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# Creative Pathways Through High School: A Response to John Dorrer, “Do We Have the Workforce Skills for Maine’s Innovation Economy?”

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## COMMENTARY

# Creative Pathways Through High School:

## A Response to John Dorrer, “Do We Have the Workforce Skills for Maine’s Innovation Economy?”

by Sylvia Most

In his article, “Do we have the Workforce Skills for Maine’s Innovation Economy?” published in the Winter/Spring 2014 issue of *Maine Policy Review*, John Dorrer suggests that the answer to that question is “no.” He reports that “there are insufficient numbers of college graduates in STEM disciplines to fill available jobs” (Dorrer 2014: 73). As a high school math teacher, this caught my eye. But perhaps more striking was his commentary that “employers, both nationally and here in Maine, call for higher levels of communication, critical thinking, and problem-solving skills from those they are seeking to hire” (Dorrer 2014: 73).

Dorrer’s article highlights data from the Maine Department of Labor showing Maine occupational projections by educational requirements for the period 2010 to 2020. Of the 676,770 jobs anticipated to be available in Maine in 2020, fully 43 percent of them require only a high school diploma or equivalent, and 26 percent of these jobs require less. In total, nearly 70 percent of the jobs in Maine as of 2020 will not require education beyond high school, a figure that remains unchanged from 2010. This coupled with the need for more college graduates with science and technology degrees calls for a new approach to high school education that goes beyond content standards and ends, well, where our graduates are likely to end up—working for an employer who will

teach them what they need to know to do their job. Students need alternative pathways through high school to allow educators to aggressively prepare both those who are suited to advanced education and those who are not for their diverging roads once they leave high school.

Statistics on the Maine job market clearly indicate that a four-year college education immediately following high school graduation may not be the most logical choice for students planning to stay in state. Furthermore, there is clear evidence that for many the investment is not worthwhile—there are alternative, potentially more successful routes to the middle class for lower income students. In a recent commentary published in the *Maine Sunday Telegram* (March 30, 2014), Michael Petrilli makes the case that despite the conventional wisdom that a college education is the best road to success, for some students it is entirely the wrong advice. In the report *Pathways to Prosperity*, the authors state, “One of the most fundamental obligations of any society is to prepare its adolescents and young adults to lead productive and prosperous lives as adults. This means preparing all young people with a solid enough foundation of literacy, numeracy, and thinking skills for responsible citizenship, career development, and lifelong learning” (Symonds, Schwartz, and Ferguson 2011).

The potential cost of encouraging all students toward a post-secondary college degree is low self-esteem for those who fail to be accepted into college, low self-esteem for those who fail to succeed in college, expensive tuition bills for unfinished education, and a lack of preparedness for the job market. Jobs such as electricians, plumbers, welders, and dental hygienists require a post-secondary certificate or apprenticeship program. More than 25 percent of people with such credentials that are short of an associate’s degree earn more than the average bachelor’s degree recipient (Symonds, Schwartz, and Ferguson 2011). We need to recognize that college isn’t the best choice for everyone. Instead, we need to create fulfilling and engaging educational pathways for those students who would benefit most from focused and valuable technical and vocational education programs in high school—not as a last stop for those who are failing, but as an aspirational achievement.

The idea of differing high school curricula depending on future goals is not new. The historical perspective gives reason to be cautious—alternative pathways bring to mind the “tracks” that in the past were racially or socially constructed in ways that were detrimental to students and to society. As far back as 1918, the NEA “Cardinal Principles of Secondary Education” endorsed different

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curricula for different students. In the 1930s schools tracked students using intelligence tests that are now known to be highly culturally biased. In the post-WWII 1940s, the GI bill sent many more people to college than had gone in the past, and shed light on the failure of high schools to adequately prepare students for advanced education. However, the 1960s social movements took schools in the direction of developing a more relevant curriculum at the expense of core academics. Today's standards movement comes back around to focus in on core academics. Yet, from the standpoint of workforce preparedness, will this resolve the problem of students leaving high school without the communication, critical thinking, and problem-solving skills employers are looking for?

Perhaps. The Common Core does emphasize process standards, those habits of mind and learning that contribute to critical thinking and problem-solving skills. In the description of these standards its users are reminded to “attend to the need to connect the mathematical practices to mathematical content in mathematics instruction” ([www.corestandards.org/Math/Practice](http://www.corestandards.org/Math/Practice)). Meaning, the *content* standards and the *process* standards must be intertwined. Yet, in the face of the hundreds of content standards, it is easy for schools and educators to lose focus on process, the area that could provide students and their future employers with the biggest payoff.

By developing deliberately different curricula for students headed toward college and those who are not, schools can focus students on the content they really need, with emphasis on process—communication, critical thinking and problem solving. Students who are not going

directly on to college do not need to demonstrate proficiency in all the Common Core's high school mathematics content. Instead, these students need technical and nontechnical career training and financial literacy skills that will serve them immediately upon graduation. Despite the reality that the majority of Maine's youth will find jobs in such fields, only a small minority actually get exposure to vocational education in high school.

Finding equitable methods to guide students toward a vocational or a college-prep path through high school is clearly a tricky undertaking. We need to ensure that any sort of tracking of students into interest or job-related high school programs is not based on racial, ethnic or socioeconomic factors that inadvertently group students unfairly. With the focus on the job market of the future, it should be the goal of society to find an equitable way to focus individuals on finding their most suitable pathway to reach their strongest economic potential.

Educators have a natural bias toward higher education—a factor that leads many to unintentionally place a higher value on college than today's workplace statistics warrant. In an age where many students emerge from a four-year college program with staggering student loan debt only to find few job openings, is it responsible to promote college as the ultimate goal for everyone? Progressives have argued that we must educate the child in order to uncover their interests and curiosity.

With longer life spans and an expectation of multiple careers, perhaps this approach needs to be adapted to teach the child how to uncover their interests and curiosity. A person may be ready to commit to an expensive education for

career preparation at 18, 25, 35 or older—in the meantime, they will work at some productive occupation for which they need to be prepared. To remove the stigma that vocational education currently enjoys in many Maine high schools, educators must begin by choosing to see vocational education as a valuable educational option.

Students will be more successful in high school if they feel they are on track toward a successful future role in society. Given that the majority of those roles require no college degree, it makes no logical sense to direct everyone toward college without regard for their capabilities and interests. If John Dorrer's assessment is correct, by attempting to get all students ready for college as the primary model of successful post-secondary activity, educators have failed to get them ready for today's economy. To address this problem, as early as middle school, educators, parents, and students need useful ways to approach the discussion of what a student's future interests are, what their capabilities are, and how energetically they wish to fill any developing gaps. All students should be exposed to vocational training at the middle school level to help them begin to develop a sense of the future. If a student's capabilities, interests, or motivation do not mesh with the rigors of advanced education, then students should pursue internships, vocational training, and certificate programs as a viable and respectable alternative to attending college.

To allow for changing interests and maturity of vision, schools can provide bridges between programs for students to change pathways. These may include summer or after-school programs to help students catch up on needed basic skills, either academic or vocational, missed by

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being in the alternative program. As educators, we should focus on the process standards of the Common Core to encourage the problem-solving, communication, and critical thinking skills our employers and colleges need. Finally, we must encourage students to think about their future in stages—a decision not to attend college now does not preclude it in the future. It just may ensure that the investment pays off both for them and for society in the long run. 🐼

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