

TCTEC



Tennessee Career and Technical Education Council

The Tennessee Board of Education and the Tennessee Board of Regents

Tennessee Career and Technical Education Council

John Lee Harrison

In recognition of the successful completion of the
requisite courses of study prescribed by
the State of Tennessee is hereby awarded this

Diploma

and is entitled to all the rights and privileges appertaining thereto.


Governor, State of Tennessee

State of



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The Tennessee Career and Technical Education Council (TCTEC) consists of thirteen members appointed by the governor to serve in an advisory capacity to the Tennessee Board of Education, Tennessee Board of Regents, the governor, and the general assembly. Members of the council are appointed to serve terms of six years.

Seven individuals are representatives of the private sector in the state and constitute a majority of the membership. Six individuals are representatives of secondary and post-secondary career and technical institutions, career guidance and counseling organizations within the state, and/or individuals who have special knowledge and qualifications with respect to the educational and career development needs of special populations.

Duties of the Tennessee Career and Technical Education Council are:

1. To meet with the Tennessee Board of Education or its representatives during the planning year to advise on the development of the state plan;
2. To advise the Tennessee Board of Education and make reports to the governor, the business community, and the general public of the state;
3. To analyze and report on the distribution of spending for career and technical education in the state and on the availability of career and technical education activities and services within the state;
4. To furnish consultation to the Tennessee Board of Education on the establishment of evaluation criteria for career and technical education programs within the state;
5. To submit recommendations to the Tennessee Board of Education on the conduct of career and technical education programs within the state;
6. To assess the distribution of financial assistance furnished under Tennessee laws, particularly the analysis of the distribution of financial assistance between secondary and post-secondary career and technical education programs;
7. To recommend procedures to the Tennessee Board of Education to ensure and enhance the participation of the public in the provision of career and technical education at the local level within the state;
8. To report to the Tennessee Board of Education on the extent to which individuals are provided with equal access to quality career and technical education programs.

Mission Statement

The mission of the Tennessee Career and Technical Education Council shall be to serve as an independent advocate of quality career and technical education, workforce and economic development, and to function as an independent oversight body.

Vision

The Tennessee Career and Technical Education Council will be a primary influence in visionary decision-making for global workforce development.

Career and technical education's mission is to enhance the economic development process by providing persons of all ages, socioeconomic status, and learning potential with opportunities to acquire career competencies for the workplace and foundations for career development through matriculation to higher education.

Career and technical education is an integral component of public education in Tennessee—providing individuals (secondary students, post-secondary students, and adults) with opportunities to attain occupational competencies and relevant academic instruction. The system is dedicated to helping all students achieve levels of personal accomplishment consistent with their interests, aptitudes, desires, and abilities.

The underlying philosophy of career and technical education in Tennessee is that students are entitled to equal opportunity to full participation in the benefits of our society, culture, and economy. Also, all students are entitled to equal opportunity to participate in a quality career and technical program that develops basic learning skills and offers useful career and technical training.

Introduction

Tennessee's career and technical education system is continuing to operate under the Carl D. Perkins Vocational and Applied Technical Education Act of 1998 (Perkins III). The Perkins Act of 1998 sets forth four goals:

1. Support state and local efforts to develop challenging academic standards.
2. Promote the development of services and activities that integrate academic, vocational, and technical instruction and link secondary and post-secondary education.
3. Increase state and local flexibility to provide services and activities.
4. Disseminate national research and provide professional development and technical assistance that will improve vocational and technical education.¹

Some noteworthy points in Perkins III include:

- ★ Increasing the minimum within-state allocation of Perkins funds distributed to local groups from 75.0 percent to 85.0 percent;
- ★ Coordinating activities with the state Workforce Development Board rather than the state Job Training Coordinating Council;
- ★ Including single parents and displaced homemakers in the definition of "special populations";
- ★ Excluding individuals in correctional facilities from the definition of "special populations";
- ★ Expanding the scope of required activities to include supporting programs that integrate academic and career and technical education; developing, improving, and expanding use of technology; supporting partnerships of LEAs, institutions of higher education, and adult education providers; and supporting programs for special populations;
- ★ Increasing the portion of the state's basic grant allotment that may be reserved for state leadership activities from 8.5 percent to 10.0 percent;

¹H.R. 1853, Carl D. Perkins Vocational and Applied Technical Education Act of 1998 (VTEA).

Tennessee's Vocational-Technical Education system is working at the secondary and post-secondary levels to furnish a seamless approach to providing an incentive to the economy of Tennessee. A well-trained workforce with strong academic and technical skills is necessary for the maintenance and expansion of existing business and industry and for the recruitment of new business and industry.

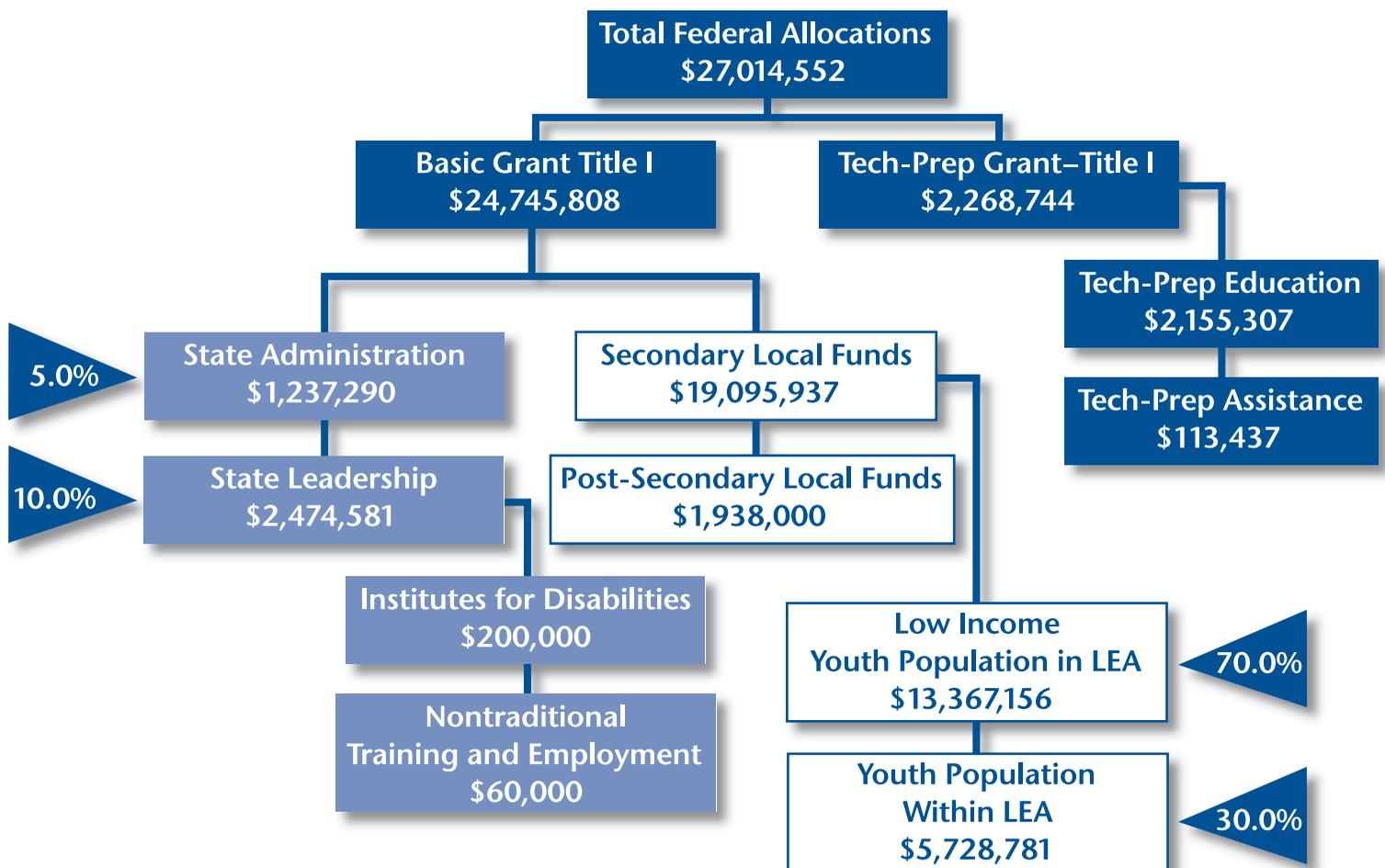
- ★ Expanding the permissible uses of funds to include technical assistance for local programs, improvement of career guidance and academic counseling, support for cooperative education, support to improve or develop new courses, providing vocational and technical education programs for adults and school dropouts to complete secondary education, providing assistance to participating students to obtain employment or continue their education, support for public charter schools operating vocational-technical education programs, and support for programs that offer experience in and understanding of all aspects of an industry; and
- ★ Strengthening evaluation and accountability by identifying core indicators of performance, establishing performance levels for each core indicator, and involving local program representatives in the development of performance levels.

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Carl D. Perkins Vocational and Applied Technical Education Act of 1998 for Tennessee, FY 2003-2004

(Basic Grant Times 85.0 Percent Minus TNBOR)



Secondary Enrollment

Since FY 1997, secondary enrollment has increased in six of the nine program areas noted in Table 1. As indicated in past reports, the majority of students are enrolled in three programs: Trade and Industrial, Information Technology (formally Business and Office Education), and Family and Consumer Sciences. Other notable changes are as follows:

- ★ As the total secondary enrollment in career and technical education programs increased significantly between FY 1997 and FY 2004 (9.2 percent), the composition of the enrollment also has changed dramatically.
- ★ The greatest percentage increase in enrollment during this time period occurred within Health Science and Technology, increasing by 48.6 percent, or by 5,905 persons.
- ★ The greatest numerical increase in enrollment occurred in Information Technology, up by 21,861 persons since the 1997-1998 school year, or by 37.9 percent.
- ★ The greatest percentage decrease and the greatest numerical decrease both occurred in Applied/Tech Prep, which has fallen by 61.7 percent, or by 22,322 persons since the 1997-1998 school year.



Table 1. Secondary Enrollment in Career and Technical Education Programs, FY 1997-FY 2004

Program Area	1997-1998	1998-1999	1999-2000	2000-2001	2001-2002	2002-2003	2003-2004	Absolute Change	Percent Change
Agricultural Education	24,698	25,466	25,442	26,384	28,651	29,831	31,337	6,639	26.9
Marketing Education	12,676	13,316	13,339	13,871	14,670	14,841	16,242	3,566	28.1
Information Technology	57,674	58,713	56,754	49,552	66,864	74,709	79,535	21,861	37.9
Health Science and Technology	12,154	12,584	11,697	13,068	14,428	15,798	18,059	5,905	48.6
Family and Consumer Sciences	54,511	55,215	52,458	53,488	60,834	53,434	54,802	291	0.5
Family and Consumer Sciences-Occupational	6,790	7,516	6,446	4,915	3,444	6,198	6,955	165	2.4
Technology Education	28,464	28,740	25,185	25,171	26,456	25,426	25,168	- 3,296	-11.6
Trade and Industrial	64,845	68,346	63,621	63,872	69,177	72,793	79,359	14,514	22.4
Applied/Tech Prep	36,186	36,153	31,746	30,506	14,651	13,087	13,864	-22,322	-61.7
Total	297,998	306,049	286,688	280,827	299,175	306,117	325,321	27,323	9.2

Post-Secondary Enrollment

Tennessee's post-secondary technical education system consistently produces a job placement rate of over 87.0 percent for program graduates.

Graduates of post-secondary career and technical programs in the state of Tennessee are often prime candidates for the highly skilled jobs that comprise today's workforce. Students may select from a wide range of technical education opportunities offered through the state's Technology Centers and community colleges. Tennessee Technology Centers focus on immediate entry into the workforce. Graduates of community colleges also enter the workforce at high rates and frequently choose to continue their education at four-year colleges or universities. Tennessee's post-secondary technical education system consistently produces a job placement rate of over 87.0 percent for program graduates.

The number of students enrolled in technical education programs continues to remain strong across Tennessee Board of Regents (TBR) institutions. Although overall enrollment in Tennessee technology centers has decreased slightly, enrollment remains strong, which is evidence of changing workforce demands and proof that Tennessee Board of Regents institutions are striving to be crucial players in the Workforce Development community.

Tennessee Board of Regents institutions continue to survey both students and employers to determine program effectiveness. Satisfaction surveys from both groups attest to the tremendous success of post-secondary career



Table 2. Post-Secondary Career and Technical Education Enrollment in Tennessee Board of Regents Institutions, 2003-2004

Tennessee Technology Centers	Enrollments
Regular	21,062
Disadvantaged	6,443
Handicapped	427
Limited English Proficiency	5
Total	28,246

Table 3. Post-Secondary Career and Technical Education Graduates, 1994-2004

Category	1994-1995	1995-1996	1996-1997	1997-1998	1998-1999	1999-2000	2000-2001	2001-2002	2002-2003	2003-2004
Graduates Available for Placement	4,348	4,389	4,229	4,390	4,726	5,224	5,437	5,680	6,100	5,879
Graduates Placed in Employment	4,088	3,985	3,808	3,899	4,194	4,567	4,805	4,971	5,410	5,235
% Graduates Placed in Employment	94.0	91.0	90.0	89.0	88.0	87.0	88.0	88.0	89.0	89.0

and technical education in Tennessee. Ninety-two percent of recent alumni surveyed in 2004 rated their technical training as good or excellent. An overwhelming majority (98.0 percent) thought that the hands-on projects and practical experiences they received during training enabled them to enter the workplace well prepared. And, employers backed up these findings:

- ★ 82.0 percent of employers rated the technical knowledge of recent graduates as good or excellent; 83.0 percent of employers scored the work quality of recent graduates as good or excellent as well.
- ★ 80.0 percent of employers gave recent graduates high marks for technical skills.



Table 4. Post-Secondary Career and Technical Education Alumni Survey, 2004

Survey Questions	Excellent	Good	Satisfactory	Poor
How well did your training program prepare you in terms of technical theory and knowledge for your job?	52.0%	40.0%	7.0%	1.0%
How well did the hands-on projects, clinicals, or practical experiences received in your training program prepare you for your job?	55.0%	33.0%	10.0%	2.0%
Were instructional tools and equipment in the training program adequate?	45.0%	37.0%	15.0%	3.0%
Was the instructional content and curriculum up-to-date?	55.0%	35.0%	8.0%	2.0%
How well did your training program prepare you to deal with co-workers and other personnel?	50.0%	38.0%	10.0%	2.0%

Table 5. Post-Secondary Career and Technical Education Employer Survey, 2004

Survey Questions	Excellent	Good	Satisfactory	Poor
Job-Related Technical Knowledge and Theory	35.0%	47.0%	15.0%	3.0%
Technical Skills	35.0%	45.0%	16.0%	4.0%
Work Quality	45.0%	38.0%	14.0%	3.0%



State Leadership and Professional Development

The Tennessee Technology Centers (TTC) have joined the Regents' Online Degree Program by offering online certificates and diplomas. Premier providers of workforce development training, the TTC's offer online technical certificates in Computer Operations, Information Processing, Detail Drafter, Drafting, and CAD Technician, as well as the Computer Operations Diploma. Online students learn the same things as students in the classroom while setting their own schedules and eliminating travel time. Advising, student support, and other forms of student assistance have been enhanced for online delivery. Technical support for online classes is available 24 hours a day, 7 days a week.

The Tennessee Technology Centers Leadership Program for employees continued for the second year. The purpose of the program is to give employees the skills necessary for executive leadership. Participants were selected from numerous applications through a competitive review of credentials. Session topics ranged from budget administration to THEC responsibilities to team building rope courses. The final session included a project that brought all the pieces together.



Student Organizations— Secondary

Tennessee's Career and Technical Education system is comprised of 122 local secondary career and technical education agencies that deliver career and technical programs to the state. Each program has an affiliated career and technical student organization consultant who provides statewide leadership to local organizations. Each career and technical program has developed curricular standards for all programs. Career and technical programs use established local, business/industry, national, and state standards with correlated assessment.

- ★ There has been a dramatic increase in enrollment in student programs between the 1997-1998 and the 2003-2004 school years, with total enrollment increasing by 92.5 percent, or by 39,846 pupils.
- ★ Accordingly, there were 239 more student organization chapters in the 2003-2004 school year than there were in the 1997-1998 school year, or an increase of 23.1 percent.
- ★ The greatest changes took place in Technology Education TSA chapters, with total enrollment rising by 854.7 percent, or by 22,719 pupils, and the total number of chapters rising by 163.6 percent, or by 72 chapters.
- ★ Although all student organizations experienced an increase between 1997 and 2004, there were some chapters in two areas that did decrease: Agricultural Education FFA chapters decreased by 4.0 percent (8 chapters), and Trade and Industry Skills USA chapters fell by 24.6 percent (35 chapters). However, both of these organizations experienced increases in enrollment of 9.8 percent (1,167 pupils) and 62.2 percent (3,852 pupils), respectively.

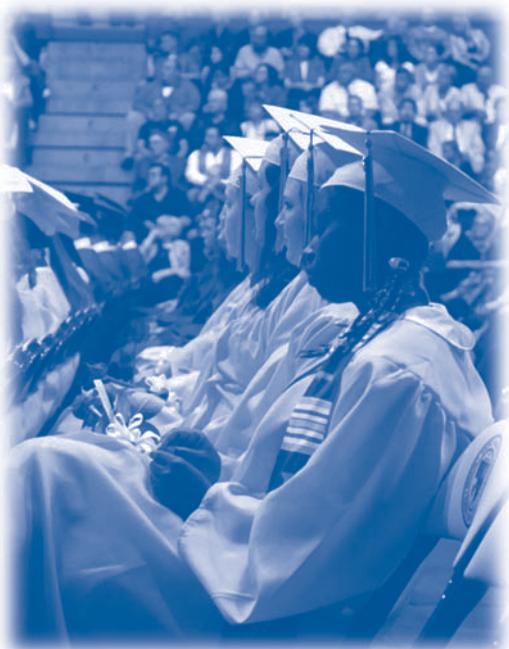


Table 6. Enrollment in Student Organizations, FY 1997-FY 2004

Student Organizations	1997-1998	1998-1999	1999-2000	2000-2001	2001-2002	2002-2003	2003-2004	Absolute Change	Percent Change
Agricultural Education									
FFA Chapters	198	163	172	175	178	185	190	- 8	- 4.0
FFA Members	11,883	12,032	12,466	12,666	12,835	12,687	13,050	1,167	9.8
Marketing Education									
DECA Chapters	114	119	148	146	134	142	139	25	21.9
DECA Members	5,509	6,182	6,648	7,017	6,444	6,997	7,233	1,724	31.3
Information Technology									
BPA Chapters	102	110	108	136	135	121	135	33	32.4
BPA Members	2,787	3,674	3,723	4,037	4,162	4,027	4,039	1,252	44.9
Information Technology									
FBLA Chapters	49	52	76	90	99	125	114	65	132.7
FBLA Members	1,589	1,577	2,445	2,814	3,382	4,204	3,958	2,369	49.1
Health Sciences and Technology									
HOSA Chapters	102	111	104	129	141	140	105	3	2.9
HOSA Members	3,844	4,497	5,128	5,515	6,070	6,218	6,727	2,883	75.0
Family and Consumer Science									
FCCLA Chapters	285	286	361	376	380	369	369	84	29.5
FCCLA Members	8,602	8,766	12,234	10,081	13,043	11,775	12,482	3,880	45.1
Technology Education									
TSA Chapters	44	52	116	103	122	128	116	72	163.6
TSA Members	2,658	3,080	11,586	12,855	23,117	27,300	25,377	22,719	854.7
Trade and Industry Skills USA									
Skills USA Chapters	142	300	586	80	82	204	107	- 35	- 24.6
Skills USA Members	6,190	6,232	9,075	11,238	11,010	9,528	10,042	3,852	62.2
Total Chapters	1,036	1,193	1,671	1,235	1,271	1,414	1,275	239	23.1
Total Members	43,062	46,040	63,305	66,223	80,063	82,736	82,908	39,846	92.5

The 2003–2004 time period was a time of development for a stronger program foundation for Tech Prep. The continued development of more reliable data was a high priority. Program barriers was a focal point of the two year period to try to ascertain hindrances to students successfully completing a sequence of courses beginning in high school with completion at the post-secondary level.

Working with the local Tech Prep coordinators both community colleges and technology centers were asked to develop methods of reporting more reliable data related to Tech Prep students. In addition better and more reliable data was sought as it relates to the federal Performance Indicators reported on the Consolidated Annual Report to the Office of Career and Technical Education and Adult Education, U.S. Department of Education. Secondary identification of Tech Prep students moved during 2004 to the identification of students in high schools that actively assisted the individual to gain benefit of an articulated course(s) at the post-secondary.

The emphasis of the two year period was the improvement of reliability of the data and the analysis of the articulation process:

1. During 2003–2004, “A Study of Barriers to Articulation from High Schools to Two-Year Public Colleges in Tennessee with Emphasis on the Associate of Applied Sciences Program” was conducted. The report called for 52 “Action Items” including the areas of:
 - a. Program guidance
 - b. Secondary career-technical education program improvement
 - c. The improvement of communication and collaboration between secondary and post-secondary education
 - d. The training of teachers and administrators in the articulation process
 - e. The improvement of the perception of career-technical education dual and articulated courses
 - f. Increase of opportunities for students to take dual-credit and articulated CTE courses
 - g. The qualification of both secondary and post-secondary faculty to teach articulated and dual-credit CTE courses
 - h. Post-secondary faculty engagement

- i. The marketing of post-secondary A.A.S. programs as high-quality opportunities to pursue rewarding careers
 - j. The elimination of financial barriers to dual-credit and articulated courses
 - k. The elimination of secondary and post-secondary policy barriers to dual-credit and articulated courses.
2. The process of better identification of secondary and post-secondary Tech Prep students, and the resulting process for reporting these individuals in the Consolidated Annual Report for Tech Prep resulted in a significant drop in the number of students reported in the federal CAR report.
 3. Also during the 2003–2004 year, the identification of “active” articulation agreements began. The use of the term “active” was intended to differentiate programs and institutions that had signed documents but did not actively promote articulation of students between the secondary and post-secondary institutions within the State. The Tech Prep consortia for the first time were asked to look at how many students received benefit in the previous three-year period of time under any specific articulation agreement. Those specific articulation documents that resulted in even one student receiving credit or waiver during the previous three years were determined to be “active.” The data indicated that of those students in an “active” articulated secondary course of study approximately 61.0 percent received credit or waiver at the post-secondary level.

Tech Prep partnered with the EdAmerica Corporation and the State Department of Education to provide a reliable college and career planning system to all secondary students. A generous contribution from the EdAmerica Corporation allowed the development of a web-based college and career planning system that could be utilized by all students, grades 7–14 (i.e. middle school through associate degree), to utilize the Kuder Interest Inventory® and other career resources to better assist the student in transition between middle school and high school and subsequently into post-secondary.

During the 2003–2004 reporting period, Tech Prep provided in excess of \$500,000 to secondary and post-secondary institutions through competitive grants. These grants resulted in the upgrading of curriculum and equipment that allowed the institutions to better articulate courses of study. For the first time, the grants allowed community colleges to participate in Perkins funding.

Table 7. CAR Tech Prep Student Data, 2001-2004

	2002-2003	2003-2004
Post-Secondary, TN Technology Centers	944	737
Post-Secondary, Community Colleges	814	388
Secondary	3,367	1,819
Total Tech Prep Students	5,125	2,944

Challenges to the Future

1. The reauthorization of the Carl D. Perkins Act of 1998 is in process as this report is being published. Both the House and Senate bills call for greater integration of the Tech Prep program with the Perkins basic grant. The proposed legislation moves Tech Prep from a separate Title as in the 1998 law to the same Title as the basic grant under existing legislation. The integration and alignment of the Tech Prep program with the basic grant will require thoughtful and deliberate consideration. All stakeholders should be brought to the table and a consensus derived from the cooperative process. The process will also provide challenges and new opportunities for the program to better serve the students of Tennessee.
2. The continuance of the improvement of data by all institutions that will allow for the reporting of reliable data to the federal government. The U.S. Department of Education is in the process of convening secondary and post-secondary representatives from the various States. The Performance Indicators to be utilized under current and future legislation is in discussion and the resulting data elements will impact the state and the programs in how and what data will be reported for the next six to ten years.
3. With better reporting processes it is now incumbent upon each consortium and its member educational institutions, both secondary and post-secondary, to more actively participate in the dual-credit and articulation process for career-technical education. Proposed legislation places the onus on individual schools to provide career pathways for each student in order to participate in Perkins funding. This places more emphasis on the development of “active” articulation agreements.
4. Tech Prep will also need to support the local secondary and post-secondary institution to better assist students to transition between secondary and post-secondary education. Tennessee Board of Regents’ community colleges report that 66.0 percent of all incoming freshmen require some form of remedial or developmental studies. Of that number, 75.0 percent of those freshmen require assistance in mathematics. Tech Prep will need to not only focus on its primary goal of providing articulation and dual-credit opportunities, but will need to assist in the identification of programs that may help students make a quicker and more educationally sound transition to post-secondary programs.

Special Populations

The Tennessee Department of Education, Division of Career and Technical Education, requires that all secondary school systems provide quality career and technical education programs for all students while also providing a comprehensive support program for special populations. Special population students have equal access to a full range of career and technical education programs and are assessed as regular students, with the exception of career and technical students with individual educational plans (IEP). Policies are in place that eliminate discrimination against special population students in the classroom. Programs are designed to include single parents; disadvantaged, including foster children; Limited English Proficiency; displaced homemakers; handicapped; and non-traditional students. Modifications have been made to educate special population students for high-skill, high-wage employment. Collaboration with the Division of Special Education and the Division of Career and Technical Education is a continuous process aimed at offering the best services to special population students without duplication.

Realizing that as we enter the next century more students than ever before will need to be educated at higher levels than ever before, farsighted educators and legislators have instituted numerous education reforms. Tennessee's Education Improvement Act of 1993 (EIA), the Perkins Act of 1998, Tech Prep's High Schools That Work program, and the School-to-Work Opportunities Act each call for a systematic restructuring of education in order to meet the developmental needs of all students. The guiding principle in each of these reform initiatives is that all students can learn. Secondary schools in Tennessee have already taken great strides toward delivering developmentally-appropriate education opportunities designed to easily transition students from school to career.

- ★ The following assurances from the New High School Policy capture the essence of education reform initiatives in the 1990s:
- ★ All students will have access to a rigorous core curriculum that includes challenging subject matter.
- ★ Teachers, parents, and students will hold high expectations for all students.
- ★ Schools will minimize tracking of students by ability, eliminate lower level classes, and provide all students with a challenging course of study.

Special population students have equal access to a full range of career and technical education programs and are assessed as regular students, with the exception of career and technical students with individual educational plans (IEP). Policies are in place that eliminate discrimination against special population students in the classroom.

Personnel representing all of the instructional divisions within the Tennessee Department of Education worked collaboratively to promote inclusion at the local school level. The concept of inclusion is rapidly becoming a reality across the state, with most disabled students receiving education and training in regular workshops, labs, and classrooms. In order to ensure that these students are able to meet the same high standards as other students, comprehensive support programs are being provided in an increasing number of high schools.

- ★ Whenever possible, and with appropriate support, students with disabilities will be included in regular classes.
- ★ All students will pursue a focused program of study preparing them for post-secondary study in either university or technical training.
- ★ While all students may not enter post-secondary training immediately following high school, they must be prepared for lifelong learning.

Personnel representing all of the instructional divisions within the Tennessee Department of Education worked collaboratively to promote inclusion at the local school level. The concept of inclusion is rapidly becoming a reality across the state, with most disabled students receiving education and training in regular workshops, labs, and classrooms. In order to ensure that these students are able to meet the same high standards as other students, comprehensive support programs are being provided in an increasing number of high schools. Included in these support programs are the following key components:

1. Teacher assistants, aides, peer tutors, and/or volunteer tutors assist students with disabilities in shops, labs, and classrooms;
2. Students with disabilities experience work-based learning environments in the local community;
3. Career and technical, academic, and special support teachers work closely together to give disabled students the extra support they need to succeed in regular programs; and
4. Learning labs, equipped with state-of-the-art, computer-assisted programs, are being made available to all students in an effort to accelerate skill development.

In an effort to make the transition from secondary school to post-secondary school and/or career training opportunities a reality for all of Tennessee's disabled students, Division of Career and Technical Education staff have collaborated with all state agencies responsible for serving this population. Staff members serve as active members with other state agency representatives on the following committees: the Developmental Disabilities Planning Council (DDPC), Tennessee Initiatives on Employment (TIE), the Tennessee Occupational Information Coordinating Committee (TOICC), and the Least Restrictive Environment Committee (LRE).

Although much work remains to be done in Tennessee before all schools are restructured to the point that all students can progress from kindergarten through the twelfth grade and into post-secondary education and lifelong learning in a “seamless system” of education, the state has taken great strides toward this goal. Under our state’s new and emerging educational system, an increasing number of schools are able to offer comprehensive support programs. At these schools, support staff members are available in all classrooms and shops to assist any student who may be experiencing difficulty with his or her instructional program. This method of providing support has proven far superior to the old “pull-out” method of providing supplemental special classes for students who were labeled as being unable to learn. In the schools that are moving ahead with systemic educational restructuring, all students are expected to meet the same high standards and are provided appropriate support to make certain they gain the required competencies in their programs. All students now develop focused four-year plans designed to connect their career goals to their high school instruction.

Although much work remains to be done in Tennessee before all schools are restructured to the point that all students can progress from kindergarten through the twelfth grade and into post-secondary education and lifelong learning in a “seamless system” of education, the state has taken great strides toward this goal. Under our state’s new and emerging educational system, an increasing number of schools are able to offer comprehensive support programs.



Youth Apprenticeship Programs

Youth Apprenticeship typically is a multi-year program that combines school and work-based learning in a specific occupational area or occupational cluster and is designed to lead directly into a related post-secondary program, entry-level job, or registered apprenticeship programs. If the program is registered with the U.S. Department of Labor's Bureau of Apprenticeship and Training or with an approved state apprenticeship agency, the program will follow strict guidelines regarding type of training and length of apprenticeship. Registered apprenticeships are usually paid work experiences. Youth apprenticeships give students the opportunity to work in businesses that offer career ladders for success. The businesses provide a coherent sequence of job training and work experiences coordinated with the students' school-based activities. The businesses and schools collaborate in monitoring the students' progress and assigning school credits. Students begin the four-year apprenticeship in the 11th grade and continue with a seamless curriculum through the 14th grade.



For more information concerning TCTEC, visit their web site at
<http://www.k-12.state.tn.us/tcove/>.



TENNESSEE.GOV

The Official Web Site of the State of Tennessee

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Tennessee Career and Technical Education Council

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Additional Links

The Tennessee Career and Technical Education Council's (**TCTEC**) mission is to serve as an independent advocate of quality career and technical education and functions as an independent oversight body regarding career and technical education.

The Tennessee Career and Technical Education Council (**TCTEC**) is a primary influence in visionary decision making for global workforce and economic development.

**Whether it's Agriculture, Health Science, or
Technology.....**



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Core Indicators of Performance: Secondary Education

Perkins III, which is the source of federal funding for vocational-technical education, has a greatly increased focus on accountability. This legislation requires that states collect data and report on four core indicators of performance, which are:

1. Skill attainment of challenging state-established academic and vocational-technical skill proficiencies.
2. Student attainment of a secondary school diploma or its recognized equivalent, a proficiency credential in conjunction with a secondary school diploma, or a post-secondary degree or credential.
3. Placement in, retention in, and completion of post-secondary education or advanced training, placement in military service, or placement or retention in employment.
4. Student participation in and completion of vocational-technical education programs that lead to non-traditional training and employment.

Tennessee, like other states, has provided the U.S. Office of Education with baseline data regarding each of these core indicators. These baseline data were derived primarily from information reported by Local Education Agencies (LEAs).

Congress has mandated that the U.S. Office of Education negotiate with states on the levels of performance for each core indicator. States, and likewise LEAs, are required to meet or exceed these negotiated levels of performance each year. Consequences for failing to do so are as follows:

1. The first year that all levels are not met or exceeded, the state or LEA will be required to develop a plan of improvement targeting budget expenditures to areas not met.
2. The second year that levels are not met or exceeded, the state or LEA may be sanctioned by having funds withheld after notice and an opportunity for a hearing may sanction LEA.

Core Indicators of Performance: Measurement Definitions and Baseline and Performance Levels

Local Education Agencies have the responsibility for implementing and evaluating core indicators of performance as designated by the state. The term concentrator, as used in these core indicators, is defined as a student with three units in a focused, sequential career and technical program of study (concentration) and one unit in an additional career and technical-related area or an additional credit in the sequence. The core indicators of performance are listed in Appendix A.



Recommendations of the Tennessee Career and Technical Education Council

The Division of Career and Technical Education and the State Board of Education jointly established a committee to develop long range plans for Career and Technical Education in Tennessee's Public Secondary schools. The Committee known as the 2020 Vision Committee is composed of local and state representatives from various interests in Career and Technical Education. An ongoing effort will be maintained to ensure continued correlation of education and training to business and industry needs and technological advancements.

The Tennessee Career and Technical Education Council (TCTEC) commends this effort as a mean to establish forward looking concepts in the formulation of current and long range planning. The Council is of the opinion that through the pursuit and implementation of the 2020 vision process, students at both the secondary and post-secondary levels will provide Tennessee with a well trained and educated viable workforce. As a result, the economic impact of all facets of Tennessee's economy will be enhanced.

Therefore, the Tennessee Career and Technical Education Council recommends that the administrative and policy bodies of Secondary and Post-Secondary Education in Tennessee vigorously support the Vision as established for 2020. A brief summary of the work from the committee to date follows.

Career and Technical Education: A 2020 Vision

Mission: Preparing Today's Students for Tomorrow's Opportunities.

Vision: To provide Tennessee students the opportunity to participate in a rigorous and relevant career and technical education program that leads to academic achievement and successful employment in a global economy.



The Challenge for Change

- ★ “When I compare our high schools to what I see when I’m traveling abroad, I am terrified for our workforce of tomorrow. In math and science, our fourth graders are among the top students in the world. By eighth grade, they’re in the middle of the pack. By 12th grade, U.S. students are scoring near the bottom of all industrialized nations...” (Bill Gates. “American’s High Schools Are Obsolete” speech given to National Governors Association, February 26, 2005)
- ★ “American high schools have far more curriculum content to cover than in the past and more content requirements in math, science and language arts that most other nations. However, when it comes to the ability of graduates to use their knowledge beyond school, they come up woefully short. Knowledge alone, without knowing how to apply it is inadequate. Students need both rigorous and relevant standards if they are to be prepared to function in a technological, information based society.” (Dr. Willard Daggett)
- ★ The National Business Roundtable has expressed its concern about a U.S. ability to sustain scientific and technological superiority through this decade and beyond by setting a goal to double the number of science, technology, engineering, and mathematics graduates with bachelor’s degrees by 2015.

The 2020 Vision Committee

This committee was formed in 2004 to begin a unified planning process for the Division of Career and Technical Education by establishing a 2020 vision and formulating an action plan. The committee was formed as a joint effort among the State Board of Education (SBE) the State Department of Education (SDE) and local stakeholders to develop long-range plans for 2020 graduates.

The 2020 committee has forced on four pillars for success:

1. **Academic Achievement**—curriculum rigor, academic and career/integration, career clusters and pathways, human relations skills and safety
2. **Articulation**—seamless transition to technical schools, community colleges, and colleges/universities, including a focus on Tech Prep and receptive boards of higher education

3. **Communication**—image of Career and Technical education to educators (administrators, teachers, career and school counselors) and other stakeholders, including the substantiation of its role through evidence-based research
4. **Professional Development/Teacher Certification**—support to teachers to try to keep pace with the rapidly changing workplace and to build a pool of quality teacher candidates

Goals

- ★ **Academic Achievement:** Provide a rigorous and relevant curriculum in all courses for all students.
- ★ **Articulation:** Provide relevant articulation and transition programs to post-secondary education
- ★ **Communication:** Improve the image of Career and Technical Education to all stakeholders through communicating the effectiveness of programs, using research, data analysis, and other evaluative tools.
- ★ **Professional Development:** Provide focused professional development and relevant teacher preparation.

Career and Technical Education in Tennessee

Career and Technical Education prepares both youth and adults for a wide range of careers. Career and Technical Education is offered in middle school, high schools, Tennessee Technology Centers, community colleges and other post-secondary schools. The seven career areas follow:

1. Agricultural Education
2. Business Technology Education
3. Family and Consumer Sciences Education
4. Health Science Education
5. Marketing Education
6. Technology Engineering Education
7. Trade and Industrial Education

Eight student organizations associated with the program areas provide activities pertaining to youth leadership and career skill development. Career and Technical Education provides additional opportunities in Contextual Academics, High Schools That Work, Jobs for Tennessee Graduates, and Project Lead the Way.

Tennessee Program Data

Tennessee enrollment in career and technical courses in the 2003-2004 school year show the following profile:

Table 8. High School Program Data

Total Course Enrollment	296,224
Course Enrollment by Program	
Agricultural Education	30,610
Business Technology Education	81,819
Contextual Academics	8,437
Family & Consumer Sciences Education	51,896
Health Science Education	18,378
Marketing Education	15,007
Technology Engineering Education	8,780
Trade and Industrial Education	80,576
Vocational Cooperative Methodology	721

Note: Seventh and eighth grade students are also enrolled in Career and Technical Education. Data not currently available.

Table 9. Individual Student Demographic Data

Total 9-12 CTE Students	170,134	—
Total 9-12 High School Students	284,615	—
Career and Technical Percentage of State Average	—	59.8%
Students with Disabilities	28,135	16.0%
Economically Disadvantaged	90,318	53.0%
Limited English Proficiency	2,520	1.0%

Examples of Key Division Concurrent Actions That Provide Support to the 2020 Vision

Academic Achievement

- ★ Link curriculum with Tennessee Technology Centers to promote statewide articulation.
- ★ Support academic integration in career and technical courses through a variety of means, including offering combined Gateway training institutes that integrate academic and career technical standards.
- ★ Provide leadership training for career and technical organization students.

Articulation

- ★ Sponsor research projects on barriers to articulation with technology centers and community colleges and an economic impact study.
- ★ Support model challenge grants for community colleges.
- ★ Form joint secondary/post-secondary advisory committees to study transitions of high school students to post-secondary education.
- ★ Develop a systematic approach to career guidance, including consultants, career development committee, American Careers Magazine, The Source, Tennessee Career Information Delivery System and Kuder Career Information Delivery System.

Communication

- ★ Amend legislation to change the Division of Vocational-Technical Education to Career and Technical Education.
- ★ Create a statewide communications plan to target students, parents, teachers, principals, counselors, industry leaders and community members (stakeholders).
- ★ Create a data system to make online reporting of student and teacher information possible.
- ★ Conduct research to determine strengths and weaknesses of Career and Technical programs in Tennessee.

Professional Development/Teacher Certification

- ★ Provide professional development for secondary and post-secondary teachers.
- ★ Provide professional development for administrators in data analysis and reporting.
- ★ Sponsor a statewide counselor's conference, which will provide information on career counseling resources, interventions, the school counselor model, and best practices.

Challenges

A common misperception is that the only route to success is through a traditional four-year university. There are many paths to success; these include technical institutes, technology centers, and community and four-year

colleges. In reality, it is imperative that all high school graduates, regardless of career choice, obtain some level of post-secondary training. To support these students, Career and Technical Education programs must include high school levels of rigor and relevance and stay current to industry standards, meeting ever-changing market demands. Further need exists for increased quality and quantity of articulation agreements can be facilitated by the use of an integrated database that supports the reporting of student and teacher performance data. Finally, all students deserve to be taught by teachers who are well prepared and qualified to lead students through the robust and broad-reaching opportunities that Career and Technical Education has to offer.

2020 Visioning Proposed Timeline for Success

Academic Achievement	2006-2007	Revise math curriculum: Infuse algebra and geometry in 7th and 8th grade math curriculum; Build capacity of 7th and 8th grade math faculty
	2007-2008	
	2008-2009	7th grade class in new math curriculum Majors—career clusters; performing arts, humanities
	2010-2011	9th grade class—new graduation requirements
	2014-2015	First graduating class meets new graduation requirements
Articulation	2006-2007	Timeline to be developed by John Townsend, Tech Prep Director
	2007-2008	
	2008-2009	
	2010-2011	
	2014-2015	
Communications—Audiences	2006-2007	Propose legislation to change the name of Vocational-Technical Education (VTE) to Career and Technical Education (CTE).
		Implement a plan to establish and market a new vision for career and technical education in Tennessee. (PFP to be let in January/February 2006).
		High School Redesign Committee
	2007-2008	Communicate the vision of the 2020 plan Education: Principals, Career and Technical directors, school directors
		Business and Labor: TCTEC, Labor and Workforce Development, Economic and Community Development, business groups (Tennessee Tomorrow, Tennessee Business Roundtable...)
		Higher Education: Tennessee Higher Education Commission, University of Tennessee, Tennessee Board of Regents

Professional Development/ Teacher Certification	2006-2007	Build a continuous improvement process that is supported by current, effective school research and data.
		Provide professional development support in the use of data as a research and program improvement planning tool at system and school levels.
		Provide professional development and pilot programs to support career academics through small learning communities.
		Use the Teach Tennessee program as a model to address career and technical certification issues, recruitment and retention.
		Provide professional development on integrating reading strategies into career and technical courses.
	2007-2008	Provide professional development on strategies of academic integration into career and technical courses.

Tennessee Career and Technical Education (CTE) 2020 Vision Committee Members

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Senator Jim Tracy, Tennessee 16th District,
Member,
Education Committee
Tennessee General Assembly

Terry Webb, Director,
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Overton County Schools

Appendix A:

Core Indicators of Performance

Final Agreed Upon Performance Level for Years 2-6

These are the final baselines and adjusted performance levels agreed upon by the State and the U.S. Department of Education for Years 3, 4, and 5. These baselines and adjusted performance levels are incorporated into the State plan as a condition of approval pursuant to section 113(b)(3)(A)(v) of the Carl D. Perkins Vocational and Technical Education Act of 1998, 20 U.S.C. 2301 et seq., as amended by Public Law 105-332.

L= Negotiated performance level
 A= Actual performance

Core Sub-Indicator	Measurement Definition	Final Agreed Upon Baseline	Year 2	Year 3	Year 4	Year 5	Year 6
			Agreed Upon Level (00-01)	7/01/01-6/30/02	7/1/02-6/30/03	7/1/03-6/30/04	7/01/04-6/30/05
1S1 Academic Attainment	<p>Numerator: Number of 12th grade secondary career and technical concentrators graduating from high school.</p> <p>Denominator: Total number of 12th grade secondary career and technical concentrators.</p> <p>Data Sources:</p> <ul style="list-style-type: none"> ▪ 12th Graders receiving diplomas filed with DOE ▪ Concentrator Data reported by LEAs 	83.54	L: 84.04% A: 90.04% + 6.00	L: 84.45% A: 86.06% + 1.52	L: 85.04% A: 84.02% - 1.02	L: 85.54% A: 87.20% + 1.66	L: 86.71% A: 87.42% + 0.71
1S2 Skill Proficiencies	<p>Numerator: Number of 12th grade concentrators who have met state-established, industry-validated career and technical standards.</p> <p>Denominator: As 1S1 denominator.</p> <p>Data Sources:</p> <ul style="list-style-type: none"> ▪ Competency Attainment Data submitted by LEAs ▪ Concentrator Data submitted by LEAs 	93.15	L: 93.15% A: 93.10% - 0.05	L: 90.00% A: 93.89% + 3.89	L: 90.00% A: 96.29% + 6.29	L: 90.00% A: 97.39% + 7.39	L: 90.00% A: 96.63% + 6.63

Concentrator: a career and technical program student who has completed a minimum of 3 units (credits) in a sequential and focused career and technical program study with an additional unit in the same program area OR an additional unit in a related career and technical program area.

L= Negotiated performance level
A= Actual performance

Core Sub-Indicator	Measurement Definition	Final Agreed Upon Baseline	Year 2		Year 3		Year 4		Year 5		Year 6	
			Agreed Upon Level (00-01)		7/01/01-6/30/02	7/1/02-6/30/03	7/1/03-6/30/04	7/01/04-6/30/05				
2S1 Completion	<p>Numerator: As 1S1 numerator.</p> <p>Denominator: As 1S1 denominator.</p> <p>Data Sources:</p> <ul style="list-style-type: none"> As 1S1 data sources 	83.54	L: 84.04% A: 90.04% + 6.00	L: 84.54% A: 86.06% + 1.52	L: 90.00% A: 96.29% + 6.29	L: 85.54% A: 87.20% + 1.66	L: 86.71% A: 87.42% + 0.71					
2S2 Diploma Credential	N/A	N/A	N/A	N/A	N/A	N/A	N/A					
3S1 Placement	<p>Numerator: Number of concentrators who graduated in a year before the reporting year and were placed in post-secondary education or advanced training, employment, and/or military service within one year of graduation.</p> <p>Denominator: Number of concentrators who graduated at the same year as the numerator.</p> <p>Data Sources:</p> <ul style="list-style-type: none"> School-administered follow-up surveys 	78.70	L: 79.70% A: 89.62% + 9.92	L: 80.20% A: 88.65% + 8.45	L: 80.70% A: 89.56% + 8.86	L: 81.20% A: 91.45% + 10.25	L: 81.70% A: 91.56% + 9.86					

Concentrator: a career and technical program student who has completed a minimum of 3 units (credits) in a sequential and focused career and technical program study with an additional unit in the same program area OR an additional unit in a related career and technical program area.

L= Negotiated performance level
A= Actual performance

Core Sub-Indicator	Measurement Definition	Final Agreed Upon Baseline	Year 2	Year 3	Year 4	Year 5	Year 6
			Agreed Upon Level (00-01)	7/01/01-6/30/02	7/1/02-6/30/03	7/1/03-6/30/04	7/01/04-6/30/05
4S1 Non-Traditional	<p>Numerator: Number of students in underrepresented gender groups who participated in a non-traditional secondary career and technical program in the reporting year.</p> <p>Denominator: Number of students who participated in a non-traditional secondary career and technical program in the reporting year.</p> <p>Data Sources:</p> <ul style="list-style-type: none"> ▪ Non-traditional career and technical program list ▪ MJS forms 	21.19	L: 21.44% A: 26.08% + 4.64	L: 21.69% A: 23.52% + 1.83	L: 21.94% A: 20.48% - 1.46	L: 22.19% A: 20.81% - 1.38	L: 22.82% A: 23.53% + 0.71
4S2 Completion Non-Traditional	<p>Numerator: Number of students in underrepresented gender groups who enrolled in a non-traditional secondary career and technical program in the reporting year.</p> <p>Denominator: Number of concentrators who enrolled in a non-traditional secondary career and technical program in the reporting year.</p> <p>Data Sources:</p> <ul style="list-style-type: none"> ▪ Non-traditional career and technical program list ▪ MJS forms ▪ Concentrator data reported by LEAs 	23.84	L: 24.09% A: 27.25% + 3.16	L: 24.19% A: 29.49% + 5.30	L: 24.29% A: 25.64% + 1.35	L: 24.39% A: 17.07% - 7.32	L: 24.64% A: 26.33% + 1.69

Concentrator: a career and technical program student who has completed a minimum of 3 units (credits) in a sequential and focused career and technical program study with an additional unit in the same program area OR an additional unit in a related career and technical program area.

Measurement Approach	
Core Sub-Indicator	Measurement Definition
1S1 Academic Attainment	<p>Numerator: Number of 12th grade secondary career and technical concentrators graduating from high school.</p> <p>Denominator: Total number of 12th grade secondary career and technical concentrators.</p> <p>Data Sources:</p> <ul style="list-style-type: none"> ▪ 12th Graders receiving diplomas filed with DOE ▪ Concentrator Data reported by LEAs
1S2 Skill Proficiencies	<p>Numerator: Number of 12th grade concentrators who have met state-established, industry-validated career and technical standards.</p> <p>Denominator: As 1S1 denominator.</p> <p>Data Sources:</p> <ul style="list-style-type: none"> ▪ Competency Attainment Data submitted by LEAs ▪ Concentrator Data submitted by LEAs
2S1 Completion	<p>Numerator: As 1S1 numerator.</p> <p>Denominator: As 1S1 denominator.</p> <p>Data Sources:</p> <ul style="list-style-type: none"> ▪ As 1S1 data sources

Concentrator: a career and technical program student who has completed a minimum of 3 units (credits) in a sequential and focused career and technical program study with an additional unit in the same program area OR an additional unit in a related career and technical program area.

High School Completion combined with State Academic Assessment System
 The measurement approach to be used for academic attainment in this core indicator is the high school graduation rate. Federal benchmarks as part of NCLB requires that subgroups demonstrate required proficiency in Math, English and Writing Assessment. In addition, beginning with the 2004-05 school year, students must successfully pass exit exams (Gateway Exams) in: Algebra I, English II, and Biology in order to graduate from high school. Prior to 2004-05, it was a prerequisite that students pass the Tennessee Comprehensive Assessment Program (TCAP) competency test in the areas of math and language arts in order to graduate with a regular education diploma, as mandated by the State Board of Education. The Gateway Exam requirement replaces TCAP for those students graduating this spring, 2005 and thereafter.

Career and Technical Education Course Completion and Competency Attainment
 Career and Technical Education Course Completion coupled with Performance Benchmarks will be used as the measurement approach for career and technical skill attainment in this core indicator. Occupational skill attainment of career and technical concentrators shall be measured by using course competencies established for each career and technical course. Competency profiles correlated to each career and technical education course will be provided to LEAs. As curriculum standards are revised using the DACUM process, new competency profiles will be developed and disseminated. As in the past, the revised standards will incorporate national and industry standards (where available) as well as input from business and industry representatives in the state.

Secondary Completion Using State/Local Administered Data
 Secondary completion is the measurement approach to be used for this core indicator of performance. Completion rates defined as of those who have met all State Board of Education requirements to receive a high school diploma will be measured.

Appendix B: Eleven-Year Data on Students and Teachers

Career and Technical Education Student and Teacher Data, 1989-2004

Area	2003-2004	2002-2003	2001-2002	2000-2001	1999-2000	1998-1999	1997-1998	1996-1997	1995-1996	1994-1995	1993-1994	1992-1993	1991-1992	1990-1991	1989-1990
Secondary Students (Legal Duplicates)	325,321	306,117	299,175	280,827	286,688	306,049	297,998	274,590	264,756	243,042	223,336	N/A	207,904	201,563	197,536
Agricultural Education	31,337	29,831	28,651	26,384	25,442	25,466	24,698	23,439	23,328	21,740	21,722	N/A	18,421	17,869	17,253
Marketing Education	16,242	14,841	14,670	13,871	13,339	13,316	12,676	11,378	10,493	9,180	8,401	N/A	11,531	10,909	11,261
Information Technology	79,535	74,709	66,864	49,552	56,754	58,713	57,674	52,554	55,391	56,181	40,319	N/A	26,853	25,928	25,366
Health Science and Technology	18,059	15,798	14,428	13,068	11,697	12,584	12,154	10,229	8,977	7,720	6,472	N/A	5,283	4,396	4,209
Family and Consumer Sciences	54,802	53,434	60,834	53,488	52,458	55,215	54,511	50,147	49,145	43,828	45,421	N/A	48,327	48,089	44,884
Family and Consumer Sciences-Occupational	6,955	6,198	3,444	4,915	6,446	7,516	6,790	6,237	5,898	5,906	5,327	N/A	6,508	6,736	7,069
Technology Education	25,168	25,426	26,456	25,171	25,185	28,740	28,464	26,390	25,317	20,145	20,373	N/A	25,518	24,962	25,374
Trade and Industrial	79,359	72,793	69,177	63,872	63,621	68,346	64,845	60,570	56,328	49,004	44,792	N/A	46,570	44,862	45,525
Applied/Tech Prep	13,864	13,087	14,651	30,506	31,746	36,153	36,186	33,646	29,879	27,704	20,589	N/A	6,443	3,981	2,777

Career and Technical Education Student and Teacher Data, 1989-2004

Area	2003-2004	2002-2003	2001-2002	2000-2001	1999-2000	1998-1999	1997-1998	1996-1997	1995-1996	1994-1995	1993-1994	1992-1993	1991-1992	1990-1991	1989-1990
Secondary Students (Non-Duplicate)	220,099	202,715	206,430	188,911	204,507	226,064	212,540	200,133	195,390	185,221	171,454	N/A	160,615	158,536	156,511
% Male	52%	52%	53%	53%	53%	53%	53%	54%	54%	54%	54%	N/A	55%	56%	56%
% Female	48%	48%	47%	47%	47%	47%	47%	46%	46%	46%	46%	N/A	45%	44%	44%
Adult Preparatory and Supplementary	N/A	N/A	N/A	N/A	N/A	10,270	8,837	4,435	11,035	11,209	14,228	18,425	18,838	25,146	29,755
Academic Path	103,766	99,382	98,230	83,142	59,901	N/A									
Tech Path	107,227	103,620	105,907	99,809	62,488	N/A									
Dual Path	84,804	81,341	77,238	66,146	59,901	N/A									
Secondary Completers I	N/A	N/A	N/A	N/A	22,568	27,639	24,828	18,058	18,502	16,517	15,673	N/A	N/A	N/A	N/A
Secondary Completers II	N/A	N/A	N/A	N/A	13,146	17,573	14,371	12,731	11,484	10,739	9,607	N/A	N/A	N/A	N/A
Disadvantaged	66,367	93,996	85,586	77,633	87,675	91,164	96,359	87,295	78,011	75,770	68,734	N/A	60,701	61,945	59,011
Limited English Speaking	3,340	4,049	5,475	3,317	3,671	4,299	5,185	1,859	2,321	1,201	1,018	N/A	744	1,124	1,112
Handicapped	20,847	28,253	28,270	29,600	33,000	36,586	35,080	31,106	31,141	27,907	22,657	N/A	20,886	22,406	22,573
Tech Prep (Secondary Only)	1,819	3,367	12,110	17,521	14,180	30,902	34,874	20,114	20,616	15,095	10,382	N/A	N/A	N/A	N/A

Career and Technical Education Student and Teacher Data, 1989-2004

Area	2003-2004	2002-2003	2001-2002	2000-2001	1999-2000	1998-1999	1997-1998	1996-1997	1995-1996	1994-1995	1993-1994	1992-1993	1991-1992	1990-1991	1989-1990
Co-Op	N/A	3,999	N/A	N/A	13,016	12,091	10,159	9,123	9,055	7,415	7,184	N/A	1,340	N/A	N/A
Apprenticeship	N/A	N/A	N/A	N/A	370	1,797	990	1,127	1,138	811	380	N/A	N/A	N/A	N/A
Single Parent	5,677	N/A	N/A	N/A	2,590	N/A									
Career and Technical Education Teachers	3,675	3,813	3,969	4,095	4,651	4,674	3,969	4,016	3,923	3,860	3,791	N/A	2,992	3,128	3,112
Agricultural Education	291	291	318	312	390	323	274	286	264	253	244	N/A	195	225	207
Marketing Education	185	205	214	211	198	222	154	158	155	143	141	N/A	170	174	173
Information Technology	634	678	672	507	801	705	611	633	662	691	687	N/A	284	326	324
Health Science and Technology	195	191	194	183	146	177	145	131	119	109	110	N/A	75	82	83
Family and Consumer Sciences	469	487	620	576	658	630	489	524	513	499	492	N/A	464	475	479
Family and Consumer Sciences-Occupational	116	129	51	112	192	163	147	148	152	149	135	N/A	128	137	140
Technology Education	249	254	297	272	328	370	249	260	249	231	226	N/A	276	278	296
Trade and Industrial	982	1,210	1,175	1,171	1,375	1,215	1,074	1,129	1,062	1,059	1,045	N/A	924	944	952
Applied/Tech Prep	554	368	428	751	563	869	826	747	747	726	711	N/A	476	487	458
Other barriers	25,802	0	0	0	0	0	0	0	0	1,500	1,500	1,500	1,500	1,515	1,777

Career and Technical Education Student and Teacher Data, 1989-2004

Student Organizations	2003-2004	2002-2003	2001-2002	2000-2001	1999-2000	1998-1999	1997-1998	1996-1997	1995-1996	1994-1995	1993-1994	1992-1993	1991-1992	1990-1991	1989-1990
Agricultural Education															
FFA Chapters	190	185	178	175	172	163	198	198	187	188	185	187	182	193	N/A
FFA Members	13,050	12,687	12,835	12,666	12,466	12,032	11,883	12,383	12,900	12,135	11,839	12,146	12,346	11,672	N/A
Marketing Education															
DECA Chapters	139	142	134	146	148	119	114	114	108	116	113	115	115	121	N/A
DECA Members	7,233	6,997	6,444	7,017	6,648	6,182	5,509	5,439	5,367	5,275	5,526	5,450	5,718	5,733	N/A
Information Technology															
BPA Chapters	135	121	135	136	108	110	102	105	105	180	185	187	170	193	N/A
BPA Members	4,039	4,027	4,162	4,037	3,723	3,674	2,787	3,184	3,261	3,519	3,812	4,014	4,734	4,870	N/A
Information Technology															
FBLA Chapters	114	125	99	90	76	52	49	45	46	50	47	47	53	100	N/A
FBLA Members	3,958	4,204	3,382	2,814	2,445	1,577	1,589	1,538	1,301	1,418	1,562	1,562	1,643	1,989	N/A
Health Sciences and Technology															
HOSA Chapters	105	140	141	129	104	111	102	98	76	73	71	68	67	70	N/A
HOSA Members	6,727	6,218	6,070	5,515	5,128	4,497	3,844	3,287	3,287	2,953	2,771	2,777	2,551	2,893	N/A
Family and Consumer Science															
FCCLA Chapters	369	369	380	376	361	286	285	299	350	354	359	377	383	387	N/A
FCCLA Members	12,482	11,775	13,043	10,081	12,234	8,766	8,602	8,984	9,848	9,925	10,659	11,604	12,308	12,720	N/A
Technology Education															
TSA Chapters	116	128	122	103	116	52	44	42	44	48	50	50	49	49	N/A
TSA Members	25,377	27,300	23,117	12,855	11,586	3,080	2,658	4,003	4,106	3,989	2,498	1,221	1,067	1,057	N/A
Trade and Industry Skills USA Chapters															
Skills USA Members	107	204	82	80	586	300	142	137	145	148	151	155	162	161	N/A
Skills USA Chapters	10,042	9,528	11,010	11,238	9,075	6,232	6,190	6,100	6,481	8,439	8,592	9,267	11,418	11,478	N/A
Total Chapters	1,275	1,414	1,271	1,235	1,671	1,193	1,036	1,038	1,061	1,157	1,161	1,186	1,181	1,274	N/A
Total Members	82,908	82,736	80,063	66,223	63,305	46,040	43,062	44,918	46,551	47,653	47,259	48,041	51,785	52,412	N/A

Appendix C: Research

U.S. Department of Education Office of Vocational and Adult Education (OVAE):

- ★ Most high school students take at least one career and technical education course.
- ★ One in four students takes three or more courses in a single program area.
- ★ One-third of college students are involved in career and technical programs.
- ★ As many as 40 million adults engage in short-term post-secondary occupational training.
- ★ Nearly one-third of the fastest growing occupations will require an associate's degree or post-secondary occupational training.

U.S. Chamber of Commerce (2002 survey by the U.S. Chamber of Commerce Center for Workforce Preparation):

- ★ Nearly 75.0 percent of employers report severe conditions when trying to hire qualified workers.
- ★ Forty percent of employers say that applicants are poorly skilled.
- ★ Thirty percent say that applicants have the wrong skills for available jobs.
- ★ Career and Technical Education plays a vital role in helping American business close this gap by building a competitive workforce for the 21st century.

The Southern Regional Education Board (SREB) High Schools That Work (HSTW) Assessment data for all states, including Tennessee, supports the following benefits of coordinated academic and career technical study:

- ★ Students who complete the HSTW recommended academic core and career concentration:
 - Have average reading, mathematics and science scores that equal or exceed those of college preparatory students;
 - Continue their studies after high school at a higher rate than students who do not complete an upgraded academic core and a concentration;
 - Have a higher grade point average in college throughout the first year.

- ★ High school students who complete a concentration of three or four credits in a career/technical field of study have better employment and earnings outcomes than students who complete fewer than two credits in a single career/technical field.
- ★ Career/technical graduates who obtain jobs in their fields of study outperform their peers who are employed in areas unrelated to their areas of study.
- ★ Students who graduate with a career/technical concentration and pursue further education are 2.5 times more likely than college-preparatory students to be employed while pursuing further study.
- ★ High-risk students are eight to ten times less likely to drop out in the 11th and 12th grades if they enroll in a career/technical program rather than a general program.
- ★ A quality career/technical program can reduce a school's dropout rate by as much as six percent.

Research Conducted for the Division of Career and Technical Education:

- ★ Career and Technical Education has a narrow vision and needs to define what it is and clearly communicate its aims to stakeholders.
- ★ School counselors need accurate and pertinent information and training to address career development for all students.
- ★ Career and Technical students participating in career and technical student organizations are more likely to perform at higher levels than other students.
- ★ There are numerous barriers to articulation to post-secondary education from secondary education, including the following:
 - A lack of statewide dual credit system
 - A lack of cooperation and communication between K-12 and post-secondary levels
 - A lack of secondary teachers qualified to teach dual credit courses on campus
 - A lack of professional development designed to support articulation
 - A variety of disconnects in the transferability of credits, including curriculum alignment and logistical obstacles
 - A high drop-out rate, especially among minorities
 - An unwillingness of students to take challenging courses

Appendix D:

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July 1, 2006

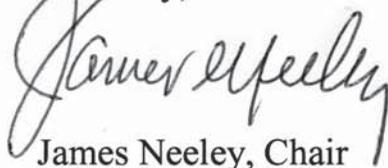
Dear Tennesseans:

The Tennessee Career and Technical Education Council is pleased to present this 2003 – 2004 Biennial Report on Career and Technical Educational programs conducted in Tennessee. This report provides an evaluation of Career and Technical Education funded through the Carl D. Perkins Career and Technical Education Act, state, and local funds.

It is intended that this report provide an overview of federal, state, and local funds expended in the various categories for support of Career and Technical Education throughout the state. The Council feels the citizens of Tennessee are fortunate to have the support of the Governor, the Tennessee General Assembly, the State Board of Education, State Department of Education, Tennessee Board of Regents, and the State Department of Labor and Workforce Development for providing high quality education and training.

Members of the Council feel it is vital for private sector input such an important fact in the lives of our citizens. Through this report, the Council is dedicated to serving the best interest of students, business, industry, and labor in Tennessee.

Sincerely,



James Neeley, Chair



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