

Literacy
Improvement

PARTNERSHIP



Facilitating Improvement in Teacher Practice

Learning Module 8 Workbook

Measuring Improvement



Acknowledgments

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Module 8 learning targets and agenda

Learning targets:

- Explore different types of data to measure improvement.
- Learn about useful data visualizations for teacher inquiry.
- Consider how to spread and scale your improvements.

Agenda

	Key content
Opening	<ul style="list-style-type: none">• Welcome• Logistics
Part 1	<ul style="list-style-type: none">• Measuring improvement• Measures of the system• Monitoring progress
Part 2	<ul style="list-style-type: none">• Gathering data• Turning data into information• Implementation and sustainability
Closing & Next Steps	<ul style="list-style-type: none">• Module review• Action period work

PART 1

Measuring improvement

Why are measures important.

Measures foster a data-driven culture within the school.

They “ensure that teachers, principals, and school and district staff have a thorough understanding of their roles in using data, and that they possess the knowledge and skills to use data appropriately.”

Measures make data part of an ongoing cycle of instructional improvement.

“Teachers should adopt a systematic process for using data in order to bring evidence to bear on their instructional decisions and improve their ability to meet students’ learning needs.”

Source: Hamilton et al. (2009)

EQUITY



PAUSE

The team in our improvement story was able to use data to clearly identify improvement in their writing conferences that positively impacted their students.

- How will you know that your changes are shifting instructional practice and making a difference for **each** of your students?
- What story do you want to be able to tell about how and why outcomes improved as a result of the prototypes you develop? How will you disaggregate your data?

Self-reflection



Measures of the system

Measures allow us to ...

- Make sure we all have the same definition of “success.”
- Monitor progress toward achieving our aim.
- Identify effective changes.
- Test whether our theory is correct.

Lagging measures ...

- Show how the system is performing overall.
- Reflect the final results.
- Are available infrequently, often after the fact.
- Not useful for midcourse corrections.

Leading measures ...

- Are early indicators that things are heading in the right direction.
- Show how parts of the system are performing.
- Are more frequent and enable midcourse corrections.

Leading indicators serve as an early warning sign, can be measures of an outcome or process, and are collected and reported frequently in a timely way to inform decisions. When developing or selecting leading measures, consider how to minimize the burden of data collection. Start with what you have, if you can, and make sure all perspectives are represented.

Self-reflection

What lagging measures do you use? When do you use them?



What leading measures do you use? How frequently do you use them?

Measures to Support Instructional Decision Making

What is measured:

*Needs to be closely connected to the work, **predictive of outcomes**, and actionable.*

How and when it is measured:

*Needs to be **timely, regular, and minimally burdensome** to people on the front lines of work.*

How it is used:

*Requires collective sensemaking, transparency, and **safety to take risks and learn from failure.***

Adapted from the Improvement Science Institute, WestEd, 2019, and Carnegie Foundation for the Advancement of Teaching, 2017

Different measures for different purposes

Task	What do you want to learn?	Possible measures
Establishing a routine (e.g., morning meeting, partner reading, think-pair-share)	<ul style="list-style-type: none"> • Which steps worked? • Which steps were hard? • Did you feel as if there were any steps missing? • What made the routine easy to use? What made it hard? 	<ul style="list-style-type: none"> • Teacher reflection/notes. • Student participation data. • Pacing data.

A practice is an activity you repeat to improve skill in a particular instructional strategy

Task	What do you want to learn?	Possible measures
Improving a process (e.g., writing mini-lesson, writing conferences)	<ul style="list-style-type: none"> • How easy was the process to follow? • Was anything missing or irrelevant? • Was anything confusing? • Were there any places where the process broke down? • Did you get the desired result? • What made the process easy to use? What made it hard? 	<ul style="list-style-type: none"> • Teacher reflection/notes. • Checklist.

A process is a series of activities or events to produce a desired result.

Task	What do you want to learn?	Possible measures
Monitoring student progress	<ul style="list-style-type: none">• How well are students understanding content?• What misconceptions do students have?• Which students need more support?• What implications are there for your instruction?	<ul style="list-style-type: none">• Formative assessments.• Topic assessment.• Curriculum assessment.

Small-group activity

Pretend you are a grade-level team and choose one of the following sample instructional improvements that your team has decided to implement in your classrooms.

Identify or develop one or two measures you could use to monitor progress toward the goals in the improvement you selected. If you have time, also discuss how you will collect data and when you will review progress with one another.

Instructional improvement activities

#1 Improving a process

Students have not been doing well on end-of-unit assessments in math. This activity is intended as a new review activity to increase student engagement in the review process and improve student performance on end-of-unit assessments.

#2 Improving a practice

Your school has been focused on using learning targets with students. Although learning targets are generally introduced at the beginning of lessons, when asked, students are usually unable to tell a visitor to the classroom what the learning target is. This activity is intended to support student understanding and internalization of learning targets.

Self-reflection

Which type of measures are most frequently used in your school? Are there any measures you want to collect but are not yet collecting?



PART 2

Gathering data

“Most of the world will make decisions by either guessing or using their gut. They will be either lucky or wrong.” – Suhail Doshi, chief executive officer, Mixpanel

You cannot learn from data if you do not collect it, but collecting data regularly is one of the most difficult habits to develop. For sustainability, it is important to find data collection methods that minimize effort and can be incorporated into regular routines.

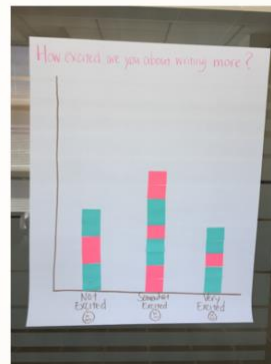
The following slides show a few examples of ways to get into the habit of gathering data.

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Example: Collecting data from students

Data collection can be done by the teacher, or methods can be used to involve the students.

In these examples, students place sticky notes on a chart to create a graph.

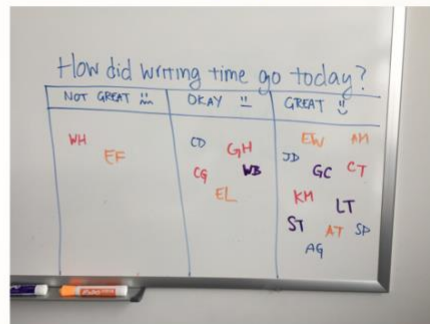


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Example: Charting Student Engagement

Data collection can be simply keeping a record of the impact of the prototype you are testing.

In this example, the students reflect on their writing time. The information is transferred later to a document that the teacher uses to monitor progress.



Example: Lesson Time Tracker

You may create a spreadsheet to collect your data.

Grade: 4		Unit	Week	Day	Total Lesson Time (minutes)	Getting Ready to Write (Y/N)	Writing Time (Y/N)	Sharing and Reflecting (Y/N)	Time students spend writing (minutes)	Notes about the day	Median Writing Time
11/1/17	Expository		2	3	40	Y	Y	Y		11 After lunch	13
11/2/17	Expository		2	4	35	Y	Y	Y			13
11/3/17	Expository		2	5	35	Y	Y	N		8 Conflict from recess	13
11/6/17	Expository		3	1	30	Y	Y	N		5 Conflict from recess	13
11/7/17	Expository		3	2	40	Y	Y	Y			13
11/8/17	Expository		3	3	35	Y	Y	N			13
11/9	Expository		3	3	30	Y	Y	Y		15 Conflict from recess	13
11/20	Expository		3	4	40	Y	Y	Y			13
Change idea: adhere to timeline for all 3 parts of the lesson, plan out timing ahead of time											
11/21/17	Expository		3	5	25	N	Y	Y		20 Class party	22.5
11/27	Expository		4	1	45	Y	Y	Y			22.5
11/28/17	Expository		4	2	40	Y	Y	N			15
11/29/17	Expository		4	3	45	Y	Y	N			22.5
11/30/17	Expository		4	4	45	Y	Y	Y			22.5
12/1/17	Expository		4	5	35	Y	Y	Y			15

Example: Weekly Progress Tracker

You may choose to create forms to collect your data.

Weekly Partner Conferencing Summary:
Teacher Last Name - Grade - School

ID: _____

1. Week of _____

2. How many opportunities did students have to write this week?
 1 time
 2 times
 3 times
 4 times
 5 times

3. How many times did students do partner conferencing this week?
 1 time
 2 times
 3 times
 4 times
 5 times

4. How many of the students improved their writing based on partner feedback?
 1 time or less
 2 times
 3 times or more
 4 times
 5 or more or all

Some additional methods for collecting data include the following:

- Create a checklist to monitor which steps are used in a classroom routine.
- Create a survey to complete at the end of each meeting/planning session to monitor team processes.
- Include implementation questions as part of a meeting agenda, and include responses in the notes.
- Collect information on a tally sheet.

Self-reflection



In what ways are these data useful in making improvements? What other data might you collect to better inform your decisions?

Turning data into information

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Information from Data

Gather

Collect data from your tests. This can be gathered using any type of data collector.

To do this, you need to align the data collection method with question(s) you are trying to answer.

You need frequent data points (daily/weekly) to create sufficient information to act on.

Organize and Display

Enter your data into a table to make it easier to analyze and create graphs.

Forms can be used to collect and organize your data.

The types of data displays are determined by the question(s) you are trying to answer.

Use

Use the data during team meetings to identify learning, trends, and actionable next steps.

Information from Data: Ask Yourself...

Gather

Have you identified the type of data collector you will use?

Do you understand the question(s) that you are trying to answer?

Is your data something that you can collect regularly?

Organize and Display

How will you organize your data?

What is the most important information to highlight?

How can your displays help to answer your question(s)?

What types of data displays will you use?

Use

How will you use the data during team meetings to identify learning, describe trends, and determine actionable next steps?



Tips for collecting and organizing data

- Keep your visualizations simple to understand. Do not put too much in one graph.
- Be thoughtful about the ordering of information.
- Pie charts make it difficult to monitor changes over time.
- Averages can hide variations between groups in your data.

Self-reflection

How have the data representations you have used informed decisions? How would a different representation shift the conversation about the effectiveness of a change?



EQUITY



PAUSE

Data is a lens that can both lift up and obscure equity issues.

- What data representations are available in your system to surface equity issues?
- Is data always disaggregated? Are averages used?
- Who has access to the data?

Implementation and sustainability

The ultimate goal of any improvement work is to find lasting solutions to the problems we are trying to solve. The Institute for Healthcare Improvement (IHI) has identified five areas to consider as you work to implement and build sustainable systems and processes. These areas are Measurement, Ownership, Communication and training, Hardwiring the change, and Assessment of workload. IHI calls it MOCHA.

Measurement

- What do we need to continue to measure?
- What is our plan if we see a negative signal?
- How will we know it is time to scale an improvement?

Ownership

- Who is responsible for monitoring implementation?
- What will they do to address resistance to change?

Communication and training

- How will we communicate about this work?
- Who will be the messengers?
- How will we support individuals in implementing the change?

Hardwiring the change

- How will we make it hard to do the wrong thing and easy to do the right thing?
- What will be standardized, and what can be adapted depending on needs? What resources are needed?
- How will we document the new change, and where will it “live”?

Assessment of workload

- How will we monitor whether our changes are increasing the overall workload in the system?
- If they are increasing the workload, will we make adjustments?
- How will we communicate changes?

Self-reflection

Which of the considerations for implementation and sustainability are in place in your setting?



Next steps

During this module, our learning targets were to:

- Explore different types of data to measure improvement.
 - Measuring improvement.
 - Measures of the system.
 - Monitoring progress.
- Learn about useful data visualizations for teacher inquiry.
 - Gathering data.
 - Turning data into information.
- Consider how to spread and scale your improvements.
 - Implementation and sustainability.

Wrap-up

- Continue to test your prototype.
- Create a plan to share your learning with someone.
- Create a plan for how you will work with additional teams using what you learned.

Closing reflection

What are you thinking about focusing on next to continue this work?



Notes
