“The Strive of It”

Kathleen Cushman

What conditions inspire teens to practice toward perfection?

In a high school on the west side of Chicago, a 9th grade boy named Joshua is describing the thing he does best in life. I am in Joshua's classroom, and 28 students are sitting in a circle with me. "I'm real good at architecture," Joshua says matter-of-factly.

I am startled, even skeptical. Architecture in 9th grade? Joshua goes on. His interest started, he says, when he was 11 as he watched his uncle, a building contractor, draw up plans on a computer.

> I was, like, "Can I do it?" Once I tried it, I liked it. I can draw the layout of a building, make electrical wires in the layout, stuff like that. It was hard learning how to use the software, because it was something I'd never used before. It took me a couple months—it was real frustrating. I remember trying to find out how to make a wall longer, and my uncle wasn't there to help me. I had to go to "Help" to read how to do it. I don't like reading, but I was determined to learn how to use this software.

All of us in the room believe him now, because Joshua is talking about something most of us know well: trying to master something hard. We recognize his frustration as he goes after something just beyond his reach. We hear how his resolve and confidence increase as he pushes past obstacles. And when Joshua tells us the result, we hear his pride. Last summer, one of his neighbors was putting up a small strip mall. The neighbor knew Joshua had expertise in this area, so he asked Joshua to help draw up the plans.

The Practice Project

What does it take, I asked the students listening to Joshua that day, to get really good at something? It's a simple question that matters equally to youth and adults, rich and poor, professional, artist, and tradesperson—and its answer could transform schools and communities. To learn more, I brought together the perspectives of

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young people and cognitive researchers in the Practice Project, a yearlong inquiry sponsored by the nonprofit What Kids Can Do.

Exciting evidence has emerged in recent decades showing that opportunity and practice have far more influence on performance than does innate talent. The people we call experts have typically spent 10,000 hours in deliberate practice getting to that point—the equivalent of 10 years of practicing three hours a day, six days a week (Eriksson, 1996).

To understand what these findings meant for everyday teaching and learning, I started asking adolescents themselves. Reaching out to schools and youth organizations, I looked not for prodigies, but for 160 ordinary teenagers willing to talk with me about their lives and learning. They came from diverse backgrounds around the United States, ranging from cities to rural communities. Together, we explored how young people acquire the knowledge, skills, and habits that help them rise to mastery in a field.

To my surprise, every one of these youth could name something they were already good at. Many of them—not just the unusually talented—were even growing expert at it. The examples kept coming: music, dance, drawing, drama, chess, video games, soccer, building robots, writing poems, skateboarding, cooking. So much sustained work in the pursuit of mastery—and so much of it happening outside school!

In days of discussion, we picked apart how the teenagers got started at these activities, why they kept going, and what setbacks and satisfactions they experienced as they put in the necessary practice. We discovered a great deal about why young people engage deeply in work that challenges them. And as we analyzed their experiences, the kids and I also began to think differently about what goes on in schools. Could what these young people already understood about practice also apply to their academic learning? Could teachers build on kids' strengths and affinities, coaching them in the habits of experts?

Getting Started, Keeping Going

These teenagers' stories brought into vivid relief research on how expertise develops. Few of them started their chosen activity because they had "natural talent." Largely, they gravitated to something because it looked like fun, because they wanted to be with others who were doing it, and because someone gave them a chance and encouraged them.

Joey, a nationally ranked archer at age 16, first picked up a bow and arrow at 6, because he wanted to "hang out with my dad in the backyard and shoot bales." Ninoshka learned to knit from her grandmother, who "would not be mad at me, no matter what came out wrong, because she was trying to make me better at it." Kellie tried double-dutch jump rope only when her big sister counted her down to the first scary move.

Kids have to want something before they risk trying it, said Ariel, a young skateboarder:

> If something's very fun-looking to you, you just get right into it. That inspiration from watching other people do new things, it gives you confidence.

Not far into their learning, all those I interviewed faced significant frustration. What happened next made a crucial difference as they realized that to succeed, they had to persist. As Darrius, a student bent on becoming an artist, said,

> It's not like one day you can just get up and say, "I'm going to do something." You got to practice at it. You might be good at it when you first start off, but you still got to practice at it so you can get better, because no one's perfect. Like me: I can draw real good. But certain things that I want to learn how to do in drawing, I can't do right now. So I just keep working at it.

When they hit discouraging points, most students said they only continued if they had a strong relationship with someone who supported them through the rough spots. As Janiy, who studied piano, observed,

> The people who sit next to you have a big part in how you get better. Without [someone encouraging you] you can start getting lazy, and you may want to give up if you don't get it right the first time. [If] I give up on the inside, she tells me, "[Try] again. Come on."

In school, too, these youth persisted with challenging material only when their practice was supported. Erika described one teacher who made her feel her tentative ideas were valid:

> I was afraid of sounding stupid. But she would never let you just sit and observe. She always wanted you in the conversation. She would make you talk, but . . . in a really encouraging way, like, "Hey Erika, what do you think about this?" And if I said a quick answer, "Can you elaborate on that?"

Through their outside activities, these teenagers had gained a healthy respect for the base of knowledge they needed before they could do something well. They had experience taking their practice step by step, continuing to reach for the next thing they could realistically manage. As Iona said, "When people are only faced with their failures, they tend to want to give up."

The students were describing, we realized, what cognitive researchers like K. Anders Eriksson call *deliberate practice*. Their learning tasks were set at a challenge level just right for them. They repeated a task in a focused, attentive way, at intervals that helped them recall the task's key elements. All along, they received and adjusted to feedback. And when they kept at it, they were rewarded by what Mihaly Csikszentmihalyi (1990) calls *flow*: the energized, full involvement of going after a challenge within their reach. As Aaron, a basketball player, described it:

> Running down the court, it's like a lion hunting for its prey. There's nothing else on its mind but that prey. And that's what makes it so beautiful, just the strive of it.

Learning from Experts

Watching accomplished people do something well often made these teenagers want to practice even more. Talking to experts directly was even better. "If I meet a musician I look up to, everything he says is like it was bolded out," said Mike. So I sent students out to interview people from their communities whom the students considered masters in their fields— plumbers, farmers, church organists, psychologists, engineers, and so on.

The kids saw many similarities to their own learning journeys. Every expert's story started with a spark of interest that somebody noticed and fanned. All had the opportunity to explore that interest further, with someone nearby to encourage and critique them. Small successes along the way rewarded hours of practice—and with each challenge met, the experts wanted to go further.

Whether the person interviewed was a surgeon, a tattoo artist, or a detective, each of these experts had developed certain habits along the way (see "The Habits of Experts"). Some were ways of thinking, and others were ways of approaching work. The students and I made a list and returned to it often, checking whether students were developing these habits.

We also questioned what drove these experts through their years of practice— competition or collaboration, public performance or private satisfaction? In all the different answers students gathered, they recognized the quality of flow. Energized by that discovery, the kids explored what brought that same feeling into schoolwork.

Taking Practice to School

Nothing compared to "the strive of it," these young people agreed. Yet they felt this sense of flow most fully outside the classroom. Was there something teachers could do to transfer the excitement of learning from one realm to the other? The kids I interviewed did not suggest making direct links between their interests and school subjects. Instead, they reminded teachers of the meaning and value they found in commitments outside school and asked teachers to look for such meaning in school subjects, too.

Aaron failed science two years in a row at his Long Beach high school before a teacher helped him make this kind of connection:

> I never understood why we have a moon, or why we orbit around the sun. And now, my teacher really breaks down why certain things happen. We have a moon because there was a large asteroid that ran into earth and broke off

> and orbited around the earth. I love that type of science. It makes me want to learn more and more about it, to understand the concept.

Some teachers, Nick said, brought boring material to life, connecting it to a story, conflict, or question that gave it more meaning:

> Any field has something interesting about it, so tell us! You can start by saying, "Look how interesting this is," and ask us to think about "Why is this? Where does this come from?"

Their best schoolwork, these students said, got them to practice the habits we had seen experts using. Although these activities focused on deep questions and concepts, teachers also adapted them to fit each learner's needs. Like good coaches, they tailored homework to what individual students needed to practice and followed up when kids had trouble.

To a striking degree, the successful curriculums kids described involved interdisciplinary projects that had students work in teams toward an outcome that mattered to them. Because they valued the project's goal, they went after the knowledge and skills required to reach it, putting what they were learning into use along the way. When they ran into trouble, a good teacher gave them encouragement and help. As they engaged in the practice necessary to succeed, very different kinds of students began to act like members of an expert team.

For example, on a class trip to Washington, D.C., student teams arranged interviews with embassies and nongovernmental organizations about one of 10 crucial world issues and then held a symposium to share their learning after they returned. In another project, an economics teacher challenged students to analyze their city's traffic congestion, research ideas for improvement, and present their proposals to the local transportation authority.

The motivating assignments students mentioned shared these characteristics:

- They started with a question, problem, or challenge that required extending the understanding of the group.
- Team members not only had individual parts to play, but also traded tasks as they worked toward a common goal. They cooperated to fill in gaps in their knowledge and to build new competence.
- As conditions shifted during the project, participants adapted to changes and made new discoveries.
- The shared challenge forged bonds within the group and created deeper investment in the work itself.
- A culminating product, performance, or presentation provided recognition and the opportunity to evaluate both the process and the outcome of the project.
- Most interesting, students who worked on such projects reported a level of absorbed involvement that matched their experiences of flow outside school.

The Practice Project yielded many insights about how the right conditions can motivate youth to practice until they reach mastery. We learned that many kids are already building habits that experts use. On the basketball court, they are honing their ability to look ahead, adapt to new information, and contribute to an interdependent system. Ripping out stitches in a knitted scarf, they are working toward the precision and persistence that make a result just right. As they grow to be experts, they connect new information with what they already know, predict what might happen if something changes, and communicate powerfully.

If educators were to recognize such practice as key to all learning, couldn't we coach students' developing habits in equally compelling ways at school? Ten thousand hours roughly corresponds to the in-class time spent in four years of high school and four years of college. What are we asking our youth to practice in that precious time?

The Habits of Experts

From fabric art to medicine, experts practice common habits:

- Ask good questions.
- Break problems into parts.
- Look for patterns.
- Rely on evidence.
- Consider other perspectives.
- Follow hunches.
- Use familiar ideas in new ways.
- Collaborate with others.
- Welcome critique.
- Revise repeatedly.
- Persist.
- Seek new challenges.
- Know yourself.

References

Eriksson, K. A. (Ed.). (1990). *The road to expert performance: Empirical evidence from the arts and sciences, sports, and games*. Mahwah, NJ: Erlbaum.

Csikszentmihalyi, M. (1990). *Flow: The psychology of optimal experience*. New York: Harper and Row.

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