

Perseverance key to children's intellectual growth, Stanford scholar says

Stanford psychologist Carol Dweck says that children are more motivated when they are told their intelligence or talents can grow and expand.

BY CLIFTON B. PARKER

Passion, dedication and persistence count the most when children are cultivating their intelligence and talents, a Stanford scholar says.

Carol Dweck, a Stanford psychology professor, said that when children are praised for the *process* they engage in – hard work, strategies, focus, persistence – they become better learners. The Stanford News Service recently interviewed Dweck on this topic:

What types of praise works with children?

Our research shows that children who are praised for their intelligence or talents are *not* more motivated learners. In fact, when children are praised for their intelligence or talents, they shy away from challenges and are less resilient in the face of difficulty.

However, when children are praised for the *process* they engage in – their hard work, their strategies, their focus, their persistence – then they remain motivated learners. They're more likely to take on challenges and thrive in the face of difficulty. In one study, we evaluated mothers' praise to their toddlers and then checked in with the children five years later.

The more the mothers gave their children "process praise" when they were toddlers, the more the children had a growth mindset (see below) and a desire for challenges five years later when they were in second grade – and the better they were doing in math and reading when they were in fourth grade.

Research with my former Stanford doctoral student, Allison Master, suggests that *too much* praise can be a bad thing. In this research, students who were given constant praise for their work became highly dependent on the praise, and many lost their motivation when the praise stopped.

In short, praise can be powerful, but it can be a motivator or a de-motivator.

What is the difference between fixed and growth mindsets?

When children are in a fixed mindset, they believe that their intelligence and talents are just fixed traits. They have a certain amount and that's that. However, when they're in a growth mindset, they believe that their intelligence or talents can be developed – through hard work, good strategies and help from others. They don't necessarily believe that everyone's equally smart or talented, but they believe that everyone can grow.

In our work, we find that a growth mindset promotes better motivation and performance, especially when

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Stanford psychology Professor Carol Dweck finds that the right kind and amount of praise motivate children to persevere, but the wrong kind or amount of praise can backfire.

things are difficult, for example, when students are facing difficult school transitions. When kids (or adults) are in a fixed mindset, difficulty makes them feel inadequate – their fixed ability feels deficient – and their confidence becomes shaky. But when they are in a growth mindset, difficulty is a natural part of learning, so they are more likely to take it in stride and find new strategies that work better. This is true about students in the classroom, athletes on the playing field, or people in the workplace.

The important thing to keep in mind is that mindsets can be changed. A growth mindset can be taught and, when it is, people can become more motivated, more resilient and more successful.

What is "grit" and why is it important for children?

Grit is perseverance, or "stick-to-it-iveness." All difficult, long-term achievements require it, and research by Angela Duckworth and her colleagues at the University of Pennsylvania show that a growth mindset fosters it. Grit is important for children and adults alike because if you are taking on challenges, setbacks are inevitable. In one study, with psychologist Heidi Grant, we looked at pre-med students in their very difficult organic chemistry course. Many of them got disappointing grades on the first exam or two, but how they reacted to those grades made a big difference. Some students doubted their abilities and lost heart, but others rolled up their sleeves and dug in. They met with the professor or teaching assistants, they went to review sessions, they joined study groups, and they found older students who had done well in the course to mentor them. Even though the two types of students didn't differ in their initial preparation or ability, those who showed grit earned significantly higher final grades.

Should leaders praise "failure" as well? Why?

Yes and no. On the "yes" side, some failures are good, clean failures. Great effort was expended, good strategies were used, wise decisions were made, and reasonable risks were taken, but the results were disappointing. In cases where failure is analyzed and learned from, leaders should bestow praise. In fact, one Silicon Valley foundation gives a "failure of the year" award to employees who have learned the most from their failure, in ways that will empower the organization going forward. In our study of Fortune 500 corporations, conducted with psychologist Mary Murphy, we found that employees in growth mindset organizations believed that if they took a valid risk and failed, the company would have their backs. Not surprisingly, employees felt freer to be creative and innovative.

On the "no" side, avoidable failures that result from poor work habits, foreseeable problems or poor teamwork are not in themselves praiseworthy, although they may provide opportunities for feedback or coaching.

Some people attribute the success of Silicon Valley to an openness to failure, as reflected in the unofficial motto: Fail early, fail often, in order to succeed sooner.

Is talent innate or learned, or both?

It's probably both, but clearly any existing talent is fed by passion and dedication. The landmark work of Swedish psychologist Anders Ericsson has demonstrated this nicely. In his view, it takes 10,000 hours of practice to become an expert in an area – but it's not just fiddling around in the area. It takes *deliberate practice*, which involves focusing on the things you don't do well yet and expanding on the things you already do well. It involves continually doing hard things and sticking to them.

For me, the important message is that you never know how good you can be at something until you approach it with passion, dedication and persistence.

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