COLLEGE AND CAREER READY STANDARDS
AND SECONDARY TRANSITION PLANNING FOR STUDENTS WITH DISABILITIES: 101

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There have been multiple philosophies of education in America since the nation began. However, there is general consensus that education is provided to improve outcomes for individuals and our society. With the onset of a new millennium there has been increased fervor around the preparedness of public school completers as competitors in a global economy, presenting the skills needed to succeed in postsecondary education, careers, and as citizens. This value that the public education system is to prepare youth for success after school has been reflected in initiatives, priorities, and reforms. There is also an understanding from research and practice that all students can succeed and the education system is accountable for the success of all students (ESEA, 2001). There is evidence and support for the acceptance that high expectations for students result in improved performance by students (Pathways to College Network, 2005). Further, there is support for the idea that allowing multiple means of accessing content is a key to successful outcomes for students and the schools that education them (Gates Foundation, 2010; National High School Center, 2011).

The purpose of the Individuals with Disabilities Education Act, reauthorized in 2004 is to "prepare (students) for further education, employment and independent living" (IDEA, 2004). The Bill and Melinda Gates Foundation charged that through its education strategy, 80% of high school graduates in 2025 will be ready for college or careers (Gates Foundation, 2009). In March, 2010, the Obama administration released recommendations for the reauthorization the Elementary and Secondary Education Act (ESEA) in a document titled "*Blueprint for Reform*" (http://www2.ed.gov/policy/elsec/leg/blueprint/index.html). The *Blueprint* provides incentives for states to adopt academic standards that prepare students to succeed in postsecondary education and the workplace. The *Blueprint* "challenges the nation to embrace education standards that would put America on a path to global leadership"

(Blueprint, p.6). The document asserts that "every student should graduate from high school ready for college and a career. Every student should have meaningful opportunities to choose from upon graduation from high school" (Blueprint, p. 7). In June, 2010 the Council of Chief State School Officers (CCSSO) and the National Governors Association (NGA) released final versions of the Common Core State Standards for Language Arts and Mathematics. Together, these initiatives and recommendations are relevant for all students, including students with disabilities at the secondary level, because they have implications for curricula, instruction, and assessment. Further, these initiatives and recommendations reflect the overall focus of improving outcomes for students leaving the K-12 education system.

Entering college ready to complete credit bearing courses is one measure of "ready". However, confusion still remains over the definition of college and career ready. There are discussions of the understanding of "college" as traditional two- or four-year institutions or any training or education beyond high school. Are schools to prepare students for college readiness as a necessary precursor to success in a career, as reflected in a recent survey of teachers, students, parents, and executives (Met Life Foundation, 2011)? Are there equally valid educational outcomes of college or career (Harvard Graduate School of Education, 2011)?

The National High School Center has created the *College and Career Development Organizer* to assist states and local districts promoting college-and-career readiness. This document includes goals and expectations for college-and-career readiness. These include (a) core content, (b) pathways content, and (c) lifelong learning skills. Second, this document includes pathways and supports for college and career preparation including: (a) personalized learning supports; (b) rigorous programs of study; and (c) aligned resources, structures, and support. Finally, this document includes outcomes and measures for college-and-career success. These include (a) on-track indicators, (b) attainment and authentication, and (c) accountability and improvement feedback. For more information

on specific examples see
http://www.betterhighschools.org/documents/NHSC_CCROrganizerMar2012.pdf

For now, the terms Career Ready and College Ready are often used interchangeably and most discussions focus on core academic skills. However, some suggest that Career Ready involves more than core academic skills. It also includes employability skills and technical, job-specific skills. The Association for Career and Technical Education (ACTE) focused its definition of career readiness on academic, employability, and technical skills in a paper on this issue (ACTE, 2010). Business and industry leaders have worked to identify employability skills needed for success, including the 1990 United States Department of Labor Secretary's Commission on Achieving Necessary Skills (SCANS) and, more recently, Partnership for 21st Century Skills. Finally in 2002, through the States Career Cluster Initiative, business and industry leaders identified technical, job specific skills needed across 16 career clusters. Since almost all states are in the process of adopting, aligning, and implementing more rigorous college and career ready standards for instruction for all students, the purpose of this paper is to provide secondary level educators with an overview of major concepts and national initiatives associated with the concepts of College and Career Ready. In addition, this paper reports which initiatives have been adopted by states and discusses implications for students with disabilities. We hope that this information will serve as a resource as secondary educators become involved in their state's efforts to ensure all students are college and career ready.

College and Career Ready Standards

To date, curriculum standards for College and Career Ready have been considered by many to be the Common Core State Standards (CCSS). The "standards define the knowledge and skills students should have within their K-12 education careers so that they will graduate high school able to succeed in entry-level, credit-bearing academic college courses and in workforce training programs" (About the Standards, 2012, Retrieved

August 30, 2012 from http://www.corestandards.org/about-the-standards). The CCSS initiative is a state-led effort coordinated by the National Governors Association Center for Best Practices (NGA Center) and the Council of Chief State School Officers (CCSSO). The standards were developed by teachers, school administrations, and content experts to provide a framework to prepare students for college and work. These standards are intended to define the knowledge and skills students should have within their K-12 education careers so that they will graduate high school ready to succeed in entry-level, credit-bearing academic college courses, and in workforce training programs. The CCSS currently address Mathematics and English Language Arts (ELA) and Literacy in History/Social Studies, Science, and Technical Subjects. So far, 49 state/ territory educational entities in the United States have fully adopted the CCSS, one state has provisionally adopted the standards, and one state has adopted the ELA standards only (Common Core State Standards Initiative, 2012, http://www.corestandards.org/in-the-states).

Recently, other academic areas are receiving attention. First, the National Council for Social Studies also updated the National Curriculum for Social Studies Standards in September, 2010. The groups are in the process of developing guidelines for the standards. For more information, see: http://www.ncss.org/standards . However, the social studies and science standards should not be confused with the ELA and Math Common Core State Standards. The science and social studies resources do not represent the same body of work. For more information on the Common Core State Standards, see: www.corestandards.org.

Second, the National Research Council, the National Science Teachers Association, the American Association for the Advancement of Science, and Achieve completed the Framework for the Next Generation Science Standards. The next step in the process, Achieve, along with state policy leaders, higher education, K-12 educators, and the science and business community, will develop the Next Generation Science Standards

that reflect this Framework.   The Framework was released in July 2011. For more information, see: http://www.nextgenscience.org/.

Additionally, the National Research Council of the National Academies of Science, Engineering, and Medicine has selected an external workgroup to develop a framework for K-12 science education. These are not articulated standards, but will provide "key grade level anchor points…with examples of performance expectations" (Board on Science Education, 2011).

While the Common Core State Standards provide educators with standards for academic knowledge and skills in both ELA and mathematics, Conley (2007) suggested there are four major components of college readiness including (a) key cognitive strategies, (b) academic knowledge and skills, (c) academic behaviors, and (d) contextual skills and awareness. Key cognitive strategies refer to patterns of behaviors that become a way of thinking that are the necessary for college-level work, such as intellectual openness, inquisitiveness, and analysis. Academic knowledge and skills in writing and research have been repeatedly identified as centrally important to college success. Also, Conley (2007) noted the importance of core academic subject knowledge and skills in English, math, science, social studies, world languages, and the arts. Academic behaviors refer to self-monitoring and study skills. For example, the ability to reflect on what worked, what needed improvement, time management, preparing for and taking examinations, and communicating with professors and advisors. Contextual skills and awareness refer to the norms, values, and conventions of interactions in the college context. For example, informal and formal college knowledge includes such things as knowledge of tuition costs, college options and choices, culture of college, and expectations of higher education.
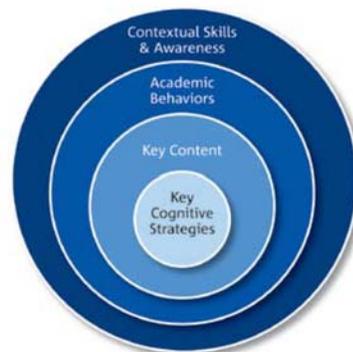
Career Ready Standards

Since the adoption by many States of the Common Core State Standards, national career technical education curriculum standards have been discussed and now are in the process of being reviewed and adopted by States. The initiative is being led by the National Association of State Directors of Career Technical Education Consortium (NASDCTEc), which represents the state and territory heads of secondary, postsecondary and adult CTE across the nation. Currently the standards are being reviewed and input provided by 42 States, the District of Columbia, and Palau. These standards will be for students enrolled in career and technical education courses and programs only. There are currently 12 Career Ready Practices to guide educators and additional specific standards within each of the 16 Career Clusters, established in 2002. Find more on this initiative, the Career Ready Practices, and Career Clusters at http://www.careertech.org/career-technical-education/cctc/info.html.

Recommendations for the reauthorization the Elementary and Secondary Education Act (ESEA) in a "Blueprint for Reform" (http://www2.ed.gov/policy/elsec/leg/blueprint/index.html) state that "every student should graduate from high school ready for college and a career." Being career ready means that a high school graduate has English and mathematics knowledge and skills necessary to qualify for and succeed in the postsecondary job and/or education necessary for their chosen career. Again, States are struggling with the difference between "college ready" and "career ready." Many argue that you can be "college ready" and not "career ready". While developers of CCSS indicate that the Common Core is intended prepare students for (a) competitive, liveable salaries, (b) opportunities for career advancement, and (c) participating in a growing, sustainable industry, business and industry leaders have suggested the need to also focus on employability skills (e.g., CCTC, SCANS skills) and technical, job specific skills (e.g., CCTC, Career Clusters). The Secretary's Commission on Achieving Necessary Skills (SCANS) represents the

foundation of 21ˢᵗ Century Skills, Career Clusters, Next Generation Learners, as well as other state-led initiatives. The following section summarizes past and current work on career readiness.

SCANS Skills

In 1990, the Secretary of Labor appointed a commission called the Secretary's Commission on Achieving Necessary Skills (SCANS) to determine skills young people needed to succeed in the world of work. The commission's fundamental purpose was to encourage a high-performance economy characterized by high-skill, high-wage employment. Although the commission completed its work in 1992, its findings and recommendations continue to be a valuable source of information for individuals and organizations involved in education and workforce development. This information includes employability skills that are needed for employee success and the report is called "What Work Requires of Schools: A SCANS report for America 2000." For more information see: http://www.academicinnovations.com/report.html

Are they Ready to Work?

An affirmation that the workplace readiness skills identified in the SCANS report remain valid today is included in the latest report *Are They Really Ready to Work*?, issued in 2006. This study included over 400 employers across the United States in partnerships with four organizations: The Conference Board, Corporate Voices for Working Families, the Partnership for 21ˢᵗ Century Skills, and the Society for Human Resource Management. Findings indicated employers valued applied skills (i.e., work ethics, oral and written communication, teamwork, and critical thinking/problem solving) over educational attainment and basic knowledge of math and reading comprehension. For more information see: http://www.p21.org/documents/FINAL_REPORT_PDF09-29-06.pdf.

Career Clusters™/Essential Standards

The States' Career Clusters Initiative (2002) was established by the National Career Technical Education Foundation. The Career Clusters™ categorize the world of work in a way that enables students to begin to prepare for and think about careers. There are 16 Career Clusters™ that cover all industries and each represent a group of occupations that share knowledge and skills required for success in the respective fields. These Career Clusters™ include key Knowledge and Skills Statements that represent content students need to know and be able to do to be a successful employee in the specific career area. For more information visit: www.careertech.org. Building from the framework of the Career Clusters™, the National Association of State Directors of Career Technical Education (NASDCTEc) next developed the Common Career Technical Core (CCTC) (NASDECTEc, 2012). The CCTC (2012) is a state-led initiative to establish a set of high-quality, program-level standards for Career Technical Education (CTE), that align with the 16 Career Clusters™ and support efforts for consistency and quality. More information can be found at www.careertech.org/career-technical-education/cctc/.

Conley's (2007) four college readiness components have also been applied to career readiness for students with intellectual disabilities (Kearns, Kleinert, Harrison, Sheppard-Jones, Hall, & Jones, 2011). In addition to academic content, it is important for students with an intellectual disability to learn broader academic behaviors (Conley, 2007) to be college and career ready. For example, the authors assert that working independently for extended periods, recognizing the need asking for assistance, as well as applying mathematical concepts to a job are skills students with intellectual disabilities need to ensure post-school success. Kearns et al. (2011) expand the categories to include the cognitive processes required for self-determination, calling this an essential element for students with intellectual disabilities. For example, components of goal setting, developing action plans to achieve goals, and evaluating the extent of which they achieved those goals (Kleinert, Harrison, Fischer, & Kleinert, 2010) can help students decide their future.

Finally, Conley (2012) extended the college readiness components to four keys to college and career readiness including (a) key cognitive strategies, such as interpretation, (b) key content knowledge, (c) key learning skills and techniques including persistence and self-awareness, and (d) key transition knowledge and skills including planning for postsecondary education and careers. This recognition that college ready and career ready are not mutually exclusive pathways may be helpful to State discussions regarding the purpose of education of youth with disabilities.

Related Initiatives

To help states and local school systems implement College and Career Ready Standards, a number of national initiatives have emerged. Some of the more well-known initiatives include 21st Century Skills, Next Generation Learners, P-16: Cradle to College and Career Ready, and Race to the Top. Each of these initiatives is briefly described below.

21st Century Skills

Partnership for 21st Century Skills (P21) is a national organization that advocates for 21st century readiness of every student. P21 and its members provide tools and resources to help educational systems infuse the three Rs (content knowledge in the major subjects) and four Cs (critical thinking and problem solving, communication, collaboration, and creativity and innovation) into the basic competencies of core subjects. P21 believes schools must move beyond a focus on basic competency in core subjects to promoting understanding of academic content at higher levels by weaving 21st Century skills into core subjects. These skills are: Global Awareness, Financial, Economic, Business, and Entrepreneurial Literacy, Civic Literacy, Health Literacy, and Environmental Literacy. P21 offers principles and recommendations to guide the reauthorization of the Elementary and Secondary Education Act around the 21st Century Skills. For more information see: www.p21.org.

Next Generation Learners

In November 2009, the Council of Chief State School Officers (CCSSO) in alliance with the Stupski Foundation, began a partnership called Next Generation Learners (NxGL) designed to transform the nation's public education system and enhance the quality of learning and achievement for all children in public schools. The NxGL initiative includes four areas across the critical attributes of the learning experience; early childhood education, extended learning opportunities, virtual learning systems, and school improvement and supports. For more information see: http://www.ccsso.org/What_We_Do/Next_Generation_Learners.html

P-16: Cradle to College and Career Ready

The P-16: Cradle to College and Career Ready is a state-led initiative that emerged in the mid-90's through the work of states such as Georgia, Maryland, and Oregon. To date, 25 states have passed some form of P-16 legislation and the Education Commission reports that 37 states have P-16 initiatives in place. P-16 has been implemented as either a "mega-bill" introducing broad, sweeping changes or as a continuum of incremental changes. In a P–16 system, all levels of education beginning with preschool (the "P" in P–16), continuing through K-12, and culminating in a baccalaureate degree and/or entry into the workforce are aligned into a flexible continuum designed to improve student achievement. The P–16 system responds to student needs at every point along the continuum to ensure student access and progress in each consecutive level. The goal of all P-16 systems is to create a seamless system of education which begins in early childhood and ends after college. The P-16 initiative focuses on planned transitions for students and families from Infant-Toddler to preschool to early elementary to middle-grade to high school to postsecondary environments. There is a focus on student academic and social-emotional development throughout the system and a life-long view of student outcomes (transition focused education). For a collection of resources on P-16 see:

http://ideapartnership.org/media/documents/P-16-Collection/pipeline_p-16-and-breaking-ranks.pdf

Race to the Top

In February 2009, President Obama signed the American Recovery and Reinvestment Act of 2009 (ARRA) into law to stimulate the economy and invest in critical sectors including education. The ARRA included the Race to the Top Fund (2010). This was a competitive grant designed to fund states that are demonstrating success in raising student achievement and had plans to accelerate reform in their future. These states were required to adopt the Common Core State Standards as part of the application for the Race to the Top funding. States funded in Phase I included Tennessee and Delaware. States funded in Phase II included District of Columbia, Florida, Georgia, Hawaii, Maryland, Massachusetts, New York, North Carolina, Ohio, and Rhode Island. For more information, see http://www2.ed.gov/programs/racetothetop/index.html

What are States Doing?

Many states have aligned, or are in the process of aligning, their instructional standards to many of the initiatives described above. The following table summarizes which states are engaging in these initiatives.

Table 1. Summary of College and Career Ready Initiatives Adopted by Each State

State	Adopted *Common Core*	Adopted *21st Century Skills*	Adopted *NxGL*	Participating in *Common Career Tech. Core*	Received *ARRA "Race to the Top"*
Alabama	X				
Alaska					
American Samoa					
Arizona	X	X			

Arkansas	X			X	
California	X			X	
Colorado	X			X	
Connecticut	X			X	
Delaware	X			X	X
District of Columbia	X			X	X
Florida	X			X	X
Georgia	X			X	X
Guam	X				
Hawaii	X				X
Idaho	X			X	
Illinois	X	X		X	
Indiana	X			X	
Iowa	X	X		X	
Kansas	X	X		X	
Kentucky	X	X	X	X	
Louisiana	X	X			
Maine	X	X	X	X	
Marshall Islands					
Maryland	X			X	X
Massachusetts	X	X		X	X
Michigan	X			X	
Micronesia					
Minnesota	X (only ELA)			X	
Mississippi	X				

State					
Missouri	X			X	
Montana	X			X	
Nebraska				X	
Nevada	X	X		X	
New Hampshire	X			X	
New Jersey	X	X		X	
New Mexico	X			X	
New York	X		X	X	X
North Carolina	X	X		X	X
North Dakota	X			X	
Northern Marianas Islands	X				
Ohio	X	X	X	X	X
Oklahoma	X			X	
Oregon	X			X	
Palau				X	
Pennsylvania	X			X	
Puerto Rico					
Rhode Island	X			X	X
South Carolina	X				
South Dakota	X	X		X	
Tennessee	X			X	X
Texas					
Utah	X			X	
U.S. Virgin Islands	X				

Vermont	X			X	
Virginia					
Washington	X			X	
West Virginia	X		X	X	
Wisconsin	X	X	X	X	
Wyoming	X			X	

California: The Linked Learning Alliance.

A two-year study by the Pathways to Prosperity Project at Harvard University Graduate School of Education notes that while much emphasis is placed in high school on going on to a four-year college, only 30 percent of young adults in the United States successfully co.mplete a bachelor's degree. The study recommends a "comprehensive pathways network" that would include three elements: embracing multiple approaches to help youth make the transition to adulthood, involving the nation's employers in things like work-based learning, and creating a new social compact with young people. The Linked Learning approach was highlighted as a model of 21st Century Career and Technical Education. For more information on the Pathways to Prosperity Project see: http://www.gse.harvard.edu/news-impact/2010/02/pathways-to-prosperity-seeks-to-redefine-american-education-system

Linked Learning is the new name for the educational approach formerly known in California as "multiple pathways." The Linked Learning Alliance is a statewide coalition of education, industry, and community organizations dedicated to improving California's high schools and preparing students for postsecondary education and career, both options and not just one or the other. Used in schools throughout California, this integrated approach helps students build a strong foundation for success in college and career—and life. Pathways prepare high school students for career and a full range of

postsecondary options, including two and four year college or university, apprenticeships, the military, and formal employment training. For more information see: http://www.connectedcalifornia.org/pathways/index.php.

Kentucky: Educational Planning and Assessment System (EPAS)

Kentucky was the first state to adopt the Common Core State Standards and has included an alignment of the EPAS College Readiness Standards with their Program of Studies curriculum standards. This will help teachers link the instruction and assessment standards. The assessment system in Kentucky includes examinations of high school readiness in eighth grade (called EXPLORE), college readiness in tenth grade (called PLAN), and college admissions and placement in eleventh (ACT). These three examinations comprise the EPAS. For more information see: http://www.education.ky.gov/KDE/Instructional+Resources/Curriculum+Documents+and +Resources/Teaching+Tools/Educational+Planning+and+Assessment+System+(EPAS)+Co llege+Readiness+Standards+and+Program+of+Studies.htm

How Can We Make Sure Students with Disabilities are College and Career Ready?: Implications for High School Students

As states adopt or align new sets of college and career ready standards, there are implications for practice. For example, student acquisition of standards must be assessed and the standard curriculum must be taught to all students including all students with disabilities. In addition, teachers must be prepared to provide students with quality instruction and transition services. The following sections describe some of the issues states may need to consider as they adopt and implement these new standards.

Assessment

The U.S. Department of Education awarded "Race to the Top" assessment funds to two consortia to develop assessments aligned to the Common Core State Standards. For more information see: http://www2.ed.gov/programs/racetothetop-assessment/index.html

First, Partnership for the Assessment of Readiness for College and Careers (PARCC) was funded to develop a K-12 assessment system aligned to the Common Core State Standards in English language arts and mathematics. The fiscal agent funded for this project is the Florida Department of Education with project management led by Achieve, Inc. The 11 governing states that lead the 25-state consortium in assessment development include: Arizona, Florida, Illinois, Indiana, Louisiana, Maryland, Massachusetts, New York, Rhode Island, Tennessee, and the District of Columbia. As the assessment system is currently in development, resources are continually updated for States in the form of white papers and webinars on topics including alignment, measurement, and technology. Sample assessment questions will be posted as available to assist the field in preparation for a shift in the assessment system. For more information see: http://parcconline.org/.

Second, Smarter Balanced Assessment Consortium (SBAC) was also funded to balance summative, interim, and formative assessment through an integrated system of standards, curriculum, instruction, and teacher development. The fiscal agent funded for the project is the Washington Office of Public Instruction with the initial project management conducted by WestEd. The 18 governing states that will lead the 31-state consortium include: Connecticut. Hawaii, Idaho, Kansas, Maine, Michigan, Missouri, Montana, Nevada, New Hampshire, New Mexico, North Carolina, Oregon, Utah, Vermont, Washington, West Virginia, and Wisconsin. Both new assessments systems are being developed with attention to universally designed assessments and both will have online components. The SBAC assessment is planned to be a fully computer adapted assessment. For current information regarding SBAC see: http://www.smarterbalanced.org/.

Finally, the U.S. Department of Education also awarded grants to develop a new generation of alternative assessment for students with the most significant disabilities. These assessments will be aligned to the Common Core State Standards and assess knowledge of mathematics and English language arts in grades 3-8 and one grade in high school. Two consortia of states were awarded these grants.

First, the National Center and State Collaborative Partnership (NCSC) is led by five centers and comprised of Alabama, Arkansas, Arizona, Connecticut, the District of Columbia, Florida, Georgia, Indiana, Louisiana, Massachusetts, North Dakota, Nevada, New York, Pennsylvania, Rhode Island, South Carolina, South Dakota, Tennessee, Wyoming and six United States entities in the Pacific Rim. The National Center for Educational Outcomes at the University of Minnesota is the fiscal host for the grant, leading the other entities. NCSC is developing a full system intended to support educators, which includes formative assessment tools and strategies, professional development on appropriate interim uses of data for progress monitoring, and management systems to ease the burdens of administration and documentation. For more information on the development of these assessments and the different levels of state involvement in the consortium see: http://www.ncscpartners.org/.

Second, Dynamic Learning Maps Alternate Assessment System Consortium is led by the University of Kansas Center for Research and comprised of Iowa, Kansas, Michigan, Mississippi, Missouri, New Jersey, North Carolina, Oklahoma, Utah, Wisconsin, and West Virginia. The system being developed is designed to map a student's learning throughout the year and allow student demonstration of competencies beyond a multiple-choice test. The system will use items and tasks that are embedded in instruction. An end of the year assessment will also be created for states that want to include a summative test in addition to the instructionally embedded system. For more information see: http://dynamiclearningmaps.org/.

Another consortium has been funded to develop the assessment of the Common Core State Standards for English Language Learners. World Class Instructional Design and Assessment is led by the University of Wisconsin at Madison and is comprised of Alabama, Alaska, Colorado, Nevada, Utah, Oklahoma, New Mexico, Montana, Wyoming, North Dakota, South Dakota, Minnesota, Wisconsin, Illinois, Mississippi, Georgia, North Carolina, Kentucky, Virginia, Pennsylvania, Delaware, Maryland, Washington DC, New Jersey, Rhode Island, Maine, New Hampshire, and Vermont. For more information see: http://www.wida.us.

Each of the assessment systems are scheduled for administration in 2014-2015 school year. However, many details regarding test accommodations, administration, and other decisions continue to be addressed in the workgroups the consortia. Each consortium has different philosophies and technical features to the assessment systems being developed; however, all are committed to communicating with one another throughout development and to the goal of measuring student achievement on standards aligned with the skills and knowledge needed for success in college and careers.

Implications for Accountability

Implementation of the CCSS and the transition to next-generation assessments will have significant implications for states. Achieve (2010) suggested mapping out a transition and phase-in strategy to address critical issues for states. Those issues include (a) evaluating the relationship between old and new assessments, (b) evaluating the various cost implications, (c) changes in curriculum needed to align to CCSS and assessments, (d) professional development needs for new assessment, (e) new data and reporting systems needed; and the changes in the accountability system to incorporate the new assessments.

There are a number of ways state assessment systems will need to evolve to measure the CCSS. The challenges in adapting assessment systems include moving beyond a single, end of year test to performance measures and extended tasks, as well as "through course" and computer adapted assessments for all students. There are workgroups within the two largest assessment consortia focused on such topics as accommodations, professional learning, performance tasks, and embedded technology.

CCSSO developed a Roadmap for Next-Generation Accountability Systems, and as these systems evolve, the document will change accordingly to serve as a resource for states. The Roadmap discusses the importance of knowledge application of common core standards and performance-based assessments. Examples of what states are doing (taken from the Roadmap document) are listed below. For more information see http://www.ccsso.org/documents/Roadmap.pdf

Florida. In 2010, Florida instituted a new high school grading system. Since 1999, its grading system was based solely on standardized test performance (FCAT and Florida's Alternate Assessment). Now, the statewide standardized assessments account for only 50% of a high school's grade. The remainder is calculated by participation and success in advanced coursework (AP, IB, AICE, dual enrollment, industry certifications); graduation rates; ACT/SAT scores; and more.

Kentucky. Kentucky's proposed accountability model will expand the state's focus beyond achievement on standardized tests to include other measures at all grade levels including growth and gap closing. At the high school level, graduation rates as well as college and career readiness measures will be included.

Indiana. Late in 2010, the Indiana Department of Education proposed a restructured accountability framework for comment and feedback by stakeholders. This framework would offer school grades (much like FL). Elementary and middle school accountability

would be based on standardized test achievement, growth, and growth of the bottom 25% of students, while high school accountability would focus on end of course assessments, graduation rates, college/career attainment as measured by AP/IB exam scores, attainment of college credit, and industry certification.

Tennessee. As part of its development of college- and career-ready state policies, Tennessee convened groups of stakeholders to discuss appropriate targets for the college- and career-ready goals and objectives. Their inclusive process provided critical feedback to the state from a wide variety of stakeholders on appropriate benchmarks.

Graduation Policies

Research has shown that graduating from high school with a diploma is a predictor of post-school success for students with disabilities (Test et al., 2009). With the adoption of CCSS, graduation requirements have become more rigorous. The American Diploma Project (ADP) Network includes 35 states working together to ensure that every high school graduate is prepared for college or careers. Together, Network member states are responsible for educating 85% of all U.S. public school students. Stakeholders including, governors, state superintendents of education, business executives and college leaders, are working to bring value to the high school diploma by raising the rigor of high school standards, assessments and curriculum and aligning expectations with the demands of postsecondary education and careers. For more information see: http://www.achieve.org/ADPNetwork

States offer an array of diploma options ranging from honors diplomas, to the standard diploma, to certificates of completion or attendance. Some states offer special diplomas to students who take rigorous course work, achieve a high grade point average, or post high scores on state exams. In addition, some diploma options and certificates are only available for students receiving special education services. Included among these

alternative diploma options are certificates of completion, IEP/special education diplomas, and occupational/vocational diplomas (NCES, 2002).

Instruction

For academic instruction, states adopting the Common Core State Standards must align their current standards with the CCSS. To do this, some states use The Common Core Mapping Project. This project is a Washington DC based, non-profit organization founded in 2007. They have worked with the National Governors Association and the authors of the standards to develop the maps. The Common Core Mapping Project provides examples of ways to provide instruction that will teach the competencies of the Common Core State Standards, focused on literature, the arts, and technology. For more information, see: www.commoncore.org

Additionally, the Association for Supervision and Curriculum Development (ASCD) has launched an online, free tool to assist teachers as they transition into the Common Core State Standards. The resource, available through ASCD's website at http://educore.ascd.org provides lesson plans, strategy descriptions, and videos of instructional strategies in both mathematics and literacy for middle and high school students. The development of the tool was supported by the Bill and Melinda Gates Foundation.

For career ready instruction, Career Technical Education (CTE) initiatives and programs are addressing transition from secondary education to postsecondary education. Through such initiatives such as Programs of Study, Dual Enrollment, Tech Prep, and Early and Middle College High Schools, these programs are preparing more students to transition to postsecondary education.

First, CTE Programs of Study (CTE POS) are knowledge and skills identified by secondary, postsecondary, and workforce partners designed to prepare students for self-sufficiency

and career success. The four core elements of CTE POS are: (a) content and standards, (b) alignment and articulation, (c) accountability and assessment, (d) student support services.

Second, CTE Dual Enrollment and Advanced Placement (AP) programs allow high school students to enroll in college courses and earn college credit. Once limited to high-achieving students, these programs are increasingly seen as a means to support the postsecondary preparation of students with disabilities.

Third, CTE Tech Prep programs link high school and college program in a career field so students can begin their course of study in high school and continue into a postsecondary educational or apprenticeship program. As a result, students earn an associate's degree or certification of apprenticeship.

Last, CTE Early and Middle College High Schools are located on postsecondary campuses and allow students to earn a high school diploma and two years of college credit in five years. Many of the Early and Middle College High Schools have specific career focused themes such as design, technology, and health care.

 For more information on all the CTE initiatives, see: www.acteonline.org

Regarding CCSS and CTE courses, Achieve piloted a process in several states for educators to evaluate, modify, and develop instructional tasks that demonstrate how CTE content can be taught through high school mathematics. Resources from the results of this work are available through this link: http://www.achieve.org/ccss-cte-classroom-tasks. Additionally, the pilots resulted in Achieve developing planning tools for use by districts as they consider alignment between specific career focused and CCSS curricula and instruction. Visit http://www.achieve.org/ccss-cte-workshop-planning-tools to view the planning resources.

Additionally, The Center on Instruction has developed CCSS resources for implementing strategies to support students with disabilities and English language learners. The resources focus on interventions that can inform the design, delivery, and use of evidence-based interventions with students, including those with disabilities and those who struggle with mastering today's rigorous reading, literacy, and mathematics standards in the CCSS. For more information see: http://www.centeroninstruction.org/files/Intensive%20Interventions%20for%20Students%20Struggling%20in%20Reading%20%26%20Math.pdf

As noted earlier, the Partnership for 21st Century Skills (see www.P21.org) is the focus of the alignment work in some States. These States are considering the demonstration of the 21st Century Skills of Global Awareness, Financial, Economic, Business, and Entrepreneurial Literacy, Civic Literacy, Health Literacy, and Environmental Literacy within the CCSS. For information on State work to embed and align see: http://www.p21.org/state-initiatives/overview-of-state-work.

Other career ready instruction includes work based learning experiences. These are activities that put students in the workplace and given an opportunity to learn about careers and work behaviors. Luecking (2009) refers to this type of purposeful educational activity as work experience. Work experience can include any combination of skills that students need to succeed in the workplace (soft skills) and job-specific skills. According to Luecking , these experiences include career explorations, job shadowing, work sampling, service learning, internships, apprenticeships, and paid employment. Not only do these experiences help students identify career preferences, other supports and accommodations that are essential to workplace success can be identified.

Implications for Individualized Education Programs

In an article written for Council for Exceptional Children (CEC) division of the Council of Administrators of Special Education, Hock described reasons to use standards in IEPs and how to ensure students with disabilities receive the maximum benefit from standards. First, he suggested standards can help clarify what is meant by regular and special education, that both are components of the same system; helping students meet the same set of standards. Second, standards can provide a useful structure for IEP development. "A typical standards framework reads like an educational road map, providing milestones for every grade level, future destinations, and points of interest along the way" (Hock). Third, standards can put a positive spin on negative behaviors. Standards promote programs that give students power over their own lives and make it clear all students are being asked to do the same. Finally, having an IEP that uses standards, promotes the use of common language and common goals, and drives innovation in teaching and learning is the expected end result.

Kochhar-Bryant and Bassett (2002) recommended "opportunity standards" are an important element in aligning standard-based education and individualized and appropriate transition planning. Those opportunities needed by students with disabilities include (a) a planned program, (b) an IEP, (c) individualized instruction, (d) non-stigmatizing grouping, (e) responsive curriculum, (f) positive behavioral interventions, (g) responsiveness to their native language, (h) access to technology, (i) valid assessment, and (j) transition services. To align the education system that addresses curriculum options or pathways that blend academic, career-technical, and community-based learning components and multiple outcome measures in multiple domains applicable for all students, not just those with disabilities.

Access to Quality Instruction

One of the fundamental outcomes promised by the standards-based educational movement is ensuring all students, including student with disabilities, are prepared to enter college and careers with knowledge, skills, and competencies needed to be successful. The Education Commission of States provides resources on emerging strategies and issues of CCSS for states, policy makers, and teachers. For more information see: http://www.ecs-commoncore.org/. Additionally, CEC has a new teacher blog called "Reality 101" that includes topics on CCSS. For more information see: http://www.cecreality101.org/about-the-blog.html

Evidence-based instructional practices for secondary students with disabilities were identified through a comprehensive literature review of experimental research studies (Test, Fowler, et al., 2009). NSTTAC has identified over 60 evidence-based practices for secondary students with disabilities. Table 2 below lists each evidence-based practice by the skill taught.

For more information visit www.nsttac.org.

Table 2.

Evidence-based practice by skill taught organized in the Taxonomy for Transition Programming

Student Focused Planning
Student Knowledge of Transition Planning • Using ***Whose Future Is It Anyway?*** **Student Participation in the IEP Meeting**: • Using ***Check and Connect*** • Using **Computer Assisted Instruction** • Using the ***Self-Advocacy Strategy*** • Using the ***Self-Directed IEP*** • Using **Published Curricula**
Student Development
Academic Skills • Using **Mnemonics** • Using **Peer Assisted Instruction** • Using **Self-Management Instruction** • Using **Technology** • Using **Visual Displays**

Functional Life Skills
- Using **Backward Chaining**
- Using **Constant Time Delay**
- Using **Forward Chaining**
- Using **Progressive Time Delay**
- Using **Self-Management Instruction**
- Using **Self-Monitoring Instruction**
- Using **Simultaneous Prompting**
- Using a **System of Least to Most Prompts**
- Using a **System of Most to Least Prompts**
- Using **Total Task Chaining**

Banking Skills
- Using **Community Based Instruction**
- Using **Constant Time Delay**
- Using **Simulations**

Community Integration Skills Using **Community Based Instruction**

Food Preparation and Cooking Skills
- Using **Computer Assisted Instruction**
- Using **Constant Time Delay**
- Using **Response Prompting**
- Using **Video Modeling**
- Using a **System of Least to Most Prompts**

Grocery Shopping Skills
- Using **Computer Assisted Instruction**
- Using **Community Based Instruction**
- Using **Response Prompting**
- Using a **System of Least to Most Prompts**

Home Maintenance Skills
- Using **Response Prompting**
- Using **Video Modeling**

Laundry Tasks
- Using **Response Prompting**

Leisure Skills
- Using **Response Prompting**
- Using **Constant Time Delay**

Safety Skills
- Using **Community Based Instruction**
- Using **Progressive Time Delay**
- Using a **System of Least to Most Prompts**

Counting Money
- Using the **One More Than Strategy**

Increased Finance Skills
- Using an **Extension of Career Planning Services after Graduation**

Purchasing Skills
- Using **Community Based Instruction**
- Using the **One More Than Strategy**
- Using **Progressive Time Delay**
- Using **Response Prompting**

- Using **Simulations**
- Using a **System of Least to Most Prompts**

Self Determination
- Using *Whose Future Is It Anyway?*

Goal Attainment
- Using the *Self Determined Learning Model of Instruction*

Social Skills
- Using **Response Prompting**
- Using **Self-Management Instruction**
- Using **Simulations**

Communication Skills
- Using **Community Based Instruction**
- Using a **System of Least to Most Prompts**

Employment Skills
- Using **Community Based Instruction**
- Using **Response Prompting**

Job Specific Skills
- Using **Computer Assisted Instruction**
- Using **Constant Time Delay**
- Using **Self-Management Instruction**
- Using a **System of Least to Most Prompts**

Completing a Job Application
- Using **Mnemonics**

Family Involvement

Parent Involvement in the Transition Process
- Using **Training Modules**

Program Structures

Using *Check and Connect* to Promote:
- **Student Participation in the IEP Meeting**

Using **Community Based Instruction** to Teach:
- **Banking Skills**
- **Community Integration Skills**
- **Grocery Shopping Skills**
- **Purchasing Skills**
- **Safety Skills**
- **Communication Skills**
- **Employment Skills**

Using an **Extension of Career Planning Services after Graduation** to Promote:
- **Increased Finance Skills**

NSTTAC conducted a systematic literature review to identify in-school predictors of post-school success in the areas of employment, education, and independent living for secondary students with disabilities (Test, Mazzotti, Mustain, Fowler, Kortering, & Kohler,

2009). As a result of this literature review, NSTTAC has identified more than 15 evidence-based predictors of post-school employment, education, and independent living success from the correlational research including career awareness, community experiences, exit exam requirements/high school diploma status, inclusion in general education, interagency collaboration, occupational courses, paid employment/work experience, parental involvement, program of study, self-advocacy/self-determination, self-care/independent living skills, social skills, student support, transition program, vocational education, and work study. For more information see: http://www.nsttac.org/ebp/PredictorResources.aspx.

Evidence-Based In-School Predictors of Post-School Success

Predictor/Outcome	Education	Employment	Independent Living
Career Awareness	X	X	
Occupational Courses	X	X	
Paid Employment/ Work Experience	X	X	X
Vocational Education	X	X	
Work Study		X	
Community Experiences		X	
High School Diploma Status		X	
Inclusion in General Education	X	X	X
Program of Study		X	
Independent Living Skills	X	X	X
Self-Determination	X	X	
Social Skills	X	X	
Interagency Collaboration	X	X	
Parental Involvement		X	
Student Support	X	X	X
Transition Program	X	X	

Policy Implications

With national efforts to adopt common standards and common assessments, policy makers should also address common diploma options. The idea of college-and-career readiness standards should lead to diploma options that are consistent across states. NCWD-Youth (2011) suggests federal policy makers support research on outcomes for students receiving, or having received, the various diploma options which currently exist. States and local education agencies may identify multiple pathways toward a diploma that reflect the personalization and relevance demanded by an IEP.

Kober and Rentner (2011) found 21 state education departments considered aligning the content of teacher preparation programs with the common core standards as a challenge. Work Group for Common Core (2011) suggests five changes for teacher preparation and professional development programs (a) increase selectivity and proactive recruitment to increase both the content knowledge of teachers and the diversity of the teaching force, (b) alter the content of disciplinary courses for future and practicing teachers, (c) alter the professional preparation courses for future and practicing teachers, (d) identify, nurture and sustain high quality field experiences for all future teachers, and (e) design and maintain a data collection system (including both assessments and infrastructure) committed to continuous improvement. SEAs, in cooperation with universities may consider these changes as they reevaluate and restructure personnel preparation programs. Teachers must be skilled in making the content of standards-based instruction accessible to all of their students. Personnel preparation programs must continue to focus on evidence-based instructional strategies and universally designed instruction within teacher acquisition of content knowledge.

Since a recent report indicated that 78% of teachers knew about the CCSS, but only 22% felt prepared to teach them (Primary Sources, 2012), professional development is needed to successfully implement the CCSS. This report also suggests teachers feel teaching and learning is too complex to be measured by one test. They ask for a move to more frequent evaluation of student knowledge. The assessments for CCSS will be designed to have

through-course and formative assessments. However, teachers and administrators will need professional development to facilitate this type of testing and related instruction. Professional development modules from the University of California, Berkeley are intended to help teachers with challenges that formative assessment presents. For more information see: http://map.mathshell.org/materials/index.php.

Federal policy makers may consider funding additional supports, in addition to funded assessment systems, to encourage the quality professional development necessary, including continued emphasis on knowledge and implementation of evidence-based practices and differentiated instructional strategies, as well as knowledge of testing accommodations and use of assessment data for instructional planning. Additionally, State Education Agencies and their local counterparts will also need to be able to support teachers through this new assessment process. Using resources such as the aforementioned modules may assist State and Local education agencies in the coming months. Additionally, as recommended by NCWD-Youth (2011) local districts should consider supporting collaboration and coaching by (a) providing training for all general and special education staff in evidence-based strategies for instruction of the common-core general education curriculum and (b) building collaboration time into teachers' schedules.

Resources from National Secondary Transition Technical Assistance Center (NSTTAC)

Infusing Secondary Transition Skills into College and Career Ready Standards

As states work to adopt and implement college and career ready standards for all students, the field must continue to consider the comprehensive secondary transition needs of students with disabilities. As a starting point, NSTTAC developed a table (see Tables 3 and 4) of examples of how important secondary transition skills such as independent

living, social, self-determination, and employment skills may be demonstrated within the CCSS in ELA and Mathematics and embedded with instruction aligned with the Standards at the high school level.

Over the last 20 years, there have been numerous competencies identified for workplace and transition-focused education. *Are They Really Ready to Work?* (2006) identified that employers are frustrated with the lack of applied skills demonstrated by new employees entering the workforce. SCANS Skills (1990) reported five competency areas that are sometimes called "soft skills" in the workplace. They are (a) how to use resources, (b) have positive interpersonal relationships, (c) use information, (d) understand systems, and (e) use technology. The following table of examples is linked to the NSTTAC identified predictors (Test et al., 2009) and may be used as a starting point for educators who wish to infuse secondary transition skills and "soft skills" into the college and career ready standards for their high school students with disabilities. Within the table, the secondary CCSS are listed with a paired transition skill activity. The activities listed provide an example of the means by which a student could demonstrate mastery of the standard. The "X" indicates if the transition activity relates to one of the following outcome areas: postsecondary education, independent living, and/or employment.

Table 3. Examples of Infusing Secondary Transition Skills into College and Career Ready Standards in English Language Arts

English Language Arts				
Standard	Activity	PSE	Ind. Living	Employ.
1. Demonstrate command of the conventions of standard English grammar and usage when writing or speaking	Prepare a plan for post school life including plans for living, working, and attending school or relevant training program. Additionally, include recreation/leisure activities and any supports needed to achieve post-school goals. [NSTTAC] Lead educational conference (e.g., IEP meeting) and present plan for post-school life to team members. [NSTTAC] Performance should be evaluated through the use of a rubric. Components of rubric should include but are not limited to: -identification of goals in living, working, school attendance, recreation/leisure activities[NSTTAC] -identification of supports for each goal[NSTTAC] -use of parallel structure[NSTTAC] -use of phrases (e.g., noun, verb, adjectival, participial) and clauses (e.g., independent, dependent, etc.) to convey specific	X	X	X

	meanings and add variety and interest[NSTTAC] (grades 9-10)			
2. Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing	Prepare a plan for post school life including plans for living, working, and attending school or relevant training program. Additionally, include recreation/leisure activities and any supports needed to achieve post-school goals. [NSTTAC] Performance should be evaluated through the use of a rubric. Components of rubric should include but are not limited to: -identification of goals in living, working, school attendance, recreation/leisure activities[NSTTAC] -identification of supports for each goal[NSTTAC] -usage of semicolon (and perhaps a conjunctive adverb) to link two or more closely related independent clauses[NSTTAC] -usage of colon to introduce a list or quotation[NSTTAC] -Spell correctly[NSTTAC] (Grades 9-10)	X	X	X
Knowledge of Language				
3. Apply knowledge of language to understand how language functions in different contexts, to make effective choices for meaning or style, and to comprehend more fully when reading or listening	Read scenarios from several different settings with varying levels of formality (e.g., text messages/emails, time with friends, at work, interview for college, etc.) and identify how certain phrases change their meanings from context to context[NSTTAC]	X	X	X

Vocabulary Acquisition and Use				
4. Determine or clarify the meaning of unknown and multiple-meaning words and phrases by using context clues, analyzing meaningful word parts, and consulting general and specialized reference materials, as appropriate	Read a user's manual for an item that will be used during post-school life (e.g., kitchen appliance, vacuum, camera, etc.). Use various reading comprehension strategies to determine the definition of unknown words (i.e., context clues, analysis of work meanings, consultation of reference materials) [NSTTAC]	X		
5. Demonstrate understanding of word relationships and nuances in word meanings				
6. Acquire and use accurately a range of general academic and domain-specific words and phrases sufficient for reading, writing, speaking, and listening at the college and career readiness level; demonstrate independence in gathering vocabulary knowledge when considering a word or phrase important to comprehension or expression				

Reading					

Standard	Activity	PSE	Ind. Living	Empl.
Key Ideas and Details				
1. Read closely to determine what the text says explicitly and to make logical inferences from it; cite specific textual evidence when writing or speaking to support conclusions from the text	Choose two postsecondary education institutions or training programs and summarize information from their website for prospective students. Identify one that would be an appropriate choice for postsecondary education/training and one that is not. Provide evidence that supports the choice. [NSTTAC] Performance should be evaluated through the use of a rubric. Components of rubric should include but are not limited to: -Identification of two PSE/training programs[NSTTAC] -Summary of information is provided[NSTTAC] -Identification of preferred program and evidence to support the choice[NSTTAC]	X		
2. Determine central ideas or themes of a text and analyze their development; summarize the key supporting details and ideas	(11th Grade- American Dream/Of Mice and Men) What is your dream for the future? What support will you need? [NSTTAC]			
3. Analyze how and why individuals, events, and ideas develop and interact over the course of a text	Read short stories on individuals who overcame adversity. [NSTTAC]			
Craft and Structure				
4. Interpret words and phrases as they are used in a text, including determine technical, connotative, and figurative meanings, and analyze how				

specific word choices shape meaning and tone				
5. Analyze the structure of texts, including how specific sentences, paragraphs, and larger portions of the text (e.g., a section, chapter scene, or stanza) relate to each other and the whole				
6. Assess how point of view or purpose shapes the content and style of a text	Any current or past political debate; speeches for or against any topic[NSTTAC]			
Integration of Knowledge and Ideas				
7. Integrate and evaluate content presented in diverse formats and media, including visually and quantitatively, as well as in words				
8. Delineate and evaluate the argument and specific claims in a text, including the validity of the reasoning as well as the relevance and sufficiency of the evidence				
9. Analyze how two or more texts address similar themes or topics in order to build knowledge or to compare the approaches authors take				
Range of Reading and Level of Text Complexity				
10. Read and comprehend complex literary and informational texts independently and proficiently	Read the state driver's manual and answer comprehension questions. [NSTTAC]			

Standard	Activity	PSE	Ind. Living	Empl.
Text types and Purposes				
1. Write arguments to support claims in analysis of substantive topics or texts, using valid reasoning and relevant and sufficient evidence	Compare and contrast two types of health insurance offered through a potential job and identify the pros and cons of both. Choose the one that offers the best package and create a "commercial" that summarizes the information for the chosen plan. [NSTTAC] Performance should be evaluated through the use of a rubric. Components of rubric should include but are not limited to: -Accurately identify three major pros for each health insurance in contrast to the other choice[NSTTAC] -Accurately identify three major cons for each health insurance in contrast to the other choice[NSTTAC] -Provides evidence that is written for the specific audience (i.e., self, middle age, or older age) [NSTTAC] -Uses transitional words to link the major ideas[NSTTAC] -Writes with a formal tone[NSTTAC] -Chooses best plan and offers support for choice[NSTTAC] -Creates a "commercial" that highlights the pros for the chosen plan[NSTTAC]	X	X	X
2. Write informative/explanatory texts to examine and convey complex ideas and information clearly and accurately through the effective selection, organization, and analysis of content				

3. Write narratives to develop real or imagined experiences or events using effective technique, well-chosen details, and well-structured event sequences	Write a narrative about a character who is graduating high school. Identify one of your own three post-school goals for them to participate in from the three outcome areas (i.e., independent living, employment, postsecondary education/training). Fictionalize the other two goals for the character. [NSTTAC]	X		
Production and Distribution of Writing				
4. Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience	Participate in the IEP process by developing new goals. Write the goals using appropriate organization and style. [NSTTAC]	X	X	
5. Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach	Participate in the IEP process by developing new goals. Revise the goals based on instructor feedback. [NSTTAC]	X	X	
6. Use technology, including the internet, to produce and publish writing and to interact and collaborate with others	Follow and participate in an online forum that poses questions through the term on functional activities. [NSTTAC]	X	X	X
Research to Build and Present Knowledge				
7. Conduct short as well as more sustained research projects based on focused questions, demonstrating understanding of the subject under investigation	Identify one possible location to move to based post-school, independent living goals. Research locations to answer the following questions: [NSTTAC] -		X	
8. Gather relevant information from multiple print and digital sources, assess the credibility and accuracy of each source, and integrate the information while avoiding plagiarism				
9. Draw evidence from literary or informational texts to support analysis, reflection, and research				
Range of Writing				
10. Write routinely over extended time frames (time for research, reflection, and revision) and shorter time frames (a single sitting or a day or two) for a range of tasks, purposes, and audiences				

Standard	Activity	PSE	Ind. Living	Empl.
Comprehension and Collaboration				
1. Prepare for and participate effectively in a range of conversations and collaborations with diverse partners, building on others' ideas and expressing their own clearly and persuasively	Participate in a student-run leadership group that explores both educational and social issues (e.g., IDEA, bullying, peer pressure). One student is designated to research the topic and present information that is relevant to the group while facilitating a discussion on that issue during the meeting. [NSTTAC] Performance should be evaluated through the use of a rubric. Components of rubric should include but are not limited to: -Student leader prepares research on the assigned topic[NSTTAC] -Student defines rules and roles for participating group members[NSTTAC] -Student leader poses questions to facilitate discussion and encourages participation from all members[NSTTAC] -Addresses questions by relating them to larger ideas[NSTTAC] -Clarify, verify, and/or challenge opinions[NSTTAC] -Summarize points of agreement and disagreement[NSTTAC] -Justify own views[NSTTAC] -Make connections to new evidence[NSTTAC]	X	X	
2. Integrate and evaluate information presented in diverse media and formats, including visually,	Observe and summarize current trends in fashion (i.e. scarfs); do observations in hallway or community, do a representation			

Standard	Activity	PSE	Ind. Living	Employment
quantitatively, and orally	quantitatively, visually, orally (could incorporate math standards into this as well) [NSTTAC]			
3. Evaluate speaker's point of view, reasoning, and use of evidence and rhetoric				
Presentation of Knowledge and Ideas				
4. Present information, findings, and supporting evidence such that listeners can follow the line of reasoning and the organization, development, and style are appropriate to task, purpose, and audience	Participate in an IEP meeting. Discuss present level of performance on current goals (including data) and propose new goals based on current goal performance, post-school goals, and preferences, interests, needs, and strengths. [NSTTAC]	X	X	
5. Make strategic use of digital media and visual displays of data to express information and enhance understanding of presentations	Participate in an IEP meeting. Present a portfolio of work through the use of power point and other digital media (e.g., video, pictures). [NSTTAC]	X	X	
6. Adapt speech to a variety of contexts and communicative tasks, demonstrating command of formal English when indicated or appropriate	Participate in a variety of mock interviews (e.g., work, college, training program, etc.). Adapt language as needed for the various contexts. [NSTTAC]	X	X	

Table 4. Examples of Infusing Secondary Transition Skills into College and Career Ready Standards in Mathematics

Mathematics				
Standard	Activity	PSE	Ind. Living	Employment
Grade 8: The Number System				
1. Know that there are numbers that are not rational and approximate them by rational numbers.	Using the "one-more than" strategy with cents pile modification. (rounding). [NSTTAC]		X	

2. Use rational approximations of irrational numbers to compare the size of irrational numbers, locate them approximately on a number line diagram, and estimate the value of expressions.			
Grade 8: Expressions and Equations			
1. Work with radical and integer exponents.	Sorting: (using square root because of repeated division) task would involve sorting the same number of objects within the same number of groups. [NSTTAC]	X	X
2. Understand the connections between proportional relationships, lines, and linear equations			
3. Analyze and solve linear equations and pairs simultaneous linear equations.			
4. Perform operations with number expressed in scientific notation, including problems where both decimals and scientific notation are used.			
5. Graph proportional relationships, interpreting the unit rate as the slope of the graph. Compare two different proportional relationships in different ways.			
6. Use similar triangles to explain why the slope m is the same between any two distinct points on a non-vertical line in the coordinate plane.			
7. Solve linear equations in one variable.			
8. Analyze and solve pairs of simultaneous linear equations.			
Grade 8: Functions			
1. Define, evaluate, and compare functions.	Any independent purchase using decision making would be a function. [NSTTAC]	X	
2. Use functions to model relationships between quantities.			
3. Interpret the equation y = mx + b as defining a linear function, whose graph is a straight line.			
Grade 8: Geometry			
1. Understand congruence and similarity using physical models, transparencies, or geometry software.		X	
2. Understand and apply the Pythagorean Theorem.	Building a bird house or dog house: you need a right angle at the top and then you determine how much wood you need from corner to corner on the bottom (this applies the Pythagorean		

	theorem). [NSTTAC]			
3. Solve real world and mathematical problems involving volume of cylinders, cones and spheres	Using liquid (paint, drink, vinegar, etc) can be used for volume of cylinders, cones, and spheres. [NSTTAC]			
4. Understand that a two dimensional figure is similar to another is the second can be obtained from the first by a sequence of rotations.				
5. Use informal arguments to establish facts about the angle sum and exterior angle of triangles, about the angles created when parallel lines are cut by transversal, and the angle-angle criterion for similarity of triangles.				
Grade 8: Statistics and Probability				
1. Investigate patterns of association in bivariate data.	Collect data on any two variables and investigate the relationship, for example: how many students have a curfew and how many students have chores? Is there evidence that those who have a curfew also tend to have chores? [NSTTAC]	X		X
2. Extends the properties of exponents to rational exponents. 3. Use properties of rational and irrational numbers.	Bank interest or paycheck hourly wage For example, .991 is the interest rate when you have a savings account. It is an irrational number. Server hourly wage could be $2.125 per hour. [NSTTAC]	X	X	X
Quantities				
1. Reason quantitatively and use units to solve problems.	Cooking breakfast for a group of 8. Everyone wants 2 eggs and 3 pieces of bacon. When I go to the grocery store, how many packs of bacon and cartons of eggs do I need? [NSTTAC]		X	
2. Perform arithmetic operations with complex numbers.				
3. Represent complex numbers and their operations on the complex plane.				
4. Use complex numbers in polynomial identities and equations.				
Vector and Matrix Quantities				
1. Represent and model with vector quantities.	Matrix- amount of production of a given task in a specified time period. For example, a.m. shift and p.m. shift productivity [NSTTAC]	X		X
2. Perform operations on vectors				
3. Perform operations on matrices and use matrices in applications.				

4. Interpret the structure of expressions.	Knowing amounts that are consistent and the number of people. For example, coefficient example: knowing there are 6 bags of popcorn in a box and 12 cans of coke in a carton. The amount of people is your variable. If you have 7 people coming over, how many boxes of popcorn and cartons of coke do you need? [NSTTAC]		X	X
5. Write expressions in equivalent forms to solve problems.				

Arithmetic with Polynomials and Rational Expressions

1. Perform arithmetic operations on polynomials.	Using the same as above with multiple variables. Number of people is the variable (above), use people and money as the polynomials. For example, if you had 7 people coming over and only $15. This activity could use a sale paper from the local grocery store. [NSTTAC]	X	X	X
2. Understand the relationship between zeros and factors or polynomials.				
3. Use polynomials to solve problems				
4. Rewrite rational expressions.				

Creating Equations

1. Creating equations that describe numbers or relationships.	For example, represent inequalities describing nutritional and cost constraints on combinations of different foods. (Any greater than or less than combination). For example, if you are on a gluten free diet versus a normal diet. [NSTTAC]		X	X

Reasoning with Equations and Inequalities

1. Understand solving equations as a process of reasoning and explain the reasoning.	Any inequality example: need 50 nails to build the birdhouse. I have two boxes of 15 and 8 nails I found from my last project. Do I have enough or do I need to buy more? Explain with a chart for graphical display. [NSTTAC]		X	X
2. Solve equations and inequalities in one variable.				
3. Solve systems of equations.				
4. Represent and solve equations and inequalities graphically.	Any inequality example: need 50 nails to build the birdhouse. I have two boxes of 15 and 8 nails I found from my last project. Do I have enough or do I need to buy more? Explain with a chart for graphical display. [NSTTAC]			

High School: Functions				

Interpreting Functions

1. Understand the concept of a function and use function	Functions have numerical outputs and inputs and are defined by	X	X	

notation.	algebraic expressions. For example, the time in hours it takes for a car to drive 100 miles is a function of the car's speed in miles per hour. [NSTTAC]			
2. Interpret functions that arise in applications in terms of the context.				
3. Analyze functions using different representations.				
Building Functions				
1. Build a function that models a relationship between two quantities.	Route to grandma's is (x) but if I decided to stop by aunt betty's (y) then I have changed my route by (y). [NSTTAC]		X	
2. Build new functions from existing function.				
Linear, Quadratic, and Exponential Models				
1. Construct and compare linear, quadratic, and exponential models.	Garden: grow a percent rate based on number of day and water. This is the reason we have "growing seasons." Day light and rainfall influence the growth of a garden. This is seasonal. [NSTTAC]		X	
2. Solve problems, and interpret expressions for functions in terms of the situation they model.				
Trigonometric Functions				
1. Extend the domain of trigonometric functions using the unit circle, model periodic phenomena with trigonometric functions.				
2. Prove and apply trigonometric identities.				
High School: Geometry				
Congruence				
1. Experiment with transformations in the plane. .	Anything you would have to replicate-slides, rotations. For example-setting a table at a restaurant; you would use both slides and rotations. If the teacher set one place setting, the student would have to "slide" to replicate on the left and right. The student would use "rotation" to do the place setting across from the example. [NSTTAC]	X	X	X
2. Understand congruence in terms of rigid motion.				
3. Prove geometric theorems.				
4. Make geometric constructions				
Similarity, Right Triangles, and Trigonometry				

1. Understand similarity in terms of similarity transformations.				
2. Prove theorems involving similarity.				
3. Solve problems involving right triangles.				
4. Apply trigonometry to general triangles.				
Circle				
1. Understand and apply theorems about circles.	Landscaping: arc length to determine the circular flower bed or circular driveway [NSTTAC]	X	X	
2. Find arc lengths and areas of sectors of circles				
Expressing Geometric Properties with Equations				
1. Translate between the geometric description and the equation for a conic section.				
2. Use coordinates to prove simple geometric theorems algebraically.				
Geometric Measurement and Dimension				
1. Explain volume and formulas and use them to solve problems.	Investigate relationship of 2-D vs 3-D objects. For example, a cookie and a circle/cookie drawn on a piece of paper. Use a 2-D and 3-D movie for visualization. [NSTTAC]	X		
2. Visualize relationships between two-dimensional and three-dimensional objects.				
Modeling and Geometry				
1. Apply geometric concepts in modeling situations.	Modeling a tree trunk, can of food, soda can as a cylinder, cereal, cracker box as a rectangular prism, ice cream cone is a cone. [NSTTAC]		X	X
High School-Statistics and Probability				
Interpreting Categorical and Quantitative Data				
1. Summarize, represent, and interpret data on a single count or measurement variable.	Median, median, mode, outliers [NSTTAC]	X		
2. Summarize, represent, and interpret data on two categorical and quantitative variables.				
3. Interpret linear models.				
Making inferences and Justifying Conclusions				
1. Understand and evaluate random processes underlying	Heads or tails game [NSTTAC]			

statistical experiments.				
2. Make inferences and justify conclusions from sample surveys, experiments, and observational studies.				
Conditional Probability and the Rules of Probability				
1. Understand independence and conditional probability and use them to interpret data.	Using the TV show Deal or No Deal and probability of winning the $1,000,000. Also use the lottery or election if students are not familiar with the TV show. [NSTTAC]	X	X	
2. Use the rules of probability to compute probabilities of compound events in a uniform probability model.				
Using Probability to Make Decisions				
1. Calculate expected values and use them to solve problems.	Compare a high-deductable versus a low-deductable automobile insurance policy using various, but reasonable chances of minor or a major accident. [NSTTAC]	X	X	
2. Use probability to evaluate outcomes of decisions.				

References

Achieve (2010). *"On the Road to Implementation"* Retrieved from http://www.achieve.org/files/FINAL-CCSSImplementationGuide.pdf

Association for Career Technical Education (2010). *CTE initiatives.* Retrieved from http://www.acteonline.org

Association for Career Technical Education (2010). *What is Career Ready?* Retrieved from http://www.acteonline.org

Bill & Melinda Gates Foundation (2007). *Common Core Mapping Project.* Retrieved from http://www.commoncore.org

Bill & Melinda Gates Foundation (2009). *College Ready.* Retrieved from http://www.gatesfoundation.org/learning/Documents/College-ready-education-plan-brochure.pdf.

Bill & Melinda Gates Foundation (2010). *Fewer, Clearer, Higher: Moving Forward with Consistent Rigorous Standards for All Students.* Retrieved from http://www.gatesfoundation.org/highschools/Documents/fewer-clearer-higher-standards.pdf

Board on Science Education (2011). *Conceptual Framework for New Science Education Standards.* Retrieved from http://www7.nationalacademies.org/bose/Standards_Framework_Homepage.html

California Center for College and Career (2010). *California Linked Learning Initiative.* Retrieved from http://www.connectedcalifornia.org/services/initiative.php

Common Core State Standards Initiative (2010). *Common Core State Standards.* Retrieved from http://www.corestandards.org

Conley, D. T. (2007). *Redefining college readiness*, Volume 3. Eugene: OR: Educational Policy Improvement Center.

Elementary and Secondary Education Act (2010). *Blueprint for Reform.* Retrieved from http://www2ed.gov/policy/elsec/leg/blueprint/index.html

Harvard Graduate School of Education (2011). *Pathways to Prosperity Project: Meeting the Challenge of Preparing Young Americans for the 21st Century.* Pearson Foundation.

Individuals with Disabilities Education Improvement Act of 2004, 20 U.S.C. § 1400 *et seq*

Kearns, J., Kleinert, H., Harrison, B., Sheppard-Jones, K., Hall, M., & Jones, M. (2010). *What does 'college and career ready' mean for students with significant cognitive disabilities?* Lexington: University of Kentucky.

Kentucky Department of Education (2010). *Educational Planning and Assessment System (EPAS) College Readiness Standards and Program of Studies Standards Alignment.* Retrieved from http://www.education.ky.gov/kde/instructional+resources/curriculum+documents +and+resources/educational+planning+and+assessment+system+(epas)+college+ readiness+standards+and+program+of+studies.htm

Kleinert, J., Harrison, B., Fisher, T., & Kleinert, H. (2010). "I can and I did"-Self-advocacy for young students with developmental disabilities. *Teaching Exceptional Children*, *43* (2), 16-26.

Kober, N., & Rentner, D. S. (2011). *States' Progress and Challenges in Implementing Common Core State Standards.*Washington, DC: Center on Education Policy. Retreived from http://www.cep-dc.org/publications/index.cfm?selectedYear=2011

National Collaborative on Workforce and Disability for Youth (September, 2011). *Policy Brief: Improving High School Outcomes for All Youth: Recommendations for Policy and Practice.* Retrieved from http://www.ncwd-youth.info/policy-brief-04

National Secondary Transition Technical Assistance Center (2009). *Predictor of Post-School Success.* Retrieved from http://www.nsttac.org/ebp/PredictorResources.aspx

Next Generation Learners Initiative (2009). *Next Generation Learners.* Retrieved from http://www.ccsso.org/What_We_Do/Next_Generation_Learners.html

P-16: Cradle to College and Career Ready (2009). *In the pipeline: P-16 and breaking ranks.* Retrieved from http://ideapartnership.org/media/documents/P-16-Collection/pipeline_p-16-and-breaking-ranks.pdf

Partnership for the Assessment of Readiness for College and Careers (2011). *The PARCC Assessment.* Retrieved from http://www.parcconline.org/

Partnership for 21st Century Skills (2002). *21st Century Skills.* Retrieved from http://www.p21.org

Partnership for 21st Century Skills (2006). Are they really ready to work? Retrieved from www.p21.org/documents/FINAL_REPORT_PDF09-29-06.pdf

Pathways to College Network (2005). *High Expectations: a key to success for all.* Retrieved from http://www.pathwaystocollege.net/pdf/highexp.pdf

Test, D. W., Mazzotti, V. L., Mustian, A. L., Fowler, C. H., Kortering, L. J., & Kohler, P. H. (2009). Evidence-based secondary transition predictors for improving post-school outcomes for students with disabilities. *Career Development for Exceptional Individuals, 32*, 160-181. Doi: 10.1177/0885728809346960

Met Life Foundation (2011). *The Met Life Survey of the American Teacher: Preparing Students for College and Careers.* Retrieved from http://www.metlife.com/assets/cao/contributions/foundation/american-teacher/MetLife_Teacher_Survey_2010.pdf.

National Council for Social Studies (2010). *National Curriculum Standards for Social Studies.* Retrieves from http://www.socialstudies.org/standards

SMARTER Balanced Assessment Consortium (2010). *A summary of core components.* Retrieved from http://k12.wa.us/SMARTER/pubdocs/SBACSummary2010.pdf

States' Career Cluster Initiative (2002). *Career clusters.* Retrieved from http://www.careerclusters.org

United States Department of Education (2010). *Race to the top funds.* Retrieved from http://www2.ed.gov/programs/racetothetop/index.html

United States Department of Education (2010). *Race to the top assessment programs.* Retrieved from http://www2.ed.gov/programs/racetothetop-assessment/index.html

United States Department of Education (2010). *Grants to improve assessments for students with disabilities.* Retrieved from http://www.ed.gov/news/press-releases/us-education-department-awards-grants-improve-assessments-students-disabilities

United States Department of Labor Secretary's Commission on Achieving Necessary Skills (1991). *What work requires of schools: A SCANS report for America 2000.* Retrieved from http://www.academicinnovations.com/report.html