A School Renewal Handbook for North Dakota Public Schools
(Version 2.0)

What Specifically Are We Trying to Accomplish?
(What Is the Exact Problem We Are Trying to Solve?)

What Change Practice Might We Introduce, and Why?

How Will We Know That Our Change(s) Are Improvements?
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Foreword

North Dakota’s accountability system provides a framework upon which we consistently, continuously, and holistically evaluate the ability of our state’s education system to achieve desired student outcomes. Although all schools are in a continuous state of improvement, some systems need more support to achieve desired results. This School Renewal Process strives to engage all relevant stakeholders in the improvement process so that more of our schools identified for either Targeted Support and Improvement (TSI) or Comprehensive Support and Improvement (CSI) build up their improvement science skills to fully implement strategies, programs, and initiatives that increase student achievement in subgroup performance, literacy, and math.

There is a sense of urgency as we evaluate North Dakota’s level of proficiency that illustrates the need for all schools to provide the highest quality teaching and learning experiences. It is the state’s responsibility to support committed educators within school buildings that serve our neediest students. We have eager learners whose future happiness, wellness, and success depend upon the adults who surround them to take this mission seriously.

This handbook should be seen as a problem-solving mechanism to help any school leader support school improvement teams as they align goals and initiatives to outcome measures. The North Dakota Department of Public Instruction (NDDPI) considers three pillars in our approach to all improvement efforts: Build Relationships, Cultivate Opportunity, and Inspire Growth. As the School Renewal Process suggests, all of these pillars are essential in making a difference for kids.

I want to extend my gratitude to the efforts of school leaders, North Dakota Regional Education Associations, the Region 11 Comprehensive Center, and the entire NDDPI team. This diverse team was made up of stakeholders representing at-risk youth, Special Education, current and former leaders of schools identified as TSI/CSI, and many instructional experts from all content areas. I am also exceedingly grateful to any educator who uses this handbook to tackle challenging educational goals to improve results for all learners.

Thank you,

Kirsten Baesler
Superintendent of Public Instruction
Introduction
The purpose of our accountability system is to provide statewide responsibility of all stakeholders to pursue the North Dakota PK–12 Education Strategic vision.

Utilizing an inclusive and collaborative process, NDDPI and the Strategic Vision for PK–12 Education Steering Committee have developed a Strategic Vision Framework to define the strategic work of the department over the next five years. As school teams work through the School Renewal Handbook, it is important to remember that the NDDPI is working to align all resources, staff efforts, projects, programs, and initiatives through this North Dakota PK–12 Strategic Vision Framework.

Through an accountability framework, North Dakota will:

- provide transparency and public reporting of key performance and improvement indicators for all schools, districts, and the state;
- ensure all schools and districts are engaged in a process of continuous improvement;
- identify when and where desired results are not being achieved, and prioritize which schools are most in need of support; and
- allocate resources and support services, increase oversight and engagement, and elevate accountability for those schools most in need of support.
All schools throughout the state participate in continuous school improvement through a shared framework (currently provided through Cognia) to achieve measurable, meaningful improvement within North Dakota’s System of Support:

- General Support
- Targeted Support
- Comprehensive Support

To meet these objectives, the NDDPI upholds three values in its approach to collaboration with K–12 schools and districts across the state.

To learn more about any public school in North Dakota, visit the Insights Dashboard for detailed information. Schools may download datasets for many measures at https://insights.nd.gov/Data. In addition, improvements to the STARS (State Automated Reporting System) interface have been made based on user feedback. As part of NDDPI’s strategy to provide innovative resources to public schools, this STARS Reporting and Analytics Portal platform provides STARS users with data tools to better inform and support continuous improvement initiatives to enhance student learning outcomes. Each section includes Key Performance Indicator (KPI) pages that users can click through for more details. Users can also easily view and export reports, see performance trends, access student rosters, and perform their own analysis in areas that measure progress on state and federal accountability performance metrics pertaining to these content areas: Accountability Reporting, Special Education, and Financial Transparency.

**This is Not ‘One More Thing’**

Improvement science is one of several continuous improvement methodologies and is used broadly across many fields. In the field of education, it is clearly designed to accelerate learning-by-doing in classrooms, schools, and districts. Improvement science is a problem-solving approach centered on continuous inquiry and learning. Changes in practice are tested in rapid cycles, resulting in efficient and practical feedback to inform school and district system improvements. A core principle of improvement science is that a system’s performance is a result of its design and operation, not simply a result of individuals’ efforts within the system. Building from this foundation, improvement science helps school and district teams build a shared understanding about how their systems work, where “bright spots” and breakdowns occur, and what actions can be taken to improve overall performance.1 It helps educators focus on three fundamental questions:

1. What specifically are we trying to accomplish? *(What is the exact problem we are trying to solve?)*
2. What change practice might we introduce, and why?
3. How will we know a change in practice is an actual improvement?

Improvement science offers tools for teachers, principals, and district-level leaders to use at each step of the school renewal journey, from clearly defining the root problem to be solved, to scaling up bright spots/improvements. This handbook will introduce you to tools to help you and your team answer one of the fundamental questions to drive your renewal efforts.

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Overview

Phase I of this handbook provides explanations, tools, and templates that guide a School Renewal Team through the process of root cause analysis to support the team’s continuous improvement efforts. Phase II provides explanations, tools, and templates to guide a School Renewal Team through the process of developing a working theory of improvement to test and study. Phase III provides explanation, tools, and templates to guide teams through the development and completion of Plan-Do-Study-Act (PDSA) rapid inquiry cycles to support the team’s continuous improvement efforts.

Rather than reading the entire handbook before the process begins, the School Renewal Team should progress through the handbook during implementation of a practice and/or program. It is useful to have a facilitator guide the team and ensure that the appropriate materials and content are available for each collaboration. The facilitator can be a principal, an administrator, a coach, a curriculum coordinator, a school counselor, a teacher, or any other team member.

Facilitator Notes are provided so that the School Renewal Team members read the appropriate information as they proceed through the renewal/improvement journey. The content guides the team through the collective improvement effort and a series of PDSA cycles.

The handbook provides a step-by-step process for a School Renewal Team to follow over the course of the school year, beginning in the summer and continuing until the end of the school year. Precisely when the process begins isn’t as important as how long it lasts. The handbook is meant to offer flexibility, and the team can decide how and when to use it in a way that is appropriate.

Appendix

The handbook includes templates, tools, and protocols to help educators engage in continuous improvement, including examples of driver diagrams and PDSA measurement plans from several different North Dakota schools.
What Specifically Are We Trying to Accomplish?  
*(What Is the Exact Problem We Are Trying to Solve?)*

**Phase 1: Root Cause Analysis**

**Purpose:** This section is designed to support personnel engaged in root cause analysis. School improvement teams are encouraged to consult their current strategy maps and strategic planning documentation, engage in data analysis through various means (Insights, STARS, SLDS, NDSA Centralized Reporting System, etc.), and focus on targeted areas of improvement. Within this phase of the improvement journey, teams should have realized the following goals:

- Analyze local data.
- Achieve school improvement team consensus on the specific problem statement to support school renewal efforts.
- Determine the root causes of the specific problem to solve.
- Develop a shared understanding of the improvement science tools and methods to support root cause analysis.
- Scan for evidence-based practices to support problem-solving efforts.

**Developing a Problem Statement: Big enough to matter, and small enough to win.**

1. **Analyzing local data**
   - Are initiatives/interventions working or not? For whom are they working? Is improvement significant?
   - What is an urgent and important area of need confronting the school?

2. **Consider:**
   - Strategically locating your problem within the larger system of people, policies, attitudes, and the physical environment in which it resides.
   - Teasing out the interconnected factors contributing to the problem.
   - Defining the problem from the perspective of the “users”: the kids and adults directly affected.

**Examples:**

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<tr>
<th>Problem Focus Areas</th>
<th>Problem Ecosystem</th>
<th>Problem Statements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Persistently low scores on grade 4 math achievement.</td>
<td>Students do not attempt to persist through challenging word problems in grade 4 math class.</td>
<td></td>
</tr>
<tr>
<td>English Learners (ELs) at our school score well below non-EL students in the writing section of Northwest Evaluation Association (NWEA) assessments.</td>
<td>Eighty-five percent of EL students at our school were chronically absent during second semester.</td>
<td></td>
</tr>
<tr>
<td>Low socioeconomic students at our school score well below non-low socioeconomic students in English Language Arts (ELA) state assessment outcomes.</td>
<td>When asked to provide textual analysis in their writing, low socioeconomic students only summarize an author’s main idea and struggle with academic language.</td>
<td></td>
</tr>
</tbody>
</table>
Facilitators’ Notes

These explanations, tools, and examples are provided to assist teams in developing or refining their own processes. After completing these exercises, teams should have realized the following goals:

1. Achieve school improvement team consensus on the specific problem statement to support school renewal efforts.
2. Determine the root causes of the specific problem to solve.
3. Develop a shared understanding of improvement science tools and methods to support root cause analysis.

Fishbone Diagram:
The purpose of this continuous improvement method is to guide school renewal teams in developing a shared and deeper understanding of the problem that the team is looking to address.

This completed fishbone diagram shows the problem that needs to be solved, factors that contribute to the problem, and the potential causes of each factor. The main problem is located on the far left with the potential causes cascading from the "major bones" (factors) of the diagram.

Problem Statement
Students in elementary grades are below proficient in math and low-income students are disproportionately represented among those students.

Factors
Teachers need additional supports to provide effective math instruction
Curriculum is not rigorous

Causes
Students are not engaged in their learning
Students lack deep understanding of math concepts
Students lack language and listening skills
Students don’t see the relevance of math in their lives
Students lack confidence in math
Teachers have received limited professional development on math instruction that promotes engagement
Teachers have limited access to tools and models for developing instructional activities
Teachers are new to the school’s math curriculum

Generating Your Team’s Fishbone Diagram

1. Norms
   - Avoid “solutionitis.” The goal is to understand the issue, not solve it (yet).
   - Encourage “Yes and . . .” The goal is to generate lots of ideas and not fixate on one.
   - Embrace “definitely incomplete; possibly incorrect.” You can (and should) revisit and revise.
   - Share the air. Step up, step back, and invite others in.

2. Generating a Problem Statement
   - Individual: What is the exact problem we need to solve? What are we trying to accomplish? Express the problem in one sentence.
   - Share around: Share problem statements.
   - Choose one or create a new one without getting hung up on the perfect wording. Write your group’s problem statement at the “head” of your fishbone diagram.

3. Initial Brainstorm of Causes—Based on your work digging into the problem (such as analyzing local data, interviewing students, etc.) and your own ideas/experiences, individually brainstorm as many causes as you can that might contribute to the problem/issue. Write each cause on a different Post-it.

4. Share & Categorize
   - Share around: Each person shares one cause contributing to the problem. If others have a similar cause, you can start to group those Post-its together on your poster.
   - Continue to share your initial brainstorm, building on each other’s ideas and adding new causes that may contribute to the problem.
   - Cluster on your poster/chart paper: Group related causes together, and give each category a title. (The information on the Post-its are the details/bones on the fishbone).

5. Post & Reflect—Post your poster/chart paper to the wall. Does your diagram capture the root causes you think are important? Is anything missing? Then each person gets to vote with one heart and one star:
   - High Leverage: Put a heart by the factor that, if addressed, you think would have a significant impact on the problem.
   - Practical: Put a star by the factor that your team could address with little effort.

6. Debrief—How did we do maintaining norms? How might we adjust this protocol in the future? What perspectives might we be missing?

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2 The information and steps outlined are adapted from the High Tech High GSE Center for Research on Equity and Innovation.

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Additional Tools and Methods

Empathy Interviews: The purpose of this continuous improvement method is to gain a deeper understanding of a user’s/student’s experience of the problem your school renewal team is working on (p. 28-29).

Process Maps: The purpose of this continuous improvement method is to better understand a school and/or classroom process leading to a particular outcome for students, and to identify potential gaps where school renewal teams should focus change efforts (p. 30).
Scanning for Evidence-based Practices

After completing the fishbone diagram (and any other tools and methods to support root cause analysis efforts), the next step is to explore existing research and identify potential strategies/practices that meet the evidence requirements. Examining a variety of evidence-based resources, including online clearinghouses, helps ensure that the team has identified all possible improvement strategies and evidence tiers associated with potential evidence-based practices. For more information on evidence-based resources, visit https://www.nd.gov/dpi/districtsschools/essa/evidence-based. Schools and districts could also consider reviewing a list of vetted evidence-based practices provided by North Dakota’s Multi-Tier System of Supports (NDMTSS).

NDMTSS Continuous Improvement Framework

NDMTSS recognizes that providing all students with the best opportunities to succeed academically and behaviorally requires a constant focus on improvement. This is done through needs assessment, planning, implementation, and evaluation. Like any school improvement process, the continuous improvement cycle empowers systems to effectively plan and implement initiatives, while accumulating and analyzing data in order to apply necessary changes to improve practice.

To learn more, visit https://ndmtss.org/essential-components.html.

NDMTSS Beliefs

Effective teachers create environments where all students can learn and improve.

Effective schools maintain and communicate a purpose and direction that commit to high expectations for learning, in addition to shared values and beliefs about teaching and learning.

Effective systems support both teachers and students by outlining evidence-based instruction and interventions while ensuring appropriate access to resources and supports.
What Change Practice Might We Introduce, and Why?

Phase 2: Developing a Working Theory of Improvement

This section is designed to support planning for rapid cycles of inquiry to support school renewal efforts. The explanations, tools, and examples will assist teams in developing or refining their own processes. After completing this phase, teams should have realized the following goals:

1. Use a Working Theory of Improvement to decide on a change practice to test.
2. Determine an appropriate grain size for a testable change practice.
3. Identify and implement appropriate process and outcome measures to use while testing a change practice.

School—Rubric

Schools will use this rubric at the conclusion of each PDSA cycle. This is a cyclical evaluation that will help schools determine their success at implementing the School Renewal Handbook and PDSA cycles. This is intended to help schools identify current progress and determine the next steps to move forward in their school improvement process. This rubric is meant to demonstrate progress toward meeting goals, not to declare success. This section of the rubric is meant as a guide to setting up a school’s improvement journey and beginning a PDSA cycle. Note: In reviewing data, adjusting the driver diagram, and entering the new PDSA cycle, schools will be rotating between the different levels of the rubric as they are going through the implementation process.

<table>
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<tr>
<th>Project Progress Score</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.5 Intent to participate</td>
<td>A working theory of improvement/focus goal (including a focus goal, measures, and initial change ideas) has not been completed, action planning is not established, nor has a school improvement team been identified.</td>
</tr>
<tr>
<td>1.0 Goal set and team established</td>
<td>A team has been formed, and a problem statement has been defined and reviewed by relevant stakeholders. The school also has an overall school action plan.</td>
</tr>
<tr>
<td>1.5 Planning has begun</td>
<td>The organization of the project structure has begun (meetings are scheduled, required resources and support are identified, tools/materials are gathered, etc.) and is being documented in a knowledge management system.</td>
</tr>
<tr>
<td>2.0 Activity but no tests</td>
<td>Initial learning has begun—an investigation of the problem statement, collection of baseline data, development of the focus goal, and an initial working theory of improvement (driver diagrams established).</td>
</tr>
<tr>
<td>2.5 Tests but no improvement</td>
<td>Initial rapid inquiry testing cycles have begun. A practical measurement plan has been established to track progress. Data displays have been designed and shared. The team is meeting regularly to reflect and refine.</td>
</tr>
<tr>
<td>3.0 Minimal improvement</td>
<td>Completed tests of change practices have produced meaningful learning relevant to the working theory of improvement (driver diagram) identified by the team. Evidence of minimal improvement exists in progress measures.</td>
</tr>
<tr>
<td>3.5 Moderate improvement</td>
<td>Testing continues, and additional improvement in project measures toward goals is seen. Modest evidence of improvement exists, and student-based data is continuing to show increasingly positive results.</td>
</tr>
<tr>
<td>4.0 Scalable improvement</td>
<td>Expected results are achieved for the identified population or subsystem. Support for implementation has begun (training, documentation of practices, the establishment of standard work routines, etc.). School is beginning to scale and spread this PDSA cycle and focus goal.</td>
</tr>
<tr>
<td>4.5 Sustainable improvement</td>
<td>Data on key measures indicate the sustainability of the improvement (9–12 data points over time at the new level of performance).</td>
</tr>
<tr>
<td>5.0 Sustainable results</td>
<td>Project goals and expected results have been accomplished. Organizational and systemic changes have been embedded to accommodate new practices and make the changes permanent.</td>
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</table>
Generate a Working Theory of Improvement

A working theory of improvement describes the structures and processes that your team believes need to be changed to meet an improvement goal and the specific actions necessary to create these changes (Bryk et al., 2015). Make sure to include a summary of the data that aligns with drivers that cause change.

The driver diagram is a tool for organizing a theory of improvement and can be completed using the information collected during Phase I, root cause analysis. It becomes a record of learning and a road map for intervention. Theories can be modified based on the learning gained after testing change practices. The driver diagram helps translate the work from the fishbone diagram—which defined the problem, key factors, and linked causes.

![Driver Diagram]

**Primary drivers** focus on the essential conditions for making the improvement described in the focus goal. A focus goal generally has three to five primary drivers that can act independently or together. These drivers are derived from the fishbone diagram. Taken together, the primary drivers represent how the focus goal might be achieved. In the example above, the School Renewal team noted that students were not motivated to persevere through 90-minute reading blocks, which is identified as a factor in the fishbone diagram. They believe this lack of motivation might be contributing to lower performance. So, one of the primary drivers they identified is to increase student motivation in class. However, the primary drivers may at times be too general to direct specific action, in which case secondary drivers are necessary. As your team identifies primary drivers, be thinking about how you will know if the drivers are an improvement.

**Secondary drivers**, derived from the primary drivers, are specific leverage points that are expected to have a direct impact on the primary drivers and, in turn, on the focus goal. They more clearly direct the types of change practices that school teams can implement. In the example above, a primary driver related to one of the factors in the fishbone diagram is student motivation. So, a secondary driver that directly relates to student motivation is classroom and counseling structures. This secondary driver is derived from one of the causes the team identifies in the fishbone diagram. Depending on the scope of the focus goal and the specificity of the primary drivers, secondary drivers may or may not be necessary.

**Change practices** are the interventions or specific work practices that are predicted to affect the secondary and, in turn, the primary drivers. Derived from the secondary drivers, or in some cases from the primary drivers, change practices should be specific, actionable, and measurable. In the example above, a change practice directly related to the secondary driver of classroom and counseling structures is a student reading conference process in the classroom. This change practice is specific, measurable, and is hypothesized to positively influence reading comprehension and, in turn, student motivation.
The driver diagram example on page 6 shows the relationship between the overall focus goal of the School Renewal project, the primary drivers that directly relate to achieving the goal, the secondary drivers that are components of the primary drivers, and specific change practices to test. Driver diagrams should be living documents that change over time as team members see changes in their school (Shakman et al., 2020). Driver diagrams represent the team’s working theory of change—or ideas about what strategies are most likely to impact and achieve the focus goal—but they are always provisional and, through the PDSA rapid inquiry cycle, are tested and revised. Since the driver diagram is designed to be an improvement tool, the team should select drivers that are realistic and most likely to affect the focus goal. In addition, the team should remove drivers that are likely to have little to no impact or that have no chance of being influenced. In the example noted above, the primary and secondary drivers are meant to affect the focus goal and should be realistic, specific, and achievable.

**Designing a Driver Diagram**

**Facilitators’ Notes**

1. **Defining a Focus Goal**

   What is big enough to matter and small enough to win? What do we want to accomplish, for whom, by when, and how much?

   The focus goal is a critical component of the School Renewal journey. The focus goal is a specific goal, developed in response to the problem statement, that guides the team’s renewal efforts. Ideally, the focus goal should:

   - target a specific population.
   - be time-specific.
   - be measurable.

   Review existing goals from Cognia school improvement plans, strategy maps, and/or any strategic planning documentation to identify a schoolwide goal and refine it into a focus goal to support School Renewal planning. It can help to have each member of your team, individually or with a partner, first craft a focus goal statement, followed by each member sharing their focus goal with the rest of the team. Then the team can adopt/adapt from these statements to create a focus goal that everyone agrees upon and feels good about.

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**Developing a Focus Goal**

<table>
<thead>
<tr>
<th>What?</th>
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<tbody>
<tr>
<td>For whom?</td>
</tr>
<tr>
<td>By when?</td>
</tr>
<tr>
<td>How much?</td>
</tr>
<tr>
<td>Full focus goal statement</td>
</tr>
</tbody>
</table>

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3 The information and steps outlined are adapted from the High Tech High GSE Center for Research on Equity and Innovation.
Examples:

<table>
<thead>
<tr>
<th>Goal</th>
<th>Focus Goal</th>
</tr>
</thead>
<tbody>
<tr>
<td>By spring 2022, 65 percent of students in grade 4 will demonstrate proficiency on state math assessment.</td>
<td>By spring 2022, 80 percent of all grade 4 students will score a 3 or 4 on the word problems section of the grade-level common assessment.</td>
</tr>
<tr>
<td>By spring 2022, the percentage of English Learners (ELs) at our school scoring proficient will increase from 15 percent to 45 percent on the NWEA assessment.</td>
<td>By spring 2022, Lincoln Middle School will decrease our percentage of EL students who are chronically absent from 85 percent to 35 percent.</td>
</tr>
</tbody>
</table>

![Diagram showing Focus Goal, Primary Drivers, Secondary Drivers, and Change Practices]

- **Focus Goal**: By spring of 2022, 80% of all 3rd grade students will score a 3 or 4 on the comprehension section of the STAR reading assessment.

- **Primary Drivers**
  - Student motivation
  - Collaboration
  - Teacher staffing & assignment

- **Secondary Drivers**
  - Classroom and counseling structures
  - Community partnerships
  - PLC structures & processes
  - Recruitment & retention

- **Change Practices**
  - Mini meetings
  - One-on-one mentoring
  - Incentive/rewards
  - Student reading conference process (2nd & 4th)
  - Stipends to support teacher professional learning
2. Identifying Primary Drivers

a. **Individual team members:** Each member identifies the top four drivers (that is, high-leverage areas) they think the team needs to focus on to impact the focus goal and writes each driver on a separate index card or Post-it note.

   ⇒ **Help with facilitation:** It can help to think of drivers as X in the following statements:
   “If we figured out X, we could achieve our goal.” or “If we didn’t figure out X, it is unlikely we could achieve our goal.”

b. **Share out & cluster:** Each team member shares their most critical driver with the team. If others wrote down a similar driver, group these cards/Post-its together on the table.

   ⇒ **Help with facilitation:** As the team shares and clusters, it can be helpful to move the “stacks” with the most cards/Post-its to the top of the table, and those with the least, put them on the floor. This gives the team a visual indicator of which drivers might be most important.

c. **As a team, select 3–5 drivers** that are essential for impacting your focus goal. Write those drivers on your driver diagram poster. This is your “theory of improvement” (that is, if you could move these drivers, you could achieve your goal).

d. **Questions for the team to consider:**

   ⇒ Is this driver specific enough that we all understand what to focus on?
   ⇒ How will you know the drivers are improvements?
   ⇒ Is this driver impactful enough that it will move the work forward?
   ⇒ Is this driver within our locus of control, meaning we can do something about it? (for example, “Poverty” is real but may not be a helpful driver. However, “Family Engagement” could be an important driver and signals a way of working with families to reduce the effects of poverty.)
   ⇒ Are these drivers necessary and sufficient for achieving our goal?
   ⇒ Which driver do we think is our greatest lever for change?
3. Identifying Secondary Drivers

Secondary drivers are the initiatives that cause the primary drivers to occur. For example, if classroom instruction is noted as a primary driver to support a goal on increasing ELA scores, a secondary driver might be time spent reading. Identifying these can help focus the team’s efforts and lead to more concrete ideas around changes to practice.

4. Generating Change Practice Ideas

Change practices are:

• specific, testable, and measurable.
• actionable within a reasonable timeframe.
• likely to create change based on their underlying practices (not a program, innovation, or person).
• likely to shift thinking or practice among those implementing the change.

Typically, change practices originate from:

1) **Research knowledge**: What does the literature say about solving this problem?
2) **Practice knowledge**: What have other colleagues done to solve this problem?
3) **Design/creative thinking**: In what new ways might we address this problem?
How Will We Know That Our Change/s Are Improvements?

This section is designed to support personnel engaged in conducting rapid cycles of inquiry to support School Renewal efforts. After completing this phase, teams should have realized the following goals:

1. Identify and implement appropriate measures to use while testing a change practice.
2. Analyze data to determine if a change practice successfully resulted in an improvement.
3. Reflect on outcomes to determine if the change practice should be adopted, adapted, or abandoned.

School—Rubric (see pages 24–26 of the Appendices)

This section of the rubric walks schools through the implementation process of PDSA cycles. Note: In reviewing data, adjusting the driver diagram, and entering the new PDSA cycle, schools will be rotating between the different levels of the rubric as they are going through the implementation process.

<table>
<thead>
<tr>
<th>Level</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.5</td>
<td>Tests but no improvement</td>
</tr>
<tr>
<td>3.0</td>
<td>Minimal improvement</td>
</tr>
<tr>
<td>3.5</td>
<td>Moderate improvement</td>
</tr>
<tr>
<td>4.0</td>
<td>Scalable improvement</td>
</tr>
<tr>
<td>4.5</td>
<td>Sustainable improvement</td>
</tr>
<tr>
<td>5.0</td>
<td>Sustainable results</td>
</tr>
</tbody>
</table>
What is PDSA?\(^4\)

The PDSA process is intended to test small-scale practice changes to build confidence in efficacy prior to full implementation and scale.

PDSA cycles are iterative mini experiments during which educators articulate improvement changes, carry out the change, study the results, and decide how to proceed (i.e., adopt the change, adapt the change, or abandon the change). The overall purpose of running PDSA cycles during the testing phase is to conduct an improvement investigation; during this investigation, educators learn quickly and affordably which interventions work and, later, how to adaptively integrate them to attain quality outcomes reliably at scale (Bryk et al., 2015).

Diagram of a PDSA

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**Diagram of a PDSA**

**STEP 1—PLAN**
Plan the testing of your change practice. Plan the collection of data to inform improvements. Predict the results of your change practice.

**STEP 2—DO**
Test your change practice. Collect and compile data to inform improvements.

**STEP 3—STUDY**
Collective examine data to inform improvements. Summarize lessons learned.

**STEP 4—ACT (Based on data)**
Take steps to implement, spread, and scale the change practice. Make improvements to the change practice. Choose to try another change practice.

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Things to Consider

- PDSA cycles during the testing phase are rapid and iterative. Not all change practices warrant this level of detailed experimentation.
- Think about interventions/change practices that you are already implementing as part of your school improvement plan. Consider refining these preexisting change practices through rapid PDSA cycles.
- Implement at a small scale to start and learn fast through the inquiry cycle.
- Change practices need to be focused and measurable.
- Data to be collected should directly measure the impact of the change practice.
- Data can be qualitative and/or quantitative.
- The progress and outcome of the PDSA cycle should be measured using a variety of data that is directly aligned with the goal and change idea, such as:
  - checklists or rubrics
  - surveys
  - observations
  - evaluations
  - classwork, homework, quizzes, tests, projects
  - interim assessments

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\(^4\) This section was created as part of training and coaching materials under REL Pacific contract # ED-IES-17-C-0010 for the Palau Partnership for the Improvement of Teaching. The information and processes outlined in this handout are adapted from Continuous Improvement in Education: A Toolkit for Schools and Districts (Shakman et al., 2020).
Suggested Roles and Responsibilities
Involv[e those closest to implementing the change practice for each step of the PDSA process.

Teachers and Coaches
- Provide input on the change practice to test.
- Participate in the development and implementation of the test.
- Collect data and participate in the analysis and study of the data.

Principals and Coaches
- Provide input on the change practice to test.
- Lead/participate in the development of the test.
- Supervise the implementation of the test.
- Lead/participate in the analysis and study of the data.
- Collaborate on next-step decision making.
- Coordinate between school and district central office.

Central Office Leaders
- Manage the development and implementation of the PDSA cycles.

Facilitators’ Notes
PDSA cycles conducted during the testing phase of the continuous improvement process are intended to test small-scale changes to build confidence in their efficacy prior to full implementation and scaling. PDSA cycles conducted during the implementation phase are intended to fully implement the agreed-upon changes across contexts (once confidence in their efficacy is built during the testing phase). There is no expectation regarding the number of PDSAs to complete or due dates for completion, as these are determined by local data, context, and need.

Determining an appropriate “grain size” for the change practice being tested is important. A testable grain size relies on determining specific actions and behaviors, is measurable, and can be easily and consistently replicated by more than one person at a time. Change practices that are too small can waste time and resources. Change practices that are too big are difficult to test efficiently and effectively.

Which change practices should you consider?

<table>
<thead>
<tr>
<th>NO</th>
<th>YES</th>
</tr>
</thead>
<tbody>
<tr>
<td>A one-time professional development workshop or course on strategies to promote reading comprehension for K–3 students.</td>
<td>Testing and implementing teacher–student reading conferences that guide students through focused, high-quality discussion on the meaning of text.</td>
</tr>
<tr>
<td>An instructional coach.</td>
<td>Coaching cycles to help teachers engage in lesson planning, modeling, co-teaching, reflective conversations, data chats, etc.</td>
</tr>
<tr>
<td>Differentiated Instruction Teaching</td>
<td>Testing the lesson planning protocols developed by the instructional leadership team: for example, the specific instructional practice</td>
</tr>
</tbody>
</table>

Individual Brainstorm: What could we try that would impact the drivers we identified? What does the research say we should try? Where is this happening well already in our school and/or district (bright spots), and what are they doing to get good results? Write each idea on its own sticky note or index card.
a. **Chart Your Change Practice Ideas:** On large chart paper, draw an *effort vs impact axis* (see example on right). Using your best collective guess, place each of the change ideas in the quadrant it fits best. Start by having each person share their favorite idea, and cluster similar ideas as you continue to share out. It can be helpful to ask:

- How much effort (time, energy, resources) would it take for us to test this idea?
- If we are successful what is the size of the likely impact?
- Will this idea impact issues/challenges in our system?

b. **Identify high-leverage change practices:** As a group, identify 4–6 change practices that you think are most *impactful*, that you could *get moving on quickly*, and that are *within your team’s locus of control* (i.e., usually those in the upper two quadrants). Add these change practices to your driver diagram, drawing arrows to show how they are aligned to the secondary drivers.

c. **Question for the team to consider:** What do we notice about the alignment (or lack of) between our change ideas and drivers? If your change ideas don’t align to your existing drivers, this could suggest a new driver is needed. If you have a driver without any change ideas, this driver may not be helpful to your current “working theory of improvement”.

### PDSA Cycles

#### Step 1—PLAN

The first step of the PDSA cycle is to make a plan by assigning tasks, roles, and due dates. In this step, you and your team will also make a prediction or predictions about what you think will happen by implementing the change practice. This will determine how you will measure the success of the change practice, both while you are conducting the test and after the test is complete.

**Describe the test and make predictions.**

- Briefly describe the test:
  - *Summarize what your change practice is and how you plan to test it.*
- How will you know that this change practice is an improvement?
  - *Describe the process measures, outcome measures, and tools you will use to determine whether the change practice tested was an improvement.*
  - *Sentence starter:* **We will know that this change practice is an improvement because teachers will _____ and students will _____.
- What do you predict will happen?
  - *Write down your prediction or predictions about what teacher and student actions or behaviors you believe will happen or hope to see by implementing this change practice. The predictions need to be measurable and observable to determine whether they were met at the end of the test.*
  - *Sentence starter:* **We predict that teachers will _____ and students will _____.
**What, Who, When, Where**

Using the table below, map out the necessary tasks needed to implement the change practice and identify who is responsible for completing each task, when the tasks should happen, and where. Be sure to communicate this plan to everyone involved in testing the change practice.

**Example:**

<table>
<thead>
<tr>
<th>Tasks necessary to implement 3rd grade student reading conferences (What)</th>
<th>Person Responsible (Who)</th>
<th>When</th>
<th>Where</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Develop a common protocol for completing reading conferences in each 3rd grade classroom.</td>
<td>3rd grade teachers and instructional coach</td>
<td>By August 14</td>
<td>Grade-level PLC meeting</td>
</tr>
<tr>
<td>2. Develop lesson and unit plans to incorporate weekly reading conferences in each 3rd grade classroom.</td>
<td>3rd grade teachers and instructional coach</td>
<td>Weekly</td>
<td>Planning time</td>
</tr>
<tr>
<td>3. Deliver weekly reading conferences with all 3rd grade students.</td>
<td>3rd grade teachers, counselors, and support staff</td>
<td>Weekly</td>
<td>All third grade classrooms and intervention time</td>
</tr>
<tr>
<td>4. Develop weekly exit tickets to collect student perceptions on reading.</td>
<td>3rd grade teachers and counselors</td>
<td>Each grading period</td>
<td>Faculty meeting</td>
</tr>
<tr>
<td>5. Disseminate and collect exit tickets to collect student perceptions on reading.</td>
<td>3rd grade teachers</td>
<td>Weekly</td>
<td>In 3rd grade classrooms</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Tasks necessary to implement the change practice (What)</th>
<th>Person Responsible (Who)</th>
<th>When</th>
<th>Where</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>2.</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>3.</td>
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<tr>
<td>4.</td>
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<tr>
<td>5.</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>6.</td>
<td></td>
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</tr>
</tbody>
</table>
Collecting Data
To determine the effectiveness of a change practice, it is important to identify methods to assess progress and monitor for unintended consequences along the way. Four measurement types can be used to maximize the effectiveness and efficiency of your team’s testing of change practices.

![Diagram of measurement types]

**Uncommon Measures**

- **Driver measures** assess changes. Changes in the primary and secondary drivers should result in changes to the focus goal. These measures serve as agents between the change practice and the outcome. The outcomes on driver measures should help teams better predict results on outcome measures.

- **Process measures** are 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 (Shakman et al., 2020).

- **Balance measures** are used to measure other parts of the school or classroom system. These measures may seem completely random and unrelated to the outcome in question. However, this measure attempts to capture the accidental consequences of a change practice. In complex school and/or district systems, it is important to ensure that the change practice introduced in one part of the system does not upset another part of the organization.

**Common Measures**

- **Outcome measures**: measure the intended result of your change practice.

- **Leading outcome measures**: short-term formative or summative assessments (such as local assessment data, checklists, rubrics)

- **Lagging outcome measures**: long-term summative assessments (such as end-of-year tests, ACT, NDSA, etc.)

(Crow, Hinnant-Crawford, Spaulding, 2019)
Focus Goal: See driver diagram

Driver Measure: Is it working?

Process Measure: How is it working?

Balance Measure: Is it working as intended?

Outcome Measure: Did it work?

By spring 2022, 80% of all 3rd grade students will score a 3 or 4 on the comprehension section of STAR reading assessment.

Student Motivation Measure: Weekly exit tickets to learn more about students feeling excited and successful about reading

Fidelity Checks Measures: Weekly lesson plans, classroom observations, notes from student conferences

Checking the system for unintended consequences Measures: NWEA math monthly assessment, science common assessment

Leading measure: e.g. NWEA, STAR, DIBELs (pre and post cycle)

Lagging measure: state standardized assessment for ELA

(Crow, Hinnant-Crawford, Spaulding, 2019)

Step 2—DO

In this phase of PDSA, you will carry out the test as planned and collect the data identified in the plan phase. Be sure to pay attention and make note of any unexpected or unintended results that arise from testing the change practice.

Test the changes. Collect the data for:

⇒ **Driver Measures**: Include the raw data (tables, charts) or a link to the raw data.

⇒ **Process Measures**: Include the raw data (tables, charts) or a link to the raw data.

⇒ **Outcome Measures**: Include the raw data (tables, charts) or a link to the raw data.

⇒ **Balance Measures**: What were the unintended consequences of implementing the change practice? Include any unexpected or surprising data that may have occurred as a result of testing the change practice.

Example:

<table>
<thead>
<tr>
<th>Data Collection Plan</th>
<th>Person Responsible (Who)</th>
<th>When will data be collected?</th>
<th>Where will raw data be located?</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Driver: Student motivation (weekly exit tickets)</td>
<td>All 3rd grade teachers</td>
<td>One time per week</td>
<td>Shared Google drive</td>
</tr>
<tr>
<td>2. Process: Fidelity checks (classroom observations notes including checking lesson plans, student interviews, etc.)</td>
<td>Instructional coach</td>
<td>One time per week, all 3rd grade classrooms</td>
<td>Shared Google drive</td>
</tr>
<tr>
<td>4. Outcome: STAR reading assessment</td>
<td>Principal and/or Assistant Principal</td>
<td>Every other month</td>
<td>Shared Google drive</td>
</tr>
</tbody>
</table>
Step 3—STUDY
In this phase of PDSA, you will analyze the data you collected during the Do phase. We recommend using a protocol for analyzing and synthesizing data with your team. Below is a sample protocol.

**Collaborative Study for Continuous Improvement Protocol**

Before you begin:
- Identify three roles: Facilitator, Timekeeper, and Note-Taker.
- Facilitators should let the data speak by allowing the team to observe what they see before making assumptions/inferences about what the data means. Be sure to ask all team members what they think.
- Depending on where in the process the group is, using the protocol may be uncomfortable at first. As a facilitator, be patient as you want the team through the following activities:
  - REVIEW the continuous improvement plan (3–5 minutes).
  - PREDICT what you believe the data will reveal (2–5 minutes).
  - EXAMINE the data independently (10 minutes).
  - ASK clarifying questions about the data (5 minutes).
  - OBSERVE what you see in the data without judgement or interpretation (10–15 minutes).
  - INTERPRET/INFER what the data reveals (10–15 minutes).
  - IDENTIFY lessons learned (5–10 minutes).
- 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 practice?
- 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. This reflection will help determine which direction to take in the next step, Act.
    - What worked well and what did not? Why?
    - What did you realize while conducting the test? What other lessons were learned from testing the change practice?

Step 4—ACT
In this phase of PDSA, the team will decide whether to adopt the change practice based on the data analysis conducted in the Study phase, abandon the change practice, or adapt the change practice and continue testing.

**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 practice to ensure that it is done with fidelity.**
- **Adapt.** Modify the change practice and continue the 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 change practice and outline a plan for how the team can test this new adapted change.**
- **Abandon.** Discard this change practice and try a different one. **Explain the reasoning behind abandoning this change practice. Choose a new change practice to test.**
Improvement Science Approach to Implementation

As change practices are tested on a small scale, PDSA cycles repeat. The School Renewal team learns from each test, refines the change, and then plans for implementing the change practice on a larger scale. For instance, this may be testing the change practice with an entire grade level. After successful implementation within a specified group/section, the team can continue to use PDSA cycles to spread, or bring to scale, the change practice to other groups/sections of the school or district. The rubric that accompanies this handbook can further guide this approach to spreading and scaling implementation of successful practices (see 4.0-5.0 score ratings).

Acknowledgements

The North Dakota School Renewal Handbook 2.0 is its own continuous improvement process. Development of this handbook is made possible by the valued contributions of members from the North Dakota Department of Public Instruction, North Dakota Regional Education Agencies, and the amazing public schools and districts of North Dakota. Drawing from the research on improvement science, as well as the valued knowledge of practitioners from the field, this handbook seeks to provide users with guidance that is usable and, therefore, purposeful in guiding School Renewal journeys that lead to desired outcomes for all students.
References


Finalized Rubrics

School—Rubric

Schools will use this rubric at the conclusion of each PDSA cycle. This is a cyclical evaluation that will help schools determine their success at implementing the School Renewal Handbook and PDSA cycles and is intended to help schools identify current progress and determine the next steps to move forward in their school improvement process. This rubric is meant to show progress to your effort and continued work versus success in meeting goals. Note: In reviewing data, adjusting the driver diagram, and entering the new PDSA cycle, schools will be rotating between the different levels of the rubric as they are going through the implementation process.

<table>
<thead>
<tr>
<th>Project Progress Score</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.5</td>
<td>Intent to participate</td>
</tr>
<tr>
<td>1.0</td>
<td>Goal set and team established</td>
</tr>
<tr>
<td>1.5</td>
<td>Planning has begun</td>
</tr>
<tr>
<td>2.0</td>
<td>Activity but no tests</td>
</tr>
<tr>
<td>2.5</td>
<td>Tests but no improvement</td>
</tr>
<tr>
<td>3.0</td>
<td>Minimal improvement</td>
</tr>
<tr>
<td>3.5</td>
<td>Moderate improvement</td>
</tr>
<tr>
<td>4.0</td>
<td>Scalable improvement</td>
</tr>
<tr>
<td>4.5</td>
<td>Sustainable improvement</td>
</tr>
<tr>
<td>5.0</td>
<td>Sustainable results</td>
</tr>
</tbody>
</table>
School—Evidence and Documentation

Schools will use this rubric at the conclusion of each PDSA cycle. This is a cyclical evaluation that will help schools determine their success at implementing the School Renewal Handbook and PDSA cycles. Below is a list of potential evidence or documentation that a school could provide to determine/prove where they are in implementing the School Renewal Handbook and PDSA cycles. This is intended to help schools identify current progress and determine the next steps to move forward in their school improvement process. This rubric is meant to show progress to your effort and continued work versus success in meeting goals. Note: In reviewing data, adjusting the driver diagram, and entering the new PDSA cycle, schools will be rotating between the different levels of the rubric as they are going through the implementation process.

<table>
<thead>
<tr>
<th>Project Progress</th>
<th>Evidence and Documentation</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.5 Intent to participate</td>
<td>Data identifying why the school was identified. Members of the school improvement team and why they were chosen (teachers, administrators, support staff, counselors, special education, etc.). Learning the school improvement process.</td>
</tr>
<tr>
<td>1.0 Goal set and team established</td>
<td>The school has formed a problem statement as well as an overall school action plan (Cognia strategy map, Title 1 comprehensive plan, CLSD plan). The school has a complete school improvement team, and a knowledge management system has been established with the entire school improvement team. Meeting effectiveness is evaluated regularly.</td>
</tr>
<tr>
<td>1.5 Planning has begun</td>
<td>School improvement meetings for the year are scheduled. All meetings have agendas and meeting notes are being taken. Notes are shared with the team and stored in the knowledge management system. Tasks and next steps are specifically assigned to team members. The needs assessment has been completed. Identify and set up activities, tests, strategies, and measurements needed to determine if the theory of practice is working.</td>
</tr>
<tr>
<td>2.0 Activity but no tests</td>
<td>Using baseline data to develop an initial working theory of improvement and focus goal, the driver diagram has been completed.</td>
</tr>
<tr>
<td>2.5 Tests but no improvement</td>
<td>A clear and concise practical measurement plan is set, and PDSA testing is happening. A PDSA testing schedule/calendar is set (i.e., common assessments, interim assessments, progress monitoring, improvement measures, driver measures, and uncommon measures). Data displays have been designed and shared. (Note: Schools are continuing to review data. This may be the stage if schools are testing but are not seeing anticipated results, in which case they need to review data and decide on the next course of action).</td>
</tr>
<tr>
<td>3.0 Minimal improvement</td>
<td>Completed PDSA tests of changes have produced meaningful learning relevant to the theory of improvement identified in the team's focus goal. (Evidence of minimal improvement exists in progress measures.)</td>
</tr>
<tr>
<td>3.5 Moderate improvement</td>
<td>Testing continues and additional improvement in project measures towards goals is seen. Moderate evidence of improvement exists, and student-based data is continuing to show increasingly positive results. The school is using data displays to chart growth and outcome measures.</td>
</tr>
<tr>
<td>4.0 Scalable improvement</td>
<td>Expected results are achieved for the identified population or subsystem. Support for continued school improvement implementation has begun (training, documentation of practices, the establishment of standard work routines, etc.). The school is monitoring balanced measures while starting to work on expanding and scaling this work to the rest of the school.</td>
</tr>
<tr>
<td>4.5 Sustainable improvement</td>
<td>Data on key measures indicate the sustainability of the improvement (i.e., 9–12 data points over time at the new level of performance). Monitoring has been embedded into systemic practice.</td>
</tr>
<tr>
<td>5.0 Sustainable results</td>
<td>Project goals and expected results have been accomplished. Organizational and systemic changes have been embedded to accommodate new practices and make the changes permanent. Other evidence may include an cycle of evaluation and improvement, positive school culture, increased student engagement, and community engagement.</td>
</tr>
</tbody>
</table>
Coaching—Rubric

Coaches will use this cyclical evaluation that will help to determine their success at coaching schools through the implementation of the School Renewal Handbook and PDSA cycles.

<table>
<thead>
<tr>
<th>Progress Score</th>
<th>Coaching Evidence and Documentation</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.5 Intent to participate</td>
<td>Have gone to all initial pieces of training, schools have been assigned and initial contact with school improvement teams has been made.</td>
</tr>
<tr>
<td>1.0 Goal set and team established</td>
<td>The application has been submitted. The problem statement has been completed. A schedule has been formed, but no work has been accomplished. A knowledge management system has been established with the entire school improvement team.</td>
</tr>
<tr>
<td>1.5 Planning Has begun</td>
<td>The organization of the project structure has begun. All meetings have agendas and meeting notes are being taken. Notes are shared with the team and stored in the knowledge management system. Tasks and next steps are specifically assigned to team members. The needs assessment has been completed.</td>
</tr>
<tr>
<td>2.0 Activity but no tests</td>
<td>Coaches assist schools in the collection of baseline data. Coaches also help walk schools through the process of developing an initial working theory of improvement, a focus goal, a driver diagram, etc. Coaches are attending all scheduled school meetings. They are actively participating in these meetings and providing all documentation to show where each school is at in the implementation process.</td>
</tr>
<tr>
<td>2.5 Tests but no improvement</td>
<td>A clear and concise practical measurement plan is set, and PDSA testing is happening. A PDSA testing schedule/calendar is set (i.e., Common assessments, interim assessments, progress monitoring, improvement measures, driver measures, and uncommon measures). Data displays have been designed and shared. Note: Schools are continuing to review data. This may be the stage if schools are testing but are not seeing anticipated results, in which case they need to review data and decide on the next course of action.</td>
</tr>
<tr>
<td>3.0 Minimal improvement</td>
<td>Completed tests of changes have produced meaningful learning relevant to the working theory of improvement identified in the team's focus goal. Evidence of minimal improvement exists in progress measures. The coach can report where the schools are currently in the improvement process and what steps schools will take next in the improvement cycle. Schools should be finishing up with at least the first PDSA cycle, reviewing the data, refining the driver diagram, and deciding on the next steps to work through PDSA cycle 2 or how to expand their first successful PDSA.</td>
</tr>
<tr>
<td>3.5 Moderate improvement</td>
<td>Testing continues and additional improvement in project measures towards goals is seen. Moderate evidence of improvement exists, and student-based data is continuing to show increasingly positive results. The school is using data displays to chart growth.</td>
</tr>
<tr>
<td>4.0 Scalable improvement</td>
<td>Expected results are achieved for the identified population or subsystem. Support for continued school improvement implementation has begun (training, documentation of practices, the establishment of standard work routines, etc.). The school is monitoring balanced measures while starting to work on expanding and scaling this work to the rest of the school. At this point, the coach will need to assist the school in identifying how best to start scaling and expanding their first PDSA cycle.</td>
</tr>
<tr>
<td>4.5 Sustainable improvement</td>
<td>Data on key measures indicate the sustainability of the improvement. (i.e., 9-12 data points over time at the new level of performance) School improvement team and liaison have created a school improvement plan for next year to carry on this work.</td>
</tr>
<tr>
<td>5.0 Sustainable results</td>
<td>Project goals and expected results have been accomplished. Organizational and systemic changes have been embedded to accommodate new practices and make the changes permanent (professional development and training schedules for staff, staff buy-in on school improvement strategies, policy adjustments, consistent progress on school improvement goals over a period, school improvement team is in a place that they are ready to take over the responsibility as liaison on their own).</td>
</tr>
</tbody>
</table>
Team Planning Charter Form
(adapted from the Educational Leader’s Guide to Improvement Science)

Date:
Organization Name:
Project Title:
Team Title:
Team Members:

Team Plan

Team Purpose: What was/is the purpose or reason for this team?

Team Creation Process: Describe how the team was/will be formed. Is there a leader? How are people included (invited, appointed, volunteered, etc.)? What are the team norms?

Team Urgency: Describe how a sense of urgency to build a successful team was/will be conveyed to and understood by all team members.

Task Activities: What activities did/will the team members engage in during this process? Which team members will engage in each activity?

<table>
<thead>
<tr>
<th>Activity</th>
<th>Team member/s</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
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<td>7.</td>
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</tbody>
</table>

Team Accountability: Describe how the team members were/will be held accountable for the interaction in the team.

Key Features of the Improvement Process:

Improvements:
Change Management Plan

**Change**: Briefly describe the change and how it was initiated.

**Relationships**: Describe who was/will be involved in the change and how they are related to each other.

**Progress Monitoring**: Describe how change was/will be measured and how frequently.

**Keys to Success**: Describe the relevant features that help(ed) the group work together toward a common goal.

### Organizational Communication Plan

**Input and Feedback**: List the partners and how you will elicit feedback from them?

<table>
<thead>
<tr>
<th>Partners</th>
<th>Modes of Communications</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
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<td>9.</td>
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<tr>
<td>10.</td>
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</tbody>
</table>

**Decision Making Process**: Describe how decisions will be made in the group or organization. Include a process for resolving disagreements within the group.

**Dissemination Process**: Describe how and when the decisions will be communicated to the group or organization.

**Existing Infrastructures**: Describe how current technology and organizational infrastructure will support the communications process. Include specific ways that Infrastructure might be engaged to guide members, document milestones and celebrate members’ accomplishments along the way.

**Infrastructure Needs**: Assess what additional processes or infrastructure may need to be acquired and/or developed to facilitate communication more effectively.
Group Consultancy Protocol

Participants in each breakout room will discuss problems of practice based on the room's topic as part of the breakout room group consultancy discussion. In your breakout room, determine who will present their problems of practice, who is going to be a notetaker, and who is going to present for the group on the plenary panel. The rest of the group will provide feedback and discussion.

Purpose
The Group Consultancy or Problem of Practice Protocol is a structured process that helps explore solutions to a problem of practice. In this process, a presenter describes a dilemma, and a facilitator manages a consultancy group in exploring the problem of practice using structured questions. Outcomes from a successful consultancy can include (1) the presenter being able to see and describe a problem more clearly, (2) the presenter emerging with new ideas to approach and solve the dilemma, and (3) the consultancy group gaining insight into similar problems they may encounter in their own work.

Choosing a Problem of Practice
The person sharing should identify a significant challenge they are currently facing and actually want feedback on in order to address. The presenter should be prepared to describe the challenge and identify a framing question to guide the discussion.

Protocol
(Estimated time: 15 minutes per problem; two problems per session)

<table>
<thead>
<tr>
<th>Topic</th>
<th>Times</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description of the problem of practice:</td>
<td>5 minutes</td>
</tr>
<tr>
<td>• A description of the specific problem with which the group is grappling</td>
<td></td>
</tr>
<tr>
<td>• Contextual details that will be relevant to understand the problem</td>
<td></td>
</tr>
<tr>
<td>Other participants ask clarifying questions (see questions below).</td>
<td>8–10 minutes</td>
</tr>
<tr>
<td>All participants offer suggestions, strategies, insights, and experiences that may help the presenters and those dealing with a similar issue. Participants might ask probing questions, planning questions, or objective questions, which help the presenter think more deeply about the problem (see the questions on the following page).</td>
<td>15 minutes</td>
</tr>
</tbody>
</table>
Probing Questions
1. Do you usually . . . ?
2. What makes you say that?
3. What do you mean by . . . ?
4. What made you decide to . . . ?
5. How did you know that . . . ?
6. Have you tried any other ways to . . . ?
7. Have you ever seen that before?
8. What happens when . . . ?

Planning Questions
1. What do you want to try first/next?
2. What would you do instead?
3. What made the situation worse?
4. What made the situation better?

Objective Questions
1. What is the history of the . . . situation?
2. What facts do we know about the . . . situation?
3. What are the deliverables or what are you trying to achieve?
4. What resources do you have to accomplish . . . ?
5. How do you feel about . . . ?
6. What kind of information do you need in order to go forward with . . . ?
7. Why is . . . happening?
8. What skills do you/your team need to learn in order to . . . ?
Empathy Interviews

Please use/adapt/share this protocol as you see fit! All we ask is that you keep the attribution statements so people know where they came from, and can reach out. For more protocols visit: https://hthgse.edu/crei/protocols

Empathy Interviews

Goal: To gain a deeper understanding of a user’s experience of the issue you are working on.

Norms for Empathy Interviews:
- Seek to understand, not confirm
- Ask once, clearly
- Ask questions that elicit stories and feelings
- PROBE: “Tell me more…” “What was that like for you?”

Prep for Interviews (15 min):
What questions could you ask a student/practitioner/stakeholder to understand their experience of your group’s problem/issue, and the factors contributing to it?

- **Question Selection/Brainstorm (3 min):** Individually, review the questions below. Adapt these or generate a few questions of your own.

- **Share & Organize (5-10 min):** As a group, identify/organize your top 5-6 questions. Will they help you understand what makes X challenging, or when students experience success (i.e. the root causes you need to address)?

- **Predict & Plan (3 min):** Each person shares one thing they think they will hear. If you are doing the interview with a partner, decide who will interview and who will take notes.

Consider these possible Empathy Interview Questions (ones in bold highly recommended!):
- What is one word you would use to describe how you feel about X?
- Tell me about a time when you felt successful in X…
  - What happened? What made this a success? (What did you do? What did others do?)
- Tell me about a time when you X was hard…
  - What happened? How did that feel? Why was that hard? What do you wish would have happened?
- What advice would you give another student/person about X?
- What advice would you give to me about X?
- What do you wish others knew about X?
- Suppose you could have three wishes to make X the best it could be. What would they be, and why?
- What do you wonder about X, or wish you knew?
- Draw me a picture of what you think about when you hear X… (then “Tell me about what you drew.”)

This document has been created by the High Tech High GSE Center for Research on Equity and Innovation. The d.school at Stanford has a useful document on empathy interviews.
Your questions:

Conduct Interviews (20 minutes):
Your notes:

Reflect (5 minutes):
Content: What did we hear? What are we learning about the root causes that contribute to the issue?
Process: Are there questions we wish we would have asked? Are there questions that were particularly fruitful? Did we probe effectively?
Process Mapping Protocol

The purpose of this protocol is to better understand the process leading a particular outcome, and identify potential breakdown points where we should focus our improvement efforts.

Roles:
- **Interviewee:** the person being interviewed who can provide a helpful perspective on the process.
- **Interviewer/Facilitator:** the person who interviews the interviewee, and who facilitates Step 3.
- **Process Mappers:** one to two people who map the process while listening to the interview.

Norms:
- **Resist Solutionitis** … get your map out first, then interrogate it
- **Share the Air** … step up, step back
- **Seek to Understand, not Confirm**

Step 1: Identify your End Point (5-7 min.)
Before mapping the process, you need to articulate the end point (i.e. goal) you are after.
- **Individually brainstorm** (2 min) possible endpoints for the process you want to map. See if you can express it in one short sentence. Examples: A student secures an internship. A student applies to a 4-year college. A teacher plans a project that integrates math.
- **Whip:** Each person shares one endpoint, and the whip continues until all ideas have been shared.
- **Choose one or create a new one** (without getting hung up on the perfect wording).

Step 2: Create the Map (10-15 min.)
Using the roles above, the interviewer interviews the interviewee to understand the process (i.e. the reality) leading up to that goal, while others map the process on paper.

*Helpful questions/sentence frames:*
- **Start with:** So if X is your goal, where do you begin?
- **Then what?**
- **Listen for decision points.** Is this a decision point? What happens if… (yes)? What happens if… (no)?
- **End by asking:** “What was most challenging about the process you just described? What changes could we make to address that challenge?”

Step 3: Interrogating your Map & Identifying Change Ideas (15-20 min.)
The interviewee may no longer be present. The rest of the team engages in a discussion about what they heard
starting with a whip, where each person shares one thing that struck them from the conversation. Looking over
the process maps, discuss the following as a group:
- What are we learning about this process?
- Was there anything important that we heard that is missing on the process map? (capture it)
- Where/how might this process breakdown, especially for students from traditionally marginalized groups?
  - **Put an X** over those places in your map where the process could breakdown.
- What might we do (i.e. change ideas) to improve this process?
  - **Write change ideas** on your map by the breakdown points.

This protocol has been created by the High Tech High GSE Center for Research on Equity and Innovation.
## Focus Goal Chart

<table>
<thead>
<tr>
<th>Developing a Focus Goal</th>
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<tbody>
<tr>
<td><strong>What?</strong></td>
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<td><strong>For whom?</strong></td>
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<tr>
<td><strong>By when?</strong></td>
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<tr>
<td><strong>How much?</strong></td>
</tr>
<tr>
<td><strong>Full focus goal statement</strong></td>
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</tbody>
</table>
Plan-Do-Study-Act Worksheet

This is a tool designed to systematically walk teams engaged in the PDSA process through each phase. This resource has been designed to explain and provide detailed guidance for each section.

<table>
<thead>
<tr>
<th>School:</th>
<th>Test date and timeframe:</th>
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</thead>
<tbody>
<tr>
<td>Focus goal:</td>
<td></td>
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<tr>
<td>Change practice to test:</td>
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</table>

**PLAN**

Briefly describe the test here:

How will you know that this change practice is an improvement? What do you predict will happen?

**Implement Change Practice**

<table>
<thead>
<tr>
<th>Tasks necessary to implement the change practice (What)</th>
<th>Person Responsible (Who)</th>
<th>When</th>
<th>Where</th>
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<tbody>
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**Data Collection**

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<thead>
<tr>
<th>Data Type: What data will be collected, and what tool will be used for the measurement?</th>
<th>Person Responsible (Who)</th>
<th>When will data be collected?</th>
<th>Where will raw data be located?</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Driver:</td>
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</tr>
<tr>
<td>2. Process:</td>
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<td></td>
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<tr>
<td>3. Balance:</td>
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<td></td>
<td></td>
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<tr>
<td>4. Outcome:</td>
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<td></td>
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</tbody>
</table>
DO
(Upload data or link to data in this section)
Test the changes. Collect the data for:

- Driver Measures
  ⇒ Include the raw data (tables, charts) or a link to the raw data.

- Process Measures
  ⇒ Include the raw data (tables, charts) or a link to the raw data.

- Outcome Measures
  ⇒ Include the raw data (tables, charts) or a link to the raw data.

- Balance Measures: What were the unintended consequences of implementing the change practice?
  ⇒ Include any unexpected or surprising data that may have occurred as a result of testing the change practice.

STUDY
Was the cycle carried out as planned? What happened during the testing phase? What did you observe that was surprising?

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

ACT
Decide to adopt, adapt, or abandon.

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

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

- Abandon: Discard this change idea and try a different one.
Examples From the Field

Selfridge Elementary School

Focus Goal
By Spring 2023, 5% of Selfridge Elementary students will move up one level on the NWEA proficiency scale for ELA using the W-H-W framework.

Driver Diagram

Primary Driver
- In-Planebook, teachers will create lesson plans tied to Power Standards and submit them weekly.
- Teachers will utilize instructional best practices.
- NWEA will be used as an interim assessment.
- Teachers will create classroom norms, structures, and a positive culture.
- Teachers will utilize data to establish small group and classroom interventions.

Secondary Driver
- Principal reviews lesson plans bi-monthly with feedback.
- Classroom observations will be conducted monthly by the administrator with feedback.
- Professional development that focuses on best practices will continue.
- NWEA administered 1st semester. Results will be reviewed to determine how to best support students.
- Student engagement surveys will be administered quarterly and classroom culture will be monitored.
- Data meetings will be held quarterly.
- Staff will build upon the MTSS structures and systems that are in place and improve upon them.

Change Ideas
- Daily schedules will be constructed to allow teachers to create a literacy block every morning.
- Intervention time will be built into the daily schedule.
- Primary and secondary curriculum will be provided to each teacher that aligns with ND Standards.

- Classroom walkthroughs will be conducted by principal with feedback.
- All affected teachers will participate in the required training for the science of reading.
- Data Coordinator will be on staff to compile formative and summative data to present to teachers.

- Classroom walkthroughs will be conducted by principal with feedback.
- Intervention time will be built into the daily schedule.
- Data will be shared with parents at conferences.
- Data Coordinator will be on staff to compile formative and summative data to present to teachers.

- Primary and secondary curriculum will be provided to each teacher that aligns with ND Standards.
- Data Coordinator will be on staff to compile formative and summative data to present to teachers.
- The MTSS team will review achievement, attendance and behavior data for each student who is referred.
SELF RIDGE ELEMENTARY SCHOOL

FOCUS GOAL
By Spring 2023, 5% of Selfridge Elementary students will move up one level on the NAEP proficiency scale for math using the WH-HW framework.

Selfridge Math Driver Diagram

**Primary Driver**
- In-Planbook, teachers will create lesson plans tied to Power Standards and submit them weekly.

**Secondary Driver**
- Principal reviews lessons bi-monthly with feedback.

**Change Ideas**
- Daily schedules will be constructed to allow teachers to create a math block every morning.
- Intervention time will be built into the daily schedule.
- Primary and secondary curriculum that aligns with NO Standards will be provided to each teacher.

- Classroom walkthroughs will be conducted by principal with feedback.
- Data will be shared with parents at conferences.

- Classroom walkthroughs will be conducted by principal with feedback.
- Data Coordinator will be on staff to compile formative and summative data to present to teachers.

- Data will be shared with parents at conferences.
- Data Coordinator will be on staff to compile formative and summative data to present to teachers.

- Professional development that focuses on best practices will continue.
- NWEA assessments will be used as an interim assessment.

- Teachers will utilize data to establish small group and classroom interventions.
- Teachers will create classroom norms, structures, and a positive culture.

- Student engagement surveys will be administered annually, and classroom culture will be monitored.
- Data meetings will be held quarterly.

- Staff will build upon the MTSS structures and systems that are in place and improve upon them.
- Leadership will formalize the MTSS team and the frequency of their meetings.

- Leadership will implement official forms whereby teachers can refer struggling students to the team.
- The RTI team will review achievement, attendance, and behavior data for each student who is referred.
### Nedrose Public School

<table>
<thead>
<tr>
<th>Focus Goal</th>
<th>Primary Drivers</th>
<th>Secondary Drivers</th>
<th>Change Ideas</th>
</tr>
</thead>
<tbody>
<tr>
<td>By May 2022, increase 4–8th grade language craft and structure in informational text to 65% proficiency</td>
<td>Differentiated instruction (all whole group)</td>
<td>Intervention time during tier 1 time</td>
<td>Daily 5/CAFÉ (structure for timed instruction broken into direct instruction, small groups, and independent)</td>
</tr>
<tr>
<td></td>
<td>Gradual release of teaching (peer-to-peer instruction)</td>
<td>Increase guided reading time</td>
<td>4–8 PLC every other week for vertical alignment (look for teach – reteach opportunities)</td>
</tr>
<tr>
<td></td>
<td>Curriculum</td>
<td>Increased instruction time for reading</td>
<td>Logan and Lisa teach more informational text craft and structure in language, Cindy focuses more on language structure in language</td>
</tr>
<tr>
<td></td>
<td>Leadership</td>
<td>Teachers given vision, resources and focused plan</td>
<td>Create assessment prep events to increase student motivation</td>
</tr>
</tbody>
</table>
Primary Driver: Student Motivation

Secondary Driver: School Culture

Change Idea: Peer Monitoring

Secondary Driver: Communicating data with students

Change Idea: Mini meetings

Secondary Driver: Celebrating successes

Change Idea: Incentives/rewards

Secondary Driver: Carrying out intervention

Change Idea: Hiring staff

Secondary Driver: Analyzing data

Change Idea: Create/follow calendar

Secondary Driver: Conducting walkthroughs

Change Idea: Identify who/when/how often

Secondary Driver: Professional development

Change Idea: Seek out and schedule training

Primary Driver: Staffing

Secondary Driver: Scheduling/Time

Change Idea: Meet with all staff

Secondary Driver: Absences due to COVID

Change Idea: Zoom sessions

Primary Driver: Carrying out interventions with fidelity

Improve Grades 1–8 student performance and proficiency in reading as measured by the STAR Reading assessment from 33% proficient to 60% proficient by May 2022.
**Narrative/Presentation:** Our PDSA cycle is based on our strategies for improving student achievement in math.

Data was collected and examined to see what areas we should focus on.

Teachers received professional development on best practices and ways to improve teaching practices.

Our goal is to increase student ELA achievement by 5%, by the spring of 2023.

---

**Narrative/Presentation:** Our PDSA cycle is based on our strategies for improving student attendance.

Data was collected and examined to see what areas we should focus on.

Incentive programs will be used to increase student attendance.

An attendance monitor will be monitoring daily attendance of students.

Our goal is to increase student attendance to 95%, by the spring of 2023.
Missouri Ridge Elementary (Williston)

<table>
<thead>
<tr>
<th>PLAN</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1. What are we trying to accomplish?</strong></td>
</tr>
<tr>
<td>• Increase student achievement</td>
</tr>
<tr>
<td>• Support teachers</td>
</tr>
<tr>
<td>• Using the strategist to fill in student learning loss and identify students in the MTSS process</td>
</tr>
</tbody>
</table>

| **2. What has been tried before?** |
| • Targeted in 2016 and increased special education teachers |
| • Added on FT ELL coordinator |
| • Prior MTSS process-student identifying issues |

| **3. What is our current plan?** |
| • Strategist hired FT |
| • Hire another FT strategist |
| • New district MTSS process and protocol |
| • Panorama purchased by district to view entire child (academic, attendance, behavior, SEL) |
| • Implemented WINN (What I Need Know) Groups |
| • I-Ready was purchased by the district to target specific standards gaps and reteach those standards |

| **4. What are we using for our baseline measures?** |
| • Assessments (MAP, NDSA) |
| • District Report Card Assessments |
| • i-Ready Diagnostic and Growth Monitoring |
| • SEL Screener from Panorama |

| **5. How will we collect data?** |
| • PLC’s for Report Card Assessments |
| • Survey Panorama-SEL |
| • MTSS Process from Growth Monitoring, MAP, NDSA |
| • Assessments Data and Reports |

| **6. Who will collect data?** |
| • Teachers |
| • PLC Teams |
| • Instructional Coaches |
| • Strategists |