Evidence-based Practices: Formative Assessment in an Integrated Tiered System of Support

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Goals

- To describe what braiding of funds between sources looks like.
- To build a shared understanding of the role of Implementation Science in the process of selecting an evidence based innovation
- To describe a model of coherence across divisions to support the implementation of an evidence-based innovation.

Title I & Special Education Braiding Funds-

- What it is ….
- Braiding of funds occurs when two or more sources of funds are spent for a purpose in such a way that the funds could still be accounted for separately.
- Braiding of funds can be considered as good project management.
- Grant funds from several sources are coordinated to support a single initiative or strategy
- Funds from each grant remain visible
- Grant funds are used together to produce greater strength, efficiency, and/ or effectiveness.

Outline

- Background
- Defining the Innovation
- Exploration Stage
- Installation Stage
- Initial Implementation Stage
- Data Collection
- Next Steps

Setting the Stage

- Historically poor performance in grades 4 and 5 mathematics
- Expanding Bridges Grant: Improving Tier 1 to Reduce Special Education Referrals
  - Implementation Science
  - Instructional Coaches
- State Systemic Improvement Plan (SSIP)
- State Professional Development Grant (SPDG)
- Invited to attend SWIFT Professional Learning Institute – Dr. John Tapper
  - *Solving for Why: Understanding, Assessing and Teaching Students Who Struggle with Mathematics*

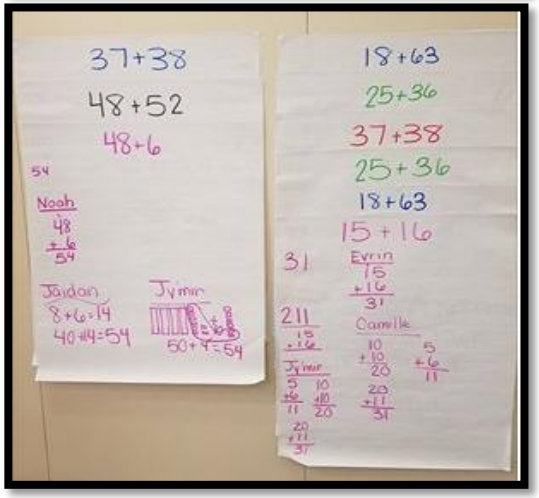
Defining the "IT:" Main Lesson-Menu Lesson and CRA Assessment

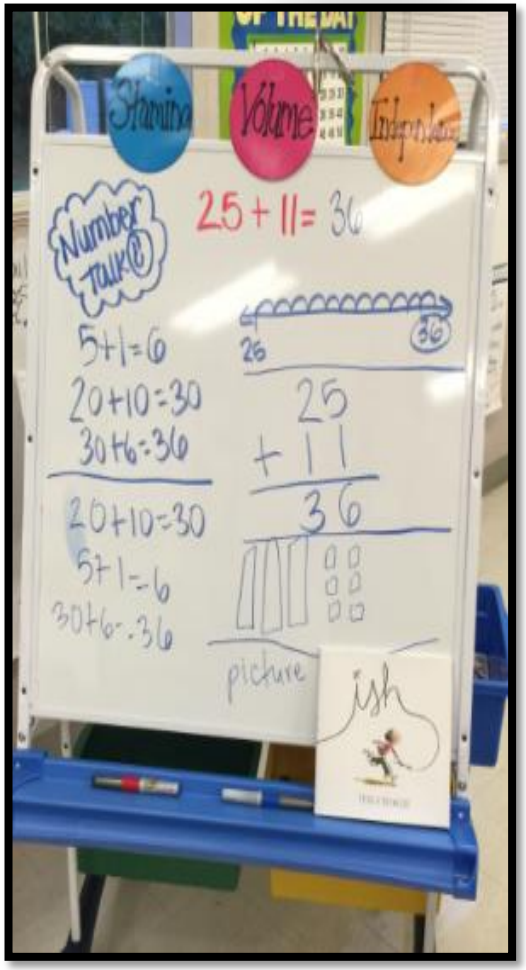
Main Lesson-Menu Lesson Instructional Framework

- **Core Components:**
  - Launch
  - Main Lesson
  - Must-Do's and Can Do's
  - Targeted Instruction
  - Problem Solving
  - Skills Practice
  - Mathematical Games
  - Journal Reflections on Mathematical Thinking
  - Closure

Launch

- Introduces the main lesson, activates prior knowledge, and engages all learners.





Main Lesson

- Origo Stepping Stones
- Lessons and learning targets usually come from a school or district mathematics program.
- Main lessons include a problem or task focused on a key math concept, makes strong use of student discourse, and uses heterogeneous grouping.
- Discourse is predominantly student-to-student.

Menu Lesson

- Must Do's/Can Do's
- Targeted Instruction
- Problem Solving
- Skills Practice
- Mathematical Games
- Journal Reflection

Menu Lesson Plan

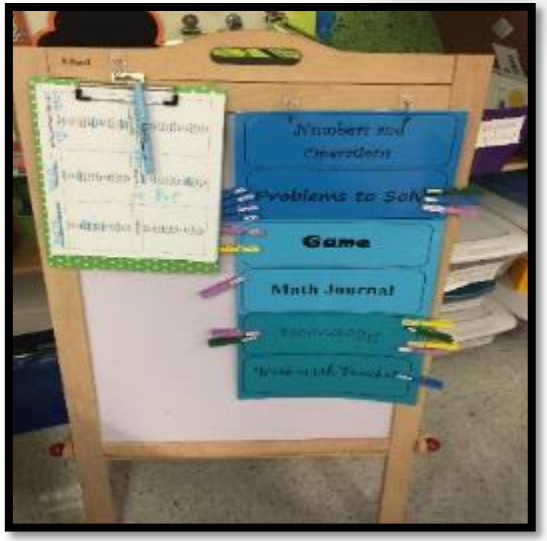
Think: *How will I differentiate this menu work for the variety of learners in my class?*
How will I collect and respond to this work?

Main Lesson Follow Up	Number and Operation Work/ Fluency	Problems to Solve
Skill: Notes:	Skill: Notes:	Skill: Notes:
Game to Reinforce/ Investigate Big Idea	**Technology Link**	**Teacher Center**
Skill: Notes:	Skill: Notes:	Students: Skill to Remediate/Enrich: Students: Skill to Remediate/Enrich:

Menu Lesson


Group 1
Group 3
Group 2
Group 4
Menu Math
Monday
Must Do
Centers
Tuesday
Technology
Must Do
Wednesday
Must Do
Journal
Thursday
Must Do
Must Do
Center


With Teacher


Game
Math Journal


1
2
3
4
5

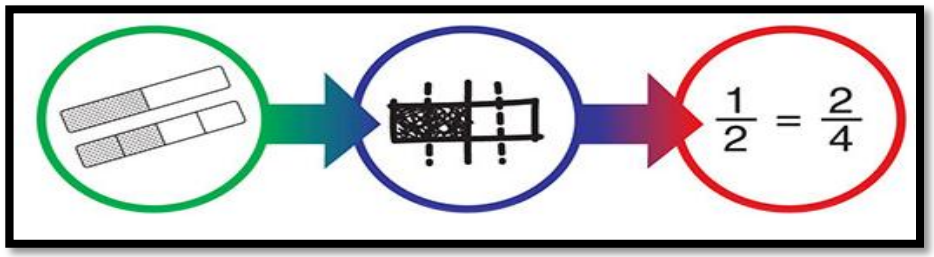
Closure

- Questions or problems that are related to the learning goal to focus attention and discussion on the work completed during Main Lesson and/or Menu Lesson.

- Examples – exit slips or probes

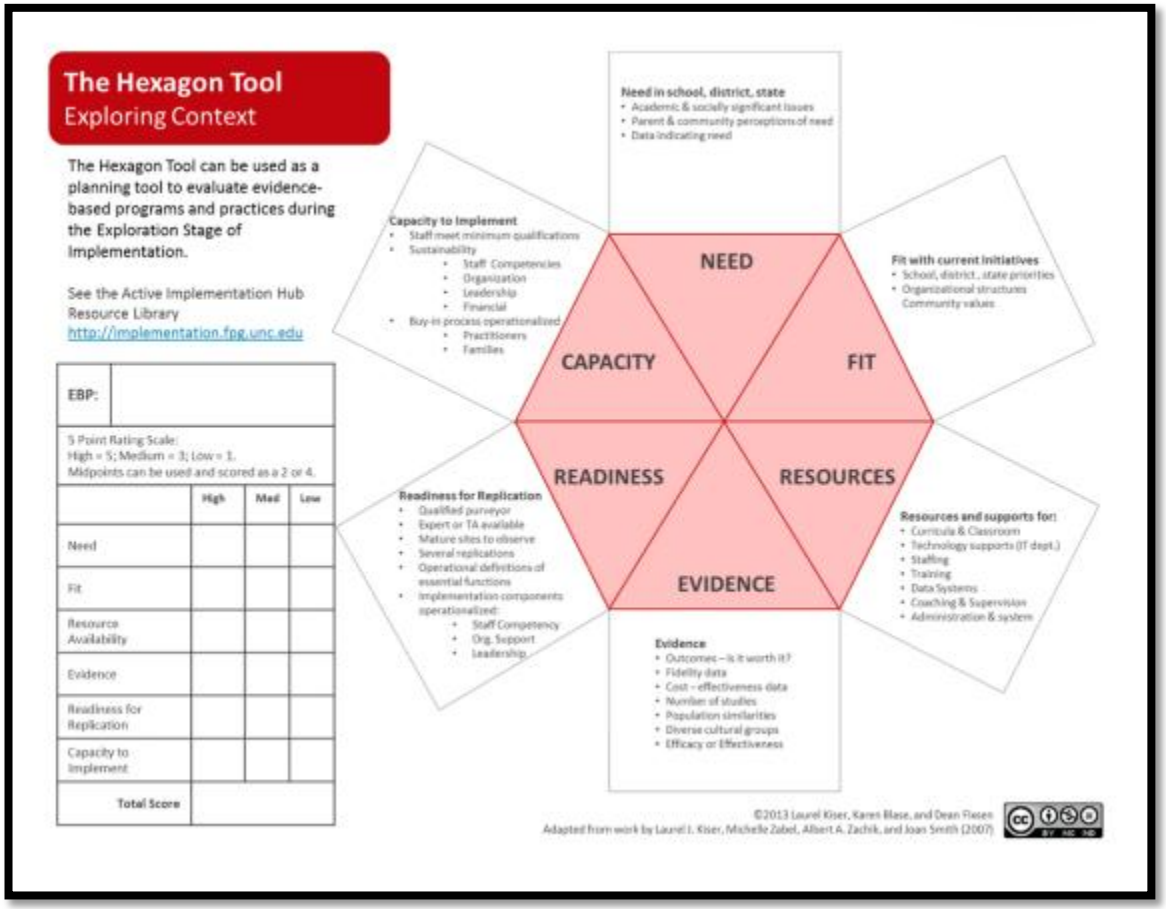
CRA Assessment

- Universal screening assessment
- Formative assessment to provide targeted instruction during Menu Lesson
- Three versions of a mathematical task:
  - Concrete
  - Representational
  - Abstract



Exploration

- Hexagon Tool
- Pilot Classrooms
- Implementation Teams
- TAP-IT Process
- School Leadership Meeting



The Hexagon Tool
Exploring Context

The Hexagon Tool can be used as a planning tool to evaluate evidence-based programs and practices during the Exploration Stage of Implementation.

See the Active Implementation Hub Resource Library
http://implementation.fpg.unc.edu

EBP:			
5 Point Rating Scale: High = 5; Medium = 3; Low = 1. Midpoints can be used and scored as a 2 or 4.			
	High	Med	Low
Need			
Fit			
Resource Availability			
Evidence			
Readiness for Replication			
Capacity to Implement			
Total Score			

Implementation Team Selection Criteria

- Knowledgeable in practices, data, and systems to support all levels of learners
- Flexibility with job responsibilities that would allow time to assist in the development and implementation plan
- At least one member that has the authority to make decisions as barriers arise and plan for systems interventions
- Ability to establish and maintain collaborative relationships with school implementation teams and MSDE staff
- Effective leadership, organization, and communication skills
- Ability and willingness to attend all necessary Implementation Team meeting

Implementation Team

- Chief Academic Officer
- Coordinator of Mathematics
- Coordinator of Special Education
- Supervisor of Special Education
- Math Instructional Coach
- Math Interventionist
- Principals
- General Educator
- Special Educator
- Parent

Core Team

- Coordinator of Mathematics
- Coordinator of Special Education
- Special Education Supervisor
- Math Coaches

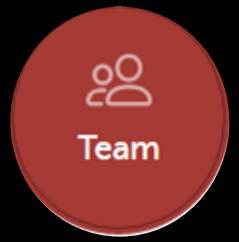
TAP-IT Process and Tool

- Implementation Team uses the TAP-IT process to make data-based decisions
- Beginning in the Exploration stage

TAP-IT Digital Portfolio

Vision
Goal & Objectives
Deliverables
Scope and Boundaries
Roles and Responsibilities
Communication Protocols

Team



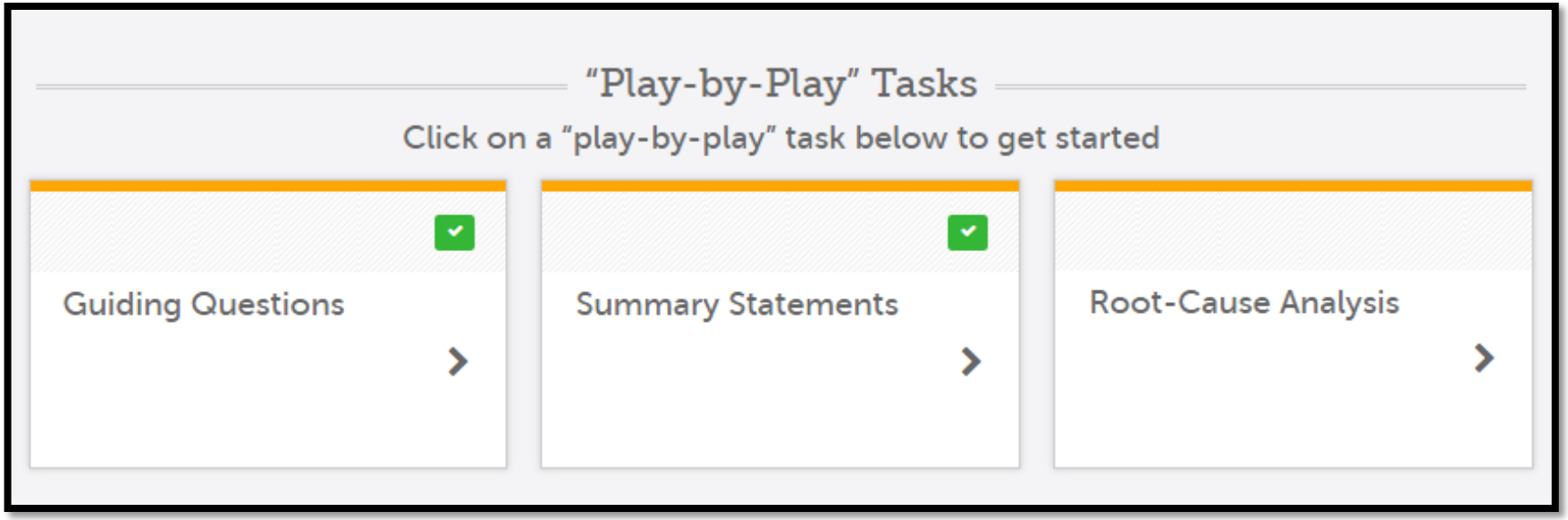
"Play-by-Play" Tasks

Click on a "play-by-play" task below to get started

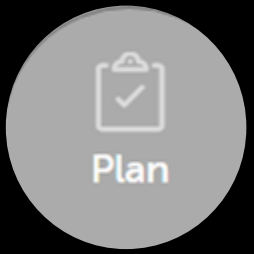
- UNITED: Beliefs
- UNITED: Vision
- UNITED: Mission
- UNITED: Learning Community Standards
- UNITED: High Performance Teaming Principles
- UNITED: Team Goal(s)
- UNITED: Roles
- UNITED: Team Name and Members
- UNITED: Logistics for Working Together

Analyze


Analyze

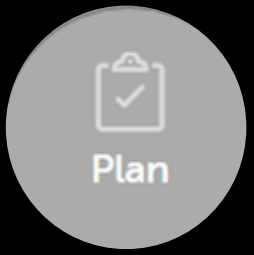

"Play-by-Play" Tasks
Click on a "play-by-play" task below to get started
Guiding Questions
Summary Statements
Root-Cause Analysis

Installation



- Teacher Training
- Coach Selection and Training
- Communication Plan Development
- Practice Profile and Fidelity Assessment Development
- Use the TAP-IT Digital Portfolio
- School Leadership Meetings

Plan



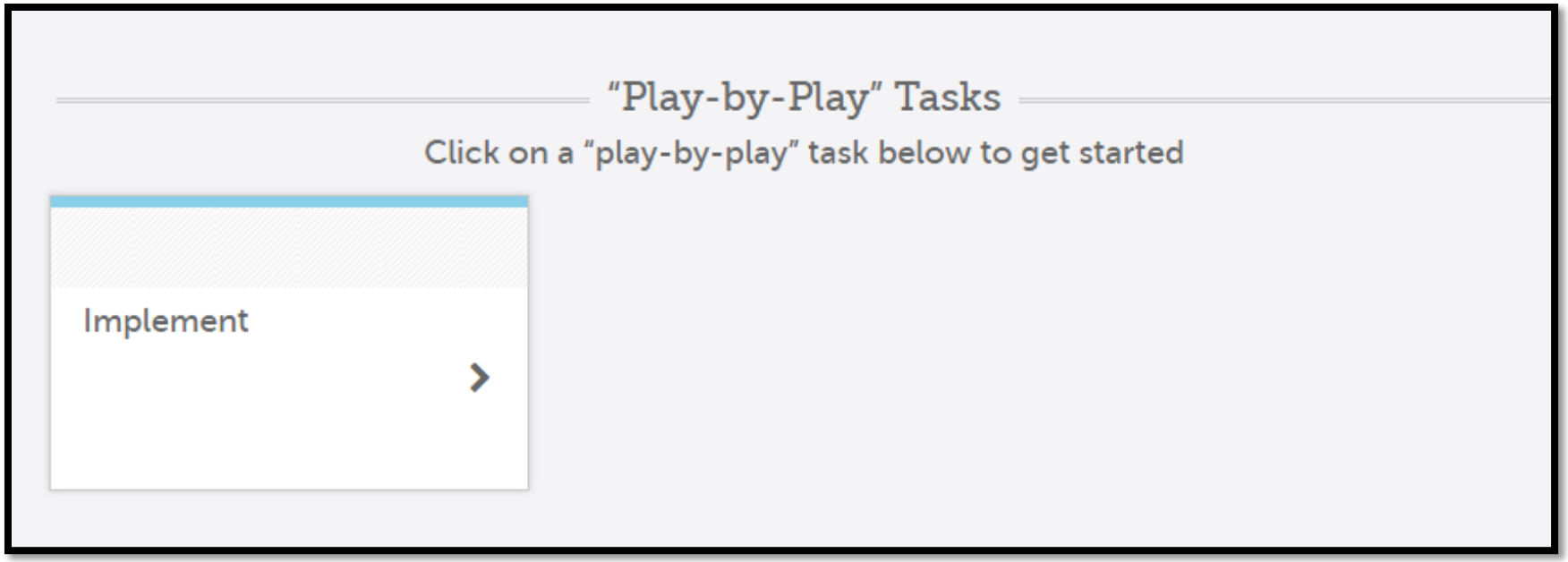
"Play-by-Play" Tasks

Click on a "play-by-play" task below to get started

- TAP-IT Action Plan >
- Area of Focus >
- Seek Solutions >
- Goals and Monthly Performance Targets >

Implement


Implement


"Play-by-Play" Tasks
Click on a "play-by-play" task below to get started
Implement

Communication Protocol

Worcester County Communication Protocol: K-5 Math Initiative	
Rationale	• Communication protocol is necessary to facilitate the communication loop between the school implementation team and district implementation team • Provide a voice to the implementers (teachers) • Provide feedback to district level decision makers • Collaboratively solve barriers and celebrate successes
Information to communicate (e.g. updates, successes, challenges)	• Progress and celebrate success throughout the system • Data • Systemic barriers: Feedback Loop Excel Spreadsheet
Responsible Individual(s)	• School Level: Instructional Mathematics Coaches • District Level: Dr. Jennifer Dale and Ms. Kirsten Danisavich
Schedule, Time Allocated	• School level implementation meetings- Monthly • September, October, December, February, April, June (additional meetings may be scheduled if needed) • 30 minutes to 1 hour • Quarterly TAP-IT meetings
Format	• Face to Face • Go To Meetings
Response Timeline	• Barriers will be studied and resolved as soon as possible but within 30 work days • Barriers will be addressed based on level of priority (low, medium, high), as outlined in the Feedback Loop Spreadsheet
Response Format	• Responses will be recorded by e-mail, phone call or face to face depending on the nature of the systemic barrier

Initial Implementation

- Teachers implementing with coach support
- Teachers meet for 30 minutes weekly with coaches in PLC
- Equitable coaching – coaching continuum
- Coaches coached by Dr. Tapper
  - Bi-weekly/monthly virtual meetings
  - Collaborate with other coaches in Vermont and Maine

Initial Implementation

- Communication and feedback loop
  - Surveys, trouble trackers, face-to-face meetings, etc.
- Fidelity assessments (October, January, May)
- Professional development
  - Peer visits and training provided based on fidelity assessments and surveys
- Continuous Communication with School Leadership
  - District Implementation Teams
  - School Implementation Teams
  - Fidelity Assessments
  - Informal walkthroughs
  - Coaches meet with principals monthly

Implementation Tools

Math Main Lesson – Menu Lesson

USEABLE STRATEGIES

Math Main Lesson – Menu Lesson

1. What is the "it" you are trying to implement?

Through math *main lesson-menu lesson-* teachers structure their lesson following the launch, main lesson, menu lessons, and closure. In the launch, teachers connect new concepts to prior knowledge. During the main lesson, teachers provide an opportunity for students to work together in an inclusive environment. During menu lessons, teachers provide differentiated instruction to students through a variety of personally tailored activities. Also, menu lesson activity choices for students are created based on assessment data that identifies key elements of students' mathematical thinking. The goal for differentiation is to be sure that *all* students meet appropriate grade level standards in mathematics. Closure allows time for students to share their work and reflect on their learning.

2. Do you have a clear description of the program?

Implementation Tools

MD SPDG Fidelity Assessment (MSFA):
Classroom Use of Main Lesson – Menu Lesson for Differentiation of Math Concepts

This instrument is to be used by math coaches and school leaders to assess the implementation of Main Lesson-Menu Lesson structure in K-5 mathematics classrooms. The purpose of this assessment is to evaluate the fidelity of implementation of elements of Main Lesson-Menu Lesson. It will also assess the use of formative assessments to make decisions about individual learning during the Menu portion of the lesson.

Classroom ID (Please give an anonymous ID number to each teacher for this assessment) _____

School Name _____ **District** _____ **Assessment Completion Date** _____

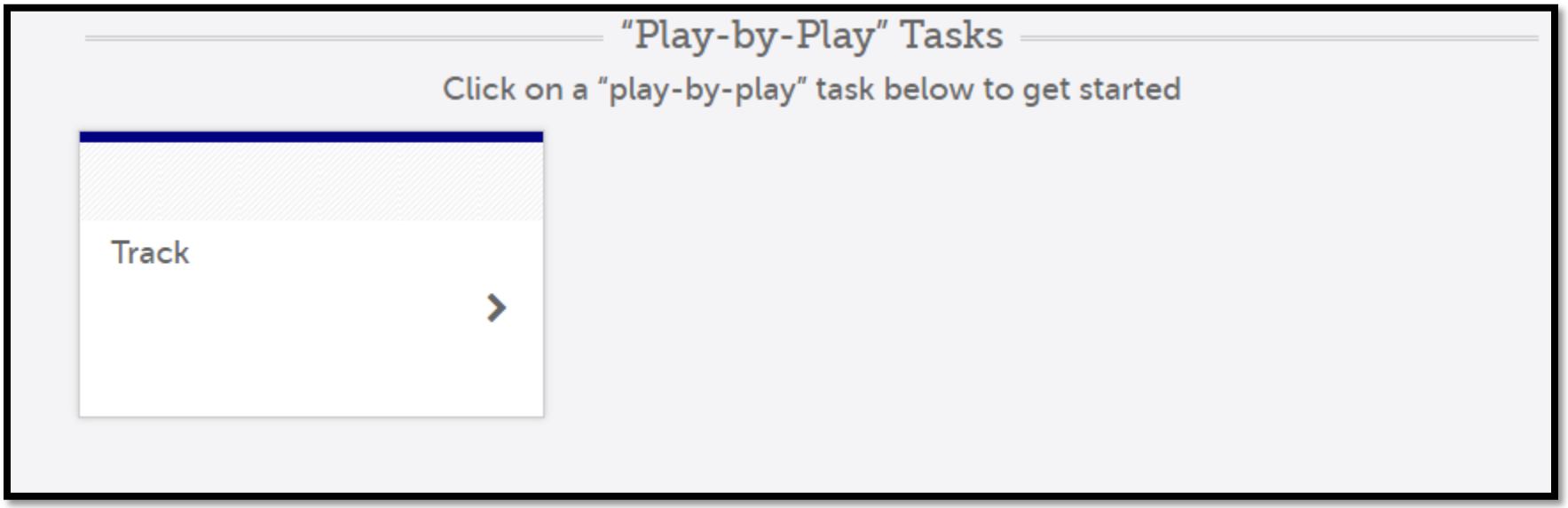
Names of Individuals Involved in Completing the Assessment:

Name	Position	Name	Position	Name	Position

Main Lesson-Menu Lesson Plan Elements	In Place 1	Not Evident 0
Launch (5-10 minutes): Introduces main lesson, activates prior knowledge, and engages all learners (one step word problem or number talk)		
Teacher activates prior knowledge by engaging students with prior skills or understanding		
Teacher uses Launch to introduce Main Lesson (key concepts/strategies in Launch appear in Main Lesson)		
*Teacher uses Launch to engage **all** students*		
Main Lesson (20-30 minutes): Lessons and learning targets usually come from a school or district mathematics program. Main lessons include a problem or task focused on a key math concept, makes strong use of student discourse, and uses heterogeneous grouping for the purpose of inclusion.		
Teacher provides problem solving experiences in heterogeneous groups		
Teacher provides multiple opportunities for student-to-student discourse		
Teacher communicates learning target(s) through verbal and visual strategies		
Teacher checks for student understanding of learning target(s)		
Teacher refers to learning target throughout lesson		

Track


Track


"Play-by-Play" Tasks
Click on a "play-by-play" task below to get started
Track

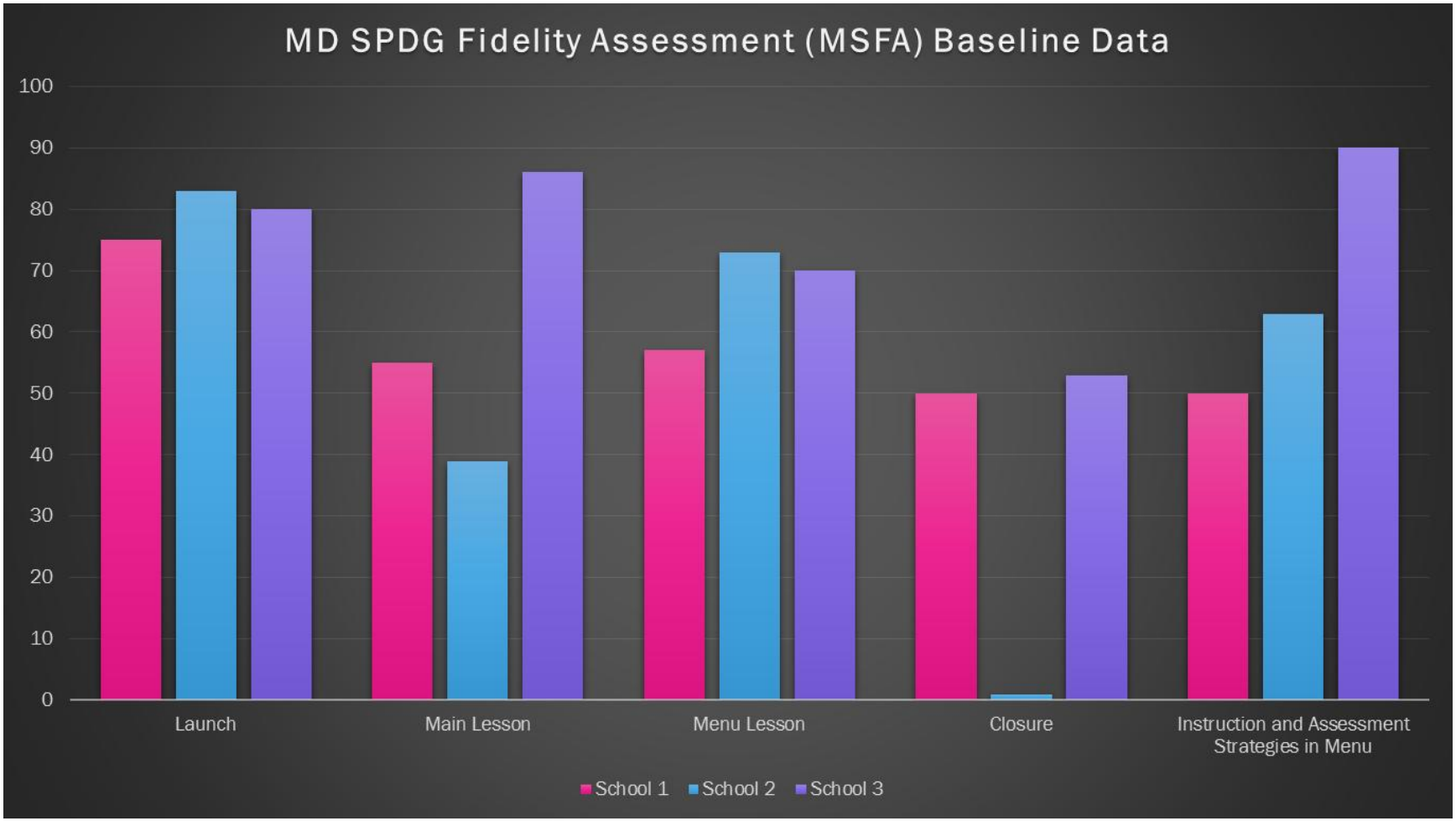
Data Collection and Analysis

- **Implementation Outcomes**
  - Teacher Tracker Tool
  - Fidelity Assessment Data
  - Teacher Survey Results

- **Student Outcomes**
  - iReady Diagnostic Assessments
  - Standards Mastery Assessments
  - PARCC
  - Pre and Post Module Assessments

Fidelity Assessment Baseline Data

Track



Formative Assessment Pre Module Data

>5.NF.A.1 Q1 4pts	% correct	>5.NF.A.1 Q2 3pts	% correct	>5.NF.A1 Q3 3 pts	% correct	5.NBT.A.3 a Q4 6 p	% correct	5.NBT.A.3.a Q5 2 p	% correct	5.NBT.A.3a Q6 3 pt	% correct	total	Percentage
3	75	0	0	2	67	0	0	0	0	0	0	5	24
4	100	3	100	2	67	3	50	1	50	2	67	15	71
1	25	0	0	0	0	4	67	0	0	0	0	5	24
0	0	3	100	0	0	3	50	0	0	0	0	6	29
4	100	3	100	2	67	4	67	1	50	2	67	16	76
2	50	0	0	0	0	2	33	1	50	2	67	7	33
0	0	2	67	0	0	1	17	0	0	2	67	5	24
4	100	2	67	3	100	4	67	2	100	2	67	18	86
1	25	1	33	0	0	5	83	2	100	3	100	9	43
2	50	0	0	0	0	2	33	1	50	0	0	7	33
0	0	0	0	0	0	2	33	1	50	2	67	3	14
1	25	1	33	0	0	0	0	0	0	0	0	2	1
2	50	0	0	0	0	0	0	0	0	0	0	2	1
3	75	0	0	0	0	2	33	0	0	0	0	5	24
3	75	0	0	0	0	5	83	1	50	2	67	11	52
4	100	2	67	0	0	3	50	0	0	0	0	9	43
2	50	2	67	0	0	2	33	1	50	0	0	7	33
36	900	19	634	9	301	42	699	11	550	17	569	132	611
68	1700	51	1700	51	1700	102	1700	34	1700	51	1700	357	1700

Summative Assessment Post Module Data

>5.NF.A.1 Q1 4pts	% correct	>5.NF.A.1 Q2 3pts	% correct	>5.NF.A1 Q3 3 pts	% correct	5.NBT.A.3 a Q4 6 p	% correct	5.NBT.A.3.a Q5 3 p	% correct	5.NBT.A.3a Q6 3 p1	% correct	total	Percentage
3	75	3	100	3	100	3	50	2	67	0	0	14	64
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2	50	0	0	0	0	2	33	2	67	3	100	9	41
4	100	3	100	3	100	4	67	1	33	3	100	18	82
3	75	3	100	3	100	6	100	3	100	3	100	21	95
2	50	0	0	0	0	4	67	2	67	3	100	11	50
4	100	3	100	3	100	4	67	3	100	3	100	20	91
4	100	3	100	3	100	5	83	3	100	3	100	21	95
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68	1700	51	1700	51	1700	102	1700	51	1700	51	1700	374	1700

High Leverage Concepts

- High leverage concepts
  - Grade level critical content
- Assessments
  - Progression of strategies and models (analyze)
  - Word problems
  - October, January, April
- How do we respond?

Next Steps

- Analyze outcome data
- Make revisions to implementation plan to prepare for full implementation during the 2017-2018 school year.
- Refine communication and feedback loops
- Provide a continuum of professional development and coaching
- Continue TAP-IT process
- Explore scaling-up to grades 6-8

Questions?

Thank you!

Contact Information

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