.**
  - Root-Cause Analysis

- **Nov.**
  - Theory of Action and Develop Outcome Measures
  - Implement Cycle 1

- **Dec.**
  - Develop Intervention

- **Jan.**
  - Implement Cycle 1

- **Feb.**
  - Measure Outcome

- **March**
  - Develop Intervention

- **April**
  - Debrief

We are here.
How?
Michigan Focus NIC Approach
Identifying a Problem.
Participants:
• School principals
• Central office representatives
• ISD representatives
• Michigan Department of Education staff
• REL Midwest staff

In the first meeting of the Focus NIC, members worked together to:
• Conduct a root-cause analysis
• Develop a problem statement: “Lack of access to, understanding of, and use of data to implement continuous improvement on a daily basis”
• Brainstorm interventions that can improve data-utilization skills among school staff
See the system that produces these outcomes.

Aim Statement

Utilizing appropriate strategies and recalling facts, all students in the bottom 30 percent will demonstrate mastery of the grade-level fluency benchmarks.

Primary Drivers

- Progress Monitoring
- Interventions for bottom 30 percent
- Emphasis on math/math fluency
- Engaging families
- Increasing data usefulness
- Training/professional development for teachers

Secondary Drivers

- Daily practice for math fluency for students
- Scheduling math block
- Materials and resources
- Embedded coaching

Training/professional development for teachers
Developing a Theory of Action.
# Theory of Action

<table>
<thead>
<tr>
<th>Program Inputs</th>
<th>Program Activities</th>
<th>Program Outputs</th>
<th>Outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Teacher logs to track daily math practice of fluency skills</td>
<td>• Identify bottom 30% of students</td>
<td>• Increased time for students spent on practicing math fluency skills</td>
<td>• Increased percentage of all students mastering math fluency benchmarks by May 2016</td>
</tr>
<tr>
<td>• Implementation guide developed by Focus NIC</td>
<td>• Teachers track Focus students’ ability to practice math fluency skills for at least 15 minutes every day using daily logs</td>
<td>• Increased time spent discussing math fluency between teachers and between teachers and principal</td>
<td>• Improved math fluency of the bottom 30% of students specifically</td>
</tr>
<tr>
<td>• Observation protocol developed by Focus NIC</td>
<td>• Bimonthly walk-throughs using observation protocol</td>
<td>• Increased math fluency emphasis</td>
<td></td>
</tr>
<tr>
<td>• Principal guidance, coaching, and support to math teachers</td>
<td>• Ongoing coaching and data use</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• RocketMath kits (Ingham) or workstations (Kalamazoo)</td>
<td>• Daily teacher logs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• District math coach</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• District and ISD-level math fluency professional development and support</td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

**Program Targets:** Mathematics teachers in Ingham ISD and KRESA who teach in Focus schools participating in the NIC. All students in mathematics classrooms in Focus schools participating in the NIC, with an emphasis on the bottom 30 percent of students.

**Program Goal:** All students will master fluency benchmarks by demonstrating appropriate strategies and recalling facts.
Measuring Outcomes.
1. Teachers track Focus students’ math fluency practice.

**Math Fluency Practice Daily Log—Template**

*Instructions:* First, enter the dates of interest in the Week column. Each day, complete the log by checking or circling “Yes” if students in the bottom 30 percent had the opportunity to practice mathematical fluency skills that day, or by checking or circling “No” if students in the bottom 30 percent did not have the opportunity to practice mathematical fluency skills that day.

<table>
<thead>
<tr>
<th>Week</th>
<th>MONDAY</th>
<th>TUESDAY</th>
<th>WEDNESDAY</th>
<th>THURSDAY</th>
<th>FRIDAY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ex: 1/11–1/15</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
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<tr>
<td></td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
</tr>
</tbody>
</table>
2. Observe teachers every two weeks.

### Mathematics Fluency Principal Observation Protocol

<table>
<thead>
<tr>
<th>Date</th>
<th>Core (Tier 1) vs. intervention (Tier 2)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Length of observation</td>
</tr>
<tr>
<td></td>
<td>Length of mathematics fluency work</td>
</tr>
<tr>
<td></td>
<td>Percentage of Focus students observed</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Students are engaged in mathematics fluency skill building.</th>
<th>Observation notes</th>
<th>Implementation score (Circle one)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>&lt;50% engagement = 0</td>
</tr>
<tr>
<td></td>
<td></td>
<td>50–75% engagement = 1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>&gt;75% engagement = 2</td>
</tr>
</tbody>
</table>

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<thead>
<tr>
<th>Students have the necessary materials</th>
<th></th>
<th>&lt;50% engagement = 0</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>50–75% engagement = 1</td>
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<tr>
<td></td>
<td></td>
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</tr>
</tbody>
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<tr>
<th>Students exhibit routines and procedures regarding work and transitions.</th>
<th>Observation notes</th>
<th>Implementation score (Circle one)</th>
</tr>
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<tr>
<td></td>
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<td></td>
<td></td>
<td>&gt;75% engagement = 2</td>
</tr>
</tbody>
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<table>
<thead>
<tr>
<th>Students practice mathematics fluency for at least 10 minutes.</th>
<th>Observation notes</th>
<th>Implementation score (Circle one)</th>
</tr>
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<td></td>
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</tbody>
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<th>Students can articulate learning objective.</th>
<th>Observation notes</th>
<th>Implementation score (Circle one)</th>
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</thead>
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<tr>
<td></td>
<td></td>
<td>Not acceptable = 0</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Acceptable variation = 1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Fully implementing = 2</td>
</tr>
</tbody>
</table>

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<th>Students receive corrections or descriptive feedback.</th>
<th>Observation notes</th>
<th>Implementation score (Circle one)</th>
</tr>
</thead>
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<td></td>
<td></td>
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<td></td>
<td></td>
<td>Fully implementing = 2</td>
</tr>
</tbody>
</table>
3. Focus NIC participants measure students’ performance on math fluency benchmarks.
Implement Continuous Plan-Do-Study-Act Cycles.
Plan: Identify bottom 30% of students on math fluency and develop plan to increase ability of teachers to improve math fluency.

Do:
- RocketMath/Workstations
- Daily teacher logs
- Principals observations
- District math coach
- Professional development

Act: Focus NIC will monitor student progress and adjust goals or practices as needed.


Cycle 1
Jan. 11 – Mar. 11 2016
**Plan:** Examine benchmark and assessment data to increase math fluency for bottom 30% of students and determine long-term goals, plans, and timeline of the Focus NIC.

**Do:**
- Assess teacher log data, walk-through assessments
- Discuss challenges and lessons learned

**Act:** Focus NIC will monitor student progress and adjust goals or practices as needed.

**Study:** Examine midyear MAP and AIMSweb scores. Seek to develop alternate tools to assess student math fluency outcomes and develop long-term metrics and goals for Focus NIC.
Richmond Elementary*

*Name changed to protect our participants.
How were students identified?

1. NWEA MAP math assessment results from December 2015.

2. The results were sorted for each grade based on the Number and Operations category.

3. Then, the bottom 30 percent (approximately) for each grade was identified.

4. Those lists were given to classroom teachers and resource room teachers, who then tracked the math fluency practice.
Intervention participants

Bottom 30 Percent of Students (Focus Students):
• 2nd grade – 25 students
• 3rd grade – 22 students
• 4th grade – 16 students
• 5th grade – 22 students
• Some of the students have individualized education programs and some are English language learners.

Math teachers:
• 10 teachers
• Six 2nd- and 3rd-grade general education teachers, one 4th- and one 5th-grade departmentalized teacher, and two resource room teachers
Feedback

• Teachers have been successful with their logs. However, there was a snow day during the first week. Also, many teachers had substitutes on one or more days for a variety of reasons. It was an inconsistent first week.

• Teachers are supportive of the process. This first week coincided with the start of a math coach. There were many discussions on what constitutes math fluency practice.

• Success – The awareness of documented daily practice

• Challenge – Trying to verify practice when a substitute is in the room
What’s Next?

Thinking about sustainability.
How can you use these tools in your work?

How can we involve this group in sustaining our efforts?
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