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Reflecting on Work Improves Job Performance

New research by Francesca Gino, Gary Pisano, and colleagues shows that taking time to reflect on our work improves job performance in the long run.

by Carmen Nobel

Many of us are familiar with the gentle punishment known as "time-out," in which misbehaving children must sit quietly for a few minutes, calm down, and reflect on their actions.

New research suggests that grown-ups ought to take routine time-outs of their own, not as a punishment, but in order to improve their job performance.

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In the working paper Learning by Thinking: How Reflection Aids Performance, the authors show how reflecting on what we've done teaches us to do it more effectively the next time around.

"Now more than ever we seem to be living lives where we're busy and overworked, and our research shows that if we'd take some time out for reflection, we might be better off," says Harvard Business School Professor Francesca Gino , who cowrote the paper with Gary Pisano, the Harry E. Figgie Professor of Business Administration at HBS; Giada Di Stefano, an assistant professor at HEC Paris; and Bradley Staats, an associate professor at the University of North Carolina's Kenan-Flagler Business School.

The research team conducted a series of three studies based on the dual-process theory of thought, which maintains that people think and learn using two distinct types of processes. Type 1 processes are heuristic—automatically learning by doing, such that the more people do something, the better they know how to do it. Type 2 processes, on the other hand, are consciously reflective, and are often associated with decision making.

Essentially, the researchers hypothesized that learning by doing would be more effective if deliberately coupled with learning by thinking. They also hypothesized that sharing information with others would improve the learning process.

REFLECTION, SHARING, AND SELF-EFFICACY

For the first study, the team recruited 202 adults for an online experiment in which they completed a series of brain teasers based on a "sum to ten" game. A round of problem solving included five puzzles, and participants earned a dollar for each puzzle they solved in 20 seconds or less.

After recording the results of the first problem-solving round, the researchers divided participants randomly into one of three conditions: control, reflection, and sharing.

In the control condition, participants simply completed another round of brain teasers.

In the reflection condition, participants took a few minutes to reflect on their first round of brain teasers, writing detailed notes about particular strategies they employed. Then they, too, completed a second round of puzzles.

In the sharing condition, participants received the same instructions as those in the reflection group, but with an

additional message informing them that their notes would be shared with future participants.

Results showed that the reflection and sharing group performed an average of 18 percent better on the second round of brain teasers than the control group. However, there was no significant performance difference between the reflection and the sharing group. "In this case sharing on top of reflection doesn't seem to have a beneficial effect," Gino says. "But my sense was that if the sharing involved participants actually talking to each other, an effect might exist."

Next, the researchers recruited 178 university students to participate in the same experiment as the first study, but with two key differences: One, they were not paid based on their performance; rather, they all received a flat fee. Two, before starting the second round of brain teasers, they were asked to indicate the extent to which they felt "capable, competent, able to make good judgments, and able to solve difficult problems if they tried hard enough."

As in the first study, those in the sharing and reflection conditions performed better than those in the control group. Those who had reflected on their problem solving reportedly felt more competent and effective than those in the control

group.

"When we stop, reflect, and think about learning, we feel a greater sense of self-efficacy," Gino says. "We're more motivated and we perform better afterward."

A FIELD EXPERIMENT

The final study tested the hypotheses in the real-world setting of Wipro, a business-process outsourcing company based in Bangalore, India. The experiment was conducted at a tech support call center.

The researchers studied several groups of employees in their initial weeks of training for a particular customer account. As with the previous experiments, each group was assigned to one of three conditions: control, reflection, and sharing. Each group went through the same technical training, with a couple of key differences.

In the reflection group, on the sixth through the 16th days of training, workers spent the last 15 minutes of each day writing and reflecting on the lessons they had learned that day. Participants in the sharing group did the same, but spent an additional five minutes explaining their notes to a fellow trainee. Those in the control condition just kept working at the end of the day, but did not receive additional training.

Over the course of one month, workers in both the reflection and sharing condition performed significantly better than those in the control group. On average, the reflection group increased its performance on the final training test by 22.8 percent than did the control group. The sharing group performed 25 percent better on the test than the control group, about the same increase as the reflection group.

This was in spite of the fact that the control group had been working 15 minutes longer per day than the other groups, who had spent that time reflecting and sharing instead.

Gino hopes that the research will provide food for thought to overworked managers and employees alike.

"I don't see a lot of organizations that actually encourage employees to reflect—or give them time to do it," Gino says. "When we fall behind even though we're working hard, our response is often just to work harder. But in terms of working smarter, our research suggests that we should take time for reflection."

About the author

Carmen Nobel is senior editor of *HBS Working Knowledge*.