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EDUCATION TRENDS

Can Innovation Skills Be Learned?

APRIL 20, 2012 | TONY WAGNER

The "DNA" of innovators might be considered a set of skills that are essential elements in design thinking **(1)**. One cannot have empathy without having practiced the skills of listening and observing. And integrative thinking begins with the ability to ask good questions and to make associations. There is also a kinship between collaboration and networking. [At the root of innovation is] the importance of experimenting -- an activity that, at its root, requires a kind of optimism, a belief that through trial and error a deeper understanding and better approaches can be discovered.

Putting the research together, some of the most essential qualities of a successful innovator appear to be the following:

- Curiosity, which is a habit of asking good questions and a desire to understand more deeply
- Collaboration, which begins with listening to and learning from others who have perspectives and expertise that are very different from your own
- Associative or integrative thinking
- A bias toward action and experimentation

But as an educator and a parent, what I find most significant in this list is that *it represents a set of skills and habits of mind that can be nurtured, taught and mentored!* Many of us tend to assume that some people are born naturally creative or innovative -- and others are not. But all of the experts whom I've cited share the belief that most people can become more creative and innovative -- given the right environment and opportunities. Indeed, Judy Gilbert's job is to continue to develop the capacities of Google employees to become more innovative.

Tim Brown writes, "Contrary to popular opinion, you don't need weird shoes or a black turtleneck to be a design thinker. Nor are design thinkers necessarily created only by design schools, even though most professionals have had some kind of design training. My experience is that many

people outside professional design have a natural aptitude for design thinking, which the right development and experiences can unlock."

Dyer, Gregersen and Christensen agree. In the conclusion of their article, the authors argue, "Innovative entrepreneurship is not a genetic predisposition, it is an active endeavor. Apple's slogan 'Think Different' is inspiring but incomplete. We found that innovators must consistently act different to think different. By understanding, reinforcing and modeling the innovator's DNA, companies can find ways to more successfully develop the creative spark in everyone."

So DNA, then, turns out not to be the right term, after all. *It's not primarily what you are born with that makes you an innovator* -- though clearly some people are born with extraordinary gifts. These authors seem to agree that *what you have learned to do is more essential*. Yes, there's nature -- but there is also nurture, what the environments around us encourage and teach.

But here's the problem: It is often difficult in our society to "act differently in order to think differently." To do so requires radically altering our adult behaviors. When Dyer and Gregersen were interviewed in a blog about their research, Hal Gregersen talked about the loss of creative capacity. "If you look at four-year-olds, they are constantly asking questions and wondering how things work. But by the time they are 6½ years old, they stop asking questions because they quickly learn that teachers value the right answers more than provocative questions. High school students rarely show inquisitiveness. And by the time they're grown up and are in corporate settings, they have already had the curiosity drummed out of them. 80% of executives spend less than 20% of their time on discovering new ideas. Unless, of course, they work for a company like Apple or Google."

Gregersen is hardly alone in his views. Sir Ken Robinson's recent book, *The Element (2)*, and his TED Talks **(3)** describe many of the ways curiosity and creativity are discouraged -- "educated out of us," he often says. Dr. Robert Sternberg, a psychologist who has studied creativity, agrees. He writes, "Creativity is a habit. The problem is that schools sometimes treat it as a bad habit . . . Like any habit, creativity can either be encouraged or discouraged."

For more information about the book, please visit [Creating Innovators \(4\)](#).

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- 1 en.wikipedia.org/wiki/Design_thinking
- 2 sirkenrobinson.com/skr/the-element
- 3 blog.ted.com/2006/06/27/sir_ken_robinso/
- 4 creatinginnovators.com/

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