The Fallacy of Raising the Bar, Part 2

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This is part two of a two-part piece. Part one can be found here. *[1]*

Changing STEM Standards to Fit the Problems

I think before making a decision on new standards for all students, it is worth taking a hard look at each of the three student groups in terms of what they are willing or capable of doing before we raise the bar.

Below Basic or Dropouts

Let's begin with the problems of the many public high schools in poverty zones. These problems are most severe in the group labeled below basic or dropouts. This group of students is dominated by inner city schools and poverty-stricken regions.

A good example in my hometown of Portland, OR — Roosevelt High School. Both the city and the state have introduced many reforms (including raising performance standards), which did not appreciably improve scores. At Roosevelt High School, almost 80 percent of the students qualify for the federal free and reduced meals program, and almost 25 percent meet the federal definitions of homelessness. A survey found that 34 percent of the students have a parent who is currently or was previously incarcerated, and 29 percent of the students say there isn't enough food at home.

Have you ever asked yourself how in the world teachers ever got trapped into teaching kids who suffer from families with mental illness, substance abuse, hunger, homelessness and parent neglect? We are making teachers responsible for societal and poverty problems, and all of the reforms, and raising of standards is not going to help the students and teachers who must first deal with these problems.

Elizabeth Walters, a public school teacher in Louisiana, knows the problems of the basic dropout group of kids. During a rally outside the legislature in Baton Rouge, Walters said, "Perhaps most importantly, one of the best ways to improve public education would be to work to alleviate those factors that are beyond the teacher's control, which affect the student's ability to learn. They are some of the factors that led to Louisiana's dismal Kids Count rating — unemployment, poverty, violence, crime rates, family instability, childhood hunger, access to health care."

Nora Lehnhoff is the Social Services program manager for Roosevelt High School and right in the middle of all student problems. Her background is in social services, not education, and she has worked for community-based organizations (CBOs) in the Portland area for 30 years.

Before Lehnhoff was hired, Roosevelt had the lowest graduation rate in the state

and very poor performance scores. The Portland Public School System had tried all kinds of reforms, such as training on educational equity, classroom management techniques, standards-based teaching and implementation of professional learning communities.

Lehnhoff convinced the school to take a different approach that addressed the socio-economic problems of the students, first, as a means to improve proficiency standards. She recruited outside partners to have offices in the school to address drug and alcohol, mental health, daycare and other issues, and coordinators to help homeless students, or arrange liaisons to food banks, shelters and churches. She has also arranged for both food and clothing donations, so that disadvantaged kids can have enough to eat and clothes for free. The outside partners both fund their programs and offer their services at the high school — these services are not in the school budget.

Since implementing these social services, the drop-out rate has decreased, while attendance and test scores have risen. She feels that every school that has these kinds of socio-economic problems should probably have a Social Services director who can find the resources and partners to address these kinds of problems. Lehnhoff asks why is it that teachers inherited all of these social problems, as well as their teaching duties, and they are held accountable for improving education and test scores regardless of the problems of the students?

Introducing a new reform, such as STEM learning to this school would be like raising the bar of the high jump to 6 feet for everyone who wants to graduate. It might be an admirable “stretch goal” for all students, but doesn’t answer the question of what to do with all the kids that cannot clear the new height.

This does not mean that many of the students could not learn STEM concepts. It means that raising the bar and introducing a new concept like STEM learning isn’t going to make a difference until something is done about socio-economic problems for schools like Roosevelt.

General Track Group

The second major group of students is the general track students who are doing just enough to get through high school and get a diploma, but are not easy to define. They do get their high school diploma, but they generally do not meet state standards, and do not have the grades or classes to qualify for a four-year university. About 40 percent of the general track students will try the community college system, and the other 60 percent will go to work or maybe the military. Many of these students who try community colleges drop out in the first year, and most of the people who go to work end up in low-paying service jobs because they lack skills.

This group does not generally know during high school what they want to do after graduation, so they don’t make use of high school by focusing on the courses that will help them. A report from the National Research Council found that 40 to 60 percent of all high school students are disengaged. This is the defining problem of

the general track group of students who often are not enthusiastic or interested, and are bored much of the time. They have trouble seeking assistance, participating in class activities and completing their work. They do not want to take difficult classes because they want to just do what it takes to get the diploma.

The problems of boredom, lack of interest and disengagement will still be a problem in the general track group regardless of what STEM reformers think they will do implementing their new curriculums. Many of these disengaged students will not learn enough to handle the STEM subjects and may need remedial courses before taking more difficult courses. I think it is safe to say that raising the standard (or bar) on this group is not going to work unless the reformers can find new ways to get these students engaged.

Another important thing to keep in mind when implementing new reform is to have a plan B. Manufacturers are very interested in students who are good at math, reading and science, but they are also interested in people who have specific skill sets such as computer-aided design (CAD) drawing, programming, machining, etc. It might be more practical to get the students to focus on a vocation and specific skills early on for those who do not or cannot take STEM classes, along with the remedial classes that the skills require.

This can be done by suggesting vocations in terms of a job description and how much the person is paid per hour as an entry-level employee and after five years in the job. I know a young girl who is studying nursing and one of the primary reasons she chose this career in high school is because she found out that they can make $30 per hour after receiving their certification.

Knowing potential earnings might motivate students to take classes that will help them in their goal rather then taking the easiest classes to get a diploma. This plan B assumes that STEM learning may not work on many of the general trackers, and the alternative would be to use specific vocations to help them to do better in high school and to get a better job.

University Track

The last group is the university track students who do so well in their exams, grades and classes that they qualify for a four-year university. What can you say about these students? They are motivated, engaged, interested and seemingly able to master any material you throw at them. I think this group will easily adapt to any kind of new standards or curriculum changes introduced by the STEM enthusiasts. This group is already taking the hardest classes, and 809,000 of them are taking international baccalaureate (IB) college-level classes.

If you want to replace IB classes with STEM curriculums, you will have to offer the same incentive, which is college credit. If they are not enrolled in IB classes, but have achieved all of the standards to be accepted into a four-year university, the solution seems obvious. In their case, you simply have to change the standards and curriculums required by the universities to include STEM learning concepts

I accept the fact that a tidal wave of educational reform is coming at schools, teachers and students, and it is called STEM. The premise of this article is that before demanding that all 16.3 million high schools students participate in STEM, it might be wise to do some quantitative research that defines the problems and obstacles of various groups of students.

In 1971, the research of a Yale psychologist, Seymour Sarason, argued that school reform efforts were bound to fail if they ignored cultural problems, and only focused on altering structure and curriculum. I think Sarason has been proven right on this assumption over and over again in the last decade.

I must repeat, as a retired manufacturer, I love the idea of getting students to study more science, technology, math and engineering. The more the kids know about STEM subjects, the better chance that we can grow the U.S. manufacturing industries and be more competitive. But I have some serious doubts as well. In fact, it may be better to require all students to take a test, or complete basic reading, writing and mathematic courses as a pre-requisite to getting into STEM courses. Enforcing a one-size-fits-all approach for all students and groups will probably not work for many students and schools, and proponents of STEM learning should ready with a plan B alternative.

What's your take? Please feel free to leave a comment below! Michael P. Collins is the author of the book Saving American Manufacturing*. You can find more related articles on his website via* www.mpcmgt.com *[2].*

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