

Test and Scale

Changes are tested with rapid, sequential Plan, Do, Study, Act (PDSA) cycles. Sometimes these are also called inquiry cycles, or safe to fail experiments. Whichever the methodology, the important thing is to have a shared way in your community to take new ideas, try them and adapt them to local context.

The components of the PDSA cycle are illustrated to the right. Each cycle ends with a decision point to abandon, adapt (and re-test) or adopt the change (if shown to be successful). Learning to test and adapt ideas with PDSA cycles is a critical skill for improvement teams to:

- Adapt the change to work in your local context (or identify that this change does not work in your context)
- Generate knowledge quickly with small tests
- Maximize limited time and resources
- Build ownership of the change as you try it without committing to keeping it
- Build a culture of learning and reduce fear of “failure”
- Abandon changes that are not successful

Your improvement community can create a culture of inquiry and transparent learning by highlighting team learning. It is important to share not just successes, but also “failed” tests where important learning was generated. This creates an “all teach all learn” culture where everyone has something to contribute to accelerate the impact of the community.



PDSA Worksheet - Example

TEAM NAME: Sunnyside Elementary School	CYCLE 1 START DATE: November 4	CYCLE 1 END DATE: November 8
PROJECT AIM: Sunnyside Elementary School will reduce the percent of students, across races and income levels, who are chronically absent from 18% to 9% by June through partnerships with families and communities.		
DESCRIBE THE CHANGE YOUR TEAM WOULD LIKE TO TEST. HOW DOES THIS CHANGE LINK TO YOUR AIM? Individual meetings with families and caregivers of students with chronic absenteeism. Learn about barriers to school attendance for their child and co-create solutions. (Links to Primary Driver: Strong Relationships with Families and Caregivers)		
WHAT WOULD YOU LIKE TO LEARN FROM THIS TEST? The best way to listen and learn from families about the obstacles they experience to access the school system and come up with solutions together. By focusing on students experiencing the most challenges with attendance, can we identify solutions that will improve school attendance overall.		

MAKE A PLAN FOR HOW YOUR TEAM WILL TEST THIS CHANGE		
<h2>1. PLAN</h2>	WHAT IS YOUR FIRST TEST FOR THIS CHANGE: Meet with the family and caregivers for one student	SIZE OF THE FIRST CYCLE (E..G., NUMBER OF CLASSROOMS, NUMBER OF STUDENTS OR TEACHERS) : One student (and their family) DATES OF THE FIRST CYCLE: November 4-8
	WHERE WILL YOU TEST THE CHANGE? School meeting room to create a friendly, welcoming space	WHAT DOES YOUR TEAM PREDICT WILL HAPPEN? TRY TO QUANTIFY YOUR PREDICTION. We predict that we will identify at least 2 barriers to attendance and generate at least 4 solutions to support school and family relationships. We don't think that this will impact daily attendance at this stage, but could develop stronger student-centered partnerships with families and thus lead to change ideas that ultimately make an impact on the aim.



PDSA Worksheet - Example

MEASUREMENT PLAN:

List any data (qualitative or quantitative) that your team will track to learn if this change works. Remember to include plans for data collection under tasks.

- Survey families to learn how they felt about the meeting
- Number of barriers identified and ideas generated
- Number of attempts to contact family
- Daily attendance for student following the meeting (as process measure for outcome - chronic absenteeism)

NECESSARY TASKS TO COMPLETE THE TEST:

(e.g. data collection forms, talk to stakeholders, gather information)

TASKS	WHO IS RESPONSIBLE?	DUE DATE
1. Utilize disaggregated reports of attendance data to identify students at most at risk from attendance and/or other social factors.	School counselor, Principal, Attendance Office Manager	October 19
2. Create talking points to ensure the message is supportive and explains that the school would like to partner with the family to identify barriers to student's attendance.	School Counselor	October 19
3. Contact family to set up a meeting.	Attendance Office Manager	October 22
4. Create a brief survey to learn from the family how they felt about the meeting.	Principal	October 22
5. Create a welcoming meeting space. Reserve meeting room and purchase food/ beverages.	Office Assistant	November 1



PDSA Worksheet - Example

RUN THE TEST AND RECORD RESULTS

2.
Do

Did the test go as planned? YES NO (If no, please describe)

Meeting was set up for November 4th during the day. It took several attempts to make contact with the family; the script should include some talking points for voicemail.

REFLECT ON THE RESULTS AND LEARNING

3.
Study

What were the results? Did the results match your predictions? What did you learn?

- 3 attempts to reach the family. Phone was preferred. Talking points were helpful and need to be adapted for a voicemail message.
- Family expressed the meeting felt supportive and useful. They suggested that it would have been helpful to include the student's primary teacher. One of the main barriers is that the student feels left out of classroom discussion and her peer group. Shared learning with teacher and started to test change ideas around student-centered learning. (Note: set up a separate PDSA cycle for this change idea.)
- 4 barriers identified and 7 solutions co-created (mostly focused on the school system).
- Later, the team found that daily attendance for student improved by 20% over one month.

DECIDE WHETHER TO ADAPT, ADOPT OR ABANDON THE CHANGE

4.
Act

ADAPT: This change needs some adaptation and/or re-testing to learn more. See the next page to run the additional cycles.

NOTES: Meeting was very helpful to identify opportunities to better engage this student, as well as identify ways to improve the system overall. Adapt the meeting to include the student's primary teacher.

ADOPT: This change works and is ready to implement. We will work on a plan to implement this change.

NOTES:

ABANDON: This change didn't work and we will try a different one.

NOTES:



PDSA Worksheet for Testing Changes

TEAM NAME:	CYCLE 1 START DATE:	CYCLE 1 END DATE:
PROJECT AIM:		
DESCRIBE THE CHANGE YOUR TEAM WOULD LIKE TO TEST. HOW DOES THIS CHANGE LINK TO YOUR AIM?		
WHAT WOULD YOU LIKE TO LEARN FROM THIS TEST?		

MAKE A PLAN FOR HOW YOUR TEAM WILL TEST THIS CHANGE		
1. PLAN	WHAT IS YOUR FIRST TEST FOR THIS CHANGE?	SIZE OF THE FIRST CYCLE (E..G., NUMBER OF CLASSROOMS, NUMBER OF STUDENTS OR TEACHERS) : DATES OF THE FIRST CYCLE:
	WHERE WILL YOU TEST THE CHANGE?	WHAT DOES YOUR TEAM PREDICT WILL HAPPEN? TRY TO QUANTIFY YOUR PREDICTION

MEASUREMENT PLAN: List any data (qualitative or quantitative) that your team will track to learn if this change works. Remember to include plans for data collection under tasks.

NECESSARY TASKS TO COMPLETE THE TEST : (e.g. data collection forms, talk to stakeholders, gather information)

TASKS	WHO IS RESPONSIBLE?	DUE DATE
1.		
2.		
3.		
4.		
5.		



PDSA Worksheet for Testing Changes

RUN THE TEST AND RECORD RESULTS

2.
Do

Did the test go as planned? **YES** **NO** (If no, please describe)

REFLECT ON THE RESULTS AND LEARNING

3.
Study

What were the results? Did the results match your predictions? What did you learn?

DECIDE WHETHER TO ADAPT, ADOPT OR ABANDON THE CHANGE

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Act

ADAPT: This change needs some adaptation and/or re-testing to learn more. See the next page to run the additional cycles.

NOTES:

ADOPT: This change works and is ready to implement. We will work on a plan to implement this change.

NOTES:

ABANDON: This change didn't work and we will try a different one.

NOTES:



PDSA Ramp: Fast Planning Worksheet - Example

PDSA ramps are an opportunity for sequential building of knowledge. They use small tests of change to progress to full implementation of a change. Ramps are based on the scale-up of a specific change or adaptations of a change linked by a common theme. Ramps allow the test of ideas on an increasing scale, over longer periods of time and/or under different conditions. Test changes on an increasing scale, over longer periods of time, or under different conditions to continuously adapt and fail-proof the change before implementing it.

TEST #2 (see long form for Test #1)	TEST #3	TEST #4
What: Individual family meetings	What: Individual family meetings (include teacher & provide early morning and/or evening options)	What: Individual family meetings
Size of cycle: One student	Size of cycle: Three students	Size of cycle: Six students
When: November 15	When: Week of November 15	When: December 2
Prediction: We will identify at least 5 new change ideas. Improve daily attendance for this student with new ideas by at least 20%.	Prediction: Meeting with more students will generate at least 10 new change ideas. Improve daily attendance for these students by at least 40%.	Prediction: We will generate fewer (5) new change ideas. We will continue to improve daily attendance for these students by at least 40%.
Results: Family couldn't meet during working hours – provide more flexible scheduling options. Generated 3 change ideas. Over the next two weeks, attendance improved by 33%.	Results: Met with 3/3 families. Observation that it can be difficult for families to name barriers to attending school. Create a sample list of common barriers to share with the family (available in different languages) to prompt conversation. Daily attendance for these students improved by 50%.	Results: Prompts work well to generate deeper discussion. Difficult to plan for six different meetings in a short time period.
Act : <input checked="" type="checkbox"/> ADAPT - Create flexible meeting times. <input type="checkbox"/> ADOPT <input type="checkbox"/> ABANDON	Act : <input checked="" type="checkbox"/> ADAPT - Include prompts for families to help identify and describe barriers. <input type="checkbox"/> ADOPT <input type="checkbox"/> ABANDON	Act : <input type="checkbox"/> ADAPT <input checked="" type="checkbox"/> ADOPT - Adopt individual family meetings. Test how to integrate this process into existing touchpoints with families to be more feasible at scale. <input type="checkbox"/> ABANDON



PDSA Ramp: Fast Planning Worksheet

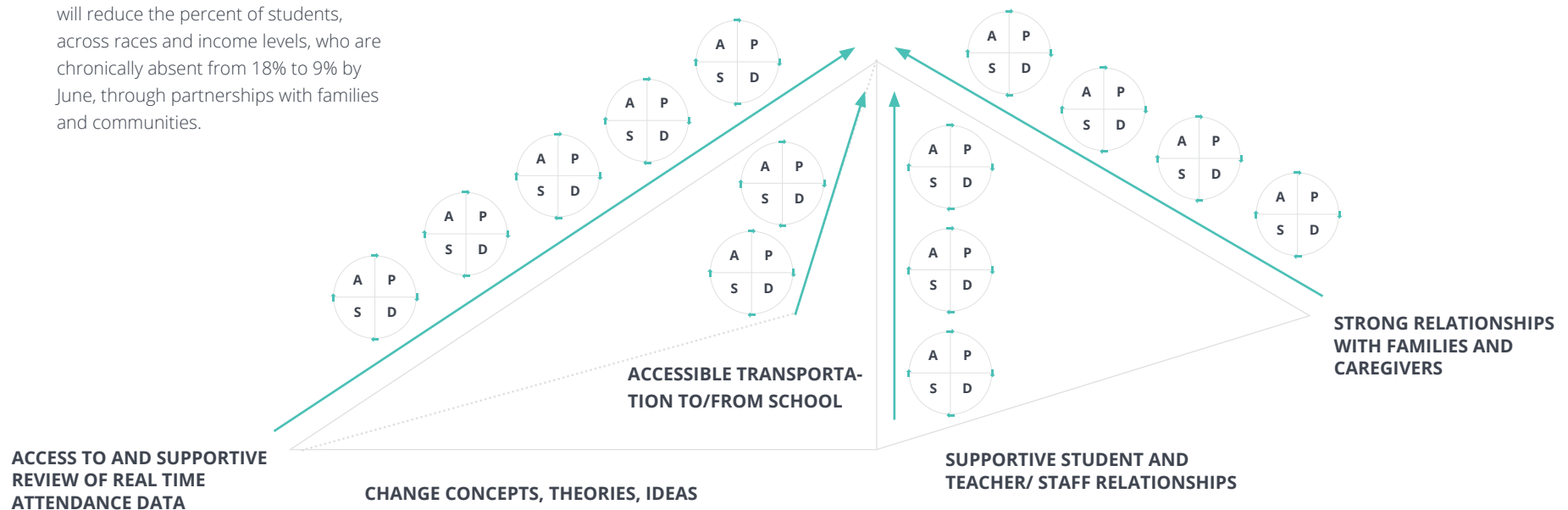
TEST #2	TEST #3	TEST #4	TEST #5	TEST #6
What:	What:	What:	What:	What:
Size of cycle:	Size of cycle:	Size of cycle:	Size of cycle:	Size of cycle:
When:	When:	When:	When:	When:
Prediction:	Prediction:	Prediction:	Prediction:	Prediction:
Results:	Results:	Results:	Results:	Results:
Act : <input type="checkbox"/> ADAPT <input type="checkbox"/> ADOPT <input type="checkbox"/> ABANDON	Act : <input type="checkbox"/> ADAPT <input type="checkbox"/> ADOPT <input type="checkbox"/> ABANDON	Act : <input type="checkbox"/> ADAPT <input type="checkbox"/> ADOPT <input type="checkbox"/> ABANDON	Act : <input type="checkbox"/> ADAPT <input type="checkbox"/> ADOPT <input type="checkbox"/> ABANDON	Act : <input type="checkbox"/> ADAPT <input type="checkbox"/> ADOPT <input type="checkbox"/> ABANDON



Putting It All Together

To accomplish complex aims that seek to address and improve the root cause of systems issues, it is likely that your improvement team will need to test and implement many changes across most or all “drivers”. Simple measurement and small scale testing enable busy teams to use their limited time and resources to make meaningful and lasting change.

AIM: Sunnyside Elementary School will reduce the percent of students, across races and income levels, who are chronically absent from 18% to 9% by June, through partnerships with families and communities.



Attribution: Langley GL, Moen R, Nolan KM, Nolan TW, Norman CL, Provost LP. (2009) "The Improvement Guide: A Practical Approach to Enhancing Organizational Performance" (2nd Edition) San Francisco, California, USA: Jossey-Bass Publishers.

