

The power of productive struggle

Why effort matters more for learning than instant answers

Tips for Parents



Did You Know?

Persisting through challenges builds real learning. This is called “productive struggle.” Learning happens in the effort (the confusion, revision, and mistakes), not the quick completion of a task.

Productive struggle helps kids grow. Every time a student makes a mistake, their brain develops a new connection that helps them learn. Kids who can persevere through hard problems show higher achievement, better mental health, and greater motivation over time.*

AI often removes the struggle. A lot of AI is designed to remove friction for users and deliver fast, polished answers. But friction is necessary for learning.

*Mathematical Mindsets, by Jo Boaler, 2016



What to Notice

Your kids' comfort with making mistakes. If your kids are afraid to be wrong or get overly upset when they make a mistake, they may need help seeing the benefits of struggle for learning.

Whether AI is replacing your kids' effort. If your kids turn to AI the moment they feel stuck instead of asking questions, making educated guesses, and trying again, they are likely skipping key learning moments.

When AI is helping your kids put in more effort. Sometimes, when a struggle is demotivating or discouraging instead of productive, AI can help. Look for AI that is embedded in digital textbooks, worksheets, or other learning experiences that can help students access difficult material and stretch themselves. This can be especially helpful for neurodivergent students, including those with learning differences, or English-language learners.

What you can do: Conversations to support productive struggle

With your kids:

We recommend these activities for kids ages 10-14. But you know your kid best! If these are relevant to you, use them!

- Ask your kid:** Why can making mistakes be a good thing?
- Conversation starter:** If AI can always give you the answer quickly, what do you think happens to your brain when it doesn't get to struggle and figure things out?
- Remember the “bicycle rule” of learning:** When kids learn to ride a bicycle, parents encourage them to keep pedaling when they wobble. Otherwise, they would never learn to ride on their own (and never believe they can). The same is true for schoolwork. When parents see their kids struggling and jump in to help too soon,

they undermine their kids' ability to learn and grow. Of course, if kids fall down, parents have an important role in helping pick them back up.**

- A useful saying:** Every mistake is a brain-building moment.

**The Disengaged Teen by Jenny Anderson and Rebecca Winthrop

In your school or community:

- Encourage your kids' school to host an “untalented” show where in a short timeframe, students and staff all learn to do something they have never done before. When people perform their newly learned skill, everyone will struggle—that's the point. Celebrating productive struggle can help students embrace making mistakes and persevering.



Find more in our Parent Tip Sheet

Library! For more detailed information, including data sources, check out the full report: *A new direction for students in an AI world: Prosper, Prepare, Protect.*