

CRRREST Education: How to Fix America's Illiteracy Problem



By Alex Berezow, PhD — January 13, 2017



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Literacy is typically defined as the ability to read and write and do basic math. However, in the 21st Century, that is simply insufficient. To be a truly literate member of society -- and to have a government capable of enacting competent policies -- one must have a fundamental grasp of science, technology, and economics.

By that expanded definition, America (along with the rest of the world) has an enormous illiteracy problem.

How else can we explain that [1 in 6 Americans](#) [2] either think vaccines are unsafe or don't know? How can we explain that [30% of Americans](#) [3] (and a whopping 41% of people aged 18-29) believe vaccination should be a parental choice? How can we explain that both then-President-Elect Obama and President-Elect Trump considered putting Robert F. Kennedy, Jr, a [vaccine denying conspiracy theorist](#) [4], in a position of authority?

To put all that into perspective, imagine if 1 in 6 Americans couldn't read, and that 30% thought that teaching a child to read should be optional. And that the President-Elect took time out of his busy schedule to meet with an anti-reading activist. That's the scale of the problem.

Of course, our woes extend well beyond the "debate" over vaccination. Our national political dialogue betrays the depressing fact that too many Americans lack the scientific, technological, and economic knowledge to cast an informed vote.

The CRRREST Strategy

At one time, "The Three R's" (reading, 'riting, 'rithmetic) were considered the marks of a person

who possessed at least a rudimentary education. I suggest that, as part of national education reform, we bring back that concept and update it to include civics, economics, science, and technology. We could call it CRRREST.

And here are some important lessons people should know *when leaving high school*. (Obviously, the following concepts are far from an exhaustive list.)

Civics. Americans do not have a sufficient grasp of how our republic works. One statistic poignantly depicts this truth: [Only one in three Americans](#) ^[5] can name the three branches of government. Given that profound ignorance, is it any wonder that Americans also don't understand what the President can and cannot do, the role of Congress, or how elections work? Really, these are lessons of which any grade school child should be familiar.

Economics. There is no avoiding the economic laws of supply and demand. Policies that decrease supply and/or increase demand will cause prices to rise. Policies that increase supply and/or decrease demand will cause prices to fall. These "laws" apply as much to apples and oranges as they do to healthcare, the labor force, and currency exchange rates. *The fact that economics is not required for all students to graduate high school is a national travesty.*

Science. Students don't need to be microbiologists or chemists when they leave high school, but they ought to know the difference between a bacterium and a virus or that ["chemical" does not mean "evil."](#) ^[6] At the very least, an elemental knowledge of, well, the elements and cell biology should be required. Perhaps most importantly, all students should take a class on the scientific method called "How We Know What We Know." There is a world of difference between our confidence in the laws of physics and the laws of economics, and students should know why.

Technology. It goes without saying that comfort with technology is vital to being a productive citizen in the 21st Century. As globalization increases competition and digital technology takes over the economy, high schools should require all students to take computer science. A basic understanding of computer programming could help create a more literate and competitive workforce.

What Good Is College if You're Still Illiterate?

Currently, we measure how educated a society is by determining the percentage of citizens who have a college degree. This is wrong. If you leave college without understanding what a gene is, then you're still a functionally illiterate person. Having a PhD in gender studies means nothing if you're fooled by Michael Pollan and Malcolm Gladwell.

Previously, I wrote that [anti-intellectualism is the biggest threat to modern society](#) ^[7]. Expanding the definition of literacy and reassessing what it means to be "educated" will be vital parts to a solution.

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[2] <http://www.people-press.org/2015/02/09/83-percent-say-measles-vaccine-is-safe-for-healthy-children/>

[3] <http://www.pewresearch.org/fact-tank/2015/02/02/young-adults-more-likely-to-say-vaccinating-kids-should-be-a-parental-choice/>

[4] <http://www.wsj.com/articles/ignore-anti-vaccine-hysteria-mr-trump-1484093196>

[5] <https://www.washingtonpost.com/blogs/govbeat/wp/2014/09/18/only-36-percent-of-americans-can-name-the-three-branches-of-government/>

[6] <http://acsh.org/news/2016/05/24/what-organic-and-chemical-actually-mean-a-glossary-of-hijacked-terms>

[7] <http://acsh.org/news/2016/06/26/anti-intellectualism-is-biggest-threat-to-modern-society>