As a leader at Hypertherm, I see far too many high school graduates who do not have the basic math skills required to succeed in advanced manufacturing positions. Like many organizations around the state, we need critical thinkers and people capable of solving problems that require a strong foundation in math.

We have some of the best teachers and schools in the nation; so what's getting in the way of having a skilled workforce? Many of us are seeking to understand this complex question. It extends far beyond the classroom and our excellent teachers. I believe businesses need to step up and partner with educators and educational systems. Educators alone cannot solve the problem.

Workforce development is an important matter to me, and thus I have taken a personal interest in the state standards. I believe the two are connected. Because of the gap in skills found among Hypertherm job applicants, we have found it necessary to create our own specialized training program with help from the River Valley Workforce Institute and in partnership with River Valley Community College. We immerse new associates full time for nine weeks in learning basic math, algebra, geometry and trigonometry. They apply their new learning in ways that mirror their upcoming job responsibilities and earn college credit as well.

Actually, they demonstrate achievement of stated outcomes, similar to the Common Core Math Standards. These are rigorous standards that focus on expectations — evidence-based outcomes that are aligned with college, career and citizenship requirements.

For example, let's look at a specific Common Core fifth-grade standard that introduces the Cartesian coordinate system — x and y coordinates. The standard requires fifth-graders to plot points in a two-dimensional space. This is a basic required competency of all machine operators at Hypertherm. Understanding the coordinate system is necessary to operating a CNC machine (computer numeric controlled) and to plotting x and y points on various pieces of inspection equipment. However, it has been our experience at Hypertherm that many of our students require substantial refresher training in this and other basic math concepts prior to joining the company. Imagine being introduced to this concept in fifth grade and then building on this knowledge in subsequent years, as is the design of the Common Core standards. And imagine as a student seeing this concept come to life in the workplace. I am hopeful that students' preparation for the workforce will improve as more and more New Hampshire students complete their elementary and high school education having been exposed to the state standards adopted in 2010. The Department of Education and hundreds of New Hampshire teachers spent years planning for the standards. The voice of New Hampshire teachers is heard all through the new standards. The Common Core Standards do not dictate how to teach — they do not define curriculum. Instead, they provide a roadmap for what students need to know and demonstrate in each grade from K-12. The standards empower teachers to do what they do best — create their own lesson plans — and share best practices across all school systems.

They also respect the way children learn. Teachers can modify the curriculum to adjust to the learning styles of their own students. I imagine a future with exciting new pathways to education, pathways that provide contextual learning experiences such as Extended Learning Opportunities (ELO's) and rigorous and robust academic programs through our Career and Technical Education Centers.

These pathways will honor the Common Core while providing unique ways for our students to demonstrate learning outcomes aligned with college and career requirements. They will make the link between academics and the skills students need to be successful in the workplace.

But this can't happen in a vacuum. The business community needs to help create these pathways and help heighten
awareness of the constantly changing needs in the workplace. We owe that to our future workforce. While the teachers and administrators I talk to are committed to the new standards and see them as a big step forward for their students, not everyone agrees. There has been public criticism and attempts to convince New Hampshire to reconsider its position. Five bills in the state Legislature have aimed to change or even eliminate the standards and the assessments connected with them. That's unfortunate.

Getting the new Common Core State Standards into our classrooms is an important step we must take for our children. Our students will become stronger problem solvers and critical thinkers — better able to make sense of the world around them. And they will be prepared for rewarding career opportunities in our New Hampshire companies. Change is difficult. I want to thank our New Hampshire teachers and administrators for their hard work in putting these improved standards to work for our students.

*Barbara Couch is vice president of Hypertherm, an Upper Valley advanced manufacturing company that designs and manufactures equipment for cutting through steel.*