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**What Teens Need from Schools** Pages

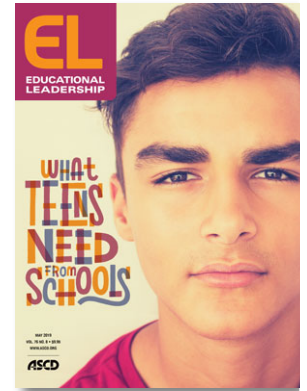
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## Honoring the Teen Brain: A Conversation with Thomas Armstrong

*Anthony Rebola*

Schools need to create environments that speak to—rather than resist or suppress—teenagers' neurological development.

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Thomas Armstrong

*Thomas Armstrong, a psychologist and educator, is the executive director of the American Institute for Learning and Human Development. He is the author of several influential books on strength-based education and working with students with special needs. His newest, [Mindfulness in the Classroom: Strategies for Promoting Concentration, Compassion, and Calm](#), will be published this summer by ASCD. In [The Power of the Adolescent Brain](#) (ASCD, 2016), Armstrong sought to explore the science of the teenage brain and help educators figure out "what to do with all that energy and misdirection." We recently talked to him about what today's teens need most from schools.*

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**In *The Power of the Adolescent Brain* you say that, in terms of neurobiology, "adolescents' experiences hold huge consequences for their adult lives." What do you mean by that?**

The adolescent brain is what we call neuroplastic—it's still in the process of being developed and, consequently, the kinds of things that happen in the teen's environment can have a profound effect on the wiring, structure, and pruning of the brain. After adolescence, although the brain continues to develop connections and even add new neurons, it does so at a much less frantic level. We often talk about early childhood being crucial to development, and that's true, of course. But adolescence is a critical developmental stage as well, and it's kind of our last chance to make a lasting impact. So that really makes it essential that we give attention to what kind of classroom environments and school policies we have so that we can *enhance* brain development and work with the changes teenagers are experiencing.

**Yet you also say that schools are often brain-hostile or brain-ignorant in terms of teens' development. What are they getting wrong?**

Well, the problem is that we tend to have this educational paradigm where we do the fun stuff in the early grades, and then we get serious starting in middle school and high school. Don't get me wrong—rigorous academic and intellectual work is good and appropriate for adolescents. But what this focus often leaves out is the emotions—which of course teenagers are famous for, but which aren't seen as something that's central to their learning process. Indeed, this part of teens' lives scares a lot of educators, and they may respond to it, for example, with more discipline and more homework. But this is just papering over the problems—and the opportunities as well—and it's not allowing for real engagement.

Essentially, the curriculum in high school needs to be more *affective*. It needs to be more engaging in terms of humor, vitality, joy, and even negative emotions, like strong opinions and anger, to bring out those qualities and channel them, so that they aren't expressed in dangerous ways outside of school. Why don't we have more poetry slams, for example? This is a great way for teens to take emotional risks and share something creative in their lives. Why don't we have students

engaging in more apprenticeships and more internships, which can be a wonderful way to help them build decision-making skills and work through emotions in a real-world but controlled setting? Teens want to be out in the world—in fact, that's what evolution has prepared them for. We can't fight a million years of evolution with a role-play in the classroom.



PSYCHOLOGIST THOMAS ARMSTRONG WORKS WITH EDUCATORS IN SACRAMENTO, CALIFORNIA.  
(PHOTO BY DENNIS MAH)

**Some of your recommendations for brain-friendly learning—such as affective learning, self-awareness practices, peer learning, learning through the body, and arts-connected learning—might strike some educators as "soft" or nice to have, but too time-consuming in light of students' academic needs. How do you respond to that?**

I'd argue that hard skills don't mean anything without the soft skills that support them. In other words, if we don't consider these sorts of things—*affective learning, imaginative and creative learning*—then we're going to be creating robo-students. We're going to be creating individuals who've mastered skills that we consider to be rigorous, but who don't have the capacity to apply them or use them responsibly. In this respect, standardized testing has done more damage than any other development in education that I can think of. And the fact that it's taking time away from kids developing their brains makes it worse. I mean, testing does develop some functions, but it leaves so much out. And this is what leads kids to take risks outside of school, because they don't have any opportunities to cultivate their emotional, risk-taking selves within school.

**So it's that channeling element you mentioned?**

Exactly. Another way of positing it is in terms of creative expression. Adolescence is a great time for channeling the creative energies of human beings—it's one of the best times. A lot of people aren't aware of it. You know, so many musical and other creative events have been produced by teenagers. Mozart's five violin concertos were done before he reached the age of 20. Einstein actually had some of the initial insights into the theory of relativity when he was in secondary school. So we've got to see that this is a very fertile time—and that requires us to create a very fertile learning environment within which those insights and motivations can be stirred.

**So where should schools start in trying to better address teens' needs? If you were a school leader, what would you do first?**

Well, I'd obviously focus on professional development, so that teachers have a very good understanding of the teen brain and how it works—so that they have insight into why evolution created the teen brain in the way it did and how the things that we've regarded as hazards or problems, the things we laugh nervously about in regard to teenagers, we can now take seriously as educational factors. We should be able to see that, wow, these are potentially elements that we can use to improve learning. And then we'd just do a lot of modeling of responsible practice throughout the year—of elements like humor, choice, and metacognitive learning, because this is a time when students are really beginning to think about their own thinking. So as a principal, I'd be pushing teachers to try new things progressively over the school year and then to come back to staff meetings to share what worked, what didn't work, and what concerns they have.

**What would you say are the greatest challenges facing teens today? What should educators be concerned about?**

Well, everything really. Here's the thing: You've got this brain that's going through a period of intense neuroplasticity—in other words, the wiring hasn't totally been laid down yet, the pruning hasn't been done yet, and how that brain structures and wires over these precious few years depends on what happens in the environment. So teens are vulnerable—another way of saying *neuroplastic* is *vulnerable*. And we're in a society where there are plenty of hostile elements—there are drugs changing sexual mores and expectations, hate groups, gangs. So that's the biggest challenge. The biggest challenge is to create an environment in the classroom and school that matches those negative risks outside the classroom with positive risks or environmental factors, to cancel out some of the power of what's going on outside the classroom.

*Editors' note:* This interview has been edited for space.