

Education in the State of Maine is at a crossroads, technology is exploding every year, and the people who do not have degrees in technology are struggling to keep up. That being said, Science, Technology, Engineering and Math (or STEM) has been emphasized in the last couple of years. Educators are divided on STEM, with veteran teachers opposing additional government intervention; on the other side of that coin, newly graduated teachers are eager to enter classrooms and help innovate education. One new education initiative that is worth considering for Maine public high school is STEAM, or rather science, technology, engineering, arts and math. This involves an increase in communication and collaboration between math, science, and art teachers. If Maine were to integrate STEAM into their public schools, there would be a myriad of benefits to a student's high school experience and provide Maine schools with a competitive edge. STEAM would be a boon for every facet of the education system in Maine. Educators interviewed agree that there is a general lack of excitement and commitment in student and hypothesize that graduation rates and grade point averages would go up if more cross curricular integration were to be implemented. The intention of this research is to prove that STEAM is not only a viable option for Maine public schools, but a desperately-needed change in attitude. It prioritizes art on the same level as the STEM fields and promotes preparedness for college and the workforce after high school. To support this Common Core prioritizes creative problem solving skills that are often focused on in art classes. STEAM would translate these skills across all disciplines. Laptops are one way that they have tried to integrate art and technology into the classroom. However there are some rural schools that still do not have access to laptops for all of their students, despite some generous state funding. Student at these schools

are not allowed to bring their laptops home. This takes away valuable time that students could be learning to use technology most efficiently.

The Rhode Island School of Design noticed that STEM fields were seen as ideal and Arts fields were seen as frivolous by Baby Boomers that were raised with the idea that STEM fields were of paramount importance. Art majors were having trouble finding jobs. RISD saw this and they developed the STEAM initiative. The school's plan for introducing STEAM to the educational program was to "make working artists, not starving artists," who will be able to apply the skills they are learning in math and science courses. There are many practical benefits to prioritizing visual and performing arts. For example, students who study music at a young age increase their capacity for language and math learning. Similarly, theatre provides practical benefits as well; theatre students from a young age possess increased public speaking and interpersonal skills. Art is ubiquitous in this world; there is very little that someone can do with a Math or Technology degree that does not in some way use the skills learned in the arts fields. Educators appear to agree that cross-curricular integration is lacking in Maine, and math teachers talk with other math teachers, there is seldom a team taught class between the disciplines despite the benefits.

While there are many things that can be done to help fix the education system; what the education system needs the most is a cultural shift. Many schools, especially schools with less than 800 students or in poorer communities, are stuck in 20th century teaching styles when students should be brought into a more interdisciplinary 21st century classroom. There are some serious time constraints that come with standards-based education. A suggestion that would be effective in encouraging this shift, is to have schools dedicate a certain amount of time per week

to cross curricular classes. Spruce Mountain High School in Jay has applied this approach by implementing “phoenix time” every Friday afternoon. Every teacher gets to teach a class they are interested in provided they are qualified. Teachers are able to team teach if they would like, and since every teacher participates, the class sizes are small. This would go beyond just integrating Art into STEM, and foster cross-curricular education on a larger scale. Another way to encourage integration is to free up in what classes could meet educational standards. If a student displays proficiency in a math standard in a music or art class, that should be no different than meeting the standard in a traditional math class. This would make cross-curricular education a viable option. One of the main concerns with STEAM teachers who talked to me expressed was time constraints and this would alleviate teachers’ fear of not having enough time to meet their standards.

The next thing that could be done concerns charter schools. Charter schools are meant to try new things and the successful experiments get disseminated into the rest of the education community. A good example can be found at Harpswell Coastal Academy (HCA). Every Wednesday, HCA meets for 2 hours to collaborate as a faculty, at which time their students go and do internships in the community. Another thing that should be looked into is giving more funding to the charter schools. A proposal establishing a pilot program with the highest performing public schools to fund students at 100% or higher to another public high school in the area. As it stands right now charter school students receive about 80% of what a public school student would because they miss out on local funding. A test program, funding one charter school at a level with public schools for one year would be an experiment to see if their innovating potential grows.

Lastly, it should be recommended that that every school district has access to a full time technology integrator. If teachers have access to an expert to help them integrate technology more efficiently, students can only benefit. If there is more interdisciplinary education happening with a priority on art, Maine students stand to be more engaged in their learning, more prepared for the labor force, more prepared for college, and more competitive in the global market.