

**NEW YORK STATE HIGH SCHOOL GRADUATES:
WHAT DOES IT MEAN TO BE COLLEGE AND CAREER READY?**

**APRIL
2012**



1585 Route 146
Rexford, NY 12148
Phone: 518-723-2137
Fax: 518-723-2140
ctetac@spnet.us

CTE Technical Assistance Center of New York: Mission and Purpose

The Career and Technical Education Technical Assistance Center (CTE TAC) of New York assists the New York State Education Department (NYSED) in carrying out its mission of improving the quality, access, and delivery of Career and Technical Education (CTE) through research-based methods and strategies resulting in broader CTE opportunities for all students.

The CTE TAC operates as part of the Successful Practices Network (SPN) under a contract with the NYSED. The CTE TAC increases the capacity of the NYSED to serve, support, and expand CTE across the state.

CTE TAC services are provided to teachers and students in:

- Local education agencies
- BOCES
- High needs school districts
- CTE professional organizations
- CTE student leadership organizations

CTE TAC Work Plan

- CTE data collection and communications
- Networking to strengthen CTE
- Integration of the Common Core State Standards
- CTE program and student leadership expansion
- CTE program approval process
- Best practices in CTE

The Career and Technical Education Technical Assistance Center of NY has made every effort to ensure the accuracy and reliability of the information contained in this white paper. The views expressed are theirs alone and do not necessarily represent the position of the NYS Board of Regents or the NYS Department of Education.

New York State High School Graduates: What Does It Mean to Be College *and* Career Ready?

The Career and Technical Education Technical Assistance Center (CTE TAC) of New York takes a critical look at “college readiness” and “career readiness.” Are they one in the same? Recent developments have blurred this issue. While college readiness is widely accepted, the interpretation and application of career readiness would suggest different skill sets. A call for a clear definition of career readiness and a renewed emphasis on the integration of academic and career and technical education (CTE) programs are the first steps in transforming our current delivery system to a unified concept of college and career readiness. Specific recommendations and a new definition of “college and career readiness” are offered to the New York State Education Department (NYSED).

College and Career Ready Defined

The new vernacular for high school graduates in the United States is “college and career ready.” Educators prepare students literally for life after school — in whatever college and career forms that may take. Yet are “college and career ready” one in the same term? If not, how is “college ready” different from “career ready”? The CTE TAC of New York submits that while the definition of “college ready” is well documented, the term “career ready” is much less well understood. Lack of a clear definition may actually be hindering efforts to expand and strengthen CTE programs as well as offer career readiness skills and concepts to all students.

Confusion over the meaning and application of these terms is prevalent across the country. This issue is particularly perplexing because education leaders across the country have endorsed the new Common Core State Standards (CCSS), which have career readiness as their foundation. Today, career educators need to help define and illustrate what career readiness within the CCSS looks like. (Conrad and Watkins, 2011 p. 8) In short, while alignment and integration of the CCSS and CTE standards continue to gain momentum, career readiness has yet to be well defined and distinguished for its role in preparing all students for their future. *What is it about a career-ready standard that makes it a career-ready standard? What kind of career advantage is expected that a college-ready standard does not provide?*

The CTE TAC of New York believes that *all* students would benefit from a clear definition of career readiness with emphasis on the integration of academic and CTE programs,

- The CTE TAC encourages NYSED to consider enhancing the definition of “college readiness” to incorporate the soft skills found in New York State CDOS standards and 21st century skills, thus enhancing the capacity for students who are “college ready” to be more successful in college than current data indicates.
- The CTE TAC recommends that to be considered “career ready,” students must have proven academic, employability, *and* technical skills in one of the 16 career clusters through an approved sequence of CTE courses.

All students should actually have the skills for career readiness. The shift from vocational education to CTE has enhanced the rigor of CTE programs. The CTE Program Approval process developed by the NYSED (New York State Career and Technical Education, Board of Regents, 2001) has encouraged and supported this transition in CTE programs. Permitting *multiple pathways* to earning a high school diploma will:

- enhance college and career readiness for all students
- improve student access to a high school diploma
- provide more opportunities for students to be successful in college and the workforce after graduation

Given the need for a clear, specific, and highly applicable definition of college and career readiness for 2012 and beyond — one that encompasses all elements — the CTE TAC of New York proposes the following definition:

College and Career Ready 2012: Defined
CTE TAC of New York

To be college and career ready, all students in NY should have preparation in the three major skill areas of core academic skills, employability skills, and technical skills, which will allow them to transition seamlessly into a career and/or a postsecondary credentialing program (e.g., industry training, apprenticeship, licensure, community or four-year college). In order to make this happen, students should:

- develop a college and career plan with academic core requirements and course choices appropriate to the plans
- explore and understand the academic and technical skill requirements for one of the 16 career clusters
- possess the specific academic skills appropriate for and foundational to the career cluster
- be able to apply academic skills in situations aligned to an increasingly sophisticated workplace and society

Giving Career Readiness Its Due

Some recent national and state discussions of career readiness are worthy of a quick recap:

- February 24, 2009: In his Address to the Joint Session of Congress, **President Barack Obama** stated: “I ask every American to commit to at least one year or more of higher education or career training. This can be community college or a four-year school, vocational training or an apprenticeship. But whatever the training may be, every American will need to get more than a high school diploma.” (The White House, 2009)
- 2009: **the National Governors Association Center for Best Practices (NGA Center) and the Council of Chief State School Officers (CCSSO), Achieve, ACT, and the College Board** worked to develop the CCSS in English language arts and mathematics for grades K-12. One of the main goals was to create a “common core of standards that are internationally benchmarked, *aligned with work and post-secondary education expectations*, and inclusive of the higher order skills that students need...” (NYSED, n.d.)
- April 2009: **New York’s Governor and Education Commissioner** signed an agreement to participate in the national effort to develop these voluntary standards.
- September 2009: The first draft of the **CCSS College and Career Readiness Standards** was released for public feedback.
- 2011: **Association for Career and Technical Education (ACTE) Executive Director Janet Bray** addressed a new three-prong approach of academic, employability, and technical skills as follows; **James R. Stone III, Director of the National Research Center for Career and Technical Education**, supports her premise.

The K-12 standards work recognizes that students in the United States are now competing in an international environment and will need to meet international benchmarks to remain relevant in today’s workplace. We are pleased that both college and career readiness have been considered as the standards were developed and view this work as foundational in the effort to address the full range of academic, employability and technical skills that students need to be successful. (ACTE, 2011)

- 2012: **New York State Commissioner of Education John King, Jr.** indicated that while graduation rates slowly improve, college instructors report that 42% of high school graduates are not ready for college work, and employers report that 45% of graduates are unprepared for work. As New York implements its

reform agenda the Commissioner states, “To implement these critical goals, the Regents are looking to leverage every area of strength we have. That’s why the Board and I continue to examine how we can best utilize Career and Technical Education (CTE) programs to further our reform goals and ensure college and career readiness ... CTE is critical to making certain we meet that responsibility. “ (King, 2012)

Still the majority of the rhetoric refers to English language arts and mathematics achievement as evidence of college and career readiness. In his memo to the “College and Career Readiness Working Group” on December 7, 2010, then Senior Deputy Education Commissioner John B. King, Jr. indicated that the issue for discussion is as follows:

What knowledge, skills, and dispositions should students have when they graduate from high school? Should our expectations be the same for all students? The Regents will discuss various possible directions for New York State’s high school graduation requirements and how to prepare the next generation of New York’s students for college and careers. (King, 2010)

The answers to these important questions are still being sought.

The CTE TAC of New York challenges the concept of “college ready” being solely aligned with test scores in English language arts and mathematics. While many students may have had success in these areas, how many of them actually *complete* a two- or four-year postsecondary program on time, if at all? What role did a lack of soft skills play in their college careers, and what role will a lack of career and technical skills play in their lives when no longer in school?

The many simplistic definitions supported by various advocacy groups fail to accommodate the varied nature of the workplace and the different kinds of academic preparation required for successful entry.

James R. Stone III, Director
National Research Center for
Career and Technical Education

The New York State CDOS (Career Development and Occupational Studies) standards and 21st century skills need to be incorporated into a definition of college *and* career readiness for the schools of New York State. Both contain valuable expectations for what students should know and do in the workplace. As Bray stated, we should “view this work as foundational in the effort to address the full range of academic, employability, and technical skills that students need to be successful.” (ACTE, n.d.)

Why is career readiness so important?
The purpose of education is not to prepare students for success *in* school, but to prepare them for success in their lives *after* school.

The Cost of Ignoring Career Readiness

The Harvard Graduate School of Education’s research study, “Pathways to Prosperity” reminds us of our charge. “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, p. 1)

Likewise, Gallup Chairman Jim Clifton discusses the need for this solid foundation in *The Coming Jobs War* (2011). Of the 75 million students enrolled in K-12 education, approximately 30% will drop out or fail to graduate on schedule. Minority students drop out at higher rates than their fellow classmates. According to Clifton, “If this problem isn’t fixed fast, the United States will lose the next worldwide, economic, job-based war because its players can’t read, write, or think as well as their competitors in a game for keeps — their talent doesn’t get maximized. Even more deadly, Gallup suspects that those students’ spirits and hope are being irreparably broken.” (p. 131) Clifton discusses all of the efforts and money put into education through the Bill & Melinda Gates Foundation, *No Child Left Behind*, and Race to the Top grants, “with no improvement yet in learning.” However, he does state that, “... there are a brilliant few who have performed magic at a school here or there, but their solutions have not proven to be scalable.” (Clifton, p. 132)

This issue then raises the question: What are possible solutions to maximizing education opportunities?

Motivate All Students by Instilling Academic Relevance

Clifton suggests that the money is being spent “trying to fix after-the-fact outcomes rather than creating strategies that get at the behaviors and causes.” (Clifton, 2011, p. 133) Moreover:

Gallup has found that kids drop out of school when they lose hope to graduate.... The reason they lose hope of graduating is because they don't feel excited about what's next in their lives. The moment they feel that despair about what is ahead, they start psychologically dropping out. Having no vision or excitement for the future is the cause of dropping out of school.... Gallup scientists have learned that hope predicts academic success and graduation better than grades and test scores do. (Clifton, pp. 133-134)

While Clifton suggests that cities should focus on the dropout rate to enhance their ability to grow jobs locally, this has far-reaching implications for how the education system in New York can enhance students' hope to graduate. The congruence of academic and career and technical education is a necessary component of the high school experience for *all* students because CTE brings relevance to academics and motivates students.

One study suggests that there are three groups of high school students (college prep, career prep, and students receiving little/none of both). “The Underserved Third: How Our Educational Structures Populate an Educational Underclass,” by Regina Deil-Amen of the University of Arizona and Stefanie DeLuca of John Hopkins University, suggests that American education based on “... an ideology that prioritizes ‘college for all’ as a societal-level approach to inequity fails to acknowledge how educational structures induce risk among marginalized populations....” (Deil-Amen and DeLuca, 2010, p. 27)

The first group is exposed to a true college preparatory curriculum and well prepared for success in college and rewarding occupations. **The second group** is relatively prepared for labor force participation through their involvement in either high school or postsecondary career and technical education (CTE) programs (Levesque et al., 2008). **A third group** constitutes a virtual underclass of students who are neither college-ready nor in an identifiable career curriculum. This “underserved third” group is likely to depart from high school having taken classes mainly from the high school general curriculum in which they are at risk of receiving low-quality instruction, lower levels of academic preparation, and little to no job preparation or guidance. (Gray and Herr, 2000; Laird, Chen, and Levesque, 2006)

Deil-Amen and DeLuca see the need for college preparation and career preparation for all three groups. As the CTE TAC maintains, *all* students in the system need both forms of preparation. The “college-ready” definition seems flawed since many students do not have the maturity or independent skills to be successful at the college level — both academically and in pursuit of “career readiness” skills. Schools need to offer students with the opportunity to develop those career readiness skills at an earlier age, even in elementary school. CTE programs provide opportunities to apply and practice these skills in a way that the traditional academic programs do not and motivate students to stay in school.

Aim Career-Ready Strategies at Both College Transitions and Work Transitions

Both work and college transitions matter. According to the study by Deil-Amen and DeLuca (2010):

... non-college bound CTE students enjoy some modest gains in labor market outcomes relative to similar students who do not participate (Arum & Shavit, 1995; Kang & Bishop, 1989; Kemple, 2008; Stern, Finkelstein, Urquiola, & Cagampang, 1997; Stern, Raby, & Denton, 1992; Stern, Stone, Hopkins, McMillion, & Crain, 1994). Since the reauthorizations of the Perkins Act (Perkins IV, 2006) and the rise of innovative career academies in urban neighborhoods, students who receive a blend of CTE courses

and work experience fare better than would traditionally be expected.... it is important to reconsider the potential of CTE as not just the low track, but as an effective pathway toward work or further education. In fact, over 70% of CTE students eventually pursue some postsecondary schooling, further breaking the stereotype. (Levesque et al., 2008, p. 28)

However, a large number of students in the third (underserved) group are not ready for college and have not had any specific career training to prepare them to enter the workforce. To address the “underserved” and the other two groups, New York needs to integrate the CDOS standards as intended throughout the K-12 experience. In addition, a student’s career exploration and career counseling opportunities need to start much earlier than in high school.

CTE Case in Point

Saunders Trades and Technical High School

Yonkers, New York

For 100 years, Saunders has been committed to combined vocational (CTE) and academic instruction that provides graduating students with skills for employment and an academic preparation for college. The school is organized into four groups that operate as smaller learning communities: 9th Grade, Technical Sciences, Occupational Sciences, and Vocational Sciences. Core area educators teach 9th grade students using interdisciplinary instruction and flexible scheduling to ensure a firm academic foundation. In addition, an exploratory career program during the first semester of 9th grade facilitates the transition to high school and develops strong study skills and a disciplined work ethic.

Career Readiness Defined Through Three Major Skill Areas

Although the mantra is college and career readiness, most policymakers are not having the conversation about career readiness. The conversation continues to suggest that the skills and expectations for college and career readiness are one and the same. Until New York has a good definition of career readiness that is embraced by all in education, we will not see the types of programs needed to prepare students for success. It is clear to the CTE TAC that the task at hand is to define the “career readiness” component when students face — as Stone suggests, “...the varied nature of the workplace and the different kinds of academic preparation required for successful entry.” (Stone, 2011, p. 2) For example, the mathematics skills required for a nurse would not be the same as those needed for an accountant, an electrician, a plumber, or an engineer. The technical skills needed for these same career areas are also quite different. Therefore, the definitions of “college ready” and “career ready” need to be flexible enough to allow students to pursue common standards (CCSS), while at the same time having the opportunity to follow a career path that aligns with their personal path to success.

Career readiness is not about a job, but a path to success.

Career readiness needs special attention because the postsecondary education and training that will be necessary for jobs of the future are not what is traditionally thought of as the four-year baccalaureate education. At least one half of the projected jobs requiring postsecondary education and training will be middle level skills and will require an associate’s degree or occupational certificate. Often these careers will pay more than those requiring a baccalaureate degree. (Symonds, Schwartz, and Ferguson, 2011) At a minimum, career readiness involves three major skill areas: **core academic skills**, **employability skills**, and **technical, job-specific skills**. (ACTE, n.d.)

- The significance of **academic knowledge** has been well addressed in previous discussions about college and career readiness; however, it is important not to forget in this discussion that all careers require a solid foundation of academic skills, specifically in English language arts, mathematics, and science, and those skills need to be applied to the context of the workplace and authentic situations. *Academic skills — of varying levels depending on the type of job — allow students to master the employability and technical skills that are critical components of “career readiness.”*
- **Employability skills** are the soft skills that the workplace requires. They include such skills as professionalism and a good work ethic, teamwork, collaboration, oral and written communication, ethics

and social responsibility, confidence, leadership, honesty, responsibility, and self-management. Other soft skills that may be desirable in the workplace, also referred to as personal qualities, such as reliability, positive attitude, and problem-solving and decision making are included here.

- **Technical skills** are industry based, may be required for licensure, and represent what a student needs to know and be able to do in the specified career area (career-specific skills). Technical skills also include the use of personal computers to carry out simple tasks. These skills along with the employability skills are seldom purposefully taught in the academic classroom. (ACTE, n.d.; Stone, 2010) Ideally, students will be able to apply technical knowledge and skills in their career area.

CTE Case in Point	
Emerson School of Hospitality, Culinary Arts Program	Buffalo, New York
<p>The high school's CTE program consistently demonstrates attention to ensuring a high degree of rigor, relevance, and relationships. It uses data effectively to track formative and summative student technical and academic growth as well as to measure overall program outcomes. The culinary arts program utilizes an innovative restaurant/banquet component, ensuring that students receive an interdisciplinary program, which reinforces the importance of job skills and building team/customer relationships as critical skills to develop before moving out of high school.</p>	

To round out career readiness preparation, students will benefit from the exposure to career pathways based on labor market realities and opportunities to experience those realities. (Stone, 2010) It also seems imperative that students have exposure to career development and possess a personal career plan. All of these skills can be developed through CTE and related work-based experiences. "Since the majority of careers require a postsecondary credential, high-quality CTE programs incorporate rigorous academic and technical standards, as well as critical workplace skills such as problem solving, communication and teamwork, to ensure career and college success for its students." (NASDCTE, 2010, p. 1) Through these experiences, CTE programs bring relevance and strong interpersonal relationships to academic preparation.

Career Readiness: What Employers Look For

Since William Bridges' *Jobshift: How to Prosper in a Workplace Without Jobs* was released in 1994, the slate of skills that employers look for and still can't find hasn't changed very much. Graduates who possess more rigorous academic and technical skills in the following chart are still in short supply. The CTE TAC has aligned these skill areas with the correlating ACTE career readiness skills area(s) in the right-hand column. When academics are taught through an applied lens, the integration between academic skills and technical skills becomes strong and moves closer to a solid definition of career readiness.

Academic and Technical Skills Employers Seek	Career Readiness Areas
<ul style="list-style-type: none"> • Informational reading, persuasive writing, and oral presentations • Applications of high-level mathematics, including analysis of information and statistics • The ability to think, problem solve, and be innovative in finding solutions • Technical skill precision and accuracy • Interpreting information 	<ul style="list-style-type: none"> • Academic, Employability • Academic, Technical • Academic, Technical • Employability, Technical • Academic, Employability, Technical

Furthermore, to develop a global competitive edge the United States recognizes that science, technology, engineering, and mathematics are driving the future.

The Counsel on Competitiveness (2008) recommends a greater focus on the following skills. Again, the appropriate ACTE career readiness skill area(s) have been crosswalked to the recommended global competitive skills.

Global Competitive Edge	Career Readiness Areas
<ul style="list-style-type: none"> • Integrative ability • Entrepreneurship • Business-savvy service • Computational skills 	<ul style="list-style-type: none"> • Academic, Technical • Employability, Technical • Employability, Technical • Academic, Technical

These career readiness skills areas would seem to differ from purely college-bound skill areas. As a result, CTE will continue to play a significant role in assuring that students can move successfully into increasingly demanding careers. As ACTE asserted:

High-quality career and technical education can ensure America’s future in the global economy through increased student engagement, the innovative integration of math, science and literacy skills, and by meeting the needs of both employers and the economy as a whole. (ACTE, 2006)

Delivering academic skills and knowledge is the responsibility of *both* academic educators and CTE educators; delivering the application of academic skills and knowledge is likewise the collective responsibility of academic and CTE educators. Only through this synergy will students successfully meet the demanding standards to succeed in careers.

CTE Case in Point

<u>Ulster BOCES Aviation Program</u>	<u>Paltz, New York</u>
--------------------------------------	------------------------

A rigorous and relevant, standards-driven curriculum is aligned with a highly effective instructional design that maximizes classroom flight instruction and work-based learning to drive student achievement. Ulster maintains a highly experienced faculty, utilizing a team teaching approach that pairs an English language arts teacher and the CTE teacher.

21st Century Career Readiness for *All* Students

Career readiness needs special attention because the postsecondary education and training that will be necessary for jobs in the future is not what is traditionally thought of as the four-year baccalaureate education. Furthermore, everyone needs to be ever mindful of the fact that “CTE provides a context for improving the rigor of knowledge and skills in public education, but it also provides the opportunities for students in all segments of the population to explore their interests and successfully transition to postsecondary education without the need for remediation.” (International Center for Leadership in Education, 2011, p. 22)

In a labor market that is more demanding than ever before, the definition of career readiness needs to be commonly understood, endorsed, and applied, as well as converged with college readiness. Policymakers must continue to provide opportunities for New York students to be college *and* career ready upon receiving a high school diploma.

References

Association for Career and Technical Education. (2011). Common Core. Alexandria, VA: Association for Career and Technical Education. Retrieved from <http://www.acteonline.org/commoncore.aspx>

- Association for Career and Technical Education. (2010). *What is career ready?* Alexandria, VA: Association for Career and Technical Education. Retrieved from http://www.acteonline.org/uploadedFiles/Publications_and_Online_Media/files/Career_Readiness_Paper.pdf
- Association for Career and Technical Education. (2006). *Career and Technical Education's Role in America's Competitiveness*. Issue Brief. Alexandria, VA: Association for Career and Technical Education
- Bishop, J. H., and Mane, F. (2004). The impacts of career-technical education on high school labor market success. *Economics of Education Review*, 23, 381-402
- Bridges, W. (1994). *Jobshift: How to Prosper in a Workplace Without Jobs*. Reading, MA: Addison-Wesley Publishing Co.
- Clifton, J. (2011). *The Coming Jobs War*. Gallup, Inc.
- Common Core State Standards Initiative. About the Standards. n.d. Retrieved from <http://www.corestandards.org/about-the-standards>
- Conrad, M. and Watkins, L. (April 2011). "Common Core State Standards: Making the CTE connection." *Techniques*, pp. 8-9. Reston, VA: Association for Career and Technical Education. Retrieved from <http://bluetoad.com/publication/?i=70275&p=8>
- Council on Competitiveness. (2008). *Thrive: The Skills Imperative*. Washington, DC
- Deil-Amen, R., & DeLuca, S. (2010). The underserved third: How our educational structures populate an educational underclass. *Journal of Education for Students Placed at Risk*, 15, 27–50. doi: 10.1080/10824661003634948
- International Center for Leadership in Education. (2011). *Career and Technical Education for College and Career Readiness — Convergence of Academics and CTE*. Rexford, NY: International Center for Leadership in Education
- King, J. B. Jr. (December 7, 2010). Memo to College and Career Readiness Working Group: Potential Revision of High School Graduation Requirements, New York State Education Department
- King J.B. Jr. (February 6, 2012). On Board Online, Retrieved from www.NYSSBA.org
- National Association of State Directors of Career and Technical Education Consortium. (2010). Up to the Challenge — The Role of Career and Technical Education and 21st Century Skills in College and Career Readiness. Partnership for 21st Century Skills, Association for Career and Technical Education
- New York State Education Department, *Common Core Background*. n.d. Retrieved from http://www.p12.nysed.gov/ciai/common_core_standards/ccsbackground.html
- New York State Career and Technical Education, Board of Regents. (2001). *Implementation Guide for CTE Program Approval*. Albany, NY: New York State Education Department. Retrieved from www.p12.nysed.gov/cte/ctepolicy/guide.html
- New York State Education Department, *Common Core Background*. n.d. Retrieved from http://www.p12.nysed.gov/ciai/common_core_standards/ccsbackground.html
- Stone, J. R. (2011). *College and career ready: A conceptual framework for increasing engagement, achievement, and transition*. Louisville, KY: University of Louisville, National Research Center for Career and Technical Education. Retrieved from http://www.educationandemployers.org/media/13877/james_stone_iii_conference_paper_2011.pdf
- Symonds, W. C., Schwartz, R., and Ferguson, R. F. (2010). *Pathways to prosperity: The challenge of preparing America's youth for the 21st century*. Cambridge, MA: Pathways to Prosperity Project, Harvard University Graduate School of Education. Retrieved from http://www.gse.harvard.edu/news_events/features/2011/Pathways_to_Prosperty_Feb2011.pdf

The White House. (2009). Address to Joint Session of Congress. Retrieved from http://www.whitehouse.gov/the_press_office/Remarks-of-President-Barack-Obama-Address-to-JointSession-of-Congress