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News

'Continuous improvement' management philosophy is put to work in first grade

If it works for Toyota ...

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By Anya Sostek, Pittsburgh Post-Gazette



Darrell Sapp / Post-Gazette

Tiausa Brown, 6, smiles as first-grade teacher Carly Laurent commends her for getting a perfect 10 on her spelling test at Washington Elementary in Mt. Lebanon.

The sparkly smiley-face stickers and pink crayons in first-grade teacher Carly Laurent's classroom at Mt. Lebanon's Washington Elementary School don't look as if they came from the world of Total Quality Management.

They are being used that way, however, as part of the same "continuous improvement" management model that made Toyota the world's top-selling automobile company and dramatically decreased injury rates at Alcoa.

Only at Washington Elementary, the "workers" are the pint-sized pupils and the end products are better spelling, reading and math scores. And the day-to-day management techniques might sound a little different than those used in the corporate world.

"All right, sweet pea, let's look at your spelling test," Ms. Laurent says to 6-year-old Tiausa Brown, who gets a high-five and an "awesome" for her perfect score of 10 out of 10.

Tiausa then places a smiley sticker to mark her score on a class graph of the test

performance, and, after conferring with a classmate, uses a pink crayon to fill in a bar graph in her personal data binder.

After all of her pupils receive their scores and chart their progress in their binders, Ms. Laurent calls the class together to compare this week's spelling performance (all 8s, 9s and 10s) to the previous week's (some 5s and 6s) and to discuss what worked well (spelling in their heads, practicing in the car) and what could be done differently to improve next time (checking their work, decorating the bathroom with words on Post-it notes).

"They're more in tune with all of their learning," said Ms. Laurent. "They can read what the goals are and they're more focused when they're doing an activity."

In the business world, continuous improvement was popularized in post-World War II Japan and is known in various forms as Total Quality Management, lean manufacturing, Kaizen, the Baldrige model and Six Sigma.

"Continuous improvement, in its simplest terms, is about being better tomorrow than you are today, being better next month than you are this month, being better next year than you are this year," said Jay Marino, chair of the K-12 education committee for the American Society for Quality, which promotes use of continuous improvement technique.

Adopting what works

The basic idea is that organizations and individuals should set goals, follow a plan to reach those goals, examine the results and come up with strategies for what they will do better the next time. Or, as it's written on the wall of Ms. Laurent's classroom, "Plan," "Do," "Study." "Act."

The philosophy spread to education in the 1990s, said Mr. Marino, and in 1998, educational institutions became eligible for the Malcolm Baldrige National Quality Award, which recognizes businesses for excellence in performance improvement.

"What we try to do in an educational setting is apply the theory from the boardroom, the central office, down to the individual student, where even kindergartners are saying, 'Can I be better tomorrow than I am today?'" said Mr. Marino, who is also an associate superintendent in Cedar Rapids, Iowa.

After the continuous improvement plan was implemented in Cedar Rapids in 2004, according to Mr. Marino, fifth-graders increased their math proficiency by 6.9 percent by the time they reached eighth grade. Reading groups increased 9.6 percent over the same period.

In Mt. Lebanon, the school district has adopted corporate mainstays such as mission statements and balanced scorecards. As of now, it's the teachers' choice whether to use continuous improvement techniques in the classroom.

First-grade teacher Jacqueline Zapko is one of the district's strongest proponents of the continuous improvement process. In her first job out of college, she worked in a school district in Ashtabula, Ohio, that had not made adequate yearly progress under the No Child Left Behind Act and had decided to adopt the Baldrige model.

Ms. Zapko was sent for intensive training even before she met her first class and became convinced of the power of continuous improvement. Even though the Mt. Lebanon district couldn't be more different economically than Ashtabula, the techniques work equally well, she said.

"You're having an open dialogue with the kids about their learning," she said. "You're asking, 'What's going to work for you, so you can learn?'"

When 6-year-old Joshua Dougherty sat down with Ms. Zapko for his individual conference on his spelling test, he immediately looked at the class bar graph for the day and said, concerned, "There's only one 10 out of 10 so far."

Joshua then found out that for his perfect score, he could add a second sticker to the graph, and Ms. Zapko reviewed his strategy with him.

"You said practicing in your head was something you were going to do this time. Did you do it?"

"Yes," said Joshua.

"Did it help?"

"Yes."

She then asked him to write that strategy on the "Plus/Delta" chart in his data binder, which tracks what is working well for each goal and what could be changed.

While most of the pupils responded well to marking their scores on the class graph and coloring in their individual data binders, one child did start to cry after discovering that she was the only one not to score a perfect six out of six on her "sight words" reading test.

To Ms. Zapko, the extent to which pupils care about their performance is a sign of the power of continuous improvement as a motivating tool.

"To me, I would rather have that because they're invested in it," she said. "Guaranteed, she'll have all of them right next week."

Applying business techniques to the classroom is nothing new, said Larry Cuban, a professor emeritus of education at Stanford University, but too often their main function is not to transform education, but to sound impressive to parents and community members.

"Programs like the Baldrige are cosmetic," he said. "It's like Botox to wrinkles. It may work, but it's really the teacher and the kids that's most important."

For Kelly Barsotti, however, who has taught in Mt. Lebanon for nine years and used the continuous improvement techniques in her second grade class for two years, there's a definite benefit.

"It makes them more aware of their part in the process," she said, after conducting an

exercise in which her pupils expertly analyzed a scatterplot of their reading test scores.

"For the kids, they are really critically thinking about themselves as learners. If we can get them to do this now, just imagine what they'll be able to do in the future."

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