

## PDSA: A Road Map to

# Improved Writing Skills

by Janet Jacobsen

### At a Glance . . .

- The plan, do, study, act (PDSA) cycle for continuous improvement is a popular quality tool used throughout Community Consolidated School District 15 in suburban Chicago.
- At Winston Campus Elementary, PDSAs are used in everyday classroom activities and on a building-wide basis to support school improvement plans.
- In 2007, Winston began a two-year PDSA improvement cycle aimed at boosting writing test scores.
- The results were dramatic: Ninety-five percent of sixth grade students met or exceeded state writing standards, up from 59 percent one year earlier.

When the state of Illinois reinstated writing tests into standardized assessments during the 2006-07 school year, just 59 percent of fifth graders at Winston Campus Elementary met or exceeded the state's standards. The school immediately took on the challenge of increasing fifth and sixth graders' test scores by 10 percent and created a plan, do, study, act (PDSA) improvement cycle to serve as its road map.

### About Winston Campus Elementary and Community Consolidated School District 15

The third largest K-8 district in Illinois, District 15 serves more than 12,000 students in seven northwestern Chicago suburbs. The district includes 15 elementary schools, four junior high schools (seventh and eighth grades), one preschool early childhood center, and an alternative public day school. An intensive focus on continuous quality improvement culminated in the district capturing the prestigious Malcolm Baldrige National Quality Award in 2003.

Winston Campus Elementary, located in Palatine, educates approximately 500 students in kindergarten through sixth grade and also includes the adapted instruction for meaningful education (AIME) program for students with mild to moderate mental impairments. The school earned a 2008 Academic Excellence Award designation on the Illinois Honor Roll, a distinction awarded to high-achieving schools in the state.

### Believing in the Power of PDSAs

Winston principal Andy Tieman is a firm believer in the value of PDSAs. During his years as an elementary teacher, Tieman had asked each of his students to create a personal PDSA—some students focused on keeping their desks neat while others directed their efforts toward spelling or vocabulary scores. Tieman's familiarity with quality tools such as the PDSA cycle would therefore play a key role in his efforts to lead improvements in Winston's writing test scores.

During the 2006-07 school year, all fifth graders in the state completed standardized writing assessments as part of the Illinois Standards Achievement Testing (ISAT) system. Only 59 percent of Winston's fifth graders met or exceeded the state standards. So, it was no surprise that during Tieman's first year as principal at Winston he would turn to the data-driven PDSA tool to improve student writing skills. The writing PDSA, launched in the fall of 2007, encompasses just one element of the school's improvement plan for balanced literacy. The four components include:

- Guided reading
- Independent reading
- Writing
- Vocabulary

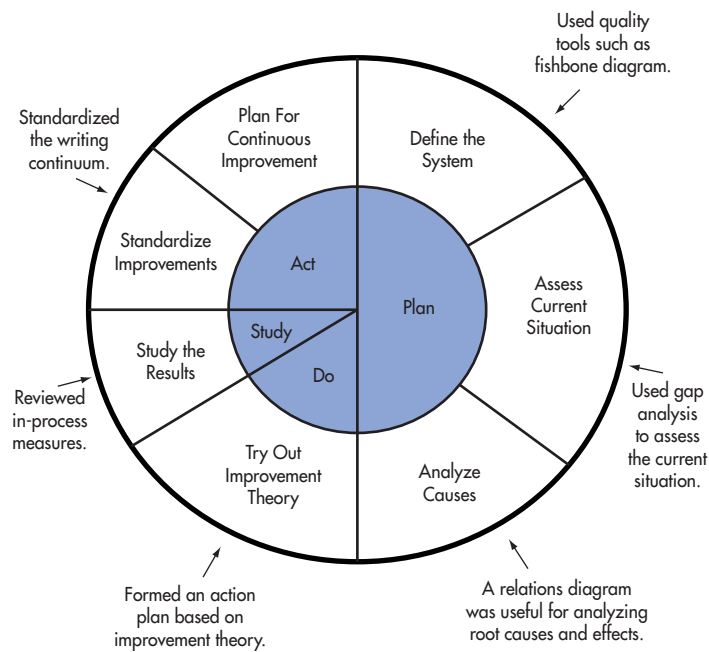
## Plan

The first step in Winston's PDSA, illustrated in Figure 1, focused on a plan for improving writing scores through three actions: defining the system, assessing the current situation, and analyzing the cause(s).

### Defining the System

Figure 2 shows the fishbone diagram the Winston staff created to define the writing system that was in place for each grade level at the elementary school. The diagram helped staff members visualize the current process before focusing on improvements.

**Figure 1—PDSA for improving student writing scores**



## Assessing the Current Situation

Next, Tieman and the teaching staff assessed the current situation by reviewing data on recent writing samples and test scores. A gap analysis, created with data from 2005-08, was used at this juncture.

### Analyzing the Causes

The final step of the “plan” phase involved analyzing the causes for lower than expected writing scores. Here, the staff looked for both root causes and root effects using the relations diagram shown in Figure 3. With the help of this quality tool the improvement team uncovered the following root causes for the learning gaps:

- Additional staff development is needed to prepare teachers to teach writing effectively.
- Grade-level expectations and teaching methods are not aligned.
- More effective teaching materials for writing are needed.
- Teachers interpret grading rubrics differently.

Next, the following root effects were identified:

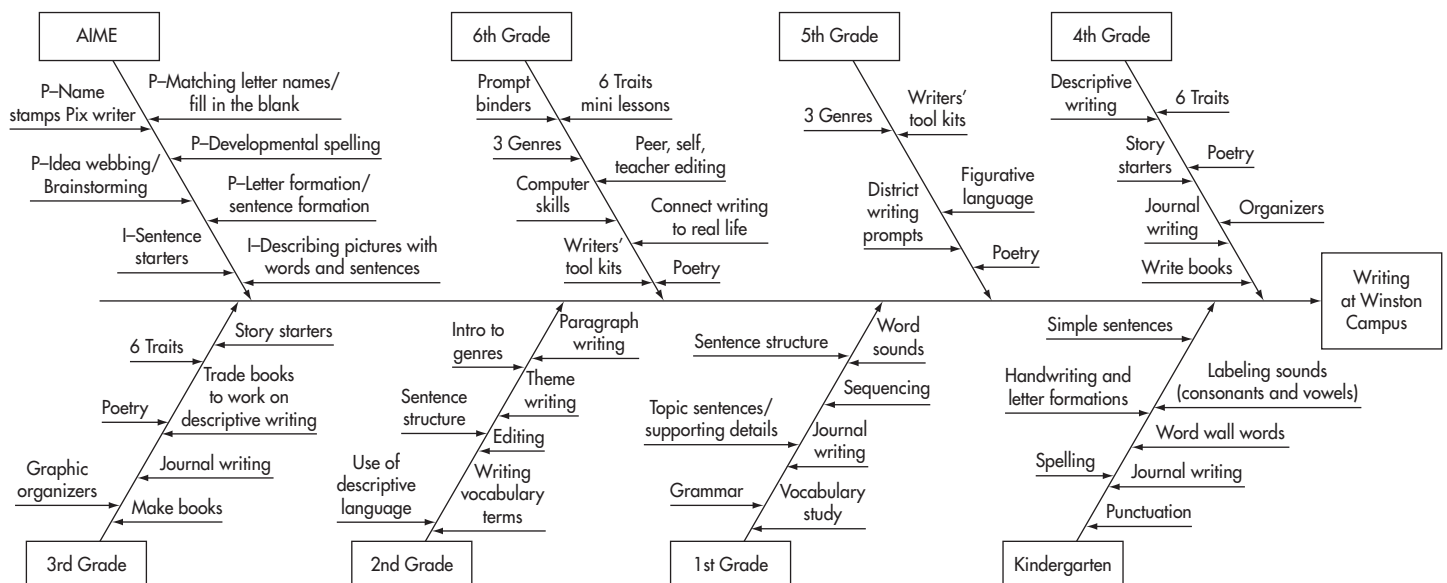
- Students are not meeting or exceeding state standards for writing.
- The achievement gap on writing skills is widening.
- Writing is inconsistently taught and evaluated between grades.

## Do

With the data collected and analyzed during the planning phase of the PDSA cycle, Tieman and his team began focusing on an improvement theory, which stated:

*If we as a school offer meaningful staff development for teaching writing, create a writing continuum that aligns writing expectations from grade level to grade level, supply the best writing materials to support the*

**Figure 2—Fishbone diagram defining the writing system**



state writing standards, and train our teachers on scoring writing samples consistently . . .

*Then our students will meet or exceed state standards on the ISAT writing prompts in grades, 3, 5, and 6; gain confidence with writing; and we will close the achievement gap with writing at Winston Campus Elementary.*

The next step was implementing an action plan linked to the improvement theory. Tieman explains that Winston’s improvement plan included five key strategies:

1. Alignment of writing expectations—Grade level teams defined expectations for entering and exiting each grade level. During this exercise, the staff discovered many gaps in the ways that writing was taught, which ultimately caused some students to miss key elements of writing instruction. The teachers created a continuum of instruction for writing to close these gaps.
2. Staff development—A university professor led staff workshops focusing on six key traits of writing.
3. Daily writing instruction—Staff created plans to incorporate the traits of writing into daily writing instruction in each grade level.
4. Trait crates—Winston introduced Ruth Culham’s Trait Crates™ classroom kits as a supplement to daily writing instruction. The colorful crates include grade-specific picture books with

in-depth lessons to teach the six traits of writing, as well as teaching guides, transparencies, and teaching posters.

5. In-process measures—To monitor progress, students in grades three through six completed writing prompts at key points throughout the school year.

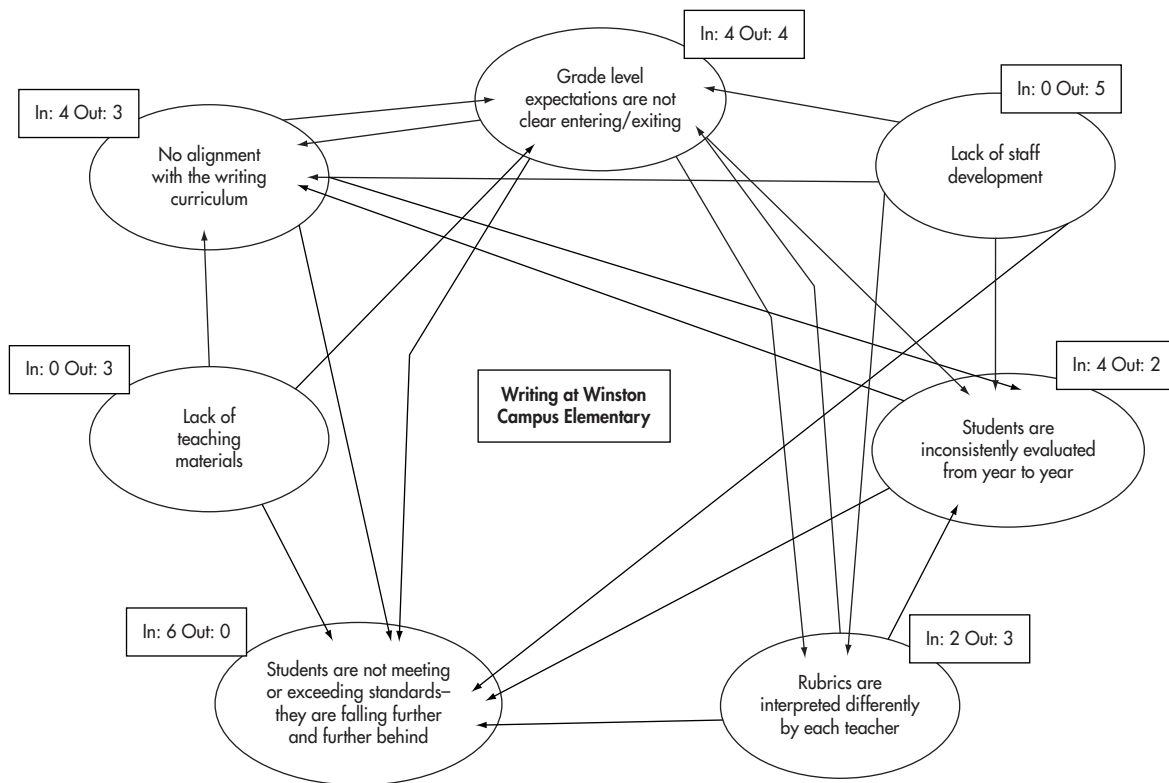
### Study

The in-process measures, mentioned in the fifth strategy of the improvement plan, allowed the Winston staff to keep tabs on students’ writing progress during the school year. Three writing prompts covering expository, persuasive, and narrative genres were given in the fall, winter, and spring. Teachers used several quality tools, including affinity diagrams, lotus diagrams, and student data folders to set goals and track progress with writing prompt results.

In addition to the school-wide testing, students in fifth and sixth grades took the ISAT again in March 2008. Looking at sixth grade scores to measure growth from the previous year, the Winston team was extremely pleased to learn that 95 percent of sixth graders met or exceeded state standards on the 2007-08 test—an impressive 36-percent improvement in just one year. Figure 4 illustrates the writing test improvement at Winston.

Tieman sees a correlation between the improved scores and the PDSA: “I feel the improvement with our writing scores is

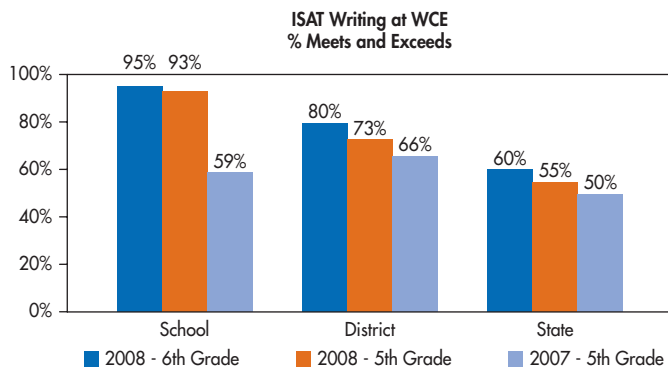
**Figure 3—Relations diagram showing root causes and root effects**



**Root Causes:** Lack of staff development with writing; grade level expectations and teaching methods with writing are not aligned; lack of effective teaching materials for writing; and grading rubrics are interpreted differently by all teachers.

**Root Effects:** Students are not meeting or exceeding state standards with writing; the achievement gap with writing is widening; and writing is inconsistently being taught and evaluated from grade level to grade level.

**Figure 4—Writing test improvement at Winston Campus Elementary**



directly tied to our efforts with the PDSA. We defined our situation, used data to analyze causes, and put an action plan in place to make continuous improvements,” notes Tieman.

### Act

In the final phase of the PDSA, the Winston team focused on standardizing the improvements and planning for continuous improvement. The continuum for writing instruction is now standardized, teachers continue to use state rubrics to score the writing samples, and additional staff development opportunities are provided. Also, during the 2008-09 school year, Winston conducted teacher roundtable sessions to encourage the sharing of teaching methods and activities to support the six writing traits. Winston teachers focused on one trait per month, and all classrooms taught that trait and used ideas from the roundtable discussions or from the Culham materials.

### Looking Ahead

While the Winston staff awaits results for the 2008-09 ISAT tests for third, fifth, and sixth graders, they anticipate achieving similar results as the previous year, based on in-process measures. As for the upcoming school year (2009-10), Winston will focus on another element of its balanced literacy plan. “As we completed the two-year PDSA cycle, our data are telling us that our next area of focus is guided reading and we’ve just started to create a new PDSA for this,” says Tieman.

Again, a university professor will consult with staff members and model classroom lessons. This staff development activity will focus primarily on guided reading as the trend data from ISAT and other standardized testing points in that direction. “With the PDSA as our road map once again, we are excited about making systematic changes to our classroom instruction,” Tieman remarks.

### For More Information

- To learn more about District 15, visit [www.ccsd15.net](http://www.ccsd15.net).
- Additional details about the district’s continuous improvement journey are available from Mary Zarr, assistant superintendent for curriculum, special services, and school improvement. Contact Zarr via e-mail at [zarrm@ccsd15.net](mailto:zarrm@ccsd15.net).
- Read three additional case studies on District 15:
  - “Former Baldrige Recipient Rekindles Its Quality Fire” ([www.asq.org/2009/08/baldrige-national-quality-program/baldrige-recipient-rekindles-quality-fire.pdf](http://www.asq.org/2009/08/baldrige-national-quality-program/baldrige-recipient-rekindles-quality-fire.pdf)).
  - “Quality Club Teaches Today’s Learners to Become Tomorrow’s Leaders” ([www.asq.org/2009/08/quality-tools/quality-club-tomorrows-leaders.pdf](http://www.asq.org/2009/08/quality-tools/quality-club-tomorrows-leaders.pdf)).
  - “Can a Fishbone Diagram Stop a Bully?” ([www.asq.org/2009/09/quality-tools/fishbone-diagram-stop-bully.pdf](http://www.asq.org/2009/09/quality-tools/fishbone-diagram-stop-bully.pdf)).
- Attend the 17<sup>th</sup> National Quality Education Conference (NQEC), October 25-27 in Jacksonville, FL, where district superintendent Dr. Dan Lukich and other key leaders will present a four-hour preconference workshop, “Continuing the Story: The 2003 National Malcolm Baldrige Winning School District: Then and Now.”

### About the Author

**Janet Jacobsen** is a freelance writer specializing in quality and compliance topics. A graduate of Drake University, she resides in Cedar Rapids, IA.