

STEM

An alternative perspective on a popular concept from New Yorker writer and Bank of America employee Jared Woodard. This is a condensed translation of an article published in American Affairs.

- U.S. education spending on technology in 2018 exceeded \$26 billion - more than Israel's entire military budget. According to some estimates, annual total spending on technology for schools worldwide will soon reach \$252 billion. Authorities warmly welcome this trend and argue that it helps reduce inequality and train a competitive workforce.

However, the technology that's being poured into schools today is draining their finances and slowing children's development.

First, technology exacerbates the problem of schools' lack of understanding of their purpose. Education is about forming individuals, not about stamping out a workforce. Instead, schools are trying to provide students with a set of "job skills" that they will need in the workplace.

Second, technology is detrimental to learning effectiveness: the use of the latest software and gadgets in the classroom is detrimental to reading, long-term memory, math and other test scores, and is addictive. The only device that has been shown to be positive in studies is a projector, and that in the hands of a competent teacher.

And third, the detrimental effects of technology are seen on a broader scale: it deepens economic inequality in society, removes responsibility from schools, takes control away from the teacher, and makes students from poor families more vulnerable to the threats of automation and globalization.

STEM vs. science

The STEM frenzy affects the teaching of general education subjects, which traditionally have been given a central place - mathematics and science: the connection of the new concept with them is very superficial, but it pursues an entirely different goal. The task of teaching science is to give children knowledge of the world and about the world.

THE TASK OF EDUCATION IS TO RAISE A WORKING UNIT WITH CERTAIN SKILLS.

Just under this "sauce" in 2009 Barack Obama's administration launched two initiatives to promote STEM education with a combined budget of over \$4.6 billion: Race to the Top and Educate to Innovate. The U.S. needs a top-notch workforce to help the country meet the biggest challenges of the 21st century, said scientist and presidential adviser John Holdren at the time. He later wrote that teaching STEM disciplines has been key to the country's ability to produce better, more advanced products, to build economic strength, and STEM-related professions are the professions of the future.

Donald Trump's administration has continued this rhetoric, with the president's education council proclaiming in 2018 that such employees will be the driver of innovation for the nation's key industries. Politicians are not "drowning" for science per se: all statements are about technology and about technology as the heart of the new economy.

The word "science" in the acronym refers only to natural and physical sciences - the humanities and social sciences do not count here. Moreover, the natural sciences are also gradually being supplanted: at STEM exhibitions, there is hardly any space for geology, physics, or chemistry, but there are plenty of applications and robots: obviously, the focus is on "technology. The concept of "engineering" is redundant here, and "mathematics" is just for furniture. Politicians are very afraid of competition with East Asia, and the various mathematical theories should be studied by children insofar as they are suitable for application in some commercially profitable way.

Probability theory, relativity, calculus, or bridge physics are valued not because they help us learn the true or the beautiful, but solely because they can be used to build satellites, calculate efficient insurance rates, and design a highway, but only if these public goods make someone else profit.