

- [Oakland Unified School District- Data Protocols](#)
- [Data Wise Process](#) and [Free Online Course](#)

STUDY

Was the cycle carried out as planned? What happened during the testing phase?

Explain what happened during the testing phase and whether the test was carried out as planned or if changes were made and why. Sometimes people are not on the same page about their roles and responsibilities and it is discovered during or after the test that different people were conducting the test differently. Include that information in this section.

What did you observe that was surprising?

Based on your balancing measures (see DO Section) what unexpected results, if any, presented themselves while testing the change idea?

What were the results? Did the results match your prediction(s)?

State the results of the data analysis and explain how they relate to your prediction(s).

What did you learn?

*Discuss any reflections the group had about the process, what worked well and why, what did not work and why, realizations and a-ha moments while conducting the test, or any other lessons learned from testing the change idea. This reflection will help determine which direction to take in the next step, **Act**.*

STEP 4- ACT

In the **Act** phase of PDSA the team will decide whether to adopt the change idea based on the data analysis conducted in the Study phase, abandon the change idea, or adapt the change idea and continue testing.

ACT

Decide to Adopt, Adapt, or Abandon

Adopt: Select changes to test on a larger scale, develop an implementation plan, and plan for sustainability. *Discuss the implementation plan that will be used for broadening the scale of the change idea to ensure that is done with fidelity.*

Adapt: Modify the change and continue testing plan. What plans/changes are you going to make for your next test? *Using the data analysis from the study phase determine what changes and improvements the team can make to the initial idea and outline a plan for how the team can test this new adapted change idea.*

Abandon: discard this change idea and try a different one. *Explain the reasoning behind abandoning this change idea. Choose a new change idea to test from the driver diagram and explain the decision behind choosing the new change idea.*

References

Bryk, A.S., Gomez, L.M., Grunow, A., & LeMahieu, P.G. (2015). *Learning to improve: How schools can get better at getting better*. Cambridge, MA: Harvard Education Press.

Institute for Healthcare Improvement (2017). Science of improvement: Establishing measures.

Retrieved from

<http://www.ihl.org/education/ihopenschool/courses/documents/practicumdocuments/learnerhandbook.pdf>

Provost, L., & Bennett, B. (2015). What's your theory? Driver diagram serves as tool for building and testing theories for improvement. *Quality Progress*, 48(7), 36-43.

DRAFT

Glossary

Balancing Measure: Used to test for unintended consequences of improvements (IHI, 2017).

Baseline Data: The initial performance data taken on a student; often the median score of three baseline data points or perception/survey data. The baseline serves as the reference point for all future data collection.

Benchmark (Periodic/Interim) Assessments: Assessments used to gather data several times a year and monitor students' progress with respect to expected (benchmark) performance, over time.

Benchmarks: Content or developmental standards (levels, cut scores, targets, etc.) that describe sequences of growth that can be monitored over time. Usually measured three times per year (fall, winter, spring).

Change Idea: Evidence based actions for improvement that are related directly to secondary drivers and are intended to have positive outcomes toward meeting the goal.

Comprehensive Needs Assessment (CNA): A formal process for determining gaps between current conditions and desired outcomes. Needs assessments are used to identify goals for continuous improvement.

Continuous Improvement: An ongoing process of improving school practice based on assessed needs and informed by data. Often this process includes rapid learning cycles / Plan-Do-Study-Act Cycles.

Data-Based Decision Making: The ongoing process of analyzing and evaluating student data to inform educational decisions, including, but not limited to, approaches in instruction, intervention, allocation of resources, development of policy, movement within a multi-level system, and disability identification.

Driver: The various components of the system believed to have the greatest influence on your problem/goal.

Driver Diagram: The Driver Diagram is a method for organizing your Theory of Improvement and can be completed using the information collected during the comprehensive needs assessment process, becoming a record of learning and a roadmap for intervention. A driver diagram shows the relationship between the overall SMART goal of your improvement project, the primary drivers that directly relate to achieving the goal, the secondary drivers that are components of the primary drivers, and specific change ideas to test for each secondary driver. (IHI QI Essential Toolkit: Driver Diagram, 2017)

Improvement Science: The science of determining which improvement strategies work best, based strongly on evidence. <http://www.carnegiefoundation.org/our-ideas/>

Local Educational Agency (LEA): Districts and Supervisory Unions

Outcomes/Summative Assessment: Assessments that help teachers to evaluate and verify learning over time and may aid teachers in planning future instruction, informing classroom decisions (i.e. potential use of groupings), evaluating curricular changes, and making school wide decisions regarding curriculum and instruction.

Outcome Measure: The measure of the intended result of your change idea.

Primary Driver: Broad areas and components of the system that have the greatest influence on the problem/goal.

Process Measure: The measure used to determine whether the successful implementation of a change idea is occurring before outcomes are known. These strategies can be monitored formatively and approaches to change can be revised quickly (IHI, 2017).

Progress Monitoring (see also Benchmark and Formative): Data used to frequently check student progress towards success. Progress monitoring is used to assess students' academic or behavioral performance and evaluate the effectiveness of instruction. Progress monitoring procedures can be used with individual students or an entire class.

Secondary Driver: Specific practices or components within identified primary drivers that influence a problem/goal.

SMART Goal: Goals for improvement should be specific, measurable, attainable, realistic, and timebound describing what will be improved, by how much, by when, and for what/whom.

Theory of Improvement: A plan outlining actions necessary to achieve desired changes to reach your goal. It is usually written as an "If-Then" statement and/or displayed in a driver diagram. A Theory of Improvement describes the structures and processes that the team believes need to be changed in order to meet an improvement goal, as well as, specific actions to create these changes (Provost & Bennett, 2015).

Appendix- PDSA Example 1- Apple Orchard Elementary PDSA Worksheet

School: Apple Orchard Elementary

Test Date and Timeframe: 9.4.18 -9.28.18

Prioritized SMART Goal: Improve PK-1st grade student performance/readiness in mathematics (number sense, number relationships and operations) as measured by MathWorks assessment by 25% by April, 2019.

Change idea to test: Teachers will consistently apply a daily inquiry discussion at the close of the mathematical lesson using a wrap-up discussion template and pool of higher order questions.

PLAN:

Briefly describe the test: At the end of each daily math lesson, teachers will ask students wrap up discussion questions to help gauge student's understanding of the day's lesson.

How will you know that this change idea is an improvement?

- There is more student discourse. Students are responding at a higher frequency and the quality of their answers is improving.
- Teachers are learning to ask new questions.

What do you predict will happen?

1. Students will be able to discuss what they have learned using conceptual math vocabulary.
2. More students will share what they learned.
3. Teachers will use formative assessment data to inform instruction.
4. Be better able to ask the right questions.
5. Be better able to diagnose and respond.
6. Be better able to use improved questioning techniques.

PLAN- What, Who, When, Where

List the tasks necessary to complete this test (What)	Person responsible (Who)	When	Where
1. Create template discussion questions.	Principal and Math Teachers	9.6.18	Conference Room
2. Ask End of Lesson Wrap Questions and collect data (see template.)	PK/K and 1 st Classroom Teachers and all students	Daily at the end of the lesson (last 5 minutes) for 2 weeks and then gather data to share as a small group. Beginning 9.10.18	Classroom

3. Create Teacher Perceptions Survey	Principal and Math Teachers	9.6.18	Conference Room
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PLAN- Data Collection

Type of Data	What data will be collected and what tool will be used for the measurement?
Process Measures- Measures how well a change practice is implemented.	1. Teachers will record student responses in a checklist on the discussion template. 2. Teachers will also take a survey about their experiences using the Math Closure Discussion Questions.
Outcome Measures- Measures if the change practice achieved its aim.	1. The frequency and quality of student response. MathWorks progress monitoring and Spring Benchmark; CLASS assessment

DO:

Test the changes. Collect the data.

Record data:

- **Process Measures-** How well were the change practices implemented? Are the specific practices performing as planned?
 - Both teachers implemented the discussion protocol and recorded answers each day but one.
 - Took longer than anticipated to record answers.
- **Outcome Measures-** How is the system performing? How are the students performing? What are the results?
 - Overall students increased the frequency with which they commented/answered questions.
 - Overall quality of student answers improved.
- **Balancing Measures-** What did you observe that was not part of the plan?
 - More students would answer when they observed the teachers recording answers.

STUDY:

Was the cycle carried out as planned? What happened during the testing phase?

- There was a definite learning curve as the students learned they were supposed to explain what they had learned from the day and it was ok to agree or say what their neighbor said.
- Some days students were very engaged and wanted to answer questions, other days they were not engaged at all.
- One of the two teachers did not notice a pattern to student answers.

What did you observe that was surprising?

- Even though there were days that students stated that they didn't learn anything new, the teachers still stuck with the protocol and continued asking questions.
- Students responded more when they noticed the teachers writing down their answers.

What were the results? Did the results match your prediction(s)?

- The frequency of student responses increased, and teachers were better able to gauge their learning.
- Quality of responses improved.
- There was also an increased justification behind responses.
- Yes, results matched predictions.

What did you learn?

- The conversation needs to be modeled more and practiced more.
- As students become more comfortable with the process, teachers expect to see more students answering.
- As students were more comfortable, they became more comfortable disagreeing.

ACT:

Decide to Adopt, Adapt, or Abandon

X Adopt: Select changes to implement on a larger scale and develop and implementation plan and plan for sustainability.

Adapt: Improve the change and continue testing plan. What plans/changes are you going to make for your next test?

Abandon: discard this change idea and try a different one