



Days 1-3: 301 Participant Resources

Data Use Professional Development Series Rhode Island Department of Education



www.ride.ri.gov

www.amplify.com

The contents of this slideshow were developed under a Race to the Top grant from the U.S. Department of Education. However, those contents do not necessarily represent the policy of the U.S. Department of Education, and you should not assume endorsement by the Federal Government.

Rhode Island educators have permission to reproduce and share the material herein, in whole or in part, with other Rhode Island educators for educational and non-commercial purposes.

© 2013 the Rhode Island Department of Education and Amplify Education, Inc.

Exercise 2.1 Data Set

Item Analysis

Standard Number		Standard 1			Standard 2		Standard 3	Overall Score
Question/Item #		1	5	4	3	2	6	
Susan	Burmeister	4	4	2	4	4	2	3.33
Jill	Butler	2	2	1	2	2	1	1.67
Jeffery	Cantrell	4	4	2	4	4	2	3.50
Antonio	Dehart	3	3	1	3	3	2	2.50
John	Doe	3	3	1	2	3	2	2.33
Brandy	Dupree	4	4	3	3	4	3	3.50
Katrina	Farrow	4	3	2	3	3	3	3.00
Patreese	Fitzjohn	4	3	2	3	3	2	2.83
John	Fitzpatrick	2	2	1	1	2	1	1.50
Samuel	Fleck	4	4	2	3	3	2	3.00
Sheryl	Goshorn	4	4	3	3	3	3	3.33
Fred	Hartnett	2	2	1	1	2	2	1.67
Lucille	Islas	2	2	1	1	2	1	1.50
Jacob	Muldoon	4	4	2	3	4	2	3.17
Laura	Na	2	2	1	2	1	1	1.50
Billy	Pachall	4	3	2	3	3	2	3.00
Jacob	Pennell	4	4	3	4	4	3	3.67
Ryan	Pfister	2	1	1	1	2	1	1.33
Shelley	Pink	4	4	1	3	3	2	2.83
Mabel	Strain	3	2	1	2	3	1	1.83
Jonathan	Wayland	4	4	2	4	3	2	3.17
Tina	Wen	4	3	2	3	3	2	3.00
Pearl	Wilk	3	2	2	3	3	2	2.50
Ryan	Zucker	3	3	2	2	3	2	2.50
	AVG.:	3.29	3	1.71	2.63	2.92	1.92	2.58

Key: 1=Beginning 2=Developing 3=Proficient 4=Exemplary

Exercise 2.2 Data Set

Second-grade students received an Exit Ticket after an initial lesson on two-digit addition with regrouping. The ticket had one question on it. The question and 24 students' answers are below.

Student 1 $\begin{array}{r} 47 \\ +34 \\ \hline 13 \end{array}$	Student 2 $\begin{array}{r} 47 \\ +34 \\ \hline 71 \end{array}$	Student 3 $\begin{array}{r} 47 \\ +34 \\ \hline 81 \end{array}$	Student 4 $\begin{array}{r} 47 \\ +34 \\ \hline 82 \end{array}$
Student 5 $\begin{array}{r} 47 \\ +34 \\ \hline 13 \end{array}$	Student 6 $\begin{array}{r} 47 \\ +34 \\ \hline 71 \end{array}$	Student 7 $\begin{array}{r} 47 \\ +34 \\ \hline 13 \end{array}$	Student 8 $\begin{array}{r} 47 \\ +34 \\ \hline 71 \end{array}$
Student 9 $\begin{array}{r} 47 \\ +34 \\ \hline 71 \end{array}$	Student 10 $\begin{array}{r} 47 \\ +34 \\ \hline 71 \end{array}$	Student 11 $\begin{array}{r} 47 \\ +34 \\ \hline 81 \end{array}$	Student 12 $\begin{array}{r} 47 \\ +34 \\ \hline 71 \end{array}$
Student 13 $\begin{array}{r} 47 \\ +34 \\ \hline 71 \end{array}$	Student 14 $\begin{array}{r} 47 \\ +34 \\ \hline 81 \end{array}$	Student 15 $\begin{array}{r} 47 \\ +34 \\ \hline 71 \end{array}$	Student 16 $\begin{array}{r} 47 \\ +34 \\ \hline 81 \end{array}$
Student 17 $\begin{array}{r} 47 \\ +34 \\ \hline 71 \end{array}$	Student 18 $\begin{array}{r} 47 \\ +34 \\ \hline 71 \end{array}$	Student 19 $\begin{array}{r} 47 \\ +34 \\ \hline 13 \end{array}$	Student 20 $\begin{array}{r} 47 \\ +34 \\ \hline 81 \end{array}$
Student 21 $\begin{array}{r} 47 \\ +34 \\ \hline 13 \end{array}$	Student 22 $\begin{array}{r} 47 \\ +34 \\ \hline 13 \end{array}$	Student 23 $\begin{array}{r} 47 \\ +34 \\ \hline 74 \end{array}$	Student 24 $\begin{array}{r} 47 \\ +34 \\ \hline 81 \end{array}$

Identifying Patterns of Need Template

1. High-Level View

What do you notice first when you look at the data set?

2. Identify Clusters of Students

What pattern(s) do you see?

3. Describe Clusters of Students

What are each cluster's characteristics, drawn from what evidence from the data?

Cluster	Characteristics	Evidence
1		
2		
3		

4. Create Working Hypothesis

Pattern Of Need:

Potential Actionable Cause:

Logging Data Conversations

Date: Met with: <input type="checkbox"/> Administrator <input checked="" type="checkbox"/> Teacher <input type="checkbox"/> Student <input type="checkbox"/> Parent <input type="checkbox"/> Other: _____	What type of conversation did you have? <input type="checkbox"/> Gathering information <input checked="" type="checkbox"/> Guiding improvement <input type="checkbox"/> Finding solutions	What step of the Cycle of Inquiry were you in? <input type="checkbox"/> Analyze <input checked="" type="checkbox"/> Strategize <input type="checkbox"/> Act
	What is one question you asked during the conversation? ✓ <i>What strategies are you considering to help your students achieve proficiency with 2-digit addition?</i>	
What was one result of the conversation? ✓ <i>The teacher will have students work in small groups with base 10 blocks to solve 2-digit addition problems.</i>		

Date: Met with: <input type="checkbox"/> Administrator <input type="checkbox"/> Teacher <input type="checkbox"/> Student <input type="checkbox"/> Parent <input type="checkbox"/> Other: _____	What type of conversation did you have? <input type="checkbox"/> Gathering information <input type="checkbox"/> Guiding improvement <input type="checkbox"/> Finding solutions	What step of the Cycle of Inquiry were you in? <input type="checkbox"/> Analyze <input type="checkbox"/> Strategize <input type="checkbox"/> Act
	What is one question you asked during the conversation?	
What was one result of the conversation?		

Date: Met with: <input type="checkbox"/> Administrator <input type="checkbox"/> Teacher <input type="checkbox"/> Student <input type="checkbox"/> Parent <input type="checkbox"/> Other: _____	What type of conversation did you have? <input type="checkbox"/> Gathering information <input type="checkbox"/> Guiding improvement <input type="checkbox"/> Finding solutions	What step of the Cycle of Inquiry were you in? <input type="checkbox"/> Analyze <input type="checkbox"/> Strategize <input type="checkbox"/> Act
	What is one question you asked during the conversation?	
What was one result of the conversation?		

Short Cycle of Inquiry

Analyze

Data Source	
-------------	--

Cluster	Characteristics and Evidence	
1		
2		
3		

Pattern of Need	
-----------------	--

Potential Actionable Cause	
----------------------------	--

Strategize

Brainstorm Strategies:

Step 1: Generate Ideas: What strategies could be implemented to address the Pattern of Need?

1	
2	
3	
4	
5	
6	

Step 2: Cross out strategies that are not evidence-based.

Step 3: Cross out strategies that are not within your direct control.

Step 4: Cross out strategies that are unrealistic to address with currently available resources.

Which high-impact strategy from the brainstormed list will be implemented to address the Pattern of Need?

Action Plan

What standard (e.g., CCSS, NGSS, GLE/GSE) or aspect of a standard will you address?	
<input type="checkbox"/> Whole Class <input type="checkbox"/> Small group – Students: <hr/>	
Plan:	
What resources will you need?	When will you implement?
How will you assess?	When will you assess?

- | | |
|---|---|
| <input type="checkbox"/> Stakeholder(s), if necessary, receive a copy of plan | <input type="checkbox"/> Timeline for plan is appropriate and realistic |
| <input type="checkbox"/> Rigor of instruction matches rigor or assessment | <input type="checkbox"/> Assessment is objective and measurable |
| <input type="checkbox"/> Rigor of instruction matches rigor of standard | <input type="checkbox"/> Resources are readily available |

Act

<p><i>After implementing Action Plan:</i></p> <p>Assessment results</p> <p>Next Steps</p>
--

Identifying Patterns of Need Template

1. High-Level View

What do you notice first when you look at the data set?

2. Identify Clusters of Students

What pattern(s) do you see?

3. Describe Clusters of Students

What are each cluster's characteristics, drawn from what evidence from the data?

Cluster	Characteristics	Evidence
1		
2		
3		

4. Create Working Hypothesis

Pattern Of Need:

Potential Actionable Cause:

Short Cycle of Inquiry

Analyze

Data Source	
-------------	--

Cluster	Characteristics and Evidence	
1		
2		
3		

Pattern of Need	
-----------------	--

Potential Actionable Cause	
----------------------------	--

Strategize

Brainstorm Strategies:

Step 1: Generate Ideas: What strategies could be implemented to address the Pattern of Need?

1	
2	
3	
4	
5	
6	

Step 2: Cross out strategies that are not evidence-based.

Step 3: Cross out strategies that are not within your direct control.

Step 4: Cross out strategies that are unrealistic to address with currently available resources.

Which high-impact strategy from the brainstormed list will be implemented to address the Pattern of Need?

Action Plan

What standard (e.g., CCSS, NGSS, GLE/GSE) or aspect of a standard will you address?	
<input type="checkbox"/> Whole Class <input type="checkbox"/> Small group – Students: _____	
Plan:	
What resources will you need?	When will you implement?
How will you assess?	When will you assess?

- Stakeholder(s), if necessary, receive a copy of plan
- Rigor of instruction matches rigor or assessment
- Rigor of instruction matches rigor of standard
- Timeline for plan is appropriate and realistic
- Assessment is objective and measurable
- Resources are readily available

Act

<p><i>After implementing Action Plan:</i></p> <p>Assessment results</p> <p>Next Steps</p>
--

Data Inventory Template

Student Achievement Data

Data Source	Grade Range	Content Area	When data collected / received	Who has access/ Where it is stored	Purpose	How are data currently used?	How data could be used more effectively
<i>Example: NECAP</i>	<i>3,4,5,6,7, 8,11</i>	<i>Reading, Math</i>			<input type="checkbox"/> Inform Instruction <input type="checkbox"/> Screen/Identify <input type="checkbox"/> Outcomes/ Accountability		
					<input type="checkbox"/> Inform Instruction <input type="checkbox"/> Screen/Identify <input type="checkbox"/> Outcomes/ Accountability		
					<input type="checkbox"/> Inform Instruction <input type="checkbox"/> Screen/Identify <input type="checkbox"/> Outcomes/ Accountability		

Data Inventory

Student Achievement Data

Data Source	Grade Range	Content Area	When data collected / received	Who has access/ Where it is stored	Purpose	How are data currently used?	How data could be used more effectively
					<input type="checkbox"/> Inform Instruction <input type="checkbox"/> Screen/Identify <input type="checkbox"/> Outcomes/ Accountability		
					<input type="checkbox"/> Inform Instruction <input type="checkbox"/> Screen/Identify <input type="checkbox"/> Outcomes/ Accountability		
					<input type="checkbox"/> Inform Instruction <input type="checkbox"/> Screen/Identify <input type="checkbox"/> Outcomes/ Accountability		

Data Inventory

Demographic Data

Data Source	When data collected	Who has access/ Where it is stored	How data are currently being used	How data could be used more effectively
<i>Example: Transfer records</i>				

Data Inventory

Student Engagement/Perception Data

Data Source	When data collected	Who has access/ Where it is stored	How data are currently being used	How data could be used more effectively
<i>Attendance</i>				

Data Inventory

Curriculum, Instruction, and Program Data

Data Source	When data collected	Who has access/ Where it is stored	How data are currently being used	How data could be used more effectively
<i>Lesson plans</i>				

Data Inventory

Other

Quantitative vs. Qualitative

Quantitative Data	Qualitative Data
Data measured and reported as numbers (e.g., student test scores, attendance, age)	Data that describe or explain with words (e.g., observations, conference notes)

Quantitative and Qualitative Example Cards

SAT Scores	Notes from conference with parent/student
Email from parent	NECAP results
Essay written by student	Recommendation from guidance counselor
Diagnostic testing results	End of year exam scores
Teacher's written observations	Attendance record
Parent letter/note	Reading percentile
Final exam scores	Student journal entry
Recommendation for behavior referral	End of unit test scores
Tardy records	Percentage of students with Free/Reduced lunch
Lesson plans	Teaching strategies

Implementation Case Studies

Directions

Read the case study (A, B, C, D, E, F) your SDLT was assigned. After reading the case study, work with your SDLT to answer the Case Study Guiding Questions at the end of the document. Be prepared to share out highlights about your case study to the rest of the cohort group.

Implementation Case Study: School A

SDLT Composition

The Hillview High School SDLT was comprised of the school principal, an assistant principal, an English teacher, and a math teacher. The two classroom teachers were also members of the RTI team. The SDLT team was curious about Data Use PD and how it would be implemented at their school. At least one administrator from the SDLT team always actively participated in off-site trainings and site visits.

School Climate and Collaborative Structures

Before participating in Data Use PD, the school used data regularly to make high-stakes, schoolwide decisions such as student placement, teacher assignments, and changes in curriculum. The high school faculty's overall attitude toward Data Use implementation was generally open and adaptive, and the administration emphasized the value and importance of data use.

At Hillview, teachers were provided several opportunities for collaboration. One hour of common planning time was designated three times a month, two of which were used for department meetings, with one for faculty meetings. Additional collaboration time was provided through a monthly early release day.

Data Use Implementation: Cycle of Inquiry and Turnkey Exercises

The Cycle of Inquiry and several turnkey exercises were introduced to the department heads during the Day 5 Site Visit. After each off-site training the SDLT would review the turnkey exercises and determine which would be most useful to bring back to their staff.

The SDLT would sometimes adapt the turnkey exercises to better fit their needs and audience. They were thorough and reflective in their planning and implementation. The exercises were introduced by the SDLT to the department heads, and the department heads would introduce the exercises to their departments during common planning time. Throughout the process, there was a strong focus on the Cycle of Inquiry and creating a common vocabulary and common processes for analyzing data. The staff worked well with the SDLT, often engaging in open and interactive dialogue.

Sustainability and Next Steps

By the end of the year, the SDLT felt they had established a good foundation for data use, but they still felt there was more work to be done. All teachers were familiar with the Cycle of Inquiry and some turnkey exercises had been shared. However, the data use practices were not yet ingrained into the school culture. As the SDLT looked toward the next year, they wanted to focus on integrating the various initiatives at their school with the new data practices. With that in mind, their Action Research Plan sought to find the impact a structured, data driven collaborative time would have on various school initiatives. They were excited to see how creating this data driven culture would play a role in the coming year's plan. Day 10 provided an opportunity for vertical articulation with the elementary and middle schools. They appreciated having the time to meet together and share. They planned to meet together as a district a few times during the following year to discuss progress and find ways to continue integration of plans.

Implementation Case Study: School B

SDLT Composition

Goldfish Elementary School's SDLT was comprised of the principal, a reading specialist, a professional development coordinator, and a 5th grade teacher. All four were very excited about Data Use PD and participated enthusiastically. The district supported the implementation of the Data Use PD by arranging to have all the district schools attend the same workshops, providing a rare opportunity for all schools to be on the same page and align their implementation plans.

School Climate and Collaborative Structures

Goldfish Elementary had bi-monthly grade-level meetings for Grades 1–5. Kindergarten was half-day in the district, so kindergarten teachers did not have common planning time designated for Data Meetings. The district already had some experience with RTI.

While many of the schools in the district opted to introduce Data Use to the whole school, Goldfish Elementary embraced the idea of starting small and chose the Grade 3 team to begin implementation of the work. This particular team was professional, but was not using data in a consistent way. Although the aim was to eventually get the team proficient enough to analyze and use data to inform instructional practice in all subjects, they gave the team a first-year data use implementation focus that connected to the school's Student Learning Objective: Responding to Text.

Data Use Implementation: Cycle of Inquiry and Turnkey Exercises

At the first faculty meeting, the SDLT introduced the high-level concepts of the Cycle of Inquiry to create a common language for all teachers. During the Grade 3 meetings, the SDLT dug deeper into the cycle and used many of the turnkey materials to enhance the data analysis skills for the 3rd grade teachers. To begin introducing this process to the entire faculty, the Grade 3 team was given some time in each faculty meeting to discuss their process, as well as their progress. They said they felt nervous at first, but also proud of their accomplishments, as they experienced many inspiring moments as a result of their work with data, which they were happy to share with the rest of the faculty. The work had a compelling impact on instruction and differentiation as the team designed, implemented, and refined their use of Exit Slips. When the principal took a

leave of absence for the remainder of the year, the team and school did not lose momentum. Throughout the course of the year, the SDLT observed the Grade 3 team, identifying aspects of their instruction to improve on independently. During the second site visit, the 3rd grade team took on new roles and developed a process for conducting their own meetings. The SDLT gradually released direction and facilitation of the 3rd grade team meetings and the 3rd grade team continued meeting on its own.

At each of the site visits, the coach gave constructive feedback to the Grade 3 team and helped co-create next steps for them and the school as a whole. The site visits became more progressive as the educators' proficiency grew, with the coach taking less of an active role in shaping the direction of the day.

Participating in Data Use PD and having regular 3rd grade team meetings provided Grade 3 teachers with the skills and the time to work on SLO's during the school year. By the end of the year, when Student Learning Objective data was due, Grade 3 teachers experienced considerably less stress than the rest of the school, as their data and documentation was already prepared. They could clearly see the progress of their students and themselves during the course of the year.

Sustainability and Next Steps

At the end of the year, the SDLT prepared the Grade 3 team to extend their learning to the rest of the faculty. The Grade 3 team was charged with facilitating Grade 4 and 5 team meetings in the use of data, with a focus on responding to informational text and the use of student self-assessment rubrics. Their plans included rolling the work down to oral response to text in K–2 the following year. During the second to last workshop day, all the schools realized they each had spontaneously decided on the same focus for their sustainability/action research plan and pulled their desks together to create an aligned plan. It was the first opportunity for school administration and teacher leaders to sit down together and align their work that anyone could remember. By the end of the last day, all the schools agreed to meet periodically and share the results of their action research and sustainability plans over the course of the next couple of years.

Implementation Case Study: School C

SDLT Composition

Madison Elementary had three members of their team — the principal, a Grade 1 teacher and a Grade 3 teacher. Although the principal had a strong presence and bought into data use, she was new to the administration and was often occupied with managing daily school operations. Realizing that she was not in a position to lead data use, she tasked two classroom teachers with implementing data use at their school.

School Climate and Collaborative Structures

The team hoped to introduce the work to the entire faculty, but there were few opportunities — faculty meeting time was already designated, and the team could not take the time away from classroom instruction to attend other grade-level meetings. They formed a voluntary group to meet before the start of the school day to discuss data use and introduce the provided turnkey materials.

Data Use Implementation: Cycle of Inquiry and Turnkey Exercises

During the first meeting of this voluntary group, one third of the faculty attended. The two classroom teachers on the SDLT team ran the meeting and introduced the Cycle of Inquiry and the first few turnkey activities. Many teachers got off-task in the meeting and left frustrated and confused about the purpose of Data Use PD and how it was connected to their every day work.

The first site visit included a brief morning session with the volunteer group to introduce positive presumptions. They chose positive presumptions because it is an aspect of data conversations the SDLT felt less confident about, and they hoped the coach, with her expertise, could clarify it for the teachers. For the remainder of the day, the coach — along a member of the SDLT— met with each teacher (the principal provided two subs for support) to provide perspective on the purpose of Data Use PD and discuss specific ways classroom teachers could use data in low-stakes ways (e.g. Exit Slips, tracking charts, pre- and post-assessments, etc.). Although there was a wide range of proficiencies, most of the teachers left the meeting with at least one actionable step they could take toward expanding their use of data in their classrooms.

After the first site visit, the SDLT regrouped and created binders for each teacher to collect and house various data sources, assist teachers in staying organized, and provide a means for teachers to transfer information quickly and easily when submitting Student Learning Objectives and when students matriculated to the next grade. The SDLT also included examples of how they themselves were using classroom data to inform and adjust instruction, and explained how using it actually saved them planning time. The teachers appreciated the organizational tool and its short-term benefits and began to feel more open to the other aspects of the Data Use PD.

By the second and third site visits, the teachers demonstrated clear evidence of a growing culture of data use. They began to use a common language around data, used some of the data use protocols in common planning time, and felt increasingly confident about analyzing and monitoring their Student Learning Objective data. The SDLT even visited a school in another district to learn about the effective use of data walls.

Sustainability and Next Steps

Although some teams still struggled to overcome mind-set challenges, the SDLT continued an honest dialogue with their coach about helping their teachers overcome these obstacles and creating a solid Sustainability Plan for the second and third years of implementation. Although there was little initial support from the district, a shift in leadership mid-year signaled more support for Data Use in the years ahead.

Implementation Case Study: School D

SDLT Composition

The SDLT from Longfellow Elementary had four members: a 4th grade teacher, a special education teacher, the school psychologist, and the assistant principal. The assistant principal was new to the school and was a late addition to the team. The team was energetic and focused during the first three days of workshops. Using low-stakes data to inform everyday instruction resonated with them and they were enthused about bringing the work back to their colleagues.

School Climate and Collaborative Structures

The SDLT had a difficult time finding time to introduce Data Use PD to the faculty. Faculty meetings were once a month and usually filled with items of “great urgency, but not necessarily great importance,” stated one team member. The principal, who set the agenda for faculty meetings, was not a part of the SDLT team. Although she understood the importance of data, she felt her faculty “was already in a pretty good place with it” and did not want to designate time in faculty meetings to Data Use PD. Each of the grade-level teams in the building had their own systems for collecting and analyzing data.

Data Use Implementation: Cycle of Inquiry and Turnkey Exercises

The SDLT felt that they were getting off to a “slow start” in implementing Data Use PD in their school. In the informal conversations the SDLT team had with their colleagues about data use, they struggled to articulate how the project was not “just another thing.” Teachers in the building were “drowning in evaluations” as one team member put it, and were — generally speaking — averse to embracing another initiative that would cut into their time. One team member described the challenge:

People would approach us in the hallway and ask about the project. We would tell them, “It’s all about how to use data to inform your instruction.” And they wouldn’t say anything, but you could see them thinking: “We already do that.” But they don’t, not all of them, and not in the way we’ve talked about during the trainings. But we almost gave them permission to opt out by not having a clear plan for integrating it with the million other things teachers are doing.

Since each of the grade-level teams in the building had their own systems for collecting and analyzing data, some of them were resistant about trying out the protocols associated with the Cycle of Inquiry. The SDLT felt in order for the Data Use PD work to truly take hold, collaborative structures like common planning time would have to be put into place. The assistant principal, the *de facto* leader of the team, felt that asking all of the teachers to do this would be problematic.

Frustrated by the difficulties they were having implementing Data Use PD with the whole faculty, the SDLT decided to focus on implementing the work with their own grade-level teams (4th grade and special education). The 4th grade and special education teams began using the Cycle of Inquiry and many of the data analysis skills in their every day work.

Sustainability and Next Steps

By the end of the year, the team made progress with their own grade-level teams, but still struggled to gain a foothold with the other teachers, who seemed increasingly overwhelmed by demands on their time. The SDLT created an action research and sustainability plan for the following year focused on widening the use of Data Use PD to the entire faculty. They silently hoped the second year would feel more successful than the first.

Implementation Case Study: School E

SDLT Composition

Golden Heights Elementary SDLT was composed of a reading specialist, the school psychologist, and the resource teacher. The school was in administrative transition after a principal abruptly retired; a substitute principal was brought in until a full-time administrator could be found. While the SDLT was engaged and excited about the process, they had concerns about their ability to move forward without a principal and any real leadership on the team. In addition, the school psychologist divided her time between three schools, so she was not present at Golden Heights on a daily basis.

School Climate and Collaborative Structures

At Golden Heights, some teachers used data to make every day instructional decisions, while other teachers used schoolwide data when it was provided for them. Most data used at the school level came from universal screeners administered three times a year, largely used to identify students for interventions. In addition, some teachers created and administered common assessments. The school provided some collaborative time for grade-level meetings; this time was designated by the principal and grade-level teams.

Data Use Implementation: Cycle of Inquiry and Turnkey Exercises

The SDLT felt they lacked the authority to dictate meeting times for the whole faculty, without the support of a principal, so they decided to start small with the 3rd grade teachers. The SDLT believed the 3rd grade teachers would be the most open and responsive to the process. The cohort began with a focus on the short Cycle of Inquiry, emphasizing the use of low-stakes data, such as Exit Tickets. On the first site visit, the 3rd grade teachers were excited about the impact Exit Tickets were having and the information they were discovering about their students and instruction. The SDLT also used the site visit to introduce the 5th grade team to the data use process through the analysis of a recent math assessment. They hoped having the coach involved would encourage the 5th grade teachers' participation. While the 5th grade teachers were open to working with the coach, they felt data use was something they were already doing and after the meeting went back to using the processes they were using before. The

SDLT continued to work with the 3rd grade team, introducing Root Cause Analysis through the use of the fishbone turnkey exercise.

During the off-site trainings, the SDLT continued to actively participate and consider how the different concepts could fit at their school. They often expressed frustration at not being able to do more; they felt stuck and unable to move forward. They believed the consistent use of data could have a positive impact on their school and were anxious to get a schoolwide plan in place. The coach encouraged them to continue moving forward with the 3rd grade team and look for ways to continue to expand the work.

Midway through the year, the school was assigned a permanent principal. She participated in the second site visit and was excited about continued implementation. During a faculty meeting, the coach was given time to introduce the staff to the Data Use PD and Cycle of Inquiry. The SDLT continued to work with the 3rd grade team on a regular basis, and were able to bring pieces of the Data Use PD to other grade levels periodically.

Golden Heights had an opportunity to share what they were learning with others during a district-wide professional development session. One of the SDLT members presented a workshop on the Cycle of Inquiry during this time. It was a first step toward the district coming together around data use.

Sustainability and Next Steps

By the end of the year, the SDLT wished they had been able to do more, but felt they were on the right track. For the next year, they planned to continue their focus on low-stakes data, this time with the entire school. With the principal's support, they were able to work with the itinerant teachers' schedules to create monthly grade-level collaborative time that would be used to introduce turnkey exercises and work through the Cycle of Inquiry with classroom data. Staff meetings would also be utilized to introduce turnkey exercises. The district was able to meet together and share Action Research/Sustainability Plans during Day 10.

Implementation Case Study: School F

SDLT Composition

The Edison High SDLT included a new principal, two guidance counselors, a history teacher and a math and reading specialist. From the beginning, the SDLT were dubious about the Data Use PD and believed that the content was too rudimentary. The SDLT objected to the time commitment they were asked to make for the workshops and hoped to discontinue involvement. After conversations with the district leaders, they agreed to participate.

School Climate and Collaborative Structures

Faculty and department meetings were held regularly, covering many different topics determined by the principal and department heads. Data was occasionally a focus of these meetings.

Data Use Implementation: Cycle of Inquiry and Turnkey Exercises

Edison did not make any implementation progress between Day 3 and 4. When the coach reached out about the first site visit (in November), the principal seemed unclear about the purpose of the visit. Although a loosely constructed plan was put in place to introduce key “practical” tools from the workshops, the coach realized the teachers had not been given a context for this Race to the Top project and were pessimistic about the introduction of “another thing that RIDE was asking of us.” When the coach tried to change direction and offer perspective, the principal countered with, “The expectation we set was that we would talk about these tools.” Although the principal was present at the first meeting, he had to resume his typical duties and as a result missed the on-site mini workshops. Halfway through the day, the coach met with the SDLT and decided to change direction and introduce the initiative to the remaining teachers.

As the year went on, the team made little progress. The second site visit was repeatedly postponed for various reasons. Eventually the second site visit connected the coach with the department heads to more firmly introduce the initiative. The SDLT did not meet in the course of the day to debrief, and it was unclear what next steps the team would put in place as a result of the day’s work. The third site visit was conducted by phone because of last-minute scheduling conflicts.

Sustainability and Next Steps

Edison produced no concrete Sustainability Plan and had no clear action plan for improving the implementation of Data Use PD over the course of the next school year.

Case Study Guiding Questions

1. What role did the SDLT play in implementation?

SCHOOL A	SCHOOL D
SCHOOL B	SCHOOL E
SCHOOL C	SCHOOL F

2. What challenges did this school face in terms of data use implementation?

SCHOOL A	SCHOOL D
SCHOOL B	SCHOOL E
SCHOOL C	SCHOOL F

3. What opportunities for leadership and growth presented themselves at given points in this case study?

SCHOOL A	SCHOOL D
SCHOOL B	SCHOOL E
SCHOOL C	SCHOOL F

4. How were data being used in the school? (before the implementation of Data Use PD?)

SCHOOL A	SCHOOL D
SCHOOL B	SCHOOL E
SCHOOL C	SCHOOL F

5. Where can you find evidence of the school’s attitude toward implementation? What are the ways this attitude impacts Data Use in this school?

SCHOOL A	SCHOOL D
SCHOOL B	SCHOOL E
SCHOOL C	SCHOOL F

Identifying Patterns of Need Template

1. High-Level View

What do you notice first when you look at the data set?

2. Identify Clusters of Students

What pattern(s) do you see?

3. Describe Clusters of Students

What are each cluster's characteristics, drawn from what evidence from the data?

Cluster	Characteristics	Evidence
1		
2		
3		

4. Create Working Hypothesis

Pattern Of Need:

Potential Actionable Cause:

Symptom, Correlation and Causation Scenarios

Handout

Correlation: The relationship between two variables or factors. Correlation does not necessarily show a causal relationship.

Causation: One action that directly causes another action.

Root Cause: The cause of an event that would substantially reduce or prevent the event if eliminated.

Symptom: An indicator or evidence of an underlying cause.

Scenario 1

A student in Ms. Simpson's room always asks to go to the restroom during independent-reading time. The student struggles to read, but the teacher thinks if the student stays in the room and reads, her skills will improve. The teacher decides to refuse the student's request in order to improve her reading.

In this scenario, does the teacher treat a symptom rather than the real cause? Can you recall another time you treated or saw others treating a symptom?

Scenario 2

Mr. Wilson sees a correlation: The students in his class get good grades on their report cards, so they obviously mastered the content.

Is the correlation Mr. Wilson drew accurate? Can you recall a time you saw an inaccurate correlation?

Scenario 3

Playground aides noticed more injuries occur on Fridays than on any other day. They decide the day of the week must cause the injuries.

Can you name other, more realistic causes? Can you recall another time a Root Cause of a problem was not addressed?

The Nurse and The Why

Handout

This week, the school nurse noticed a Pattern of Need: by Wednesday, four students had come to his office after slipping and falling in the cafeteria. The nurse decided to dig deeper into the Root Cause of this problem by going to the cafeteria and asking “Why?” a number of times.

Pattern of Need: Four students slipped and fell in the cafeteria.

Why are students slipping?

There is a puddle of water on the floor.

Why is there a puddle?

Water is dripping from the ceiling.

Why is the water dripping from the ceiling?

A pipe that is above the ceiling is leaking.

Why is the pipe leaking?

There is a broken seal in the pipe.

Why is the seal broken?

The pipe is not anchored securely and moves with the vibration from the floor above.

Test for Root Cause:

Would addressing the last cause eliminate or substantially reduce this Pattern of Need?

Understand the Risks:

Implementing an Action Plan based on one of the first answers would probably not solve the need. If the nurse didn't investigate, what could have happened? Could the nurse ask “Why?” several more times?

The 5 Whys

Handout

Pattern of Need: _____

Why?

Why?

Why?

Why?

Why?

Test for Root Cause:

Would addressing the last cause eliminate or substantially reduce this Pattern of Need?

Revisiting Working Hypothesis

Handout

After analyzing Root Cause, revisit and refine your hypothesis.

Pattern Of Need:

Potential Actionable Cause:

Identifying Patterns of Need Template

1. High-Level View

What do you notice first when you look at the data set?

2. Identify Clusters of Students

What pattern(s) do you see?

3. Describe Clusters of Students

What are each cluster's characteristics, drawn from what evidence from the data?

Cluster	Characteristics	Evidence
1		
2		
3		

4. Create Working Hypothesis

Pattern Of Need:

Potential Actionable Cause:

Short Cycle of Inquiry

Analyze

Data Source	
-------------	--

Cluster	Characteristics and Evidence	
1		
2		
3		

Pattern of Need	
-----------------	--

Potential Actionable Cause	
----------------------------	--

Strategize

Brainstorm Strategies:

Step 1: Generate Ideas: What strategies could be implemented to address the Pattern of Need?

1	
2	
3	
4	
5	
6	

Step 2: Cross out strategies that are not evidence-based.

Step 3: Cross out strategies that are not within your direct control.

Step 4: Cross out strategies that are unrealistic to address with currently available resources.

Which high-impact strategy from the brainstormed list will be implemented to address the Pattern of Need?

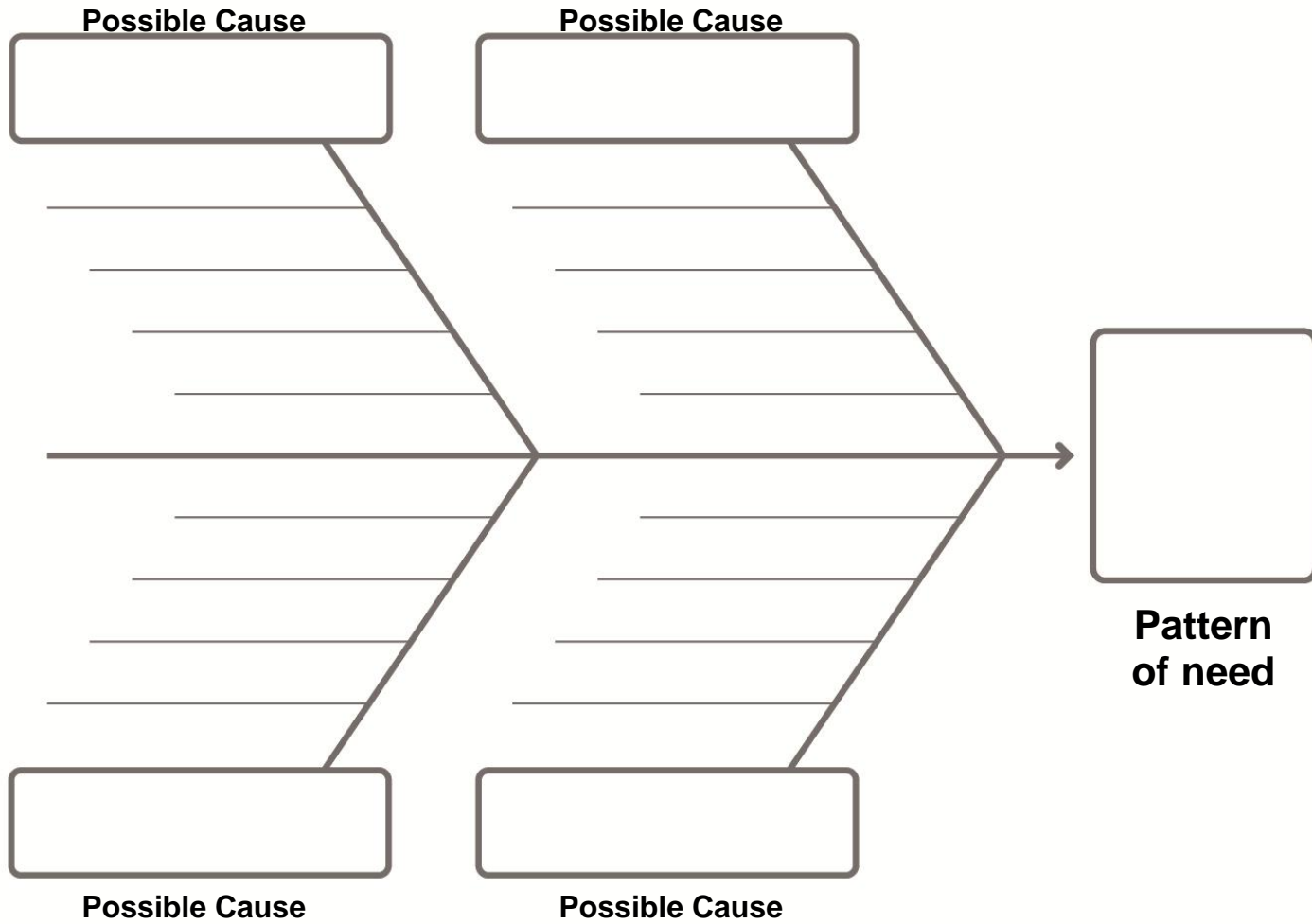
Action Plan

What standard (e.g., CCSS, NGSS, GLE/GSE) or aspect of a standard will you address?	
<input type="checkbox"/> Whole Class <input type="checkbox"/> Small group – Students: <hr/>	
Plan:	
What resources will you need?	When will you implement?
How will you assess?	When will you assess?

- | | |
|---|---|
| <input type="checkbox"/> Stakeholder(s), if necessary, receive a copy of plan | <input type="checkbox"/> Timeline for plan is appropriate and realistic |
| <input type="checkbox"/> Rigor of instruction matches rigor or assessment | <input type="checkbox"/> Assessment is objective and measurable |
| <input type="checkbox"/> Rigor of instruction matches rigor of standard | <input type="checkbox"/> Resources are readily available |

Act

<p><i>After implementing Action Plan:</i></p> <p>Assessment results</p> <p>Next Steps</p>
--



Revisiting Working Hypothesis

Handout

After analyzing Root Cause, revisit and refine your hypothesis.

Pattern Of Need:

Potential Actionable Cause:

Implementation Plan

Current State of Data Use

Analyze

Briefly describe the practices related to formative data (classroom level) being used at your school.

Briefly describe the practices related to summative data sources (e.g. NECAP) being used at your school.

Strategize

In what ways does formative data impact day-to-day instruction at your school?

In what ways does summative data impact high-stakes decisions at your school?

Act

How do educators determine which strategies have been most effective? How do educators distinguish between strategies that achieved goals and those that have not?

What protocols are used when instructional objectives are not met?

Current State of Collaboration

Please list and briefly describe the collaborative structures currently in place at your school.

How are these structures currently used?

Initiative Integration

Think of three other initiatives going on at your school that seem highly connected to this work. List common characteristics where you see a possibility of integration.

A diagram for initiative integration. On the left is a white rectangular box with an orange border containing the text "Data Use" in orange. To its right is a grey triangular shape pointing towards the box, with a white circle at its vertex. A vertical line extends from this circle down to the text "Common Characteristics" centered below the diagram. To the right of the grey triangle is a white rectangular box with a grey border and a horizontal line inside, intended for notes.

Data Use

Common Characteristics

A diagram for initiative integration. On the left is a white rectangular box with an orange border containing the text "Data Use" in orange. To its right is a grey triangular shape pointing towards the box, with a white circle at its vertex. A vertical line extends from this circle down to the text "Common Characteristics" centered below the diagram. To the right of the grey triangle is a white rectangular box with a grey border and a horizontal line inside, intended for notes.

Data Use

Common Characteristics

A diagram for initiative integration. On the left is a white rectangular box with an orange border containing the text "Data Use" in orange. To its right is a grey triangular shape pointing towards the box, with a white circle at its vertex. A vertical line extends from this circle down to the text "Common Characteristics" centered below the diagram. To the right of the grey triangle is a white rectangular box with a grey border and a horizontal line inside, intended for notes.

Data Use

Common Characteristics

Ideal Vision of Data Use and Collaboration

Use these questions as a framework for thinking about and discussing your ideal school in terms of data use and collaboration.

- If there were no constraints on time or budget, how would educators collaborate at your school?
- If there were no constraints on time or budget, how would educators access and evaluate data at your school?
- If there were no constraints on time or budget, how would educators measure instructional effectiveness?
- What would students, teachers, parents, be talking about? What would those conversations sound like? What qualities would they have?
- What would someone experience who walked into your school for the first time? How would they feel? What would they notice?
- When talking about your school, what sentiments would stakeholders express?

Vision Statement

Now, imagine you have just a moment to explain to a colleague the vision of data use and collaboration you are trying to achieve. Write a short vision statement every SDLT member could use when talking about the work — a statement that could be shared with stakeholders quickly and without too much educational jargon. Take into account your school's current state of data use and collaboration, and your discussion about your ideal vision. It should be inspiring, realistic and connect to other initiatives.

Why Use Data?

When talking to colleagues and stakeholders about this work, you may be asked this question. Construct a short answer, 2-3 bullet points, that every SDLT member will use.

What will success look like?

Think about the end of this school year. You have completed ten days of data use professional development and what you've learned has started to become a part of your school culture. What will you see that shows you have begun to accomplish your vision? List specific things; make sure they are realistic and achievable.

Extended Cohort Planning

As discussed, SDLT members will be responsible for sharing what is learned during the off-site workshops with others at their schools. How this looks depends on the composition and needs of each site. With this in mind, who will be included in your school's extended cohort? Consider the following:

- Who is already doing this work?
- Who would be open to starting this work?
- Who has the capacity to do this work?
- Will you target the whole school? One grade level? Department heads? One subject?

Choose at least 3-7 individuals with whom you will begin this work.

Name	Grade/Subject	What characteristic/s does this individual have that makes them a good candidate for taking on this work?	In what other initiatives are they already involved?

Turnkey Plan Worksheet

Getting Started: Introduce the Initiative, Introduce Cycle of Inquiry

The Team

Who will own these pieces of the work? Who will provide support?

Introduce the Initiative:

Introduce Cycle of Inquiry:

What is currently going on with regard to data use?

Among the daisies?

From a bird's-eye view?

What is at stake?

What might people have to give up, or let go of, in order to engage in frequent low-stakes Cycles of Inquiry? This may include longstanding practices, and deeply held, sometimes limiting, beliefs.

What will success look like?

If someone were to walk through your school 3 years from now, after this piece of the work has taken root, what would they see?

Turnkey Plan Worksheet

Getting Started: Introduce the Initiative, Introduce Cycle of Inquiry

The Team

Who will own these pieces of the work? Who will provide support?

Introduce the Initiative:

Introduce Cycle of Inquiry:

What is currently going on with regard to data use?

Among the daisies?

From a bird's-eye view?

What is at stake?

What might people have to give up, or let go of, in order to engage in frequent low-stakes Cycles of Inquiry? This may include longstanding practices, and deeply held, sometimes limiting, beliefs.

What will success look like?

If someone were to walk through your school 3 years from now, after this piece of the work has taken root, what would they see?

Turnkey Plan Worksheet

Getting Started: Data Inventory

The Team

Who will own these pieces of the work? Who will provide support?

What is currently going on with regard to data use?

Among the daisies?

From a bird's-eye view?

What is at stake?

What might people have to give up, or let go of, in order to begin working on a Data Inventory?

This may include longstanding practices, and deeply held, sometimes limiting, beliefs.

What will success look like?

If someone were to walk through your school 3 years from now, after this piece of the work has taken root, what would they see?

Turnkey Plan Worksheet

Analyze: Identify Patterns of Need

The Team

Who will own these pieces of the work? Who will provide support?

What is currently going on with regard to data use?

Among the daisies?

From a bird's-eye view?

What is at stake?

What might people have to give up, or let go of, in order to engage in this type of thinking about data analysis? This may include longstanding practices, and deeply held, sometimes limiting, beliefs.

What will success look like?

If someone were to walk through your school 3 years from now, after this piece of the work has taken root, what would they see?

Turnkey Plan Worksheet

Analyze: Root Cause Analysis

The Team

Who will own these pieces of the work? Who will provide support?

What is currently going on with regard to data use?

Among the daisies?

From a bird's-eye view?

What is at stake?

What might people have to give up, or let go of, in order to engage in Root Cause Analysis?

This may include longstanding practices, and deeply held, sometimes limiting, beliefs.

What will success look like?

If someone were to walk through your school 3 years from now, after this piece of the work has taken root, what would they see?

Turnkey Plan Worksheet

Strategize: Create an Action Plan

The Team

Who will own these pieces of the work? Who will provide support?

What is currently going on with regard to data use?

Among the daisies?

From a bird's-eye view?

What is at stake?

What might people have to give up, or let go of, in order to engage in this type of action planning? This may include longstanding practices, and deeply held, sometimes limiting, beliefs.

What will success look like?

If someone were to walk through your school 3 years from now, after this piece of the work has taken root, what would they see?

Turnkey Plan

School Name: _____ District Name: _____ Date: _____

Topic	Time Frame	Facilitator	Participants	Location	Expected Outcome	Data Collection
Introduce the initiative						
Introduce Cycles of Inquiry						
Data Inventory						

Turnkey Plan

School Name: _____ District Name: _____ Date: _____

Topic	Time Frame	Facilitator	Participants	Location	Expected Outcome	Data Collection
Identify Patterns of Need						
Root Cause Analysis						
Create an Action Plan						

