

REPORT TO THE LEGISLATURE

# Statewide Strategic Plan for Secondary Career and Technical Education

December 2012



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## **Report to the Legislature**

# Statewide Strategic Plan for Secondary Career and Technical Education 2012

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# Executive Summary

In 2011, the Washington State Legislature passed [Substitute House Bill 1710](#) to direct the Office of Superintendent of Public Instruction (OSPI) to convene a working group to create a Statewide Strategic Plan for Career and Technical Education (Strategic Plan). An interim report was prepared in December 2011 and is available online at <http://www.k12.wa.us/legisgov/2011documents/CTEStrategicPlanDec11.pdf>.

This report provides the results of efforts by the Career and Technical Education Strategic Planning Committee (Committee).

As directed by the Legislature, this final report, submitted December 1, contains the following:

- a) A vision statement, goals, and measurable annual objectives for continuous improvement in the rigor, relevance, recognition, and student access in career and technical education programs that build on current initiatives and progress in improving career and technical education, and are consistent with targets and performance measures required under the federal Carl Perkins Act; and
- b) Recommended activities and strategies, in priority order, to accomplish the objectives and goals, including activities and strategies that:
  - Can be accomplished within current resources and funding formulas;
  - Should receive top priority for additional investment; and
  - Could be phased-in over the next ten years.

Based on the research and efforts outlined above, a mission and vision for Career and Technical Education (CTE) in Washington are provided below, including goals supporting that mission and vision, objectives to reach those goals, and recommended activities and strategies.

## **Mission**

Career and Technical Education is an innovator and leader in education in Washington that offers courses of study to ensure students explore, compete, and succeed as lifelong learners in the world of work.

## **Vision**

Education and workforce leaders partner to engage students and prepare them for life success through multiple career pathways that are relevant to student interests and responsive to the needs of employers and the economy.

The situation this Strategic Plan addresses may be summarized in four trends borne out by current research:

1. The tie between education attainment and lifelong earning potential is evident and proven.
2. The education requirements for most occupations are growing.
3. There is a growing gap between workers' skill attainment and estimated employer requirements.

4. CTE helps prevent dropouts from high school, improves math scores, and improves chances of going onto postsecondary education.

The solution is threefold:

1. Robust, relevant, rigorous and academic career and technical education, including strong implementation and integration of the 21st Century Skills and the Common Core State Standards (CCSS) across K–12 programs and disciplines, to prepare students for postsecondary education they will need.
2. Targeted, 21st century-oriented skill training, such as integration of the 21st Century Skills, to meet education requirements for jobs today and tomorrow.
3. Career planning for all students, regardless of career or postsecondary path, to ready all students for the world of work.

The Committee has identified four major goals to help shape the CTE program in Washington into a responsive, powerful vehicle to help students achieve and to overcome some of the barriers we currently face.

In summary, the goals are to:

1. Improve the access to and quality of CTE, which prepares students for lifelong learning and employment through the development of adaptable skills and knowledge.
2. Ensure that every student receives comprehensive career guidance that leads to a personalized Program of Study (POS).
3. Require CTE teachers and administrators to be fully prepared and supported in their roles as educator instructional leaders.
4. Ensure that CTE is a results-driven education system so as to demonstrate a positive return on investment.

Out of these four goals come specific, measurable objectives and recommendations (activities and strategies) necessary to reach those goals and improve the statewide CTE program and educational opportunities for all students. The Committee encourages the Legislature to endorse and support career and technical education and the CTE program in Washington as outlined in this Strategic Plan.

## Introduction, Including Committee Membership

In 2011, the Washington State Legislature passed [Substitute House Bill 1710](#) to direct the Office of Superintendent of Public Instruction (OSPI) to convene a working group to create a Statewide Strategic Plan for Career and Technical Education (Strategic Plan).

In response to the legislation, OSPI convened a CTE Strategic Planning Committee (Committee). The Committee held meetings on September 27, October 5, October 25, November 2, and November 30, 2011, as well as January 24, February 23, March 20, and September 13, 2012.

The Committee was tasked to review current practices in Washington, identify best practices, recommend activities and strategies to advance best practices, and identify next steps. These efforts were then taken up and affirmed by the whole Committee, resulting in the vision statement, goals, measurable annual objectives, and other elements in this report. An interim report was prepared in December 2011, which is available online at <http://www.k12.wa.us/legisgov/2011documents/CTEStrategicPlanDec11.pdf>.

This report includes the recommendations of the Committee as a whole, as facilitated by OSPI. The recommendations do not necessarily reflect the positions of State Superintendent Randy Dorn.

A final list of committee membership is provided on the next page.

## **Committee Members**

Betty Klattenhoff	Director, Career and Technical Education, OSPI
Bobbi Arnold	Career Guidance Specialist, Evergreen School District
Brad Liberg	CTE Director, West Valley School District
Cheryl Fambles	Chief Executive Officer, Pacific Mountain Workforce Development Council
Christine Cote	President, Perry Technical Institute
Dave Gering	Executive Director, Manufacturing Industry Council
Dennis Milliken	STEM Program Supervisor, OSPI
Dennis Wallace	Skilled and Technical Sciences Program Supervisor, OSPI
Doug Meyer	Engineering Teacher, Yelm High School
Gerry Ringwood	Director, Tri-Tech Skills Center
Jane Chadsey	Professional Development Director, Educurious Partners/Member, Common Core State Standards Steering Committee
Jeannie Beierle	Counselor, Yelm High School
Jerry Bender	Director of Governmental Relations, Association of Washington School Principals
Jessica Vavrus	Assistant Superintendent, Teaching and Learning, OSPI/Lead, Common Core State Standards Steering Committee
Jonelle Adams	Executive Director, Washington State School Directors' Association
Justin Montermini	Policy Analyst/Legislative Liaison, Workforce Training and Education Coordinating Board (WTECB)
Kairie Pierce	K-12 Apprenticeship Director, Washington State Labor Council (WSLC)
Kathe Taylor	Former Policy Director, State Board of Education/Director, Early Learning Assessment, OSPI
Kathleen Lopp	Assistant Superintendent, Career and College Readiness, OSPI
Lance Wrezinski	Washington State Business Education Association, Centralia College
Leska Wetterauer	Independent Consultant
Lori Province	Field Mobilization Director, WSLC
Luis Moscoso	WA State Representative, 1st Legislative District
Marianna Goheen	CTE Director, Highline School District
Marlena Sessions	CEO, Workforce Development Council of Seattle/King County
Robin Barnhart	Business/Marketing/CTE Teacher, Central Valley High School
Tim Knue	Executive Director, Washington Association for Career and Technical Education
Timothy McNeely	Program Supervisor, Methods of Administration, OSPI
Tom Lopp	Governmental Relations Liaison, OSPI
Wes Pruitt	Former Policy Analyst/Legislative Liaison, WTECB

## Why Career and Technical Education?

The case is this: in order for students to succeed, we need to prepare them for the ever-changing world of work, which means not only college readiness, but career readiness—students with access to postsecondary education and skills attainment possibilities that will prepare them to achieve in the 21st century.

We ask the question, “Why Career and Technical Education?” with honesty. Why, among the many competing education demands, student needs, and graduation requirements, does a program that has its foundations in the 1917 Smith-Hughes Act hold relevancy still? Between emphases on early learning to college preparation, where does Career and Technical Education (CTE) fit in and merit consideration? Why should students who barely have an opportunity to explore the arts, health and fitness, or social studies, be directed to courses in aerospace manufacturing, horticulture, financial math, sports medicine, or integrated science, technology, engineering, and mathematics (STEM)?

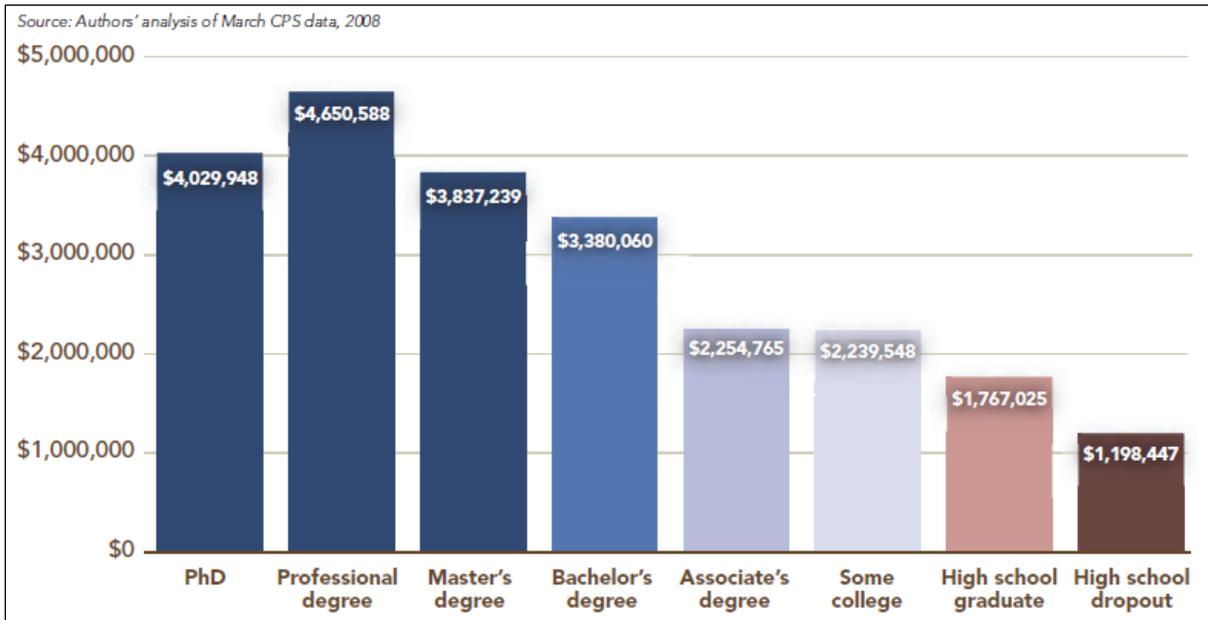
The answer to the above questions, we believe, is that CTE offers a unique opportunity to engage students in an enormous variety of subjects, incorporating academic, creative and technical skills, with the specific goal, nowhere else represented in education, of preparing students for all of life that comes after high school.

CTE needs to be an integral part of every student’s education so that all students graduate from high school globally competitive for work, prepared for postsecondary education, and ready for life as positive, contributing members of society in the 21st century. With CTE, students succeed.

### **The tie between education attainment and lifelong earning potential is evident in a wide variety of research.**

The lifetime earnings gap between those with a high school education and those with a college degree is now estimated to be nearly \$1 million. And the differential has been widening. In 2008, median earnings of workers with bachelor’s degrees were 65 percent higher than those of high school graduates (\$55,700 vs. \$33,800). Similarly, workers with associate’s degrees earned 73 percent more than those who had not completed high school (\$42,000 vs. \$24,300). (William C. Symonds, Robert B. Schwartz and Ronald Ferguson. *Pathways to Prosperity: Meeting the Challenge of Preparing Young Americans for the 21st Century*, Pathways to Prosperity Project, Harvard Graduate School of Education, February 2011. p. 2).

**Figure 1: Estimated Lifetime Earnings by Education Level**



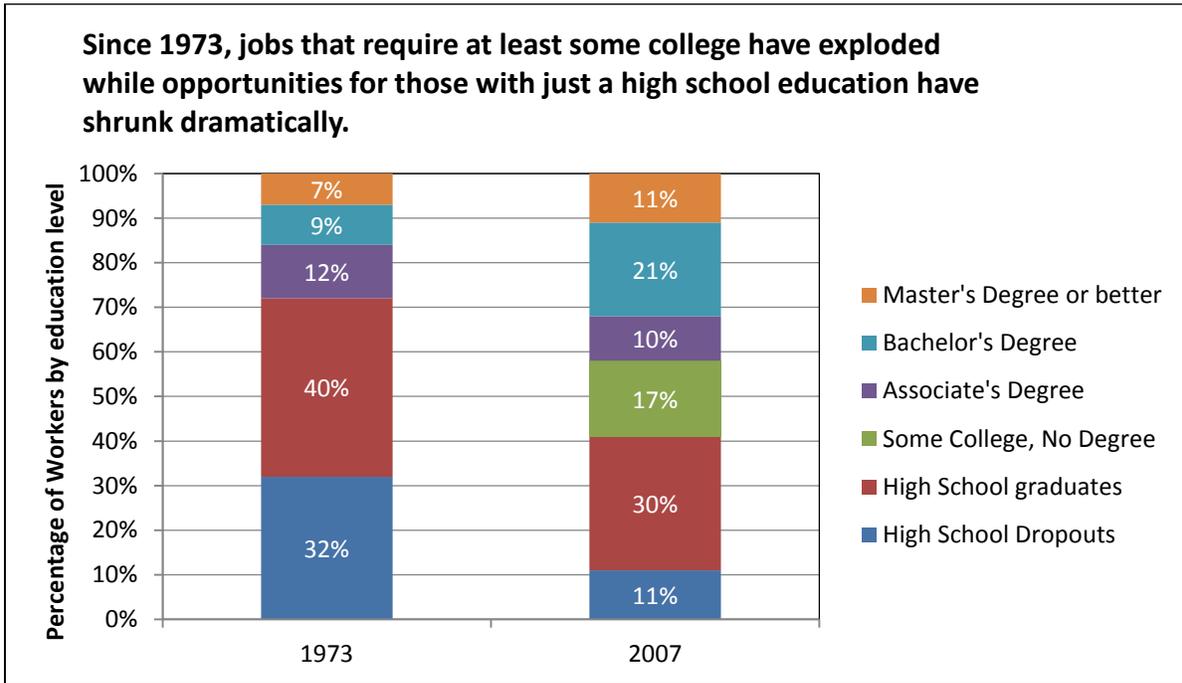
(Anthony P. Carnevale, Nicole Smith and Jeff Strohl. *Help Wanted: Projections of Jobs and Education Requirements Through 2018*, Georgetown University Center on Education and the Workforce, 2010. p. 5)

**The education requirements for most occupations are growing.**

Note that, where “some college” is the listed category in data above or below, it is inclusive of industry-based certifications and apprenticeships, postsecondary certificate programs, and other training provided post-high school. It is not solely or primarily the acquisition of some finite number of prerequisites for a degree never completed. Those who participate in postsecondary education and training receive a significant lifelong earnings increase over those with only a high school diploma.

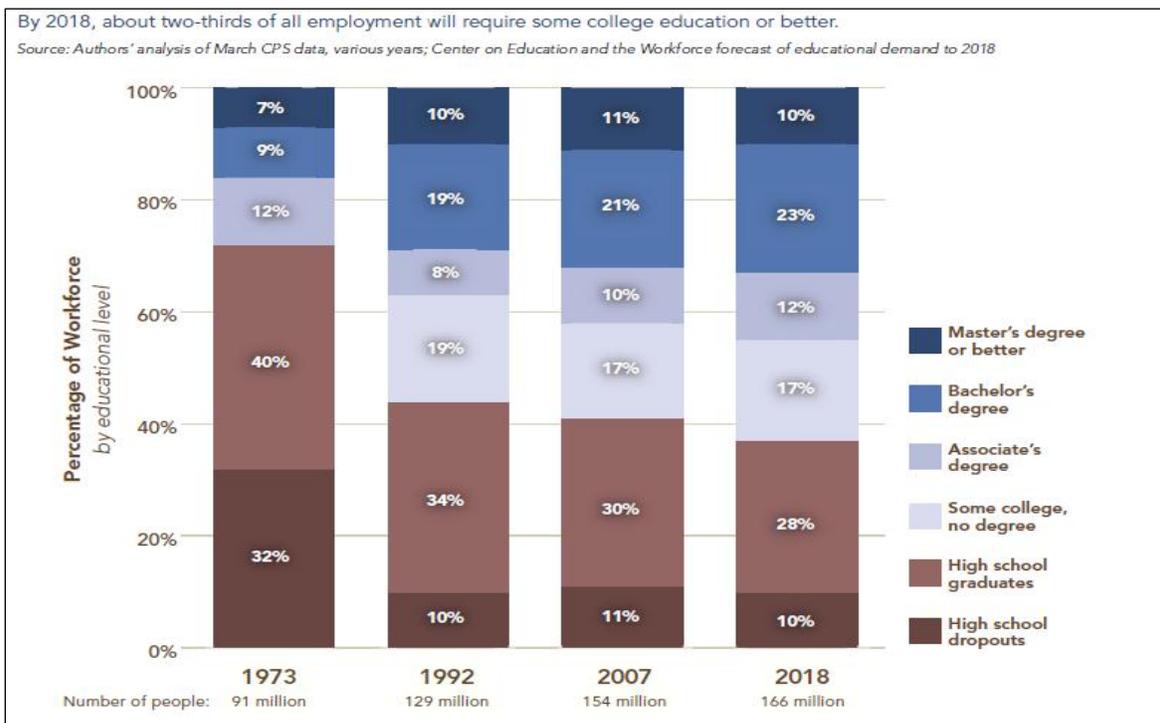
The Georgetown Center projects that 14 million job openings—nearly half of those that will be filled by workers with post-secondary education—will go to people with an associate’s degree or occupational certificate. Many of these will be in “middle-skill” occupations such as electrician, construction manager, dental hygienist, paralegal, and police officer. While these jobs may not be as prestigious as those filled by B.A. holders, they pay a significant premium over many jobs open to those with just a high school degree. More surprisingly, they pay more than many of the jobs held by those with a bachelor’s degree. In fact, **27 percent of people with post-secondary licenses or certificates—credentials short of an associate’s degree—earn more than the average bachelor’s degree recipient** (*Pathways to Prosperity* p. 3).

**Figure 2: Percent of Workers by Education Level**



(Pathways to Prosperity, p. 3)

**Figure 3: Percentage of Workforce by Education Level**



(Help Wanted, p. 14)

**There is a growing gap between workers' skill attainment and estimated employer requirements.**

The implication of this work is that a focus on college readiness alone does not equip young people with all of the skills and abilities they will need in the workplace, or to successfully complete the transition from adolescence to adulthood. This was highlighted in a 2008 report published by Child Trends, which compared research on the competencies required for college readiness, workplace readiness, and healthy youth development. The report found significant overlaps. High personal expectations, self-management, critical thinking, and academic achievement are viewed as highly important for success in all three areas. But the report also uncovered some striking differences. For instance: while career planning, previous work experience, decision-making, listening skills, integrity, and creativity are all considered vital in the workplace, they hardly figure in college readiness. (*Pathways to Prosperity* p. 4).

**Career and technical education helps prevent dropouts from high school; it also improves math scores and improves the chances of going onto postsecondary education.**

As stated in the recent report released by the Georgetown University Center on Education and the Workforce:

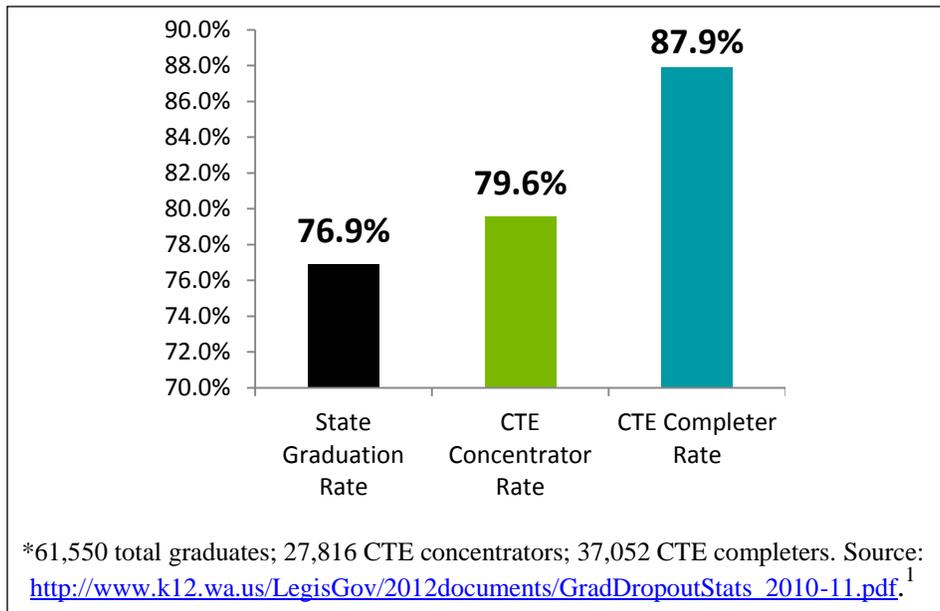
The American Career and Technical Education system is unique, flexible, and responds well to changes in labor-market conditions.

CTE is a rich American tradition that is distinct in its applied learning method and teaching of field- and occupation-specific skills. For many Americans, CTE starts at high school, although the share of high school students concentrating in vocational programming has declined for decades. This decline has been heavily influenced by the shift toward an economy in which postsecondary education and training has become the dominant pathway to jobs that pay middle-class wages. High school-level CTE is the updated version of high school vocational education because of CTE's dual emphasis on making students college and career ready. In particular, high school CTE can provide:

- Career exploration for all students;
- Programs of study that align with postsecondary programs as well as employer-based training;
- An alternative applied pedagogy that encourages persistence to high school graduation as well as academic development and stronger transitions to postsecondary education.

Indeed, data already collected by the CTE program in Washington shows a marked difference in the graduation rate based on engaged participation in the CTE program. It is worth pointing out that the courses students took to qualify them as “completers” were part of at least 360 hours of instruction in a single program area, courses probably taken as juniors and seniors in high school.

**Figure 4: 2010–11 CTE Graduation Rate**



**The solution** is threefold:

1. Robust, relevant, rigorous, academic, career and technical education, including strong implementation and integration of the 21st Century Skills and the Common Core State Standards (CCSS) across K–12 programs and disciplines, to prepare students for postsecondary education they will need.
2. Targeted, 21st century-oriented skill training, such as integration of the 21st Century Skills, to meet education requirements for jobs today and tomorrow.
3. Career planning for all students, regardless of career or postsecondary path, to ready all students for the world of work.

It is common today to speak of “college and career readiness,” or occasionally, “career and college readiness.” It is the CTE program that speaks to this desire for education—to prepare all students to be ready for all of life to come after graduation. CTE leads the way.

To these ends, the CTE program in Washington has:

- Pioneered Advanced Placement CTE courses, allowing students to achieve at the highest academic levels, while preparing for careers they are interested in pursuing.
- Led efforts to require districts to create course equivalencies, which free up student schedules, provide alternative contexts in which to receive instruction, and promote the same level of academic rigor in each and every class that a school may offer.

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<sup>1</sup> *Concentrator*: A secondary student who has enrolled in two or more CTE courses above the exploratory levels in a single cluster.

*Completer*: A secondary student who has acquired 360 hours of instruction in a single CTE program area and has completed all courses taken within that single program area with grades of D or better.

- Maintained a commitment to developing student leaders, students ready to receive the mantle of responsibility that comes with adulthood, students that understand and have experienced the value of teamwork and collaboration.
- Promoted business partnerships, including the Microsoft IT Academy, helping maintain industry standards in the classroom and helping students have access to industry-recognized certifications.
- Required an environment of continuous improvement, from core standards integrated into courses offered, to industry standards and industry need driving course offerings and content, to students that learn from leadership standards in the classroom everyday and in competitions they are a part of through career and technical student organizations (CTSOs).
- Expanded CTE exploratory courses to the middle school level and strengthened the integration of core subjects in these courses, creating STEM offerings that prepare students for advanced CTE Programs of Study (POS) while in high school and beyond.
- Strengthened industry connections in aerospace and manufacturing, creating pathways from high school to industry and/or postsecondary education and training that leads to employment in family wage jobs.
- Helped achieve a higher graduation rate for CTE program participants.

But more work needs to be done:

- The minimum occupational education course requirement for graduation is one credit in four years, which is too little time for a student to understand what is needed for career success and to decide if that student wants to pursue a given career for, potentially, the rest of his/her life.
- Career exploration through guidance and counseling is not integrated into overall learning plans or class choice decisions. Career centers are rarely accessed except by school requirement, and then often only in a perfunctory manner.
- Graduation requirements do not allow students the flexibility to complete a CTE POS—a key means to significant learning in a specific career field, with articulation to postsecondary education built in.
- College entrance requirements and admissions officers do not value CTE courses, even those given equivalency status.
- CTE programs are believed to be for low-achieving students, and inappropriate for high-achieving students, which at the very least disregards the value of the knowledge and skills required for a great many jobs in our country.
- Gatekeepers (parents, counselors, advisors, mentors) do not understand CTE and funnel students away from programs and opportunities.
- Advocacy for career readiness is not as strong as advocacy for college readiness, though a dangerous gap remains between postsecondary attainment and career placement.

The Committee has identified four major goals to help shape the CTE program in Washington into a responsive, powerful tool to help students achieve and to overcome some of the barriers we currently face.

The goals are to:

1. Improve the access to and quality of Career and Technical Education, which prepares students for lifelong learning and employment through the development of adaptable skills and knowledge.
2. Ensure that every student receives comprehensive career guidance that leads to a personalized POS.
3. Require CTE teachers and administrators to be fully prepared and supported in their roles as educators and instructional leaders.
4. Ensure that Career and Technical Education is a results-driven education system so as to demonstrate a positive return on investment.

Out of these four goals come a variety of specific, measurable objectives and recommendations, which are activities and strategies to reach those goals and improve the CTE program and educational opportunities for all students.

Why CTE?—because CTE is an innovator and leader in education in Washington that offers courses of study to ensure students explore, compete, and succeed as lifelong learners in the world of work.

## Resources

- Anthony P. Carnevale, Nicole Smith and Jeff Strohl. *Help Wanted: Projections of Jobs and Education Requirements Through 2018*, Georgetown University Center on Education and the Workforce, 2010.
- Anthony P. Carnevale, Tamara Jayasundera and Andrew R. Hanson. *Career and Technical Education: Five Ways that Pay*, Georgetown University Center on Education and the Workforce, September 2012.
- Hans Meeder and Thom Suddreth. *Common Core State Standards & Career and Technical Education: Bridging the Divide between College and Career Readiness*. Achieve, May 2012.
- *Kids Today: What Teens Think about Apprenticeship: Report to Washington State Labor Council: ANEW's K-12 Research*, February 2012.
- *Reflect, Transform, Lead: A New Vision for Career Technical Education*. The National Association of State Directors of Career Technical Education Consortium. 2010.
- *The Rise of Generation C: Implications for the World of 2020*. Booz & Co. 2010.
- *Up to the Challenge: The Role of Career and Technical Education and 21st Century Skills in College and Career Readiness*. Association for Career and Technical Education, National Association of State Directors of Career Technical Education Consortium, and Partnership for 21st Century Skills. 2010.
- William C. Symonds, Robert B. Schwartz and Ronald Ferguson. *Pathways to Prosperity: Meeting the Challenge of Preparing Young Americans for the 21st Century*, Pathways to Prosperity Project, Harvard Graduate School of Education, February 2011. p. 2.

# Methodology

The Committee worked in small groups and as a whole to research four broad topics:

1. Graduation Requirements and Access to CTE
2. Common Core State Standards and 21st Century Skills
3. Replicating Innovative Programs
4. Transition to Postsecondary Education and Employment, Industry Certifications

In each subject area, the Committee reviewed current practices in Washington, identified best practices, recommended activities and strategies to advance best practices, and identified next steps for research or action.

As directed by the Legislature, the final report, due December 1, contains the following:

- a. A vision statement, goals, and measurable annual objectives for continuous improvement in the rigor, relevance, recognition, and student access in career and technical education programs that build on current initiatives and progress in improving career and technical education, and are consistent with targets and performance measures required under the federal Carl Perkins Act; and
- b. Recommended activities and strategies, in priority order, to accomplish the objectives and goals, including activities and strategies that:
  - Can be accomplished within current resources and funding formulas;
  - Should receive top priority for additional investment; and
  - Could be phased-in over the next ten years.

In particular, the working group examined:

- a. Proposed changes to high school graduation requirements and strategies to ensure that students continue to have opportunities to pursue CTE career and college pathways along with a meaningful high school diploma;
- b. How CTE courses can be used to meet the CCSS and how in turn the standards can be used to enhance the rigor of career and technical education;
- c. Ways to improve student access to high quality CTE courses and work experiences, not only in skill centers but also in middle school, comprehensive high schools, and rural areas;
- d. Ways to improve the transition from K–12 to community and technical college, university, and private technical college programs;
- e. Methods for replicating innovative middle and high schools that engage students in exploring careers, use project-based learning, and build meaningful partnerships with businesses and the community; and
- f. A framework for a series of career and technical education certifications that are:
  - Transferable between and among secondary schools and postsecondary institutions; and
  - Articulated across secondary and postsecondary levels so that students receive credit for knowledge and skills they have already mastered.

# Glossary

The following brief glossary is aligned to the definitions provided in the proposed “Multiple Pathways” bill in development by the Workforce Training and Education Coordinating Board and other parties.

**21st Century Skills:** As defined by the Partnership for 21st Century Skills, six key elements comprise a “21st century education.” They include:

- Core Subjects (as defined in No Child Left Behind and other relevant documents).
- 21st Century Content (global awareness; financial, economic, business and entrepreneurial literacy; civic literacy; health and wellness awareness; and environmental literacy).
- Learning and Thinking Skills (critical thinking and problem solving; communication; creativity, and innovation; collaboration; information and media literacy; and contextual learning).
- Information and Communications Technology Literacy.
- Life Skills (leadership, ethics, accountability, adaptability, personal productivity, personal responsibility, people skills, self direction, and social responsibility).
- 21st Century Assessments (a balance of high-quality standardized testing and effective classroom assessments).

**Advisory Committee:** A committee whose members should represent business and industry, education, labor organizations, special populations, community, government, students, parents, and teachers. A majority of these members shall share a working knowledge of the job tasks and competencies required for related occupations, related labor market needs, and courses necessary to meet these needs. The committee provides advice in the design, development, delivery, evaluation, and continuous improvement of Career and Technical Education programs. The committee meets on a regular basis and minutes are on file in the district. It is the local district’s responsibility to effectively inform committee members of Washington State Career and Technical Education Program Standards and the Federal Perkins Act. (This definition is aligned with the Perkins Act, Washington State RCW 28C.04.100 and RCW 28A.150.500 as adopted by Washington State.)

- General Advisory Committee: provides direction and guidance to administrators and governing boards for the entire Career and Technical Education program offered by a district or institution.
- Program Specific Advisory Committee: provides direction and guidance to administrators and teachers for a specific Career and Technical Education program offered by a district or institution.

**Career and Technical Education (CTE):** A planned program of courses and learning experiences that begins with exploration of career options; supports basic academic and life skills; and enables achievement of high academic standards, leadership, options for high skill, high wage employment preparation, and advanced and continuing education and:

- a. Provides individuals with rigorous content aligned with challenging academic standards and relevant technical knowledge and skills needed to prepare for further education and careers in current or emerging professions;

- b. Provides technical skill proficiency, an industry-recognized credential, a certificate, or an associate degree; and may include prerequisite courses (other than remedial courses) that meet other requirements; and
- c. Includes applied learning that contributes to the academic knowledge, higher-order reasoning and problem-solving skills, general employability skills, technical skills, occupation-specific skills, and knowledge of all aspects of an industry, including entrepreneurship of an individual.

**Career and Technical Student Organization (CTSO):** Washington State recognized organizations for individuals enrolled in a Career and Technical Education programs that engage in CTE leadership skill development activities as an integral part of the instructional program.

**Career Cluster:** A grouping of occupations and industries based on common aspects that provide students with a context for planning and studying academic and technical courses related to a career. The sixteen career clusters provide an organizing tool for schools, small learning communities, skill centers, academies, and magnet schools. Students will use these models to explore educational options that lead to employment.

**Career Pathway:** A coherent, articulated sequence of rigorous academic and career related courses within a career cluster, commencing in ninth grade and leading to an industry-recognized certificate or licensure, an associate degree, and/or a baccalaureate and beyond.

**CTE Completer:** A secondary student who has acquired 360 hours of instruction in a single CTE program area and has completed all courses taken within that single program area with grades of D or better.

**CTE Concentrator:** A secondary student who has enrolled in two or more CTE courses above the exploratory levels in a single cluster.

**Exploratory Course:** A CTE course in which students demonstrate the application of academic learning standards in the context of preparing for living, learning, and working; demonstrate foundational and occupational specific skills required to meet current industry standards; explore and demonstrate knowledge of career options within the related career cluster; and demonstrate leadership and employability skills.

**Framework:** Refers either to state-developed model frameworks or locally modified and approved curriculum frameworks. All frameworks identify the required components of a CTE course. The components are: Targeted Industry Standards, Performance Assessments, Targeted Grade Level Expectations and/or Common Core State Standards, Leadership Alignment, and the 21st Century Skills.

**Industry:** When referencing “industry standards” or working “with business and industry” and the like include registered apprenticeship programs, private and public businesses, and industry-recognized professional organizations and governing bodies.

**Leadership Skills:** The ability to preside, guide or manage self, others, activities or events with responsibility for the final outcome. All CTE students will demonstrate leadership skills in real world, family, community, and business and industry settings.

**Postsecondary Education:** Includes pre-apprenticeship, apprenticeship, workforce training programs, community and technical colleges, and baccalaureate and post-baccalaureate opportunities.

**Preparatory Course:** A technically intensive and rigorous CTE course or sequence of courses in which students demonstrate mastery of occupational specific skills, including the application of academic learning standards as required to meet industry defined standards needed for a specific career; leads to a certificate or credential necessary for employment or offers dual credit; and leads to workforce entry, approved apprenticeships, or postsecondary education in a related field.

**Program of Study (POS):** A coordinated, nonduplicative progression of courses within a career pathway that aligns academic and career and technical education in secondary education with postsecondary education to prepare students for an occupation or group of occupations within a career cluster. Each POS follows a pathway offering a multitude of career opportunities based on differing levels of education and training. A POS offers coherent and rigorous academic content aligned with the Common Core State Standards, or other appropriate state learning standards, and relevant career and technical content, includes opportunities for students to earn dual high school and college credit, provides work-integrated learning experiences, prepares students to enter postsecondary education and employment and culminates in an industry-recognized credential, certificate, or degree whenever possible. Integration of academic and career and technical education content is encouraged.

# Research

## Graduation Requirements and Access to CTE Courses

The work group on Graduation Requirements and Access to CTE Courses was challenged to examine proposed changes to high school graduation requirements and strategies to ensure that students continue to have opportunities to pursue CTE career and college pathways along with a meaningful high school diploma, and examine ways to improve student access to high quality career and technical education courses and work experiences, not only in skills centers but also in middle school, comprehensive high schools, alternative learning programs, and rural areas.

### Current Practice in Washington State

The [Basic Education Act](#) specifies that “school districts must provide instruction of sufficient quantity and quality and give students the opportunity to complete graduation requirements that are intended to prepare them for postsecondary education, gainful employment, and citizenship.” The State Board of Education (SBE) is moving the state toward graduation requirements more likely to accomplish these instructional requirements. The state graduation requirements adopted for the graduating classes of 2012, 2013, and 2016 are portrayed in the following table.

**Table 1: Graduation Requirements for 2012, 2013, and 2016:  
Adopted November 2011**

Requirement	2012 Credits	2013 Credits	2016 Credits*
English	3	3	4
Math	2	3	3
Science	2 (1 lab)	2 (1 lab)	2 (1 lab)
Social Studies	2.5	2.5	3 (including .5 civics)
Arts	1	1	1
Occupational Education	1	1	1
Health and Fitness	2	2	2 (.5 health; 1.5 fitness)
Electives	5.5	5.5	4
<b>Total State-Prescribed Credits</b>	<b>19</b>	<b>20</b>	<b>20</b>
High School and Beyond Plan	Non-credit	Non-credit	Non-credit
Culminating Project	Non-credit	Non-credit	Non-credit
Proficiency in Reading and Writing HSPE, and in math exam OR earn 2 credits of math after 10 <sup>th</sup> grade	Non-credit		
Proficiency in Reading and Writing HSPE; Algebra or Geometry EOC		Non-credit	
Proficiency in Reading and Writing HSPE; Algebra and Geometry EOC; Science EOC			Non-credit
District Requirements	Vary	Vary	Vary

\* Note: More than 80 percent of districts with high schools currently meet English and social studies requirements for the class of 2016. Districts that do not require 4 credits of English or 3 credits of social studies may request an extension to implement the graduation requirements for the class of 2018. Districts that chose to delay implementation were required to submit a local board resolution to the State Board of Education by June 1, 2012.

## Proposed Changes

The State Board of Education (SBE) has approved, but not yet adopted into rule, a 24-credit framework of Washington State Career and College Ready Requirements. The framework, shown in Table 2, would require 17 mandatory credits, and 7 credits of student choice (including 2 credits of career concentration) that are based on a student’s High School and Beyond Plan (HSBP). The SBE took the first step in implementing this framework in November 2011, by adopting the English, social studies, and elective changes noted in Table 1. A student choosing to pursue a career and technical education (CTE) pathway could take 3 credits of CTE (1 credit of occupational education, plus 2 credits of career concentration), and begin earning credits as early as middle school, assuming such opportunities were provided by the district. Under the newly-approved requirements, students could add CTE depth through the judicious selection of electives, substitution of arts and/or world languages, and CTE-equivalent courses. RCW [28A.230.097](#) requires districts to adopt course equivalencies for CTE high school courses offered to students in high schools and skill centers.

**Table 2: Washington State Career and College Ready Credit and Non-Credit Graduation Requirements, State Assessment Requirements, and Local Requirements**

Subject Area	Credits	
English	4	Mandatory
Math	3	
Science	3 (2 labs)	
Social Studies	3	
Arts	1	
Occupational Education	1	
Health	.5	
<b>Fitness*</b>	1.5	
<b>High School and Beyond Plan (beginning in middle school)</b>	Non-credit	Student Choice
Arts**	1	
World Language**	2	
Career Concentration	2	
Electives	2	
<b>Culminating Project</b>	Non-credit	
Proficiency in: State Assessments prescribed by the Legislature	Non-credit	
District Requirements	Vary	

\* Fitness is unique in that it is governed by a statute that allows students to be excused from physical education.

\*\* Students may substitute coursework for 1 credit of art and 2 credits of world language if other courses would better help them meet their educational and career goals as expressed in their High School and Beyond Plans.

## Resources for Research-Based Best Practices

- *What is “Career Ready”?* Association for Career and Technical Education (April 2010). The article defines three sets of skills students need to be career ready—core academic skills, employability skills, and technical skills. Available online at: [http://www.acteonline.org/uploadedFiles/Publications\\_and\\_Online\\_Media/files/Career\\_Readiness\\_Paper\\_COLOR.pdf](http://www.acteonline.org/uploadedFiles/Publications_and_Online_Media/files/Career_Readiness_Paper_COLOR.pdf).
- *The Daggett System for Effective Instruction—Where Research and Best Practices Meet.* Daggett, W. R., International Center for Leadership in Education (June 2011). The article references recent research and its relationship to Daggett’s instructional approach. Available online at: <http://www.leadered.com/pdf/DSEI%20White%20Paper%207-11.pdf>.
- *The Condition of College and Career Readiness 2011.* ACT Inc. (July 2011). The article analyzes the performance of 2011 ACT-tested high school graduates and recommends six policies and practices that are designed to systematically increase the percentage of students who are ready for college-level work. Available online at: <http://www.act.org/research/policymakers/cccr11/pdf/ConditionofCollegeandCareerReadiness2011.pdf>.
- *Ready for Tomorrow: Six Proven Ideas to Graduate and Prepare More Students for College and 21st Century Careers.* Southern Regional Education Board (November 2009). Summarizes the six conditions that enable career-focused programs of study to increase students’ college and career readiness, including equipping all students with 21st century skills through high-quality career/technical programs. Available online at: [http://publications.sreb.org/2009/09V20\\_Ready\\_for\\_Tomorrow.pdf](http://publications.sreb.org/2009/09V20_Ready_for_Tomorrow.pdf).
- *The Next Step for Career/Technical Programs: Project Lead the Way and the Merging of Academic and Career/Technical Studies.* Southern Regional Education Board (July 2009). Compares students’ results on the 2008 *High Schools That Work* Assessment with students in other pre-engineering programs and with students in all CTE programs. Available online at: [http://publications.sreb.org/2009/09V15\\_PLTW\\_Research\\_Brief.pdf](http://publications.sreb.org/2009/09V15_PLTW_Research_Brief.pdf).
- *Help Wanted: Projections of Jobs and Education Requirements Through 2018. State-Level Analysis.* Georgetown University Center on Education and the Workforce (June 2010). Provides state-level analysis of percentage of jobs that will require postsecondary education. Available online at: <http://www9.georgetown.edu/grad/gppi/hpi/cew/pdfs/washington.pdf>.

## Next Steps

Long-term, two important systems issues will need to be addressed in order to facilitate a ten-year Strategic Plan:

1. The system needs to build in the supports needed to help students achieve so that they are prepared to do grade-level work and to successfully complete their courses without needing to repeat them. The pattern of student failure, documented in the SBE’s 2008 transcript study, is unacceptable.
2. Policies that provide funding based on seat-time need to be aligned with academic policy that enables and encourages credit to be awarded on the basis of competency. Unless this disconnect is reconciled, districts will not be receptive to investing the resources needed to build student-centered systems that enable students to move forward at their own pace,

when they have demonstrated proficiency (as opposed to when they have completed an academic term or year).

3. The Career and College Ready Graduation requirements proposed by the SBE need to increase ability to access CTE and other electives.

### **Common Core State Standards and 21st Century Skills**

The work group for Common Core State Standards (CCSS) and 21st Century Skills was charged to examine how CTE courses can integrate the CCSS for English language arts and mathematics into their existing program content, and how in turn these new state standards can support enhancing the rigor of CTE.

The CCSS provide the foundational content necessary for English language arts and mathematics. The intentional bridge within the CCSS to support literacy across subject areas and to directly address relevance to the real world, allows for strong opportunities for application of the CCSS throughout CTE courses. One common practice currently is through equivalency crediting. The CCSS may be used in CTE courses for showing where they support, supplement, or are equivalent to an academic core course.

### **Current Practice in Washington State**

Washington State adopted the CCSS for English language arts and mathematics in July 2011. Districts across the state began their transition to the CCSS for English language arts and mathematics in the 2011–12 school year; however, the standards will not be measured through the state’s assessment system until the 2014–15 school year. OSPI, in partnership with the state’s nine regional educational service districts (ESDs), and other professional learning partners, including CTE state, district, and association partners, has developed a statewide CCSS implementation plan that addresses the identification and/or development of transitional resources to support a variety of audiences in learning more about the standards and digging into them.

Throughout the 2012–13 school year, webinars and ESD meetings will be held to introduce the CCSS across the state and support district collaborations around the transition. Key to the state’s implementation plan is to build capacity among school district curriculum leaders and district administrators, including CTE directors and instructors. One area of intentional connection is through CTE Programs of Study as a model where academic and technical courses are aligned and sequenced to meet the requirements for a focus in a theme-based area. In these rich programs, core academics (or general education) deliver standards-based courses through complex, authentic, career or industry application.

### **Resources for Research-Based Best Practices**

One of the immeasurable opportunities presented by adoption of the CCSS has been access to resources, instructional supports, and communication tools developed by other states across the nation. Examples that make explicit connections between CCSS implementation and application within CTE programs include models such as the [Linked Learning](#) model in California. These types of statewide approaches deserve further investigation to identify the relevant and necessary supports needed in Washington.

In addition, the recent *Techniques* magazine from the Association for Career and Technical Education focused on the CCSS and CTE and best practices. Relevant articles from the October 2011 issue include:

- [“CTE and the Common Core State Standards.”](#) Susan Reese. *Techniques: Connecting Education and Careers*. (October 2011).
- [“Preparing Now for Common Core: A State and Local View.”](#) Stephen DeWitt. *Techniques*. (October 2011).
- [“Setting a New Standard with a Common Career Technical Core.”](#) Dean Folkers. *Techniques*. (October 2011).
- [“Alignment with the Common Core Standards: A 21st Century How-to Model for Successful CTE Programs.”](#) Scott Burke. *Techniques*. (October 2011).

Finally, national organizations such as Achieve and the National Association of State Directors of Career and Technical Education are establishing partnerships that will continue to offer strong and aligned CCSS implementation supports for both CTE and general education leaders at state, district, and school building levels. A specific example is the [Achieve CCSS-CTE Classroom Tasks](#), which are sample instructional tasks that demonstrate how the CCSS and CTE content can be leveraged throughout high school mathematics. The tasks were jointly developed by high school and postsecondary mathematics and CTE educators, and validated by developers of the CCSS, as well as experts involved in developing the Common Career Technical Core (CCTC) standards. They provide examples of authentic classroom tasks and demonstrate how the CCSS and CTE Knowledge and Skills Statements can be integrated into classroom learning.

### **Next Steps**

While further research is needed, resources are emerging across the country that offer sketches of what it might look like to link the CCSS and 21st Century Skills in CTE, such as:

- The model for curriculum becomes integrated where instruction is inquiry-based and students experience authentic theme-based situations that are integrated themselves and multidisciplinary. Through this approach, students also master the 21st Century Skills that are taught and assessed.
- Curricula are aligned through a Program of Study.
- Teachers collaborate within and across disciplines, programs (general education and CTE), and grade levels for a coordinated, coherent curriculum. A project-based approach where students participate in several extended multidisciplinary projects that integrate academic and technical course content is provided.
- Sample classroom tasks and formative assessment resources aligned with the CCSS are available to support collaborative professional learning among general education and CTE educators (as mentioned above).

### **Replicating Innovative Programs**

The work group on Replicating Innovative Programs was charged to examine methods for replicating innovative middle school and high schools that engage students in exploring careers, use project-based learning, and build meaningful partnerships with businesses and the community.

It was determined that in addition to identifying processes for implementation, the group would provide a means by which innovative programs would be identified. Preliminarily, the group identified several key elements of an innovative program and worked to clarify the definition of *innovation* as “innovative programs that are relevant to short- and long-term employment need forecasts and articulated postsecondary education that lead to family wage jobs.”

The 2011 Legislature spoke encouragingly of innovation in education in [HB 1521](#) and [E2SHB 1546](#) and commissioned OSPI to designate “innovative schools” that:

- Implement bold, creative, and innovative educational ideas.
- Restructure school operations and implement evidence-based practices.
- Hold students and educators to high expectations and standards.
- Provide students with a diverse array of educational options.
- Improve staff capacity and effectiveness.
- Have active and meaningful parent, family, and community involvement and partnerships.
- Engage project-based or hands-on learning.

### **Current Practice in Washington State and Research-Based Best Practices**

There is a need to identify current practices and research-based best practices being used in Washington State. The work group did preliminary work to identify current practices and best practices with respect to project-based learning, career exploration, and partnerships with businesses and the community. The Committee is also considering exploring current and research-based best practices in equivalency crediting and work-based learning experiences.

More work needs to be done to identify, designate, and support innovative CTE programs in the state.

### **Transition to Postsecondary Education and Employment, Industry Certifications**

The work group on Transition to Postsecondary Education and Employment, Industry Certifications was tasked to:

- Examine ways to improve the transition from K–12 to community and technical college, university, apprenticeships and private technical college programs.
- Examine a framework for a series of CTE courses/programs that are:
  - Transferrable between and among secondary schools and postsecondary institutions, and
  - Articulated across secondary and postsecondary levels so that students receive credit for knowledge and skills they have already mastered.

## Next Steps

- Solicit input about transition best practices in the nation and the state.
- Identify potential measures to improve the career relevance of certificate-based learning systems in Washington and opportunities to better connect related secondary and postsecondary programs.
- Articulate the career and life advantages of helping more Washington students make more successful transitions from secondary to postsecondary, with an initial focus on economic sectors already targeted for Programs of Study (agriculture, healthcare, information technology, aerospace, and other advanced manufacturing sectors).
- Examine the need for more successful student transitions from secondary to postsecondary learning and career opportunities and the personal and social costs of education/employment gap (“drift”). Documentation is available through dropout rates in the secondary and postsecondary systems, demographics of students engaged in postsecondary and certificate-based, career-related learning, and the demographic workforce changes that are creating new labor demands in aerospace, healthcare, agricultural services, and other key state economic sectors requiring high skills and offering high pay.
- Find and highlight student success stories that are so compelling they will encourage state and local education leaders to search for ways to implement the Strategic Plan.

# Indicators of Success

Throughout the implementation of the Strategic Plan, general indicators of program success statewide will be derived from those outlined in the [Carl D. Perkins Career and Technical Education Improvement Act](#) of 2006 (also known as Perkins IV) in collaboration with the Workforce Training and Education Coordinating Board, the state administrator of the Carl D. Perkins Act.

Assessing and meeting Perkins “Indicators of Performance” are an inherent part of receiving federal Perkins funding and provide a framework for monitoring CTE program success in the state. Perkins indicators include, at a minimum, measures of each of the following<sup>2</sup>:

## **1S1: Academic Attainment in Reading/Language Arts**

- **Numerator:** Number of CTE concentrators who have met the proficient or advanced level on the statewide high school reading/language arts assessment administered by the State under section 1111 (b)(3) of the ESEA, as amended by NCLB, based on the scores that were included in the state's computation of Annual Measureable Objectives (AMOs) and who, in the reporting year, left secondary education.
- **Denominator:** Number of CTE concentrators who took the ESEA required assessments in reading/language arts whose scores were included in the state’s computation of AMOs and who, in the reporting year, left secondary education.

## **1S2: Academic Attainment in Mathematics**

- **Numerator:** Number of CTE concentrators who have met the proficient or advanced level on the statewide high school mathematics assessment administered by the state under section 1111 of the ESEA, as amended by NCLB, based on the scores that were included in the state's computation of AMOs and who, in the reporting year, left secondary education.
- **Denominator:** Number of CTE concentrators who took the ESEA required assessments in mathematics whose scores were included in the state’s computation of AMOs and who, in the reporting year, left secondary education.

## **2S1: Technical Skill Attainment**

- **Numerator:** Number of exiting CTE concentrators who took and passed a state or nationally recognized assessment of technical skills and knowledge.
- **Denominator:** The number of exiting CTE concentrators who took a state or nationally recognized assessment of technical skills and knowledge.

## **3S1: School Completion**

- **Numerator:** Number of CTE concentrators who have attained a high school diploma or GED and who have left secondary education in the reporting year.
- **Denominator:** Number of CTE concentrators who have left secondary education in the reporting year.

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<sup>2</sup> Washington State Perkins 5-Year Plan, Effective July 1, 2008 to June 30, 2014.

#### **4S1: Student Graduation Rate**

- **Numerator:** Number of CTE concentrators who, in the reporting year, were included as graduated in the state's computation of its graduation rate as described in Section 1111(b)(2)(C)(vi) of ESEA.
- **Denominator:** Number of CTE concentrators who, in the reporting year, were included in the state's computation of its graduation rate as defined in the state's Consolidated Accountability Plan pursuant to section 111(b)(2)(C)(vi) of the ESEA.

#### **5S1: Placement**

- **Numerator:** Number of CTE concentrators who were employed, enrolled in higher education, or enlisted in the military during the third post-exit quarter, based on administrative records or a student survey.
  - **Denominator:** Number of CTE concentrators who left secondary education during the reporting year.
- NOTE:** 5S1 measures included in the displayed Local Performance Measures reflect the number of CTE concentrators who left secondary education in the previous school year and were employed, enrolled in higher education, or enlisted in the military during the third post-exit quarter, based on administrative records or a student survey.

#### **6S1: Nontraditional Participation**

- **Numerator:** Number of CTE participants from underrepresented gender groups who participated in a program that leads to employment in nontraditional fields during the reporting year.
- **Denominator:** Number of CTE participants who participated in a program that leads to employment in nontraditional fields during the reporting year.

#### **6S2: Nontraditional Completion**

- **Numerator:** Number of CTE concentrators from underrepresented gender groups who completed a program that leads to employment in nontraditional fields during the reporting year.
- **Denominator:** Number of CTE concentrators who completed a program that leads to employment in nontraditional fields during the reporting year.

### **Additional State Indicators**

#### **Earnings**

Median annualized earning of former participants with employment recorded in unemployment insurance and other administrative records during the third quarter after leaving the program, measured *only* among the former participants not enrolled in further education during the quarter.

#### **Employer Satisfaction**

Percentage of employers who report satisfaction with the new employees who are program completers as evidenced by survey responses. (Not required at the local level.)

**Student Satisfaction**

Percentage of former students who report satisfaction with the program as evidenced by survey responses. (Not required at the local level.)

The above, at a minimum, will guide monitoring and assessment of and provide indicators of success for the Strategic Plan.

Additional indicators of success for specific recommendations will be determined as each recommendation is approved for implementation.

# Vision Statement, Goals, and Measurable Annual Objectives

The Legislature directed that the final report on the Strategic Plan, due December 1, contain the following:

- a) A vision statement, goals, and measurable annual objectives for continuous improvement in the rigor, relevance, recognition, and student access in career and technical education (CTE) programs that build on current initiatives and progress in improving CTE, and are consistent with targets and performance measures required under the federal Carl Perkins Act; and
- b) Recommended activities and strategies, in priority order, to accomplish the objectives and goals, including activities and strategies that:
  - Can be accomplished within current resources and funding formulas;
  - Should receive top priority for additional investment; and
  - Could be phased in over the next ten years.

Based on the research and efforts outlined above, a mission and vision for CTE in Washington are provided below, including goals supporting that mission and vision, objectives to reach those goals, and recommended activities and strategies. Where specific agencies could be identified and timelines drawn, they were. Individual objectives are identified as either being able to be accomplished within current resources, requiring additional funding, or able to be phased in over the next ten years, in conformation with the original legislation.

## **Mission**

Career and Technical Education is an innovator and leader in education in Washington that offers courses of study to ensure students explore, compete, and succeed as lifelong learners in the world of work.

## **Vision**

Education and workforce leaders partner to engage students and prepare them for life success through multiple career pathways that are relevant to student interests and responsive to the needs of employers and the economy.

## **Goal 1: Improve the access to and quality of Career and Technical Education, which prepares students for lifelong learning and employment through the development of adaptable skills and knowledge.**

### **1.1 OBJECTIVE: SUPPORT ACCESS TO CTE COURSES IN GRADUATION REQUIREMENTS**

- Ensure that students continue to have opportunities to pursue CTE career and college pathways, as a critical component of a meaningful high school diploma.

- Identify specific strategies to improve student access to high quality CTE courses and work experiences, in skill centers, middle schools, comprehensive high schools, and rural areas.

## **Recommendations**

STATE BOARD OF EDUCATION — The Committee recommends the State Board of Education (SBE) take the following actions:

### Current Resources

- 1.1.1 Rename the one credit Occupational Education requirement in WAC 180-51-066 as “Career and Technical Education.” This is a priority item.
- 1.1.2 Change the mandatory third credit of science in the SBE’s approved career and college ready framework of graduation requirements to a student-choice credit in order to create more flexibility for students. The three-credit requirement decreases the flexibility of students to attend skill centers before their senior year.
- 1.1.3 Change the mandatory fourth credit of English in the SBE’s approved career and college readiness framework of graduation requirements to a student-choice credit in order to create more flexibility for students. The four-credit requirement decreases the flexibility of students to attend skill centers before their senior year.
- 1.1.4 Actively promote and encourage equivalency-crediting.
- 1.1.5 Enact changes to graduation requirements to provide improved access for students to take CTE courses.

### Additional Funding

- 1.1.6 Design the High School and Beyond Plan (HSBP) planning process to produce a POS that drives the selection of student-choice credits.

OFFICE OF SUPERINTENDENT OF PUBLIC INSTRUCTION — The Committee recommends that OSPI take the following actions:

### Additional Funding

- 1.1.7 Create state model course equivalencies that districts could adapt to local requirements. This is a priority item.

LEGISLATURE — The Committee recommends the Legislature take the following actions:

### Current Resources

- 1.1.8 Expand course-equivalent opportunities at skill centers, comprehensive high schools, and alternative learning programs to provide students more flexibility to meet career and college ready graduation requirements. Requires legislative action.

### Additional Funding

- 1.1.9 Increase funding for innovative intervention options both in and outside of the school day so as to maintain access to CTE programs.

### Phased-In

1.1.10 By 2016, reduce barriers for external partners to provide career exploration opportunities for high school students outside of the regular school day or year (e.g., organizations to provide after-school activities and/or events; community and technical colleges partnering with school districts to provide summer opportunities and others). Promote the creation of such opportunities and recognize partner participants. Include workforce development councils as a possible conduit for this partner engagement. Requires legislative action. This is a priority item.

### **Desirable Outcomes**

- The pattern of student failure, documented in the SBE's 2008 transcript study, is reversed.
- Funding policy that supports competency-based crediting.

### **1.2 OBJECTIVE: EXPAND MIDDLE SCHOOL LEVEL CTE**

- Identify specific strategies to improve student access to high quality CTE courses and work experiences in middle schools.
- Begin career exploration in earnest as low as the 6th grade level.

### **Recommendations**

OFFICE OF SUPERINTENDENT OF PUBLIC INSTRUCTION — The Committee recommends that OSPI take the following actions:

### Current Resources

1.2.1 Design a model framework that begins the discussion of careers in 6th grade so students have multiple opportunities to explore what they want to do and how to get there.

### Phased-In

1.2.2 By 2016, identify emerging career and/or industry-focused program models at the elementary and/or middle school levels (such as elementary STEM Academies) to inform and bridge to middle school programs that integrate career exploration intentionally into core student learning, career guidance programs, and as offerings for students and families outside of the school day.

LEGISLATURE — The Committee recommends the Legislature take the following actions:

### Additional Funding

1.2.3 Expand middle school level CTE course opportunities, including that all middle schools offer students access to multiple programs of study within career pathways that meet defined POS standards and build into students' HSBP. Requires legislative action. This is a priority item.

### Phased-In

1.2.4 By 2016, reduce barriers for external partners to provide career exploration opportunities for middle school students outside of the regular school day or year (e.g., organizations to

provide after-school activities and/or events, community and technical colleges partnering with school districts to provide summer opportunities and others). Requires legislative action.

- 1.2.5 By 2018, expand middle school level CTE comprehensive guidance offerings to implement a comprehensive guidance and planning program for all students. The purpose of the program is to support students as they progress in their education and plan for their future; encourage an ongoing and personal relationship between each student and an adult in the school; and involve parents or guardians in students' educational decisions and plans. Requires legislative action.

### **Desirable Outcomes**

- Students from 6th grade onward are engaged in meaningful exploration of career options and preparation for career-readiness.
- Students from 6th grade onward have access to multiple POS that drive course selection and build into their personal HSBP.

### **1.3 OBJECTIVE: UPHOLD INDUSTRY AND EDUCATION STANDARDS**

Support student skill and knowledge development through integration of strong industry and education standards and successful program integration and implementation of those standards.

### **Recommendations**

OFFICE OF SUPERINTENDENT OF PUBLIC INSTRUCTION – The Committee recommends that OSPI take the following actions:

#### Current Resources

- 1.3.1 Require all CTE programs to have validated technical skills that align with industry standards. Partner with the Workforce Training and Education Coordinating Board (WTECB) to accomplish.
- 1.3.2 Require CTE programs to be aligned directly with current and future labor market needs as defined by the WTECB and national trend data.
- 1.3.3 By 2013, require all CTE courses to incorporate the 21st Century Skills into the curriculum. This includes starting to make intentional connections with the Common Core State Standards (CCSS) and the Common Career Technical Core (CCTC) for students and educators.
- 1.3.4 Promote industry and postsecondary partnerships and expand support for and opportunities to engage all students in CTE through business, industry, and agency partnerships.
- 1.3.5 Encourage each school board to incorporate the new Strategic Plan into their one-year and five-year district plans.

#### Phased-In

- 1.3.6 By 2016, work with the business community to ensure that the credentials earned by students enrolled in CTE programs are valued and validated by the labor market. This is a priority item.

- 1.3.7 By June 2015, model industry collaboration through the utilization of an OSPI CTE General Advisory Committee comprised of business and labor representatives to review statewide offerings and make annual recommendations.
- 1.3.8 By 2015, integrate the CCSS into all CTE courses.
- 1.3.9 By 2020, align all CTE courses with CCTC standards.

LEGISLATURE — The Committee recommends the Legislature take the following actions:

Additional Funding

- 1.3.10 Encourage that all CTE courses are a sequential part of a POS. Requires legislative action. This is a priority item.
- 1.3.11 Encourage that POS influence K–12 curriculum and staffing. Requires legislative action.

Phased-In

- 1.3.12 By 2015, start recognition program for quality CTE programs. Requires legislative action.

**Desirable Outcomes**

- Students achieve industry-recognized certifications in alignment with benchmarks in the state Perkins Performance Plan (PPP).
- Students achieve “work-readiness” credentials in alignment with benchmarks in the state PPP.
- Industry and postsecondary partnerships grow in alignment with benchmarks in the state PPP.
- All CTE courses have integrated the CCSS into their curriculum.
- All CTE courses have integrated and aligned their curriculum with the CCTC standards.
- Programs of Study inform K–12 curriculum development and support, educator professional development, collaboration and capacity building across programs, and staffing decisions.
- All CTE courses are a sequential part of a POS.
- Funding based on competencies rather than seat time.
- Program outcomes include portable, relevant industry-validated credentials and certifications.
- By 2023, 75 percent of graduates in Washington State are in a chosen POS at college, in an apprenticeship, or in a job that fits their career path within three years of high school graduation.

**1.4 OBJECTIVE: REQUIRE WORK-BASED LEARNING**

Ensure all students have at least one authentic work-based learning (WBL) experience (e.g., job shadows, internships) aligned with their POS and their high school and beyond plan. All preparatory CTE programs include the opportunity for students to participate in WBL.

## **Recommendations**

OFFICE OF SUPERINTENDENT OF PUBLIC INSTRUCTION — The Committee recommends that OSPI take the following actions:

### Current Resources

1.4.1 Create worksite experience requirement aligned to WBL Manual and WAC.

### Additional Funding

1.4.2 Provide students opportunities to explore occupations of interest in a variety of pathways.

LEGISLATURE — The Committee recommends the Legislature take the following actions:

### Additional Funding

1.4.3 Call for the creation of a statewide database that connects students and teachers to job shadow/internship opportunities. Requires legislative action. This is a priority item.

1.4.4 Develop incentives for businesses providing industry-based worksite learning activities. Requires legislative action. This is a priority item.

## **Desirable Outcomes**

- All preparatory CTE programs provide the opportunity for students to participate in WBL.
- Every student leaves high school with a performance-based WBL experience.

## **1.5 OBJECTIVE: EXPAND PROGRAM OFFERINGS**

Continue to develop robust CTE program offerings through a variety of delivery models.

## **Recommendations**

OFFICE OF SUPERINTENDENT OF PUBLIC INSTRUCTION — The Committee recommends that OSPI take the following actions:

### Additional Funding

1.5.1 Develop delivery models for CTE curriculum that use current and emerging technologies, such as smart phones, tablets, and mobile devices. This is a priority item.

1.5.2 Provide professional development that supports project-based learning.

### Phased-In

1.5.3 By 2015, implement procedures to eliminate obsolete or poor-quality programs. This is a priority item.

LEGISLATURE — The Committee recommends the Legislature take the following actions:

### Additional Funding

1.5.4 Ensure adequate funding for CTE programs. Requires legislative action. This is a priority item.

### **Desirable Outcomes**

- Students have the flexibility to transition within and among career pathways as interests change, opportunities emerge, and the economy transforms.
- All Grades 6–12 students have an individualized POS that clearly maps out a comprehensive strategy to achieve their education and career goals.
- Professional development supports project-based learning.
- Learners of all ages have access to the education and training necessary to be highly competitive in the labor market, including ongoing skill development.
- Programs designated as poor quality and obsolete no longer receive CTE funding.

### **Goal 2: Ensure that every student receives comprehensive career guidance that leads to a personalized Program of Study.**

#### **2.1. OBJECTIVE: CAREER GUIDANCE COUNSELING**

All students in Grades 6–12 have access to high-quality career guidance that produces their personal POS.

#### **Recommendations**

OFFICE OF SUPERINTENDENT OF PUBLIC INSTRUCTION — The Committee recommends that OSPI take the following actions:

##### Current Resources

- 2.1.1 By 2014, develop a framework/model of best practices for career awareness activities.
- 2.1.2 Build economic awareness into comprehensive career guidance.

##### Phased-In

- 2.1.3 By 2018, develop career guidance and counseling models for all students and professional development resources for all counselors and educators.

LEGISLATURE — The Committee recommends the Legislature take the following actions:

##### Phased-In

- 2.1.4 By 2018, all schools shall provide comprehensive career guidance counseling. Requires legislative action.

### **Desirable Outcomes**

- Individual POS have been developed collaboratively with parents, students, and educators as a part of the HSBP.
- Career guidance is equitable, collaborative, and accountable for all students.

#### **2.2 OBJECTIVE: PROGRAMS OF STUDY**

POS will be integrated at all grade levels 6–12 and into each student's HSBP.

## Recommendations

OFFICE OF SUPERINTENDENT OF PUBLIC INSTRUCTION — The Committee recommends that OSPI take the following actions:

### Phased-In

- 2.2.1 By 2016, promote online tools for 6th grade students to explore POS.
- 2.2.2 By 2016, encourage collaboration among multiple school districts for development of POS.
- 2.2.3 By 2016, encourage school districts to host at least two parent meetings per year to inform parents and students about POS.

LEGISLATURE — The Committee recommends the Legislature take the following actions:

### Phased-In

- 2.2.4 By 2017, require that all 6th grade students develop, in person or online, their personal career pathway plan. Requires legislative action.
- 2.2.5 By 2017, integrate POS into HSBP, required by every student. Beginning in 6th grade, students encounter multiple POS and their choices in middle school lead to the eventual incorporation of their personal career pathway plan into their HSBP. Requires legislative action.

## Desirable Outcomes

- Students and parents have a clear understanding of an educational pathway.
- Online career exploration tools are integrated into programs statewide.

## 2.3. OBJECTIVE: PROFESSIONAL DEVELOPMENT

By 2017, through professional development opportunities, all CTE personnel, counselors, and educators have a thorough understanding of POS.

## Recommendations

OFFICE OF SUPERINTENDENT OF PUBLIC INSTRUCTION — The Committee recommends that OSPI take the following actions:

### Current Resources

- 2.3.1 Provide annual CTE presentations at stakeholder conferences to increase understanding of CTE.

### Additional Funding

- 2.3.2 Deliver professional development to teachers and counselors on:
  - Academic alignment of standards
  - Community-based organizations
  - HSBP requirements
  - Industry partnerships
  - Professional associations

- Programs of Study
- Social media integration in the classroom
- Student leadership

This is a priority item.

#### Phased-In

- 2.3.3 By 2016, train all 6th grade teachers, in person or online, to support three hours of exploration in POS for all 6th grade students.
- 2.3.4 By 2018, identify strong POS models across the state to support increased access and collaboration among districts in building these programs.

#### **Desirable Outcomes**

- Professional development will have occurred in all areas above.
- Ongoing professional development is provided and integrated into state and district provided professional development opportunities for all educators.

#### **2.4. OBJECTIVE: OUTREACH**

Increase community involvement and outreach. Continue CTE awareness campaign to empower programs, schools, and districts to be able to articulate and promote the answers to the question “Why CTE?”

#### **Recommendations**

OFFICE OF SUPERINTENDENT OF PUBLIC INSTRUCTION — The Committee recommends that OSPI take the following actions:

#### Current Resources

- 2.4.1 Collaborate with families, community, businesses, and workforce development councils to ensure development of quality CTE programs which will meet student needs.
- 2.4.2 Collaborate with the State Board of Community and Technical Colleges (SBCTC), the Washington Student Achievement Council (WSAC), and the Workforce Training and Education Coordinating Board (WTECB) to develop and review POS.
- 2.4.3 Provide outreach to administrators, school directors, parents, and industry on multiple pathways to success.

LEGISLATURE — The Committee recommends the Legislature take the following actions:

#### Current Resources

- 2.4.4 Mandate statewide articulations between secondary and postsecondary education. Requires legislative action. This is a priority item.
- 2.4.5 Charge education agencies to develop statewide articulations from high school to postsecondary education. Requires legislative action. This is a priority item.

#### **Desirable Outcomes**

- Statewide articulations are in place and universal between institutions.

- Number of credits earned at the postsecondary level through articulation agreements continues to increase.

**Goal 3: Require CTE teachers and administrators to be fully prepared and supported in their roles as educators and instructional leaders.**

**3.1 OBJECTIVE: PREPARING LEADERS**

Increase and improve CTE teacher and administrative staff preparation and leadership opportunities.

**Recommendations**

OFFICE OF SUPERINTENDENT OF PUBLIC INSTRUCTION — The Committee recommends that OSPI take the following actions:

Additional Funding

- 3.1.1 CTE directors are included in planned school district professional development for administrators on teacher evaluation and methods to support CTE educators' application of high leverage instructional practices necessary within career and college readiness standards.
- 3.1.2 Provide statewide professional development through multiple venues, on targeted topics necessary to the operation and implementation of quality, successful and contemporary CTE programs, in collaboration with state general education and CTE professional development associations.

CAREER AND TECHNICAL STUDENT ORGANIZATIONS — The Committee recommends that CTSOs engage in the following:

Current Resources

- 3.1.3 Increase teacher prep program visibility and inclusion at CTSO conferences.

Additional Funding

- 3.1.4 Recruit future CTE teachers through CTSO involvement.

BUSINESS AND INDUSTRY PARTNERS — The Committee recommends that business and industry partners take the following actions:

Additional Funding

- 3.1.5 Develop consistent forum for business and industry to work with colleges and universities that provide teacher preparation and professional development.

STATE COLLEGES AND UNIVERSITIES — The Committee recommends that state colleges and universities take the following actions:

Current Resources

- 3.1.6 Work with secondary education and businesses to recruit new CTE instructors.

- 3.1.7 Increase focus on student leadership development strategies, including CTSOs in teacher preparation programs.

#### Additional Funding

- 3.1.8 Develop web-based virtual academies to support CTE teacher and CTE leader education/professional development.
- 3.1.9 Work with business and industry to validate instructional content and programs.

PROFESSIONAL ORGANIZATIONS — The Committee recommends that professional organizations engage in the following:

#### Current Resources

- 3.1.10 Partner with other educational associations to provide professional development for all CTE directors and teachers.

LEGISLATURE — The Committee recommends the Legislature take the following actions:

#### Phased-In

- 3.1.11 By 2015, create leadership academy for CTE administrators similar to the principal leadership academy supported by the Legislature. Requires legislative action. This is a priority item.
- 3.1.12 By 2015, require CTE fundamentals as a component of secondary principal certification. Requires legislative action.
- 3.1.13 By 2020, work with the Professional Educator Standards Board (PESB) to incorporate CTE more thoroughly into teacher and principal preparation programs. Requires legislative action.

#### **Desirable Outcomes**

- CTE and academics are considered an equal priority by districts.
- CTE fundamentals are a required component of principal certification.

### **3.2. OBJECTIVE: CERTIFICATION**

Strengthen opportunities and requirements for CTE certification.

#### **Recommendations**

OFFICE OF SUPERINTENDENT OF PUBLIC INSTRUCTION — The Committee recommends that OSPI take the following actions:

#### Current Resources

- 3.2.1 Develop new CTE certification programs in collaboration with the PESB. This is a priority item.

#### Phased-In

- 3.2.2 By 2015, secondary principal, superintendent, and program office certifications include CTE fundamentals.

LEGISLATURE — The Committee recommends the Legislature take the following actions:

Phased-In

- 3.2.3 By 2017, expand CTE certification programs and options. Requires legislative action.
- 3.2.4 By 2020, attach CTE director certification to enhanced CTE funding. Requires legislative action. This is a priority item.
- 3.2.5 By 2020, support state funded CTE teacher internship/sabbatical opportunities as part of certification. Requires legislative action.

**Desirable Outcomes**

- CTE certification is based upon the standards needed for developing, implementing, instructing, and evaluating quality CTE programs.

**Goal 4: Ensure that Career and Technical Education is a results-driven education system so as to demonstrate a positive return on investment.**

**4.1 OBJECTIVE: EXISTING DATA**

Research current status of CTE in Washington with regard to policies, practices, and other available data in order to provide results-driven programs.

**Recommendations**

OFFICE OF SUPERINTENDENT OF PUBLIC INSTRUCTION — The Committee recommends that OSPI take the following actions:

Current Resources

- 4.1.1 By spring of 2013, monitor, using clear measures and targets, the performance of CTE programs in at least the following areas:
  - Student participation in and completion of high-demand programs.
  - Students earning dual credit for high school and college.
  - Performance measures and targets established by the WTECB.If a school district fails to meet the performance targets above, require district to submit an improvement plan. If a district fails to implement improvement plan or continues to fail to meet performance measures, OSPI may use this failure as the basis to deny the approval of one or more of the district’s CTE programs.

**Desirable Outcomes**

- The Perkins Performance Plan is a living document, actively utilized to improve performance.

**4.2 OBJECTIVE: RETURN ON INVESTMENT**

Utilize the return on investment model developed by the WTECB for CTE statewide.

## Recommendations

OFFICE OF SUPERINTENDENT OF PUBLIC INSTRUCTION — The Committee recommends that OSPI take the following actions:

### Current Resources

- 4.2.1 Utilize the return on investment model developed by the WTECB that includes fiscal, societal, and economic impacts to demonstrate the success of CTE and improve and enhance CTE policies and programs statewide.
- 4.2.2 Partner with the WTECB to promote the return on investment model broadly within the education and workforce communities.

### Additional Funding

- 4.2.3 Determine best and innovative practices that may be replicated, promoted, and implemented on a larger scale. Publish results statewide.

## Desirable Outcomes

- Return on investment model data informs program decisions statewide.

### **4.3 OBJECTIVE: ONGOING DATA COLLECTION**

Make acquisition and distribution of CTE-related data an ongoing priority and utilize reliable data to inform decision-making.

## Recommendations

OFFICE OF SUPERINTENDENT OF PUBLIC INSTRUCTION — The Committee recommends that OSPI take the following actions:

### Current Resources

- 4.3.1 Share data at appropriate venues, collect input, and plan development of performance targets, in collaboration with the WTECB.
- 4.3.2 Lead in the collection, interpretation and distribution of comparable, valid, and reliable data.

### Desirable Outcomes

- By 2015, policies are in place to support the collection of comparable, valid, and reliable data.

### **4.4 OBJECTIVE: TRACKING SUCCESS**

Develop a statewide tracking system for CTE student success, including accurate follow-up post-high school.

## Recommendations

OFFICE OF SUPERINTENDENT OF PUBLIC INSTRUCTION — The Committee recommends that OSPI take the following actions:

### Additional Funding

- 4.4.1 Provide professional development for teachers and administrators in best practices acquired by data gathered and in best practices concerning data gathering. Collaborate in this professional development with appropriate agencies.

### Phased-In

- 4.4.2 By 2017, define indicators for statewide tracking systems for monitoring CTE progress.
- 4.4.3 By 2019, partner with Workforce Training and Education Coordinating Board to collect external data on employment and industry trends to instigate improvement measures for CTE programs.

LEGISLATURE — The Committee recommends the Legislature take the following actions:

### Phased-In

- 4.4.4 By 2018, require the creation of a graduate follow-up system to track students after high school, including those who continue on to two-year or four-year colleges, apprenticeships, military service, certification programs, or work. Requires legislative action. This is a priority item.

### **Desirable Outcomes**

- CTE program data, employment and industry trends, and post-high school follow-up information inform program decisions statewide.

# Top Priorities

Below, by goal and specific recommendation, are the top priorities for implementation and funding by the Legislature, called out from the plan as a whole for special notice.

## **Goal 1: Career and Technical Education prepares students for lifelong learning and employment through the development of adaptable skills and knowledge.**

### Current Resources

- 1.1.1 Rename the one credit Occupational Education requirement in WAC 180-51-066 as “Career and Technical Education.”

### Additional Funding

- 1.1.7 Create state model course equivalencies that districts could adapt to local requirements.
- 1.2.3 Expand middle school level CTE course opportunities, including that all middle schools offer students access to multiple programs of study within career pathways that meet defined POS standards and build into students’ High School and Beyond Plans. Requires legislative action.
- 1.3.10 Encourage that all CTE courses are a sequential part of a POS. Requires legislative action.
- 1.4.3 Call for the creation of a statewide database that connects students and teachers to job shadow/internship opportunities. Requires legislative action.
- 1.4.4 Develop incentives for businesses providing industry-based worksite learning activities. Requires legislative action.
- 1.5.1 Develop delivery models for CTE curriculum that use current and emerging technologies, such as smart phones, tablets, and mobile devices.
- 1.5.4 Ensure adequate funding for CTE programs. Requires legislative action.

### Phased-In

- 1.1.10 By 2016, reduce barriers for external partners to provide career exploration opportunities for high school students outside of the regular school day or year (e.g., organizations to provide after-school activities and/or events; community and technical colleges partnering with school districts to provide summer opportunities, and others.) Promote the creation of such opportunities and recognize partner participants. Include workforce development councils as a possible conduit for this partner engagement. Requires legislative action.
- 1.3.6 By 2016, work with the business community to ensure that the credentials earned by students enrolled in CTE programs are valued and validated by the labor market.
- 1.5.3 By 2015, implement procedures to eliminate obsolete or poor-quality programs.

**Goal 2: Ensure that every student receives comprehensive career guidance that leads to a personalized Program of Study.**

Current Resources

- 2.4.4 Mandate statewide articulations between secondary and postsecondary education. Requires legislative action.
- 2.4.5 Charge education agencies to develop statewide articulations from high school to postsecondary education. Requires legislative action.

Additional Funding

- 2.3.2 Deliver professional development to teachers and counselors on:
- Academic alignment of standards
  - Community-based organizations
  - High School and Beyond Plan requirements
  - Industry partnerships
  - Professional associations
  - Programs of Study
  - Social media integration in the classroom
  - Student leadership

**Goal 3: Require CTE teachers and administrators to be fully prepared and supported in their roles as educators and instructional leaders.**

Current Resources

- 3.1.11 By 2015, create leadership academy for CTE administrators similar to the principal leadership academy supported by Legislature. Requires legislative action.
- 3.2.1 Develop new CTE certification programs in collaboration with the Professional Educator Standards Board.

Phased-In

- 3.2.4 By 2020, attach CTE director certification to enhanced CTE funding. Requires legislative action.

**Goal 4: Ensure that Career and Technical Education is a results-driven education system so as to demonstrate a positive return on investment.**

Phased-In

- 4.4.4 By 2018, require the creation of a graduate follow-up system to track students after high school, including those who continue on to two-year or four-year colleges, apprenticeships, military service, certification programs, or work. Requires legislative action.

## Conclusion

The Strategic Planning Committee encourages the Legislature to endorse and support career and technical education and the CTE program in Washington as outlined in the Statewide Strategic Plan for Career and Technical Education.

It is common today to speak of “college and career readiness,” or occasionally, “career and college readiness.” It is the CTE program that speaks to this desire for education—to prepare all students to be ready for all of life to come after graduation. CTE leads the way.

In order for students to succeed, we need to prepare them for the ever-changing world of work, which means not only college readiness, but career readiness. Students with access to postsecondary education and skills attainment possibilities will be prepared to achieve in the 21st century.

CTE is the innovator and leader for education today in Washington, offering courses of study to ensure students explore, compete, and succeed as lifelong learners in the world of work.

CTE offers a unique opportunity to engage students in an enormous variety of subjects, incorporating academic, creative and technical skills, with the specific goal, nowhere else represented in education, of preparing students for all of life that comes after high school.

CTE needs to be an integral part of every student’s education in order that every student might graduate from high school globally competitive for work, prepared postsecondary education, and ready for life as positive, contributing members of society in the 21st century. With CTE, students succeed.



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