Continuous Improvement in Education: A Toolkit for Schools and Districts

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Diana Wogan
Researcher, REL Northeast & Islands

Sheila Rodriguez
Researcher, REL Northeast & Islands

Karen Shakman
Researcher, REL Northeast & Islands

Cassandra Townsend
Director of Special Education, Champlain Valley School District
Today’s Agenda

Welcome, Introductions, & Goals
Continuous Improvement in Action
What is Continuous Improvement?
Overview of Toolkit
When and Where to Use Continuous Improvement
Assessing Readiness to Engage in Continuous Improvement
Facilitated Q&A with Practitioner
Wrap-up and Next Steps
Today’s Presenters

Karen Shakman
Researcher
REL Northeast & Islands

Diana Wogan
Researcher
REL Northeast & Islands

Sheila Rodriguez
Researcher
REL Northeast & Islands

Cassandra Townshend
Director of Special Education
Champlain Valley School District
Who Are We?

REL Northeast & Islands is one of 10 Regional Educational Laboratories.

We work in partnership with educators and policymakers to develop/use research that improves academic outcomes for students.

What we do:
- Conduct research studies
- Disseminate research findings to those we serve
- Strategically engage with partners to use findings
- Design and deliver technical assistance focused on the use of data and research
Objectives for Today

• Learn about the toolkit and how it might apply to your work

• Learn about assessing your school’s or district’s readiness to engage in continuous improvement

• Explore some of the tools and resources in the toolkit
Getting to Know Who’s Out There

Poll: What is one question you have about continuous improvement?

Enter in chat box.
What Is Continuous Improvement?
The Model for Improvement

- What problem are we trying to solve?
- What change might we introduce and why?
- How will we know that a change is actually an improvement?
The Continuous Improvement Cycle

**Plan**: Select a change practice to test.

**Do**: Implement the change practice.

**Study**: Examine data to inform improvement.

**Act**: Based on data study, make improvements to the change practice, scale the change practice, or try another.
PDSA in Everyday Life
Continuous Improvement in Action
Reflection #1

• What is the problem the teachers are trying to solve?

• How do they know it is a problem?

• What do they do to address the problem?
Reflection #1

• What is the problem the teachers are trying to solve?
• How do they know it is a problem?
• What do they do to address the problem?
• How do we know the change was an improvement?
Overview of the Toolkit
What’s in the Toolkit?

Part I: Guidance for a Continuous Improvement (CI) leader regarding **steps to take** before embarking on a CI effort.

Part II: Content (readings, tools and templates, and videos) for a **series of meetings** that guide an Improvement Team through the process.

Five short videos that explain CI and guide the team through building a fishbone diagram, a driver diagram, and a data collection plan.

Fillable tools and templates to support the team, including a PDSA planning tool and a run-chart Excel template.
Part I: Preparing for an Improvement Effort

- Assess readiness
- Determine overall focus
- Recruit a team and defining roles and responsibilities
- Plan an improvement calendar

Continuous improvement calendar

Many schools begin continuous improvement cycles in the summer, but it is possible to begin at any time of the year.

SUMMER
- Convene the improvement team
  - Meeting 1: Introduction to continuous improvement
  - Meeting 2: Defining the problem and determining continuous cycles
  - Meeting 3: Establishing goals and developing a change package
  - Meeting 4: Preparing for action

WINTER
- Begin PDSA cycles
  - Meetings 5-8: Examining results and related data

SPRING
- Continue PDSA cycles
  - Meetings 9-12: Examining results and related data

Handout 5: Continuous improvement calendar (Page I-16)
Part II: Improvement Team Meetings

<table>
<thead>
<tr>
<th>Topic</th>
<th>Materials</th>
<th>Time</th>
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</thead>
<tbody>
<tr>
<td>Welcome, review of agenda and goals, introductions, and discussion of pre-meeting reading</td>
<td>Toolkit, including a customized agenda; pre-meeting reading (p. II-3)</td>
<td>15 minutes</td>
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<tr>
<td>Watch and discuss Video 1</td>
<td>Video 1 (<a href="https://go.usa.gov/XXXXX">https://go.usa.gov/XXXXX</a>)</td>
<td>15 minutes</td>
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<tr>
<td>Activity: Read continuous improvement scenarios and discuss guiding questions</td>
<td><em>Handout 7—Continuous improvement scenarios and guiding questions</em> (p. II-9)</td>
<td>20 minutes</td>
</tr>
<tr>
<td>Activity: Discuss the overall focus</td>
<td>Toolkit, <em>Handout 2—Preliminary data inventory worksheet</em> (p. I-8)</td>
<td>25 minutes</td>
</tr>
<tr>
<td>Improvement Team member roles and responsibilities and calendar</td>
<td><em>Handout 4—Improvement Team member roles and responsibilities</em> (p. I-13), <em>Handout 5—Continuous improvement calendar</em> (p. I-16 and <a href="https://go.usa.gov/XXXXX">https://go.usa.gov/XXXXX</a>)</td>
<td>10 minutes</td>
</tr>
<tr>
<td>Wrap up and next steps</td>
<td>Toolkit</td>
<td>5 minutes</td>
</tr>
</tbody>
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For every meeting (1-10):
- Meeting Goals
- Agenda with suggested times
- Pre-meeting reading
- Step-by-step activities
- Videos
- Templates/tools
- Guiding questions
- Wrap up and next steps
Case Example (Page II-5)

The toolkit employs a case example to take teams through every step of the process.
Fishbone Diagram for the Example Case

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

1. Teachers need additional supports to provide effective math instruction
2. Teachers have limited access to tools and models for developing instructional activities
3. Teachers have received limited professional development on math instruction that promotes engagement

Causes

1. Students lack language and listening skills
2. Students don’t see the relevance of math in their lives
3. Students lack confidence in math

Students are not engaged in their learning

- Participation in class activities is not equitable across students

Students lack deep understanding of math concepts

- Students are more focused on procedures than concepts
- Students have difficulty visualizing math concepts
- Some students just look to get the "right answer"
- The curriculum lacks open, authentic tasks
- Math activities are too procedurally focused

Curriculum is not rigorous
Driver Diagram Case Example

This completed driver diagram shows how the change practices (the interventions or specific work practices) are predicted to affect the secondary, and in turn, the primary driver.

1. **Aim**
   - Increase student engagement in math class
   - The percentage of students performing at proficient or above will increase by 10%, and the gap between low-income students and their peers will decrease

2. **Primary Drivers**
   - Increase student use of math discourse
   - Increase the relevance of math to students’ lives

3. **Secondary Drivers**
   - Increase teachers’ capacity to build students’ conceptual understanding in math
   - Provide math professional development for teachers
   - Supplement the math curriculum with additional resources and tools

4. **Change Practices**
   - Teachers use “sentence starters” to prompt math discourse
   - Teachers implement conversation protocol to promote active listening
   - Teachers develop and use examples that are relevant to students’ lives
   - Math specialist provides professional development and support for implementing rich tasks
   - Teachers employ observational rounds and provide feedback
When and Where to Use Continuous Improvement
Preparing to Embark on a Continuous Improvement Effort

• Step 1: Assess the school’s or district’s readiness to engage in continuous improvement.

• Step 2: Determine the overall focus of the continuous improvement effort.

• Step 3: Recruit Improvement Team members.

• Step 4: Identify Improvement Team member roles and responsibilities.

• Step 5: Plan the Improvement Team calendar.
Preparing to Embark on a Continuous Improvement Effort

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Considerations Before Embarking on a Continuous Improvement Effort

- Is there broad agreement on the need to change some practice?
- Are there a team of educators interested in addressing the challenge?
- Is there a culture of collaboration?
- Is leadership in support of addressing this challenge?
- Are there resources to support this effort?
- Is there some data to support the identification of the challenge?
- Are there basic data literacy skills among at least some members of the team?

Handout 1: Checklist for assessing readiness (Page I-5)
Reflection #2

• Consider why you are here today. Are there particular strengths or challenges you face related to readiness?

Write your thoughts in the chat.
Continuous Improvement: Practitioner Perspective
Questions and Answers
Wrap-up and Next Steps
We Listen to You!

Your feedback is essential to our work. Please take our survey to help us improve.
To Contact Today’s Presenters

Diana Wogan: dwogan@edc.org
Sheila Rodriguez: srodriguez@edc.org

ies.ed.gov/ncee/edlabs/regions/northeast
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