

Many people watched IBM's Watson computing system defeat former champions on a special series of "Jeopardy!" matches broadcast last month. Last week, five Members of Congress from both parties got a chance to match their "Jeopardy!" skills against a simulated version of Watson. It was a terrific display of bipartisanship. The Members pooled their scores and put up a very good fight.

The match was a lot of fun for the Representatives who played: Bill Cassidy (R-La.), Nan Hayworth (R-N.Y.), Jim Himes (D-Conn.), Jared Polis (D-Colo.) and one of us, Rush Holt (D-N.J.).

Though the machine won handily — with a score of \$40,300 to the Members' collective score of \$30,000 — maybe someday we can play a full "Jeopardy!" match and win.

But this wasn't just an enjoyable battle of networks versus neurons. It was an important opportunity to raise awareness of serious issues concerning U.S. global competitiveness, the positive effect of technology on society and the need for greater investments in math and science education.

Watson represents a major leap forward for computer science. With its combination of sheer data processing power, natural language recognition and machine learning, the system demonstrates that technology has the potential to help humans improve the performance of many endeavors — everything from medicine to education, law and environmental protection. Watson also shows the U.S. has the capacity to remain one of the world's most innovative and economically competitive countries.

But technology breakthroughs such as Watson don't happen without a tremendous amount of effort. Led by 25 New York-based scientists, IBM Research spent four years creating and fine-tuning the system. And their advances stand on the shoulders of many scientists who preceded them and billions of dollars invested in education and research over the decades by corporations, government and universities.

The Obama administration and Congress agree our nation must address our national budget

shortfalls in a responsible manner, and there is a debate over how to responsibly eliminate government waste and reduce the deficit.

What we should not do is recklessly cut successful and vitally needed programs that would diminish our ability to out-innovate, out-educate and out-build the rest of the world.

Innovation is vital to the nation's economic vitality now and in the years ahead. To compete in the future, we should be investing in — not cutting — education, science and technology in order to create the high-tech jobs of the future and better compete globally.

The U.S. needs a scientifically literate and technically skilled workforce to compete globally. Citizens must be well-informed in order to grapple wisely with complex issues such as health care costs, environmental pollution, energy policy, traffic congestion and consumer product safety

The United States remains one of the leading countries in key metrics of innovation and research and development investment, but our system of educating young people in science, technology, engineering and mathematics cries out for reform and investment. According to the National Science Board, students in other countries are outperforming even our highest achievers. In the 2006 Program for International Student Assessment test, U.S. 15-year-olds in the 90th percentile (our top students) scored below their peers in 29 countries on mathematics literacy and below 12 countries on science literacy.

So let IBM's Watson be both an inspiration and a warning. Our concern is that in an effort to cut budgets deeply, the government will make it more difficult for Americans to produce innovations such as Watson in the future. Our hope is that everyone will be excited by Watson and the possibilities that this kind of achievement holds for our country and society at large.

Rep. Rush Holt represents New Jersey's 12th district and is a five-time "Jeopardy!" winner. Christopher Padilla is a former undersecretary for international trade at the Department of Commerce and currently serves as vice president of IBM Governmental Programs.