**Read "Not by Math Alone,” by Sandra Day O’Connor and Roy Romer. In a well-organized essay, analyze the rhetorical strategies the writers use to achieve their purpose. Is their argument persuasive?**

**“Not by Math Alone”  
by Sandra Day O’Connor and Ray Romer**

Fierce global competition prompted President Bush to use the State of the Union address to call for better math and science education, where there's evidence that many schools are falling short.

We should be equally troubled by another shortcoming in American schools: Most young people today simply do not have an adequate understanding of how our government and political system work, and they are thus not well prepared to participate as citizens.

This country has long exemplified democratic practice to the rest of the world. With the attention we are paying to advancing democracy abroad, we ought not neglect it at home.

Two-thirds of 12th-graders scored below "proficient" on the last national civics assessment in 1998, and only 9 percent could list two ways a democracy benefits from citizen participation. Yes, young people remain highly patriotic, and many volunteer in their communities. But most are largely disconnected from current events and issues.

A healthy democracy depends on the participation of citizens, and that participation is learned behavior; it doesn't just happen. As the 2003 report "The Civic Mission of Schools" noted: "Individuals do not automatically become free and responsible citizens, but must be educated for citizenship." That means civic learning -- educating students for democracy -- needs to be on par with other academic subjects.

This is not a new idea. Our first public schools saw education for citizenship as a core part of their mission. Eighty years ago, John Dewey said, "Democracy needs to be reborn in every generation and education is its midwife."

But in recent years, civic learning has been pushed aside. Until the 1960s, three courses in civics and government were common in American high schools, and two of them ("civics" and "problems of democracy") explored the role of citizens and encouraged students to discuss current issues. Today those courses are very rare.

What remains is a course on "American government" that usually spends little time on how people can -- and why they should -- participate. The effect of reduced civic learning on civic life is not theoretical. Research shows that the better people understand our history and system of government, the more likely they are to vote and participate in the civic life.

We need more and better classes to impart the knowledge of government, history, law and current events that students need to understand and participate in a democratic republic. And we also know that much effective civic learning takes place beyond the classroom -- in extracurricular activity, service work that is connected to class work, and other ways students experience civic life.

Preserving our democracy should be reason enough to promote civic learning. But there are other benefits. Understanding society and how we relate to each other fosters the attitudes essential for success in college, work and communities; it enhances student learning in other subjects.

Economic and technological competitiveness is essential, and America's economy and technology have flourished because of the rule of law and the "assets" of a free and open society. Democracy has been good for business and for economic well-being. By the same token, failing to hone the civic tools of democracy will have economic consequences.

Bill Gates -- a top business and technology leader -- argues strongly that schools have to prepare students not only for college and career but for citizenship as well.

None of this is to diminish the importance of improving math and science education. This latest push, as well as the earlier emphasis on literacy, deserves support. It should also be the occasion for a broader commitment, and that means restoring education for democracy to its central place in school.

We need more students proficient in math, science and engineering. We also need them to be prepared for their role as citizens. Only then can self-government work. Only then will we not only be more competitive but also remain the beacon of liberty in a tumultuous world.

Sandra Day O'Connor retired as an associate justice of the Supreme Court. Roy Romer, a former governor of Colorado, is superintendent of the Los Angeles Unified School District. They are co-chairs of the national advisory council of the Campaign for the Civic Mission of Schools.