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The Significance of Grit: A Conversation with Angela Lee Duckworth

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People who can set long-term goals and stick to them have a leg up on success in school and life.

For the last 11 years, Angela Lee Duckworth of the University of Pennsylvania has been conducting groundbreaking studies on grit—the quality that enables individuals to work hard and stick to their long-term passions and goals. In this interview with Educational Leadership, Duckworth describes what her research has shown about the relationship between grit and achievement, and she reflects on the importance of helping students develop grit and other noncognitive traits.

The theme of this issue, as you know, is "Resilience and Learning." How are grit and resilience related? Is there a difference between the two?

The word *resilience* is used differently by different people. And to add to the confusion, the ways people use it often have a lot of overlap. To give you an example, Martin Seligman, my advisor and now my colleague here at Penn, has a program called the "Penn Resiliency Program." It's all about one specific definition of resilience, which is optimism—appraising situations without distorting them, thinking about changes that are possible to make in your life. But I've heard other people use *resilience* to mean bouncing back from adversity, cognitive or otherwise. And some people use *resilient* specifically to refer to kids who come from at-risk environments who thrive nevertheless.

What all those definitions of resilience have in common is the idea of a positive response to failure or adversity. Grit is related because part of what it means to be gritty is to be resilient in the face of failure or adversity. But that's not the only trait you need to be gritty.

In the scale that we developed in research studies to [measure grit](#), only half of the questions are about responding resiliently to situations of failure and adversity or being a hard worker. The other half of the questionnaire is about having consistent interests—focused passions—over a long time. That doesn't have anything to do with failure and adversity. It means that you choose to do a particular thing in life and choose to give up a lot of other things in order to do it. And you stick with those interests and goals over the long term.

So grit is not just having resilience in the face of failure, but also having deep commitments that you remain loyal to over many years.

Tell us about one of your studies that showed the relationship between grit and high achievement.

One of the first studies that we did was at West Point Military Academy, which graduates about 25 percent of the officers in the U.S. Army. Admission to West Point depends heavily on the Whole Candidate Score, which includes

SAT scores, class rank, demonstrated leadership ability, and physical aptitude. Even with such a rigorous admissions process, about 1 in 20 cadets drops out during the summer of training before their first academic year.

We were interested in how well grit would predict who would stay. So we had cadets take a very short grit questionnaire in the first two or three days of the summer, along with all the other psychological tests that West Point gives them. And then we waited around until the end of the summer.

Of all the variables measured, grit was the best predictor of which cadets would stick around through that first difficult summer. In fact, it was a much better predictor than the Whole Candidate Score, which West Point at that time thought was their best predictor of success. The Whole Candidate Score actually had no predictive relationship with whether you would drop out that summer (although it was the best predictor of later grades, military performance, and physical performance).

Woody Allen once quipped that 80 percent of success in life is just showing up. Well, it looks like grit is one thing that determines who shows up.

We've seen echoes of our West Point findings in studies of many other groups, such as National Spelling Bee contestants and first-year teachers in tough schools. Grit predicts success over and beyond talent. When you consider individuals of equal talent, the grittier ones do better.

What research finding on grit has been most surprising to you?

Probably the finding that most surprised me was that in the West Point data set, as well as other data sets, grit and talent either aren't related at all or are actually inversely related.

That was surprising because rationally speaking, if you're good at things, one would think that you would invest more time in them. You're basically getting more return on your investment per hour than someone who's struggling. If every time you practice piano you improve a lot, wouldn't you be more likely to practice a lot?

We've found that that's not necessarily true. It reminds me of a study done of taxi drivers in 1997.¹ When it's raining, everybody wants a taxi, and taxi drivers pick up a lot of fares. So if you're a taxi driver, the rational thing to do is to work more hours on a rainy day than on a sunny day because you're always busy so you're making more money per hour. But it turns out that on rainy days, taxi drivers work the fewest hours. They seem to have some figure in their head—"OK, every day I need to make \$1,000"—and after they reach that goal, they go home. And on a rainy day, they get to that figure really quickly.

It's a similar thing with grit and talent. In terms of academics, if you're just trying to get an A or an A–, just trying to make it to some threshold, and you're a really talented kid, you may do your homework in a few minutes, whereas other kids might take much longer. You get to a certain level of proficiency, and then you stop. So you actually work less hard.

If, on the other hand, you are not just trying to reach a certain cut point but are trying to maximize your outcomes—you want to do as well as you possibly can—then there's no limit, ceiling, or threshold. Your goal is, "How can I get the most out of my day?" Then you're like the taxi driver who drives all day whether it's rainy or not.

When I look at people whom I really respect and admire, like psychology professor [Walter Mischel](#) or economist [Jim Heckman](#), these people are extremely talented. For every hour that they put into research, they're getting a lot out of it. Still, they work 17 hours a day. Jim Heckman won the Nobel Prize in Economic Sciences in 2000, and if he were working to get to a cut point, he should now be coasting. But he's not. I think he wants to win another Nobel!

The people who are, for lack of a better word, "ambitious"—the kids who are not satisfied with an A or even an A+, who have no limit to how much they want to understand, learn, or succeed—those are the people who are both talented and gritty.

So the inverse relationship between talent and grit that we've found in some of our studies doesn't mean that all talented people are un-gritty. That's certainly not true. The most successful people in life are both talented and gritty in whatever they've chosen to do. But on average—and I think many teachers would resonate with this—there are a lot of fragile gifted and talented kids who don't know how to fail. They don't know how to struggle, and they don't have a lot of practice with it. Being gifted is no guarantee of being hardworking or passionate about something.

Earlier, you said that grit depends on having focused, long-term passions. In a [2009 TED Talk](#), you spoke about how you moved frequently from job to job during your 20s, even though you were successful in each one, before you finally committed to your passion for education research. How did that transformation happen?

Several things happened. One was that I had this realization—a reflective, midlife crisis moment of, "Gee, let me take stock here." I realized that I wasn't actually going to be really good at anything unless I stuck with one thing for a long time, and I had never done that.

I was a good fourth-year math teacher relative to other fourth-year math teachers. But I was not nearly as good as the master teachers who had been doing it for 25 years. And I would never be that good, unless I decided to spend 20 more years working really hard at it. I realized that just shifting, shifting, shifting every two or three years was not going to add up to what I wanted. I thought, "I'm very ambitious. I want to be world-class at something. And this is not a recipe for it."

The second thing that happened was not so much finding my passion as recognizing or rediscovering my passion.

When I looked at my interests and what I had been involved in since high school, I saw two themes: education and children. I thought, "I've spent a lot of time thinking about children and learning. Maybe there's a theme there."

I also recognized that psychology had been a long-standing interest. In my family, my dad didn't let us do anything unless we could pay for it ourselves. When I was 16, I had saved enough money to pay for a summer activity. The first time I was able to afford anything, I went to Yale summer school. I remember looking at the course catalog, and it was like a candy shop. I thought, "OK. I could take philosophy. I could take chemistry. It's my money; I can do whatever I want." And I chose psychology and nonfiction writing. Rhetorical writing is essentially what you do in research, right? You're arguing something: "Here's my evidence. And here are the counterarguments." So interest in research and psychology were there very early in my life.

Third, I took an inventory of what I was good at. I thought to myself, "Well, I write pretty well, and I learn well. I can read things. And I have that kind of analytic bent." So I wondered what field I could use those abilities in. That drove me to thinking about research as a career and wondering how to marry that with my interest in children and psychology.

And that's what I do today. I had actually already identified my interests when I was 16. I got lost a little bit. But now, 11 years after I started graduate school, I'm on this path. I have the pleasure of being reasonably good at something and getting deeper and deeper into it.

A lot of young people never get to experience that—being into something for enough years with enough depth so that they really know it. Master teachers know what I'm talking about. So do people who are seriously committed to whatever vocation they have, even people who have a really serious hobby that they've worked at for years. They reach a level of appreciation and experience that novices can never understand.

Students need to hear that message, because so much of today's conversation is about the changing economy—how you're going to have all these different jobs and you have to be flexible. But you know, you also have to be good at something.

Your research on grit seems to be related to Carol Dweck's work on a growth mind-set. She has studied the benefits of teaching kids that intelligence is not fixed, but is something that they can grow. Do you think the same is true of grit? And should we help young people see that they can develop grit, that it's not just something you're born with?

Carol Dweck, more than anyone else, is a role model for me. We're collaborating with her on a couple of projects. One thing we've found is that children who have more of a growth mind-set tend to be grittier. The correlation isn't perfect, but this suggests to me that one of the things that makes you gritty is having a growth mind-set. The attitude "I can get better if I try harder" should help make you a tenacious, determined, hard-working person.

In theory, the work that Carol has done to show that you can change your mind-set would also be relevant to changing your grit. We're developing an intervention, inspired by her work, to look at making students aware of the value of deliberate practice, the kind of effortful practice that really improves skills. In Carol's work, she shows kids scientific evidence of brain plasticity—the fact that peoples' brains change with experience. Although at first they might respond to frustration and failure by thinking, "I should just give up; I can't do this," Carol uses testimonials from other students to show kids that those feelings and beliefs, as strong as they are, can change.

We're using the same kind of format to try to communicate information to students about *deliberate practice*, which is very effortful practice on things you can't yet do. We're actually developing an intervention and testing it in middle schools right now. We tell kids that deliberate practice is not easy. You are going to be confused. You are going to be frustrated. When you're learning, you have to make mistakes. You need to do things over and over again, and that can be boring. In theory, this intervention can change students' grit levels by changing their beliefs. I say "in theory," because we haven't shown it yet.

Teachers have so many good intuitions about this. They work on this every day. How do I get my kids to try harder? How do I get them to be determined, to stick with things? I'm really excited about starting a conversation to bring more people's ideas into the dialogue because I am guessing that some terrific teachers, basketball coaches, and guidance counselors have their own theories that need to be tested. There are probably going to be more ideas coming out of educators than out of scientists on how to help students develop grit.

Do you agree with Paul Tough's thesis in his book *How Children Succeed* that noncognitive character traits are more important to success, or at least as important, as cognitive abilities?

I would probably say "as important," just to be a little conservative. I think there's been a pendulum swing toward the importance of noncognitive traits.

Recently I was reading *The Big Test* by Nicholas Lemann (Farrar, Straus, and Giroux, 1999), which is the story of how the SAT came to be so dominant in college admissions and how standardized testing became so prominent. He walks you through what happened in 20th-century America—there was a very well-intentioned shift toward a meritocracy and a desire to admit people to the most elite schools on the basis of what they could do, not on the basis of family lineage, last name, or color of skin. Around the same time, these reliable, easy-to-administer standardized tests became available. So there was a pendulum swing toward an emphasis on cognitive aptitude, IQ, and so forth.

What we're seeing now is a swing back toward a recognition that these standardized tests, although they serve an important function, are limited in their ability to pick up things like grit and self-control—as well as many other traits that

I don't study—gratitude, honesty, generosity, empathy for the suffering of others, social intelligence, tact, charisma. These are qualities I want my daughters, who are 10 and 11, to have. Another important quality is being proactive—when a kid thinks, "I care about the whales, and I'm going to start an organization," and then actually goes out and does that. Then there's honesty, kindness, and so forth.

None of those qualities is picked up by a standardized test. We're now seeing a pendulum swing away from the single-minded focus on standardized testing and toward a broader view of the whole child. And our research just happens to be in the swinging pendulum's path, which keeps us very busy.

So you believe that schools are generally moving in this direction?

I think so. We get a fair amount of correspondence from schools, and we also talk with teachers and parents. We always get the same reaction—they really do care about these things. They recognize that gym is important, that music is important, that empathy is important. These are qualities that policymakers are less concerned about. But this message really resonates with most people who are in close contact with children.

From your observations in schools, are there programs that are ahead of the curve in developing important character qualities, including grit? Are programs like the KIPP schools effective?

Some of the high-performing charter schools—for example, YES Prep and Aspire—are on the cutting edge in recognizing the power of character. KIPP is the one I know best. From day one, they have said "character and academics for success in college and in life." It was never an either/or question—either we can emphasize math, or kids could be self-controlled. Instead it was, if we emphasize self-control, students will be successful in math.

A lot of independent schools have never lost their emphasis on character. The elite independent schools in the United States have maintained fidelity to character as part of their mission from the early days. Unfortunately, public schools are besieged by budget cuts and reporting requirements and No Child Left Behind-type demands. They have to meet all the standards for the district, for the state, and for the federal government. And they have the fewest resources for incorporating character education. They're not like these wealthy private schools that have so much a year to spend on kids and have relatively few problematic children.

But despite those disincentives, Upper Darby School District, a large urban public school district near the University of Pennsylvania, has partnered with us. We've had a wonderful relationship with them for the last year. They've really embraced character education. They haven't figured out all of the answers, but they're asking all the right questions.

What I'm saying is that there is interest in developing traits like resilience and grit across K–12 education. Some of the schools that have the most freedom to work on this are making the most headway. But a lot of the others are trying to catch up.

How Upper Darby School District Builds Student Resilience

Upper Darby School District on the border of Philadelphia, Pennsylvania, has struggled to stretch its shrinking financial resources to serve the needs of its increasingly diverse student body. The district's 12,400 students speak more than 83 different languages at home; 63 percent of the students qualify for free or reduced-price lunch. In the past two years, the district has faced budget deficits ranging from 9 million to 13 million dollars.

Why would a district facing so many daunting challenges decide to dedicate time and resources to an ambitious character education program? As assistant superintendent for curriculum and instruction Dan McGarry explains, district leaders firmly believe that character education and positive school climate are the keys to reducing discipline problems and raising student achievement.

In his long career as an educator, McGarry has seen the benefits of character education, and he was enthusiastic about its potential to address Upper Darby's challenges. A district team that consisted of the director of curriculum, the director of special education, the director of pupil services, and McGarry had been researching the topic for two years by reading about the effects of Positive Behavioral Interventions and Supports (PBIS) and by reading books like Ross Green's *Lost at School* (Scribner, 2009) and Paul Tough's *How Children Succeed* (Houghton-Mifflin, 2012). McGarry decided to build a period of time into the schedule at both district middle schools to address school climate and culture concerns as well as to implement character education and citizenship classes.

A turning point was McGarry's decision to call Angela Duckworth after reading about her research on character development and grit at the University of Pennsylvania. In that first 90-minute conversation and a follow-up meeting a week later, the two of them laid the groundwork for a thriving university–district partnership.

Duckworth would conduct research on perseverance and grit among Upper Darby's 12th graders, and she and other researchers would take the district's middle school staff through a series of professional development workshops based on a model called PERMA—Positive Emotions, Engagement, Relationships, Meaning and purpose, and Accomplishments. Administrators, teachers, counselors, social workers, and psychologists also attended courses in positive psychology taught by Duckworth and her colleagues at the university.

This comprehensive professional development led to a plan. The middle schools designed a daily citizenship class

that covers such topics as how to have good conversations, be an active listener, build meaningful relationships, set goals and pursue them, and recognize the consequences of behavior. Eran Magen, another prominent psychologist at the University of Pennsylvania, has begun to work with both adults and students in the district to develop a curriculum around what he calls Active Listening. Magen works with teachers and students in classrooms for 30 minutes a day. The plan will be to train all teachers, students, and administrators on the Active Listening process.

Upper Darby has set the context for this intensive character development focus in middle school by putting a Response to Intervention program for behavior in place in all its schools, beginning at the elementary level. Every school has a three-tiered system of intervention to support positive student behavior. Students who have the greatest behavior challenges work directly with a school psychologist, counselor, or social worker.

Upper Darby's intensive character-building program has yielded results at the elementary level, middle school level, and even in the 9th grade: At this grade level, when many students commonly struggle, retention rates have decreased, discipline problems have fallen, and student achievement has risen.

What advice would Dan McGarry give other school district leaders? First, remember the importance of providing social and emotional support. "If public schools start to devalue social workers, counselors, and school psychologists—if they don't understand that these people are a key part of the learning situation for kids—then we're in big trouble." Second, schools—especially those facing major challenges—should not be afraid to look into partnerships with research universities. "The more relationships schools can build with outside resources, the better off they're going to be."

—*Deborah Perkins-Gough*

Audio Bonus

Listen to an excerpt from this interview.

Endnote

¹ Cramerer, C., Babcock, L., Lowenstein, G., & Thaler, R. (1997, May). Labor supply of New York City cabdrivers: One day at a time. *Quarterly Journal of Economics*, 407–441.

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