Association for Career and Technical Education
ACTE

ISSUE BRIEF

Career and Technical Education's Role in Career Guidance

IN THIS BRIEF:
This Issue Brief will explore the leading role that career and technical education plays in the field of career guidance and in improving student success through career development services. CTE supports a comprehensive counseling and guidance system, provides a curriculum framework for career exploration, and engages students through personalized and applied learning.

The 21st century workplace is changing so quickly that traditional educational methods are no longer sufficient to ensure that students have the skills to navigate this complex economic environment. Today's students need relevant and rigorous educational programs that integrate academic, technical, employability and career decision-making skills and that provide the support and guidance necessary to connect them to the hopes, dreams and realities of their futures. Such a foundation not only leads to individual student success, but also ensures a better informed and prepared citizenry to meet national economic and workforce needs.

Most people do not acquire these skills spontaneously; they need the support of a planned, systemic, broad-based, institutional-wide program founded on the principles of strong career guidance. The American Counseling Association defines guidance as "The process of helping people make important choices that affect their lives."[1] It is more critical than ever that today's students are equipped with the skills they need to make these important choices as they lead America into the 21st century.

Photos: iStock

The Concerns

A CHANGING WORKPLACE

The skills necessary for competition in today's globally competitive workplace are complex and constantly changing. The average young baby boomer, born between 1957 and 1964, held 10.8 different jobs between the ages of 18 and 42.[2] All indicators point to this number rapidly increasing for today's students. Global competition, technical advances, and continuous innovation in product and process development challenge traditional rules related to organizational structure, employee tenure and advancement.[3] Companies are outsourcing services and product manufacturing, and the economy is completely integrated. Workers are being forced to retrain or be replaced by new technologies or more highly skilled employees. Either by choice or by chance, workers are required to make complex and frequent career decisions as they navigate the changing workplace, making strong career guidance more important than ever.

Student/Counselor Ratio in the United States

Average Student/Teacher Ratio in United States: 479 to 1

Recommended Ratio: 250 to 1

Not only is the workplace itself changing rapidly, but individual career opportunities are evolving as well. Some traditional careers have become obsolete, while new ones are emerging at a rapid pace. The Bureau of Labor Statistics estimates that 15.6 million new jobs will be added to the labor force between 2006 and 2016,[4] with population shifts and new technologies fueling job growth. Many of these new jobs will require higher communication, math, technology and employability skill levels than ever before. Even careers in traditional occupational areas such as the service sector are requiring higher-level skills such as creativity, problem solving, communications, entrepreneurship, computational analysis, collaboration and teamwork.[5]

Unfortunately, today's students often do not understand the new world of work, and there are gaps in work readiness that must be addressed by educators and employers. Although workforce shortages are widely reported, "far too few of those available are prepared to perform today's job duties...let alone the duties of the jobs that will emerge in the evolving future."[6]

LACK OF CAREER KNOWLEDGE

The lack of preparation to navigate the changing workplace can be tied specifically to a lack of career knowledge and awareness. More than half of high school students say no one in their school has been helpful in advising on career options or options to further their education.[7] Without structured guidance activities, young people tend to drift through their high school education without gaining knowledge of all the career opportunities available to them or the skills that are required. Some will become discouraged and drop out of high school; others may miss the connection between high school, postsecondary education and the workplace and make career decisions based on inaccurate or incomplete information.

In the 2008-2009 survey "The State of Our Nation's Youth" the top career choices among students in an open-ended question were doctor or surgeon (10 percent), teacher or professor (8 percent), engineer (6 percent), nurse/medical assistant (6 percent), arts or entertainment (5 percent), or lawyer or attorney (5 percent).[8] Most of these choices require a number of years of postsecondary education, yet only 70 percent of students graduate from high school on time, and only 34 percent graduate ready for college.[9] This disconnect between aspiration and educational performance sets students up for personal and financial disappointment as they are faced with the realities of the job market.

Many other students enter college without a clear career goal, resulting in indecision and the costly prospect of excessive time spent in post-high school institutions as they drift from one program to another or pursue courses of study that do not align with employer needs. Students over the age of 25 are now one of the fastest growing populations in community colleges;[10] they often enroll to acquire additional skills to be competitive in the workplace. Many of these students have already completed some college or even a four-year degree, but have found it inadequate or inappropriate for the career opportunities that are available to them. Engaging in postsecondary education without a clear purpose does not use public or private resources as effectively as possible, and these students would have greatly benefited from stronger career guidance early in their educational experiences.

CHALLENGES IN THE FIELD OF GUIDANCE AND COUNSELING

While counseling structures designed to help students gain career awareness are in place within the educational system, the field of school-based guidance and counseling is itself confronted with great challenges that make it more difficult to provide students with strong career guidance. Guidance professionals in many public schools are often assigned large work loads. The average U.S. student/

counselor ratio is 479 to 1, and it grows to more than 1,000 to 1 in some schools.[11] This contrasts greatly with what is necessary to ensure adequate student services. The American School Counselor Association recommends a student/counselor ratio of 250 to 1 in order to implement a comprehensive developmental school counseling program designed to meet the needs of all students.[12]

Further complicating these high ratios, guidance professionals are at times redirected to assignments that do not match nor need their professional counseling skills. Responsibilities may include such diverse activities as conducting testing programs, registering students for courses, filling out college applications, handling disciplinary issues and maintaining student records. Some of these activities, such as coordinating and administering cognitive, aptitude and achievement tests, have been declared inappropriate by the American School Counselor Association;[13] while others merely stretch the limits of any individual professional, leaving less time to focus on direct student services such as career guidance. A survey of high school counselors in Florida found that more than 30 percent reported that "actual career counseling" occupied very little of their time.[14]

There is also a dichotomy between what counselors need to know about helping students make good educational and career decisions and what counselors learn in counselor preparation programs. Many counselor preparation programs focus predominately on mental health models rather than academic and career development models.[15] Thus, some guidance professionals lack current and accurate knowledge concerning career guidance and emerging career opportunities, and may have outdated perceptions about postsecondary options that impact the information they share with students.[16]

CTE Provides Solutions

Despite the challenges, career and technical education (CTE) programs are in a unique position to complement guidance and counseling professionals' efforts to provide students with strong career guidance. The historical roots of counseling and guidance have always been inextricably linked to CTE. Since 1908, when Frank Parsons established the first Bureau of Vocational Guidance, career guidance has been a component of workforce development. It was the key to the career education movement which developed in the 1980s, and has consistently remained a critical aspect of the federal Carl D. Perkins CTE program.[17]

The long and enduring link between career guidance and CTE has been strengthened in recent years as CTE has gone through its own metamorphosis. One outward indicator of the changes in CTE is the shift in language from "vocational" to "career and technical" programs. Vocational programs were originally intended to provide skills training in limited fields for students who were not going to college. Today's CTE programs provide pathways both from high school to the workplace and from high school to postsecondary education in a wide variety of career fields.

Former vocational programs separated academic courses from skills training courses and created an artificial barrier between students and teachers in schools. Model programs now integrate academics into career preparation. The new CTE is much broader and more inclusive, and includes the philosophy that all education is career education. This new CTE philosophy provides career development to all students, for all levels of education and for all career fields by supporting a comprehensive counseling and guidance system, providing a curriculum framework for career exploration, and engaging students in personalized and applied learning.

SUPPORTING A COMPREHENSIVE COUNSELING AND GUIDANCE SYSTEM

The framework for student success is most often found in school systems where traditional guidance programs have been re-conceptualized to provide comprehensive service delivery. Such programs have become an important center of support for the overall educational system, serving all students and their parents or guardians. These programs attend to the academic, career and personal/social development of the individual student. Further, comprehensive counseling and guidance programs include the components of individual student planning, guidance curriculum, responsive services and system support. These components ensure that individual students' needs are being met and that students are engaging in age-appropriate activities for their own career development.

Results from fully implemented comprehensive counseling and guidance programs show that students

have access to more college and career information, are more targeted in their course selection, reach higher levels of academic achievement and have higher grades, and feel that their education has better prepared them for their future.[18] In short, well-planned comprehensive counseling and guidance programs provide the scaffolding which ensures students' success in informed career decision-making.

Comprehensive counseling and guidance programs are led by counselors, but in order to navigate the complex workplace of the 21st century, students need the services of many qualified professionals who engage them in the career decision-making process. These educational professionals can include career development specialists, CTE teachers, CTE administrators, career coaches, work-based learning facilitators, and a variety of other capable individuals, many with strong connections to CTE. These people, working in concert, provide a powerful service-delivery system of programs and activities designed to help students gain proficiency in career decision-making skills. Ultimately, the strength of career guidance programs is dependent upon the combined effort, collaboration and support of all of the adults in the educational system.

This cooperation is only possible when the adults are prepared and informed. At the school or institutional level, guidance and career development leaders should meet together to identify the different roles that each play. Counselors are trained to understand young people and their age-appropriate development. Career coaches and career facilitators can work with groups of students to help them create portfolios and gain work-readiness skills. Work-based learning coordinators can interact directly with business and industry leaders to create opportunities for students to interface with the workplace. CTE administrators can support professional development and training, provide equipment and space, and approve and encourage the positive efforts of the team.

PROVIDING A CURRICULUM FRAMEWORK FOR CAREER EXPLORATION

As CTE has grown into a model of education reform, a new focus on the reorganization of CTE curriculum has

Utah's Comprehensive Counseling and Guidance Program[19] was developed in 1989 out of concerns that students were not receiving the best career guidance services in their schools. From the 11 pilot programs to the 262 secondary schools that now implement the comprehensive program, Utah has had great success in creating a system that meets the career and educational needs of its students. There are four areas of student outcomes that Utah counselors help students achieve under the program: Academic/Learning Development, Life/Career Development, Multicultural/Global Citizen Development and Personal/Social Development.

Funding for the program comes from the Office for Career and Technical Education in the Utah State Office for Education and is distributed through incentive grants based on school enrollments. Beyond the funding, there is a strong relationship between CTE and the Comprehensive Counseling and Guidance Program. One of its key components is the creation of a Student Education Occupation Plan (SEOP), which allows students and counselors to organize and promote student accomplishments and helps students, parents, teachers and counselors plan, monitor and manage educational and career development in middle and high school.

The use of the SEOP in the Comprehensive Counseling and Guidance Program is essential to the success of Utah's CTE Pathways initiative. The CTE Pathways provide templates for school counselors to utilize when working with students on developing the individual SEOP. Through the planning process, counselors identify appropriate Pathways that meet each student's interests, abilities and goals.

Another way the Comprehensive Counseling and Guidance Program proves beneficial to Utah CTE Pathways is through Utah Choices, the state-sponsored career information delivery system. The state has entered into a partnership with the developers of Utah Choices to disseminate information about and promote the use of the CTE Pathways. Work has already begun on the development of a database that will describe all 62 statewide secondary pathways, including the academic and CTE courses that have been defined to help students achieve high school graduation and transition to college and careers; link those secondary pathways to the regional postsecondary pathways to create an efficient search and sort process for students; and be accessible to regions, districts and specific schools so their CTE programs can be marketed to their own students as well as to students in other districts.

16 Career Clusters

Agriculture, Food & Natural Resources
Architecture & Construction
Arts, Audio/Video Technology & Communications
Business Management & Administration
Education & Training
Finance
Government & Public Administration
Health Science
Hospitality & Tourism
Human Services
Information Technology
Law, Public Safety, Corrections & Security
Manufacturing
Marketing
Science, Technology, Engineering & Mathematics
Transportation, Distribution & Logistics

emerged. This new model emphasizes career clusters and career pathways as a way to guide young people through the career decision-making process. Used as curriculum framing tools, clusters and pathways help students to more clearly understand how their educational choices affect future career options.

Career clusters are broad groupings of occupations or careers used as an organizing tool for curriculum design and instruction. The U.S. Department of Education identified 16 national clusters in 1999, and many individual states have adopted or adapted these clusters for their own use through the States' Career Clusters Initiative.[20] The career cluster framework is serving to reorganize CTE programs in a way that is more meaningful to students as they enter the 21st century workplace and allows more broad exploration of career opportunities.

Career pathways are more specific groupings of occupations or careers within career clusters. According to the College and Career Transitions Initiative (CCTI), a career pathway is a "coherent, articulated sequence of rigorous academic and career courses, commencing in the ninth grade and leading to an associate degree, and/or an industry-recognized certificate or licensure, and/or a baccalaureate degree and beyond."[21] Career pathways are designed to be developed, implemented and maintained in partnership among secondary education, postsecondary education and employers; and to lead to rewarding careers.

The States' Career Clusters Initiative has identified 81 career pathways and completed, in partnership with CCTI, sample plans of study for each of the pathways[22] that can be used to assist students in education and career planning.

Similar in concept to the plans of study, the 2006 Carl D. Perkins Career and Technical Education Act included a new requirement for CTE to begin implementing "programs of study" to be eligible for federal funding. Programs of study are defined in the Perkins law as options for students in planning for and completing future coursework. They must incorporate and align secondary and postsecondary education elements; include rigorous and relevant academic and CTE content in a coordinated, non-duplicative progression of courses; lead to an industry-recognized credential or certificate at the postsecondary level, or an associate or baccalaureate degree; and may include the opportunity for dual or concurrent enrollment programs.[23]

The terms "career pathway" and "program of study" are used interchangeably in some places to represent the specific set of courses and activities that students need for a chosen career area. In other places around the country, programs of study are more specific, with several programs being developed within a career pathway. For example, programs of study might be developed for interior design and graphic design within the "visual design" pathway of the Arts, Audio/Visual Technology & Communications cluster.

Regardless of the specific terminology being used, the systematic course planning and design involved in these efforts provide tremendous tools for career guidance. Students who utilize career pathways and programs of study will be able to capture a clear vision of their own career futures. These tools will open new opportunities for career exploration while providing students with very clear pathways to further education and success.

ENGAGING STUDENTS THROUGH PERSONALIZED AND APPLIED LEARNING

Perhaps the most important contribution of CTE to career guidance is its ability to engage students in the educational and career decision-making process through learning that is relevant and personal. This personalized learning can have a direct relationship on students' career success. For example, a study recently released by MDRC found that career academies, a leading CTE reform initiative that bases curricula of schools around career themes, produced substantial and sustained improvements in the post-high school labor market outcomes of youth.[25] Focused CTE programs underscore the relevancy of high school education and help students see how they will use the knowledge they are gaining in their futures, critical elements of career guidance. The most successful education reform movements have recognized this and embedded career development themes into their vision.

The Southern Regional Education Board, International Center for Leadership in Education, National Governors Association, National Academy Foundation, Gates Foundation and the National High School Alliance are all examples of groups whose high school reform efforts validate the nexus of career education, CTE and traditional core academic subjects through personalization and engagement. For example, the National High School Alliance calls for individual guidance, information and resources on career pathways and opportunities for participating in workplace-based learning;[26] while the National Governors Association supports different school design approaches and programs to appeal to students' varied interests and learning styles.[27] CTE provides students with all of these opportunities.

One of the key components being used to personalize student learning is an "individual plan for graduation and beyond," also known as an "individualized graduation plan." These plans are often based on career clusters, pathways or programs of study, and they map out the career and college readiness courses a student is required to take, as well as a mix of interest-based courses, other electives and enrichment experiences. A variety of electronic tools exist to help students develop such plans and integrate them with interest assessments and career exploration tools. Some schools are also using electronic portfolios in order to follow students' career choices. Computer-based programs can simplify the process for young people by organizing careers into related clusters and by providing links to post-high school institutions and professional organizations.

A personalized education plan provides a template for students to choose coursework and firsthand experiences that allow for further exploration of possible career choices. Within this plan, CTE courses provide opportunities for

Based on high dropout and postsecondary remediation rates, low secondary-postsecondary transition rates, and the belief that "the curricula of the 21st century should combine rigorous academics with relevant career education," the state of Texas began reorganizing its CTE system in 2005. The result is AchieveTexas, a model state initiative that replaces more traditional CTE programs with a new academic-CTE system based on the 16 federally defined career clusters.

AchieveTexas helps schools rearrange their instructional programs to provide students and parents a better understanding of education and how it applies to career choices. Two of its main goals are to afford vertical alignment so the career clusters span all grades (P–16+) and for students to flow seamlessly from secondary to postsecondary programs. This vertical alignment will allow Texas institutions to provide high-quality programs of study which include rigorous courses that are based on relevant and challenging academic and technical standards.

The postsecondary vertical alignment process began with three clusters identified by the Governor as priority areas for economic development, including Advanced Manufacturing; Informational Technology; and Science, Technology, Engineering and Mathematics (STEM). The initial alignment will provide the model for all future alignment activities. Texas' goal is to vertically align all 16 career clusters and provide model programs of study by 2009.

Sixteen printed cluster guides have been developed to help students, parents, academic and guidance counselors, secondary teachers and postsecondary faculty, and business and industry partners to effectively implement the career clusters and new programs of study. Extensive technical assistance will be provided to inform stakeholders about high-skill, high-wage or high-demand occupations in each of the 16 career clusters.[24]

In 2005, the South Carolina General Assembly passed the Education and Economic Development Act, requiring all public school districts to develop a curriculum that is organized around personal pathways to success for all students. The state developed the law to provide students with strong academic and real-world problem-solving skills. Schools are required to organize curricula around a minimum of three career clusters and establish individual graduation plans for all students. In addition, the law requires that every public high school implement a career guidance program model, ensure students are provided with the services of a certified Career Development Facilitator, and establish a student/guidance personnel ratio of no greater than 300 to 1.

As a high school in transition, McCormick High School in McCormick, South Carolina, received a below average performance rating from the state in 2004. The school has 88 percent of its students on free or reduced-price lunch and 39 percent come from single-parent households. The rural school resides in a county where the adult literacy rate is just under 50 percent.[28] In order to comply with the new state mandate and develop a way to reduce the school's high dropout rates, the school decided to implement the Career Choices curriculum with all freshman students in 2006.

Career Choices is a curriculum that helps students develop a personalized, career-inclusive 10-year educational plan, outlining yearly quantitative goals and objectives for education, work, financial and lifestyle choices. McCormick High School developed a freshman academy to implement the curriculum through preparatory freshman transition courses that provide advice and instruction for each student, including a scheduled 24-minute advisory period each instructional day. After the first year of the program, the school received one of two excellent ratings in the entire state in its category. During the second year of the program, McCormick had the fourth highest graduation rate in the state.[29]

applied learning that allow students to perform the skills that will be required of them on the job in a wide variety of career possibilities. For example, students enrolled in the VyStar Academy of Business and Finance at Bartram Trail High School in St. Johns County, Florida, operate a student-run credit union on the school campus, gaining relevant real-world experience in the context of a rigorous curriculum. By actually performing the technical skills which will be expected in employment, students gain a better understanding of the careers they wish to pursue and their aptitudes and abilities related to the professions they are considering.

Work-based learning experiences like internships, job shadowing, community service projects and youth apprenticeships provided by CTE can further help students make career decisions, network with potential employers, select courses of study and develop job skills relevant to future employment. Through the interaction of work and study experiences, students can enhance their academic knowledge, personal development and professional preparation. As an extension of this work-based learning, students also have the opportunity to participate in Career and Technical Student Organizations (CTSOs), co-curricular organizations that provide leadership, career development and recognition opportunities for students.

Conclusion

Structured career guidance activities are essential in preparing students for successful education and career transitions, which are important to realizing both personal goals and national economic and workforce objectives. The 21st century world of work is complicated and rapidly changing, and without guidance, young people often make impulsive or uninformed career decisions. Career guidance helps students carefully consider their own interests and abilities, as well as the future potential in a specific career choice. It helps students identify and achieve goals that can motivate them to remain in school and to pursue positive choices for their entire lives.

CTE is an integral part of a successful career guidance program. It supports a comprehensive counseling and guidance system, provides a curriculum framework for career exploration, and engages students in personalized and applied learning. CTE programs can lead efforts to ensure that all students have access to strong career guidance and make important contributions to career awareness activities that help individuals become productive members of the 21st century economy.

Endnotes

1 American Counseling Association, "Definition of Counseling," Crisis Fact Sheet, January 1, 2007, **www.counseling.org/Resources/ConsumersMedia.aspx?AGuid=97592202-75c2-4079-b854-2cd22c47be3f**.

2 Bureau of Labor Statistics, U.S. Department of Labor, "Number of Jobs Held, Labor Market Activity, and Earnings Growth Among the Youngest Baby Boomers: Results From a Longitudinal Survey," Press Release, June 27, 2008, **www.bls.gov/news.release/pdf/nlsoy.pdf**.

3 Feller, Rich, "Aligning School Counseling, the Changing Workplace, and Career Development Assumptions," *Professional School Counseling* 6, no. 4 (April 2003): 262-271.

4 Bureau of Labor Statistics, U.S. Department of Labor, "Tomorrow's Jobs," *Occupational Outlook Handbook, 2008-09 Edition*, **www.bls.gov/oco/oco2003.htm**.

5 Van Opstal, Debra, "Thrive: The Skills Imperative," (Washington, DC: Council on Competitiveness, April 2008).

6 Herman, Roger, Thomas Olivo and Joyce Gioia, *Impending Crisis: Too Many Jobs, Too Few People*, (Winchester, VA: Oakhill Press, 2003), 84.

7 Hurley, Dan and Jim Thorp, eds., "Decisions Without Direction: Career Guidance and Decision-Making Among American Youth," (Big Rapids, MI: Ferris State University, Career Institute for Education and Workforce Development, 2002).

8 Horatio Alger Association of Distinguished Americans, Inc., "The State of Our Nation's Youth: 2008-2009," **www.horatioalger.org/pdfs/0708SONY.pdf**.

9 Alliance for Excellent Education, "High School Teaching for the Twenty-First Century: Preparing Students for College," **www.all4ed.org/files/HSTeach21st.pdf**.

10 Gateway Community College, "Adult Re-Entry," **http://students.gatewaycc.edu/resources/adultreentry/default.htm**.

11 Gaviola, Nick and Jennifer Sable, "Documentation for the Common Core of Data State Nonfiscal Survey of Public Elementary and Secondary Education: School Year 2004–05, Version 1f (NCES 2008-355)," (Washington, DC: U.S. Department of Education, National Center for Education Statistics, 2008).

12 American School Counselor Association, "Position Statement: Comprehensive School Counseling Programs," **www.schoolcounselor.org/content.asp?contentid=196**.

13 American School Counselor Association, "Inappropriate Activities for School Counselors," **www.schoolcounselor.org/files/appropriate.pdf**.

14 Osborn, Debra and Jennifer Baggerly, "School Counselors' Perceptions of Career Counseling and Career Testing: Preferences, Priorities, and Predictors," *Journal of Career Development* 31, no. 1 (Fall 2004): 45 –59.

15 Martin, Patricia, "Transforming School Counseling: A National Perspective," *Theory into Practice* 42, no. 3 (Summer 2002): 148–53.

16 Mitkos, Yvonne and Debra Bragg, "Perceptions of the Community College of High School Counselors and Advisors," *Community College Journal of Research and Practice* 32, no. 4 (2008): 375–90.

17 Hoyt, Kenneth and Judith Stein, *Career Education: History and Future* (Tulsa, Oklahoma: National Career Development Association, 2005).

18 Lapan, Richard, Norm Gysbers and Yongmin Sun, "The Impact of More Fully Implemented Guidance Programs on the School Experiences of High School Students: A Statewide Evaluation Study," *Journal of Counseling & Development* 75 (1997): 292-302.

19 Utah State Department of Education, "Comprehensive Counseling and Guidance Program," **www.schools.utah.gov/cte/guidance.html**.

20 States' Career Clusters Initiative, **www.careerclusters.org**.

21 League for Innovation in the Community College, College and Career Transitions Initiative, "Career Pathway Characteristics," **www.league.org/league/projects/ccti/cp/characteristics.html**.

22 States' Career Clusters Initiative, "Plans of Study," **www.careerclusters.org/resources/web/pos.cfm**.

23 "Carl D. Perkins Career and Technical Education Act of 2006," Public Law 109-270, August 12, 2006.

24 Texas Education Agency, "AchieveTexas," **www.achievetexas.org**.

25 Kemple, James and Cynthia Willner, "Career Academies: Long-Term Impacts on Labor Market Outcomes, Educational Attainment, and Transitions to Adulthood," **www.mdrc.org/publications/482/full.pdf**.

26 National High School Alliance, "A Call to Action: Transforming High School for All Youth," (Washington, DC: Institute for Educational Leadership, 2005).

27 Achieve, Inc. and National Governors Association, "An Action Agenda for Improving America's High Schools," **www.nga.org/Files/pdf/0502ACTIONAGENDA.pdf**.

28 "Best Practices Panel Discussion," 2008 Focus on Freshman Institute, **www.academicinnovations.com/panel/index.html**.

29 Telephone Interview, Rebecca Dedmond, October 20, 2008.

Association for Career and Technical Education
ACTE
Educate. Advocate. Lead.

The Association for Career and Technical Education
1410 King Street, Alexandria, VA 22314
703-683-3111 800-826-9972

www.acteonline.org

ACTE would like to acknowledge Guidance and Career Development Division Vice-President Judy Whitaker for providing background information and content for this Issue Brief.