

When Math and the Arts Collide By Mariah Moon

When Kentucky governor Matt Bevin noted that he thinks "students majoring in French literature should not receive state funding for their college education", he contributed to the list of politicians that are pushing for more students to major in STEM areas - an acronym that stands for "science, technology, engineering, and math". The acronym can be found in many different articles, but one of the most prevalent is the 2016 study done by Mary C. Enderson and John Ritz.

In their study, Enderson and Ritz took a look at why students took a STEM elective course. The majority of the students - 84.6 % - were only in the class to fulfill a requirement for their major (34). This disturbing statistic shows that the politicians that follow Matt Bevin's example are undermining the American students. To go into any of the aforementioned fields, a solid understanding of mathematics is a must. Enderson and Ritz even did their own research and found that a solid understanding of math is needed by the time students get into college; most students who want to go into STEM ought to take at least up to pre-calculus before they get into college. This is because the relationship between



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“The excitement quickly fades as students brush up against [...] the ‘math-science death march’.” – David E. Goldberg

math, engineering, technology, and most sciences is a deep, intricate dance. It requires a finesse that many have lost over the years because the United States focuses on a "math-science death march" (from The New York Times article, "Why Science Majors Change Their Minds (It's Just So Darn Hard!)"). With this, there is little in-class application.

This is the issue in many STEM programs. The fun dries out as application and theories are separated into two distinctly separate courses. Anna Feldman explored what happened when the arts - in any capacity - were added in her Slate article "STEAM Rising". The results should not be surprising. When the arts were added, and students got a chance to use what they were learning in practice, the students did better. Grades went up. Understanding of the various theories and equations increased. Most importantly - one can argue - the students learned that these subjects can be fun. The fun was no longer contained to building a few sets in an engineering class or to making things go ‘pop’ in chemistry. The content of the other classes spilled into what are known as “design” classes; practical application.

What can United States politicians learn from this? The "math-science death march" is not what our students need. The entire country is suffering from the STEM-minded focus. If our politicians don't wake up soon, the rising

students might become deadened to a fun career because it "doesn't earn money" - or any of the other phrases along the lines of a starving artist. It simply isn't true. An artist can use their talents in any of these areas, and the world will be better off for it. After all, necessity is the mother of invention, and inventions come from creativity and the arts.

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