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Redefining CTE: Seizing a Unique Opportunity to Help the "Neglected Majority" Become World-Class Students, Workers and Citizens

By Dan Hull, President and CEO, CORD

U.S. public education is caught up in a tug of war between the need for globally competitive workers and the demand for higher academic achievement. Career and technical education (CTE) has the potential to get the two sides pulling in the same direction toward a common goal. At the same time, CTE is in a precarious position and must reinvent itself, soon, if it hopes to survive. The situation calls for sweeping changes, for all practical purposes a "new system," in which teachers, including CTE teachers, change the way they go about their business every day.

In the current climate, CTE is in danger of being pushed further to the sideline or even eliminated. While some CTE programs do an excellent job of preparing students for the future, CTE is still widely viewed as a "dumping ground" for academically struggling students (and therefore a way for our education system to hide its "failures"). The No Child Left Behind (NCLB) legislation does not specifically call upon CTE to play a role in education reform. If CTE expects to survive in an NCLB-driven educational world, its proponents must step forward, very soon, and make the argument (supported by data) that CTE can play an essential role in supporting NCLB?by reducing dropout rates, improving academic achievement, and encouraging and preparing more students to enter and be successful in postsecondary education.

Improved academic performance of all American students is a worthy and achievable goal. Americans want to be first, not last. But the Third International Mathematics and Science Study (TIMSS) scores in the last two decades indicate that our high school students rank near the bottom of the international heap in math and science. (See http://nces.ed.gov/pubs99/1999081.pdf for highlights.) Data on literacy are no less alarming. States have responded by going "back to the basics," increasing the number and rigor of required math, science and English classes and initiating high-stakes tests to benchmark schools and establish uniform promotion and graduation requirements. In many schools, if students are lagging in math, they are placed in supplementary math classes in the hope of bringing them back to grade level.

One result of going "back to the basics" is that fewer elective courses are available in secondary school curricula?which means fewer opportunities for students to select CTE courses.

The way things currently stand, CTE would never be looked to as a means of improving academic performance. CTE has traditionally been regarded as a place for students who couldn?t "cut it" academically, and most existing CTE courses are designed to work around rigorous math and science rather than reinforce them. The way to make CTE an essential tool in teaching "basics" is to redesign CTE courses (and the way they are taught) so that they help students learn math and science by showing students the uses of math and science.

The other competing force in the educational tug of war is globalization. Whether they like it or not, more and more American businesses are finding themselves in competition with comparable businesses halfway around the world. The same applies to individuals. It is no longer enough for American workers to be competent. To be globally competitive, they must be so good at what they do that employers in this country would rather hire at home?incurring relatively high labor costs?than ship jobs overseas to save money. A large part of the responsibility for meeting the challenges of globalization falls to our educational system, wherein our future workforce lies.

The globalization side of the tug of war favors CTE: It says that the need for career focus in education is urgent. However, it doesn?t say we need more technical skills training per se. Since as far back as the 1991 SCANS report we?ve known that American workers of the future will need a solid foundation in basic skills (reading, writing, science, math, communication), thinking skills (reasoning, thinking creatively, solving problems, making decisions), and personal qualities (personal responsibility, self-management). The SCANS report went on to say that "global workers" must be able to productively use five things: resources, interpersonal skills, information, systems and technology. To date, CTE has been somewhat successful in integrating technology skills into its curricula, but evidence of progress in other areas has been spotty at best. All of which is to say that, while global competition in the marketplace calls for a sharper focus on career preparation via CTE, it does not call for a ramping up of conventional voc-ed.

We don?t need more of the same. We need something different.

How do we get from here to there?

So how can we get everyone pulling in the same direction when there seem to be two competing goals?raising academic achievement and improving job readiness?

The first step is to realize that the gap between those goals is really an illusion. Every student needs a good academic foundation, and every student should be encouraged to give serious thought to his or her future in the workplace. There is no inherent conflict between the two. In fact, they are mutually supportive.

Given that in today?s world a strong academic foundation is essential to success in the workplace, helping students to build that foundation is an essential part of career education. Similarly, when CTE teachers show students how math and science apply to their occupational interests, the net effect is not to distract from the students? focus on math and science but to sharpen it.

By now you will have noticed that what I am talking about would require integration of

CTE and academics on an unprecedented level, and it would require buy-in and participation on the part of everyone. If CTE expects to be a player in the new millennium, CTE teachers must learn to "infuse" high-level academics into their courses, not just now and then but routinely. Academic teachers should be willing to do their part as well, presenting their subjects in the context of how information is used outside the classroom. Making a change of this scope would require changing what we teach, how we teach, and even where we teach?in other words, it would require a new system.

Some readers may find the systemic changes being recommended here a little unsettling, since CTE teachers would be called upon to do things they were not trained to do. But the current situation should be viewed as an opportunity. Our nation needs the new CTE, and "neglected majority" students will find it essential for lifelong career success. Rebuilding CTE for the new millennium is a manageable undertaking as long as certain key facts are kept in mind:

? Curriculum in the new CTE will not be equipment based; it will be knowledge based.
? In the coming years, most workers will require education beyond high school.
? All workers will need high levels of useful academics.
? All high school students will be taught to the same standards.
? The new curriculum must accommodate future workplace changes.

Another reason for optimism is that some of the necessary groundwork has already been laid. Our country?s 13-year experience with Tech Prep as a change agent for CTE has shown us a great deal. For instance, we now know more about how "neglected majority" students learn (i.e., "in context"), and we?ve gotten better at showing them how they will use what they learn. We?re also sending more and better-prepared high school graduates to higher education, and we?ve identified the best career options for students who can meet the demands and challenges of the new secondary-postsecondary CTE.

The situation is by no means bleak, but CTE must act quickly if it wants to avoid becoming a relic of a bygone era.

A Systemic Approach to Creating the New CTE

To create the new CTE system, we must make coordinated, quantum-leap changes in three areas: what and when we teach, how we teach, and where we teach.

As I describe each area, I will also refer to initiatives in which these changes are being successfully implemented.

Changing *what* and *when* we teach: The new curriculum frameworks

The backbone of the new system would be what I call curriculum frameworks. Curriculum frameworks consist of three elements: (1) recommended grade-9?14 course sequences that satisfy requirements for graduation and entrance into postsecondary education and training; (2) course descriptions, with prerequisites, recommended grade levels, credits and standards to be achieved by students; and (3) sample textbook references and computer hardware and software requirements.

Curriculum frameworks reflect academic, employability (SCANS) and technical (skill) standards as well as entrance requirements for postsecondary curricula.

The New Curriculum Framework for Workforce Education:

- **Technical Specialty: Grades 15-16 and 13-14**
  Advanced Technical Skills
  Advanced Academics
  Worksite Experience
- **Technical Core: Grades 11-12**
  Technical Skills Within Cluster
  Advanced Academics
  Work-Based Learning
- **Foundation: Grades 9-10**
  Academics in Contest
  Career Experience
  Basic Work Skills

Curriculum frameworks divide course sequences into three two-year layers, each involving greater concentration on the student?s technical specialty than the one before (see above). The first layer, called "foundation," encompasses the ninth and 10th grades, during which students study contextual academics (math, science, language arts, other), begin to explore career options, learn employability skills, and learn to apply technology skills to their fields of interest. All CTE-related work is open-ended in that it does not limit student options.

The second layer, called "technical core," encompasses the 11th and 12th grades, during which students study increasingly advanced contextual academics, acquire knowledge and skills for the technical core of the fields they plan to pursue and participate in work-based learning experiences such as job shadowing and summer internships. Twelfth graders are usually encouraged to take at least one dual-credit postsecondary course to get a head start on their college freshman year. Upon completion of this layer, students are employable in their chosen fields but will require additional education and training for long-term career success.

The third layer, called "technical specialty," encompasses the two years required to obtain an associate degree. It focuses on the student?s career area in depth but allows for and encourages continued work in academic fields and the humanities. Students who complete this layer are qualified for employment in their chosen fields or, if they choose, admission to baccalaureate degree programs.

The beauty of curriculum frameworks is that they not only give students a sense of direction (a career pathway) but also provide great flexibility. By the end of the 10th grade, students have taken only two CTE courses?one on using software in their chosen fields, the other on employability skills?both of which every student should take. Even by the time of high school graduation, most of the courses students have taken can lead in several directions, including employment.

The new "technical core" curriculum?The new system would call for a "technical core" curriculum designed to give students what I call "focus, foundation and context." It would give them focus in the sense that everything they do in high school, especially during the 11th and 12th grades (the "technical core" years), would lead in specific directions chosen by the students themselves. All the credits earned would pertain to carefully thought out plans that make sense to the students and their parents.

The new technical core curriculum would give students a foundation in that it would

enable them to acquire broad employability skills, rudimentary technical skills pertaining to the careers they plan to pursue and?most important of all?the solid academic skills that would enable them to go in just about any direction they want.

And finally, the new curriculum would give students context by helping them make connections?between new ideas and things they already know, between abstract principles and how those principles are used in everyday life and in the workplace, and between academic disciplines.

One potential source of anxiety about the new technical core curriculum is that it might take time away from preparation for standardized tests. This anxiety is natural, since teachers have no choice but to deal with standardized tests. But the new technical core would, in fact, be thoroughly standards based. It would meet not only employability and technical skill standards (as specified by businesses and industries) but academic standards. (Implementation of the system would vary from state to state to ensure that state standards are met.) Moreover, the new technical core would raise academic performance across the board by increasing students? interest and motivation.

A unique contribution of CTE courses in the new technical core curriculum would be that they would offer opportunities for interdisciplinary problem solving, in which solutions draw knowledge and skills from more than one academic discipline. This would present both an opportunity and a challenge to CTE teachers because it would call for a team effort in which they would collaborate with academic teachers.

Team teaching, especially across disciplines, requires more preparation than conventional teaching, but the extra effort pays off. In interdisciplinary problem solving situations, students are more likely to have opportunities to expand their critical thinking skills, tackle open-ended questions, and explore higher levels of math, science, communication and the humanities.

The team teaching envisioned for the new system represents something new for most teachers and would require professional development. But the obstacles are not as formidable as they might seem, and the rewards would be great.

In the new system, CTE teachers would be called upon not only to teach differently but to assist in the development of the curriculum. This would represent a concerted effort involving academic teachers and college faculty members as well.

A recent initiative in Tennessee shows great promise in the development and implementation of the new curriculum frameworks.

A Course Sequence for Tennessee's Manufacturing Technology Curriculum Framework

Grade	English	Mathematics	Science	Social Studies	Health, Computer and Elective	Cluster
9	English I	Algebra I	Biology		Health/PE/ Wellness	2 Career Management Success
10	English II	Geometry		U.S. History	2 Programming Logic or other Computer Science	1 Engineering Design and CAD
11	English III	Algebra II	Chemistry	World History		3 Principles of Machining and Manufacturing
12	English IV *or* Applied Communication	*Optional:* 4th Year of Mathematics	Applied Physics	1/2 unit each U.S. Gov. and Economics		Manufacturing Applications
13 1st Semester	English Composition	College Algebra and Trig.	1 Engineering Design	Orientation	2 Computer Applications in Manufacturing	3 Principles of Machining I
13 2nd Semester	Humanities Elective		Advanced CAD	Communication Elective	Technical Elective	Materials and Manufacturing Processes
14 1st Semester		Statistical Process and Quality Control	General Physics I	Principles of Economics	Electromechanical Devices	Technical Elective
14 2nd Semester		Metrology and Quality Control	Technical Elective	Tool Design	Technical Elective	Technical Elective

1, 2, 3: secondary courses eligible for postsecondary (dual) credit, allowing early graduation or allowing opportunities for advanced technical electives

Restructuring Secondary Education Through Curriculum Frameworks in Tennessee

In 1999 the Division of Vocational Technical Education (VTE) of the Tennessee State Department of Education (SDE) came to the realization that its vocational standards were outdated and in dire need of revision if students in the state?s manufacturing, construction and transportation programs were to be prepared for the job market and postsecondary education. Clearly, remedying the situation was going to require thinking "outside the box." With the help of CORD, VTE staff members polled Tennessee industry leaders (using surveys, interviews and site visits), reviewed national standards, and examined Tennessee graduation requirements for the university and technical paths.

The outcome was a new set of 9?12 curriculum frameworks in manufacturing, construction and transportation. Each new framework outlines recommended course sequences that satisfy curriculum requirements for graduation from high school, as specified by SDE; requirements for postsecondary credit for entrance into colleges and universities in Tennessee; and requirements of business and industry as stated in

national standards and as determined through an employer-needs assessment. Each framework also includes a detailed course description for each technical course specified. The course descriptions identify standards, learning expectations, performance standards and sample performance tasks as prescribed by SDE requirements.

A group of core teachers assessed the validity of the frameworks, compiled notebooks of teaching resources, and served as trainers at regional workshops designed to familiarize colleagues with the frameworks and available resources.

In the first implementation year, about half the new courses were successfully implemented. The core-teacher model worked well; during summer 2003, a second group will work with colleagues across the state to orient them to new frameworks in 28 courses. Some teachers will participate in professional development designed to help reinforce mathematics through CTE. The new curriculum frameworks represent a big change for CTE teachers (as well as administrators), but teachers who have adapted and embraced the idea that CTE students can perform at levels consistent with postsecondary education requirements are enthusiastic proponents of what should be the new national outcome standard?entry into postsecondary education and the workplace. As Tennessee teachers have discovered, the requirements for entry into both are the same!

(Becky Kent, Assistant Commissioner, Division of Vocational Technical Education, Tennessee Department of Education)

Changing *how* we teach: Integrating academics and CTE

CTE has the potential to instill high-level academic skills and prepare students for the workplace?but that potential will not be realized if we stick with conventional teaching practices. The key to fulfilling the promise of CTE is contextual teaching.

Contextual teaching is a proven concept that combines excellent teaching practices with the most recent research in cognitive science. It is effective because it is based on recognition of the fact that people learn most efficiently when information is presented in familiar contexts and in ways that show how the information is useful.

Contextual teaching facilitates learning by using five teaching strategies collectively called REACT:

- Relating?Learning in the context of what is already understood or believed
- Experiencing?Learning in the context of exploration, discovery and invention
- Applying?Learning in the context of how information is used
- Cooperating?Learning in the context of sharing, responding and communicating
- Transferring?Using knowledge in new contexts and novel situations

CTE pioneered efforts in contextual teaching as far back as the 1980s with applied academics curricula. Through Tech Prep, contextual teaching evolved into the REACT strategies, which are based on applied teaching methodology, constructivist learning theories and other recent advances in cognitive science.

Contextual teaching in mathematics and science is growing in appeal and practice. Data supporting its effectiveness are available, but more are needed. Success depends on more than good curriculum materials; for most academic teachers, understanding and practicing contextual teaching require professional development.

Until a few years ago, all efforts to integrate academics and CTE were focused on math and science teachers, who were encouraged to teach their subjects within the context of real-world applications. Now it?s time for CTE teachers to "reach across" from the other side by infusing higher levels of math and science into their courses.

As we design and develop the new high school CTE curriculum, which will require higher levels of math, science and communication, an important question will inevitably arise: "Who will teach this?" The answer is that, for the most part, it will be taught by the CTE teachers who have been so successful in the old system. But we will need for those teachers to present new occupational content using more and higher levels of academic content?a job that they were not hired for and that, for many, will require using academic skills that they have not drawn on for a long time. I am convinced that most of our CTE teachers can meet this challenge if they?re willing?and if we provide them the help they will need.

Tech Prep has long touted its benefits in offering creative approaches to curriculum integration, i.e., connecting career-oriented subjects to academic subjects and providing the context for academic learning. But most of our efforts in integration have been to support academic teachers in teaching math, science or English "in context." How have we approached integration from the other end?from building more academics into CTE courses?to use CTE context and motivation to support and strengthen student achievement in math and science? I am frankly embarrassed that, until recently, CORD and most Tech Prep practitioners have neglected this opportunity for real integration and the professional development that CTE teachers need and deserve.

Last year we had an opportunity to work with automotive and math teachers in Michigan to address this issue (see below). The results were astounding! Why hadn?t we been doing this all along instead of criticizing secondary CTE for not changing fast enough? The Michigan experience shows what can be done to "raise the bar" in secondary CTE through professional development.

One other thought on professional development: The new CTE curriculum will require more than one or two in-service days. It will require as many as six days of face-to-face training supplemented by more than 10 weeks of online support. It?s a big job?for all? but I think it?s worth it.

The Michigan Automotive Mathematics Project?Giving CTE Automotive Students an Edge

In recognition of the need for a solid mathematics foundation in CTE automotive training, Michigan?s Department of Career Development (MDCD) undertook a project designed to help CTE teachers in the state integrate higher levels of mathematics into the automotive technology career cluster.

MDCD chose eight teachers to participate (four in mathematics, four in automotive CTE). The project team met during the spring, summer and fall of 2001 and again in the spring of 2002 to develop and refine exercises in which students use higher-level math to solve problems related to automotive technology. (For example, in one exercise, students are asked to explore the relationship between boiling point and percent antifreeze coolant content; see below.)

Writing and Solving Linear Equations in Automotive Problems

Problem

The chart below shows the relationship between the boiling point of coolant and the percent antifreeze content of the coolant. You have tested a car?s coolant system and found that the coolant is 20% antifreeze. The car will hold 12 liters of antifreeze when full.

Percent Antifreeze in Coolant	Boiling Point of Coolant (×F)
10	213
20	214
30	217
40	223
50	228
60	236
70	245
80	258

1. What is the boiling point of the coolant in the car with coolant containing 20% antifreeze?
2. b. If you want the boiling point to increase to 245×F, what percent antifreeze should the coolant be?
3. c. How many liters of coolant should you remove from the system so that replacing by 100% antifreeze will raise the boiling point to 245×F?

Solution

1. a. Reading off of the chart, the boiling point is 214×F.
2. b. Reading off of the chart, the percent of antifreeze is 70%.
3. c. Let x = number of liters of coolant removed and added. Account for all the antifreeze: Original Amount ? Amount removed + Amount added = Final amount
   0.2(12) ? 0.2x + 1.0x = 0.7(12)
   2.4 + 0.80x = 8.4
   0.80x = 6
   x = 6 = 7.5 liters
   0.80

ACT Work Keys Level: 7
NATEF Task(s): VII.C.5; VII.C.6

To ensure workplace relevance, the exercises were correlated to the eight technical areas recognized by the National Automotive Technicians Education Foundation (NATEF): engine repair, automatic transmission and transaxle, manual drive train and axles, suspension and steering, brakes, electrical and electronic systems, heating and air conditioning, and engine performance.

The team also developed a matrix that correlates the NATEF tasks to the NATEF Applied Mathematics Standards, Michigan?s Mathematics Curriculum Strands and the Michigan

Education Assessment Program (MEAP) High School Test (HST) in Mathematics.

The outcome of the project is a CD containing more than 80 automotive-specific math problems. The items on the CD are linked and cross-referenced in such a way that users can access them via several criteria?NATEF task, NATEF technical area and American College Testing (ACT) Work Keys Assessment Levels. Reaction to the CD has been extremely positive. This year, Michigan has expanded its efforts to include 24 more math and CTE teachers.

The Michigan experience has prompted six more states (S.C., N.C., N.J., Ky., Tenn. and Minn.) to provide this type of training for over 500 CTE/math teachers in a program called Math Enrichment for CTE.

(John Williams, Deputy Director [ret.] Michigan Department of Career Development)

Changing *where* we teach: A new high school delivery system based on career academies

Given the significant changes in what would be taught in the new system, and how it would be taught, the high school would take on an essentially new role. In the new system, the high school would no longer be an isolated institution that treats academic education and CTE as separate enterprises. Rather, it would be part of an integrated secondary-postsecondary collaborative that sees academic education and CTE as naturally intertwined.

The high school in the new system would no longer be content merely to say to students, "Learn this." Rather, it would show students the "why" of their studies, which would in turn increase their motivation and the likelihood of their staying in school and graduating. The high school in the new system would create a "level playing field" by taking a realistic approach to the diversity of learning styles within our student population. The new high school would provide guidance in helping students make informed career plans and, even more importantly, in showing them how their schoolwork will help them reach their long-term goals.

In the new system, CTE would no longer focus entirely on job training as in the past (i.e., hand skills around a particular machine or procedure). Rather, it would take on a stronger academic flavor, which would mean that CTE teachers would no longer be able to meet their responsibilities in isolation from academic teachers.

Ideally, in the new system, students with common career interests would be grouped with teaching teams. (The teams would be especially well informed about the new curriculum because in many cases they would have helped to create it.) Because this arrangement?career-focused student groups and interdisciplinary teaching teams?would take a broad rather than a narrow view of career preparation, it would encourage most if not all students to continue their education and training at the postsecondary level. At the same time, students would have acquired enough career-specific skills by the end of the 12th grade to begin full-time work or work part time while attending college.

The efficacy of this model is already being demonstrated by the many career academies established around the country in recent years, especially those established by the National Academy Foundation (NAF). NAF career academies, which take the form of either magnet schools or "schools within schools," provide high-level academic education within the context of career preparation in particular occupational clusters. NAF

academies are successful because they require adherence to structured, well-articulated curricula, and they provide administrative training and teacher professional development, along with employer-supported paid internships for all students completing the 11th grade.

The NAF system is focused but flexible: Students enter by choice (and, in so doing, declare their intent to pursue a given career cluster), but they can switch to another cluster if they feel that their first choice is no longer the right one, or they can leave the program altogether. NAF academy students who remain in the program stay with their grade-level peers for the entire four years and are usually taught all four years by the same team of academic and technical teachers.

Students in NAF academies are challenged to master high-level academics through courses in which academic concepts are presented in the "context" of the students? chosen career clusters. Students take at least one career-related course every term; they can elect to take additional courses during the junior and senior years, often for dual credit through affiliated postsecondary institutions.

Texas Academy Receives State?s Highest Rating

In 1997, A. J. Moore Academy was founded as a magnet high school in Waco, Texas, a highly diverse community of more than 100,000 residents. A. J. Moore was the first high school in the district to receive the state?s highest rating of "exemplary." To earn the rating, at least 90 percent of students had to pass each of the three areas of reading, math and writing on the Texas Assessment of Academic Skills (TAAS). A. J. Moore students passed at the rate of 96 percent in reading, 94 percent in math and 96 percent in writing. The percentage of students passing all three tests was 91 percent. Passing rates also had to be 90 percent or better among black, white, Hispanic, and economically disadvantaged students. A. J. Moore passed in each category.

Dropout rates were also used in calculating the school?s rating for the "exemplary" honor.

About the academy?A. J. Moore Academy has over 600 students enrolled within three clusters: business, engineering and information technology. Students in area middle schools are counseled about careers in the three clusters and then given the opportunity to enroll in the academy prior to entering the ninth grade. In the ninth and 10th grades, students take core academic courses and one cluster-specific course per semester. The cluster-specific courses cover basic work skills; students must also complete 10-hour worksite learning activities. During the 11th- and 12th-grade years, students take one or two courses in the common technical cores of their clusters. The summer following their junior year, students participate in 10-week paid internships in their chosen fields. Twelfth-grade students are encouraged to take dual-credit technical courses at local two- and four-year postsecondary institutions that partner with the academy in facilitating transitions to higher education.

(Debra Bishop, Principal, A. J. Moore Academy)

NAF academies smooth the transition to college. In the more than 350 NAF academies, more than 90 percent of graduates transition to postsecondary education and training after high school graduation; among students who make that transition, only six percent require math remediation.

The new system could encourage transforming area vocational schools (BOCES, ROCS, etc.) into career academies. Area vocational schools are typically 11th- and 12th-grade centers that students attend for half days to receive skills training in particular occupations. Academic instruction is usually provided by the "sending school" during the other half day. (Students may waste as much as two hours a day commuting between the vocational school and the sending school.) In this arrangement, it is difficult, if not impossible, to coordinate academics and technical instruction.

In some states and localities, career centers provide both academic and technical instruction in a full-day format. These centers should consider the new curriculum for the full four years of high school, focusing on one or more career clusters. In comprehensive high schools, where vocational and academic programs are co-located, the new system would foster the creation of "school-within-a-school" career academies based on career clusters.

Conclusion

In this article I have suggested that our CTE system needs to make significant changes? in what, how and even where we teach. I have also suggested that those changes are so fundamental that they would result in what amounts to a "new system." The keys to the success of that system would be thorough integration of academics and CTE at every level, the development and implementation of contextual curricula and curriculum frameworks, and widespread adoption of career-focused learning communities such as career academies.

I am convinced that the new system could benefit any student, but especially students in the middle 60 percent, which I call the "neglected majority." As educators, we should feel a burden to do right by students in the middle, for three reasons: (1) So far they have not been very well served. (2) That?s where most of our students are. (3) They will be the backbone of the next generation of American workers.

Most "neglected majority" students are far more capable than they are able to demonstrate in settings in which conventional, lecture-style teaching is the rule. Most are contextual learners and would flourish in the new system, in which contextual teaching would be the rule.

Skeptics will claim that the new system would (a) force high achievers into occupational programs that don?t interest them and (b) have a "dumbing down" effect on the general academic climate of our schools. But neither claim is true. The new system would allow students who so choose to opt out of CTE altogether (with perhaps the exception of a couple of courses on employability and computer skills, which everyone needs), and it would raise the overall academic climate of our schools.

The new system?in which CTE teachers would play a leading rather than an auxiliary role?would not waste a moment wringing its hands over the fact that some students just don?t try or seem unwilling to "get real" about the future. Rather, it would meet people where they are by helping them to leverage their strengths into useful knowledge and skills that will serve them long into the future.

The new system would strongly support the goals of No Child Left Behind by giving all students?but especially those in the "neglected majority"?focus, foundation and context.

The current educational climate offers CTE a unique opportunity to have an essential voice in leading the educational enterprise toward a common goal of raising academic performance and producing globally competitive workers. But this will not happen unless CTE is willing to redefine itself and insist that its voice be heard.

CTE may still be able to choose its fate. The time to act is now.

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