THE HUFFINGTON POST

Edition: U.S.

FRONT PAGE | POLITICS | BUSINESS | ENTERTAINMENT | TECH | MEDIA | WORLDPOST | HEALTHY LIVING | COMEDY | HUFFPOST LIVE | ALL SECTIONS

E D U C A T I O N

Posted on 11/09/2012

The Keystone Habit That Will Reignite American Education

by Robert Sun

Charles Duhigg's book The Power of Habit has spurred discussion in many quarters about one of the book's central observations—that personal, organizational and societal change can be brought about by altering "keystone habits."

A keystone habit is one that, once changed, ripples through a system changing unproductive habits and driving new and/or improved habits in related areas. As Duhigg notes in one prominent example, when Paul O'Neill was hired as the CEO of Alcoa in 1987 he quickly announced he would focus on worker safety as his number one priority. Investors and Wall Street analysts were shocked; the company was struggling and needed a plan that would reinvigorate its product quality as well as its balance sheet. Why was this new corporate leader obsessing about safety?

But just one year after adopting O'Neill's new strategy, Alcoa's profits hit a record high. Upon his retirement in 2000, through years of preaching worker safety with a singleness of purpose that overwhelmed supporters and critics alike, Alcoa's yearly net income had increased five times and its market capitalization had grown by $27 billion.

Why did O'Neill's plan work? Because he zeroed in on one thing that everyone could buy into and agree was important. Safety was non-controversial, yet intimately connected to the company's performance. Who could argue with better worker safety? Not unions. Not management. Not shareholders. Not the media, social activists, industry watchdogs, government—and certainly not the workers themselves or their families. By making safety a number one priority, O'Neill started a common dialogue among engineers, managers, labor leaders, and front-line employees who had to discover new ways to do things better. The rest—quality and profits—naturally folowed.

Keystone habits exist in any complex system. If they are found and addressed positively, they will reform virtually anyone, or any thing, that is underperforming.

Robert Sun is president and CEO of Suntex International, and creator of First In Math, an online program designed for self-paced learning in mathematics.

Clearly, K-12 schools in America are in need of help. Some would argue that it's best to attack the problem by focusing on higher test scores, more staff, or alternative forms of funding. These strategies are well-intentioned but flawed. If Alcoa had attempted a turnaround by focusing purely on profitability, rather than finding the single transformative habit that would generate changed attitudes and increased performance throughout the company, it would not have achieved its goals. O'Neill's predecessors had taken this very path and gotten nowhere.

I believe we need to focus on a keystone habit in our schools that is the equivalent of worker safety. It is an idea that no one can argue with, has universal support, diverse value, and lifelong applicability: math achievement.

It may surprise some, but mathematics is a wonderful vehicle to get kids invested in a single keystone habit of achievement that will ignite their natural desire and passion for intellectual success. It's the ultimate building-block subject; in math, each new concept stands on the shoulders of the one before. Without proficiency at each stage, students cannot progress and reach the level of achievement required as an adult.

Proficiency in math is a great confidence builder. It tells kids they can "make it" in school. If students become convinced they can succeed in math, chances are they will find success

in other academic avenues.

Carl and Louis Stokes Central Academy, a pre-kindergarten to eighth grade school in the Cleveland Metropolitan School District, is a perfect example of the transformative power of practicing math as a keystone habit. At the end of the 2009 academic year, only 17.1 percent of the fifth graders at Stokes were proficient in reading by Ohio state proficiency standards. Even more frightening, however, were the math results; just over 7 percent of fifth graders passed that section—a rate outdone only by the 4.8 percent of fourth graders who met the standard.

Math is one of the most important subjects to learn, but can be difficult to teach. It became clear that the school needed to radically rethink how kids acquired math skills. "We found that just knowing how to practice is important," said Fatima Wright, named principal of Stokes Academy the following fall. "Practice is hard work—and most of all, it's not only the right answer but also the process that makes you a mathematician."

A primary agent for change became the school's computer labs where kids were tasked with practicing their math problems. In the past, upon entering the rooms, kids would argue about who sat where, about bringing in food, and about what websites they could or could not visit.

Stokes Academy introduced a new online interactive program in the labs that provided a game environment for math practice. Each student was awarded a virtual sticker for correctly solving three math problems, and results were posted. Healthy competition started becoming the norm, as students worked to outdo their classmates, other classroom "teams" and even other schools throughout Cleveland. Because students had a "scoreboard" that showed what they needed to do to win, they became profoundly engaged and took ownership of being "in the game."

"Competition became a work ethic," Principal Wright states. "Students would come up to me and say, 'Ms. Wright, I have 2,499 stickers,' or, 'I have 2,510.' We put a bulletin board in the hallway last year with names of high achievers on it and ribbons for the winners. The students loved that."

Soon students wanted to compete during their lunch periods after eating. The program was installed in classrooms and used as a reward if children finished their work early. Interest and confidence soared. Now students looked at the computer lab as a "sacred place," with valuable resources that helped them achieve. In just eight months, students at Stokes correctly solved more than 2 million math problems using the online program.

In October 2012, state test scores for the 2011-12 academic year were released. In the fifth grade, the percentage of students at Stokes Academy who met the minimum standard for math nearly tripled from the 2009 result. In the fourth grade, where three years before only 4.8 percent of students met the standard, the number jumped to 26.5 percent.

Just as remarkable were the other subjects that followed this improvement. Reading scores for fourth graders improved from 23.8 percent to 42.0 percent, and fifth grade reading scores improved from 17.1 percent to 42.9 percent. Even science scores improved for fifth graders, from 9.8 percent in 2009 to 45.9 percent in 2012.

While Principal Wright acknowledges her school has a long way to go, and credits her teachers, staff, family, community, school system and the state itself for their support, she is clear in her assertion that practice, in an encouraging and fun environment, was critical to her school's new vision—and student achievement.

"Our math program turned kids on," she emphasized. "It gave them excitement. Learning is competition sometimes, and when a child says to me 'Ms. Wright, I DID it,' that's like gold."

Math is central to education. It's essential to life itself. But even more, in terms of the challenges facing American schools, it is a keystone academic skill. Help children to excel in math and their perception of school can be improved. What's more, their view of themselves, their abilities, and their very potential to learn, can all be transformed.