In recent years, America’s technological and educational ranking in the world has significantly decreased. It is commonly acknowledged that our education system is badly in need of upgrades and that more young people need to be encouraged to pursue STEM careers. Although the U.S. dominated the 20th century, there is no guarantee its technological hegemony will continue in the age of other rising countries.

**Research Question**

- Why have significantly fewer students in America been pursuing careers in STEM (science, technology, engineering, and math) areas?

- What recent educational policies may have contributed to this reduction?

**Literature Review**

**Differing Standards of Education**

- Some Schools deemed to be failing in one state would get passing grades in another state under the No Child Left Behind law (Hamilton 2007).
- The study underscores wide variation in academic standards from state to state.
- In 2007, only 42 percent of Kentucky schools met the Adequate Yearly Progress set by No Child Left Behind (Hamilton 2007).
- Under No Child Left Behind, schools with many disadvantaged students generally face harsher sanctions than other schools.
- In a recent analysis for Ohio, it is estimated that intervention costs represent over 95 percent of additional costs and an average of $760 per student (Driscoll & Fleeter 2003).
- In a study on costs in Texas, it is estimated that meeting a passing rate of 70 percent would require $4.4 billion of additional spending, or $1,064 per pupil (Imazeki & Reschovsky 2006).

**Teachers and Standardized Testing**

- Teachers spoke of the limited individual attention they could give students due to the narrow objectives of the all-important federal test scores (Price & Peterson 2009).
- The problem that teachers have with teaching to the test is that it significantly shifts the focus of learning to one specific examination, rather than entire concepts.
- Many teachers agreed that No Child Left Behind’s emphasis on testing makes their job harder, more stressful, and more frustrating.
- Teachers have also found that the policy has been particularly hard on special needs students and the schools that make them welcome, as they have to take the same test with no regard for their disabilities, and that stands to bring down the scores for the whole school and thereby place the school in jeopardy (Price & Peterson 2009).

**STEM Education and No Child Left Behind**

- Districts that increased instructional time for ELA did so by 43 percent on average.
- Districts that reduced instructional time in subjects reported total reductions of 32 percent.
- Most districts that increased time for ELA reported substantial cuts in time for other subjects or periods, including STEM – Science, Technology, Engineering, and Mathematics (Bybee 2010).
- They acknowledge that our education system is badly in need of upgrades and that more young people need to be encouraged to pursue STEM careers.
- That sobering finding, which Duke University’s Pratt School of Engineering released on Tuesday, points to a major problem in our country – STEM education.
- Although the U.S. dominated the 20th century, there is no guarantee its technological reign will continue in the age of BRIC - Brazil, Russia, India, and China (Bybee 2010).

**Methods**

My specific research included finding published research literature about this topic, and then forming a conclusion based on what I found. Since I was looking at the effect of No Child Left Behind on education, I looked at TAKS (Texas Assessment of Knowledge and Skills) test scores before and after the law was passed to see a possible trend as a result. I also found data that shows shifts in instructional time on certain subjects as a mandate of No Child Left Behind.

**Bibliography**


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