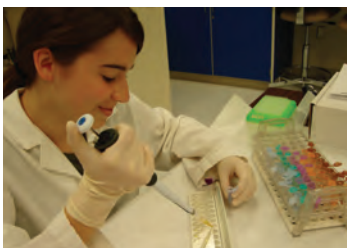


# *Creative Education — Career-Skilled Students*

## Career & College

# READINESS

**STAKEHOLDER REPORT  
AUGUST 2009**



# From the Superintendent of Public Instruction



This report, intended for everyone who has a stake in the education of our children, shows what we're doing to ready students for their lives beyond high school.

During the last year, the Office of Superintendent of Public Instruction's (OSPI) efforts to educate and prepare students for career and college options have been met with demonstrable success.

Excellent teachers, business and industry standards, and targeted academic and career education in the same classroom have created positive opportunities for students to succeed. Students are better prepared for education after high school and for meaningful careers in high-demand fields.

Career and Technical Education (CTE) integrates academic education and applied learning so that students are motivated to learn about current trends, preparing them for 21st century jobs — preparing them for something they truly want to do. CTE equips students for a range of postsecondary education options, including two-year community or technical college degrees, four-year college degrees and registered apprenticeships.

Secondary Education oversees high school graduation requirements, extended learning opportunities, dual credit options and the Navigation 101 program. Navigation 101 is an advisory-based life-planning program for students in grades 6-12 — it helps students make clear, careful and creative plans for their education and for life.

I hope you enjoy this opportunity to see what we're doing in career and college readiness — with CTE, and through the partnership of Secondary Education and Navigation 101 — to help students achieve their dreams in education and real career options.

Thank you for your continued support,

A handwritten signature in cursive script that reads "Randy Dorn". The signature is written in dark ink on a light-colored background.

Randy I. Dorn

State Superintendent of Public Instruction

# Table of contents

Legislative update .....	3
Integrated Science and Math in Middle School .....	5
Green technologies .....	6
Navigation 101 .....	7
CTE and Advanced Placement .....	8
CTE Student Enrollment 2006-08 .....	9
Course equivalencies .....	10
Dual credit options .....	11
Running Start for the Trades .....	12
Skills Centers .....	14
A look ahead .....	15

## Legislative update

In recent years, the Legislature has taken critical actions to expand career and technical education opportunities for middle school and high school students. These efforts must not only be continued, but expanded. Specific actions that are needed include:

- Funding middle school career and technical programs
- Increasing opportunities for providing industry certification and other high quality CTE programs in comprehensive high schools
- Funding Skills Center construction in the capital budget
- Providing additional options for students to meet graduation and college entrance requirements through expanded equivalency crediting opportunities
- Providing incentives for employers, labor organizations, educational institutions, and Workforce and Economic Development Councils to use existing funds to build educational and employment pipelines to high-demand careers for at-risk high school students

We are seeing successes, but we have more work to do.

The 2009 legislative session saw a number of bills related to our mission and goals pass into law:

- HB 1347 *Financial Education* — The goal is to include personal financial education as part of high school graduation requirements. The content must be based on the JumpStart Coalition standards.
- HB 1355 *Opportunity Internship Program for High School Students* — It provides incentives for local consortia to build educational and employment pipelines for low income high school students in high-demand occupations.
- HB 2119 *Expanding Dual Credit Opportunities* — The goal is to increase the number of students in dual credit programs as well as the availability of the various programs.
- HB 2261 *Education System* — This redefines basic education.)
- SB 5676 *Middle School CTE* — This provides for CTE opportunities for middle school students in STEM.

The 2009 Operating Budget included:

- Middle School Funding — moved from grant program to formula-funded
- \$5.5 million — High-Demand grants and Course Equivalencies (\$150,000 for FIRST Robotics, FIRST Lego, FIRST Tech)
- \$194,000 — Career and Technical Student Organizations
- \$150,000 — Financial Literacy
- \$350,000 — Pre-Apprenticeship Programs
- \$6.4 million — Navigation 101
- \$1.3 million — Comprehensive Dropout Prevention and Retrieval

During this last year, we have:

- Increased equivalency crediting — giving students options to meet requirements.
- Responded to the market's call for a new, green economy and grown education options for our students.
- Continued to support apprenticeships and skilled trades opportunities through the Running Start for the Trades program.
- Renewed high-demand grants in green construction, manufacturing or energy; integrated science, technology, engineering and mathematics (STEM); and health care.

# Integrated science and math in middle school

The integration of academics and CTE at the middle school level provides an applied approach to science and math education. Students are taught academic concepts as they acquire hands-on experience and skills by designing and building projects. This strategy recognizes that learning occurs when students are engaged and interacting with ideas. Providing high-quality Science, Technology, Engineering and Mathematics (STEM) education is no longer simply an academic issue.

Washington state needs to succeed in producing high school graduates with a deep knowledge and strong passion for science and math. To achieve this, we need to implement a consistent, statewide approach to integrating and applying core academic concepts using technology processes. Courses are now being developed and implemented that allow curriculum to be taught that incorporates engineering concepts. Specifically, we need this at the middle school level. Why middle school? — Because many students that are not captivated by science and math by 8th grade do not see what interest it should hold for them in high school, and do not gain the skills needed for 21<sup>st</sup> century jobs.



To this end, the Legislature approved Senate Bill 5676 extending enhanced CTE funding to middle school STEM programs at the same funding level as

high school programs. In addition, OSPI issued grants for program development and improvement in high-demand fields, including middle school STEM.

STEM provides students with many of the skills that are needed to be successful in today's world.

## Green technologies

***“We are going to need sheet metal workers, electricians and builders to meet the demand for green collar jobs... we need training and other programs specifically to make sure skilled workers — from engineers to tradesmen and women — are here to fill the jobs that are coming.”***

Gov. Chris Gregoire

The CTE green initiative is taking root. In 2009, OSPI released a portion of the \$1.7 million in high-demand grants for program development in green construction, manufacturing, and energy and power. CTE also rolled out a new model exploratory course in Green Sustainable Design and Technology.

New or revised course frameworks with a focus on green sustainable design are now or will soon be available, including:

- Sustainable Design and Technology
- Green Architectural Design
- Green Residential Carpentry/Carpenter
- Green Residential Electrician
- Sustainable Energy and Power Foundations

Students in new, green CTE courses learn about principles of sustainability, the impact of human activities on sustainability, sustainable transportation technology, power generation and resource management, healthy homes and communities, and postsecondary options in sustainable technology fields.



# Navigation 101

***“Navigation 101 helps kids put a real mental image in their heads about what the future might hold, and when parents get energized by what they’re seeing students doing in Navigation 101, they get involved”***

Mark Mansell, Superintendent, La Center

Navigation 101 is an advisory-based life planning program for students in grades 6-12. It helps students improve their academic performance, plan for future education and career choices, and, most important, make progress toward becoming the people they want to be. Navigation 101 is a program under the supervision of Secondary Education and is a partner with the CTE program office.

Specifically, Navigation 101 has been designed to help students:

- Develop clear plans for what they would like to do with their lives after high school; and
- Learn what they need to accomplish today — while they are still in school — to reach those goals.

Navigation 101 operates on the premise that every student deserves help and attention, not just those who are high risk or high achieving. With Navigation 101, no student is invisible: every student has the support of a caring adult at school.

And Navigation 101 is seeing success — researchers at Washington State University have found that school districts that have the longest involvement with

Navigation 101 have improved their graduation rates and maintained higher on-time graduation rates than the state average. For the last three years, these schools have graduated more than 82 percent of their students on time. In the same period, the state average on-time graduation rate fluctuated slightly from 70-74 percent.

*Photo: Matt Wallis, Skagit Valley Herald*



In February 2009, 21 schools in seven districts

were selected to be funded through College Spark Washington's College Readiness Initiative. These schools received multi-year grants to implement Navigation 101 more intensively and, in the process, develop new tools and resources that will benefit all Navigation 101 schools across the state.

Statewide trends show that interest in the program is growing:

- In 2007-08, Navigation 101 funded all applicants: 155 schools in 80 school districts.
- In 2008-09, Navigation 101 funded all applicants: 187 schools in 95 school districts.
- In July 2009, Navigation 101 awarded \$2.6 million in grants to 134 schools in 69 districts to develop and embed Navigation 101 in Washington schools. Due to an increase in interest and visible effectiveness, only 58 percent of schools were awarded grants. Ninety-six of the awarded grants included online curriculum and a formal commitment to change management process, facilitated by a public/private partnership with the Envictus corporation.

Visit Navigation 101 at [www.k12.wa.us/navigation101](http://www.k12.wa.us/navigation101) for more information about the program and these grants.

## CTE and Advanced Placement

The partnership between CTE and Advanced Placement (AP) instruction formed in 2007-08 continued to grow in the 2008-09 school year through outreach activities around the state. Results from an OSPI survey of CTE administrators showed a strong interest in expanding the number of CTE and AP courses offered in the future.

Out of 85 school district respondents, 40 percent are offering CTE-AP courses, including:

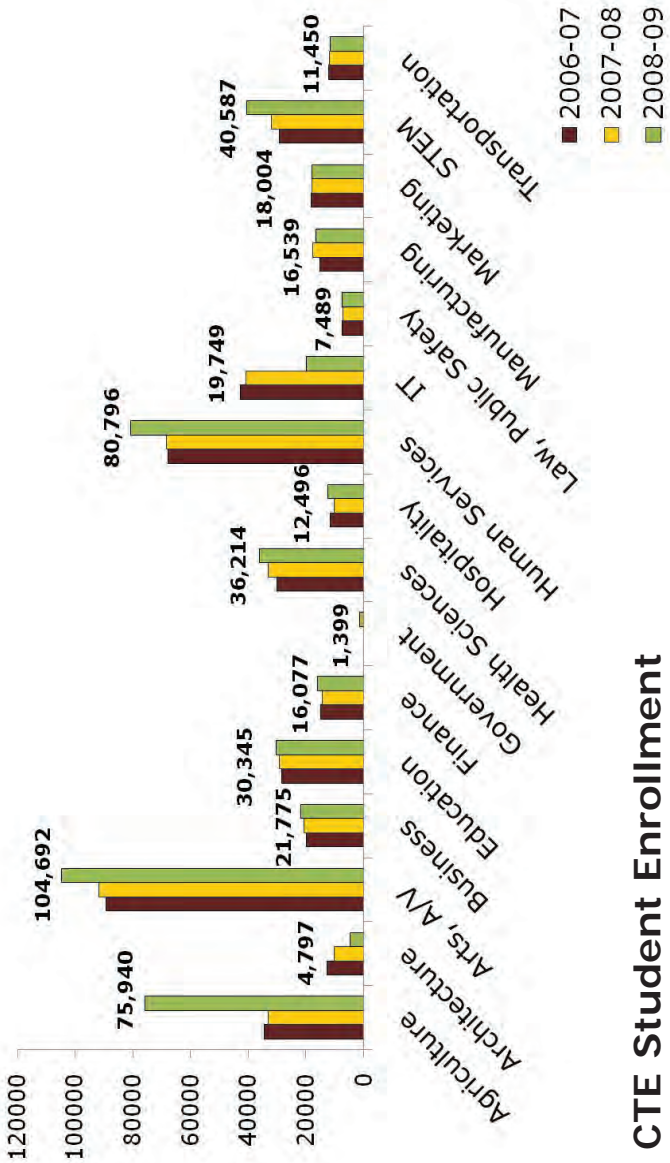
- AP Environmental Science (31 percent)
- Computer Programming (25 percent)
- Studio Art 2D/3D (26 percent)

We project that, during the 2009-10 school year, CTE-AP offerings in psychology, environmental science and economics will double. Three growth areas frequently cited in the survey results were AP Computer Science,

AP Environmental Science and AP Studio Art. Over the 2009-10 school year, particular focus will be given to pairing AP Environmental Science and CTE Natural Resources. This is where students engage in the environment they find around them, and can learn about global issues and the green economy.

We look forward to a continued increase in both interest and offerings for CTE-AP pairings as students learn the value of career-based, college-ready education.

# CTE Student Enrollment 2006-09



**CTE Student Enrollment  
2006-08**

# Course equivalencies

In 2008, OSPI made establishing course equivalencies a top priority — an equivalency is when a CTE course is transcribed as an academic credit. Last year, OSPI released \$200,000 in grants for school districts to increase the integration of academic and CTE instruction. The CTE program office also conducted regional teacher training and developed the Equivalency Credit Toolkit to help districts cultivate course equivalencies.

As of December 2008, almost 700 courses have been articulated as equivalent to academic courses across the state. Of 134 districts that responded to our survey, 47 percent have established District Equivalency Committees.

## CTE Course Equivalency Survey December 2008

Course	Equivalencies
Art	205
Science	176
Math	142
Health and Fitness	61
English	58
Social Studies	28
World Language	12

In 2009, the CTE program office will conduct a number of “train the trainer” seminars in order to further equip districts to establish equivalencies. A new edition of the toolkit will also be made available with further examples and updated standards.

### Legal citations for equivalency crediting:

- WAC 392-410 *Courses of Study and Equivalencies*
- WAC 180-51 *High School Graduation Requirements*
- RCW 28A.230.097 *Career and Technical High School Course Equivalencies*
- RCW 28A.230.120 *High School Diplomas — Issuance Option to Receive Final Transcripts — Notice*

# Dual credit options

***“In today’s world of education the pathway to career and college isn’t always direct. There are many ways to get a good education — two year colleges, four-year colleges and apprenticeships — that can result in excellent jobs.”***

Linda Cowan, Director  
Whatcom County Tech Prep

Dual credit classes let high school students earn college credit at the same time they are earning the high school credit they need for graduation. The best way to take advantage of dual credit opportunities is to plan ahead, and the best time for students and their parents to start planning is during the 8<sup>th</sup> grade school year or at the very beginning of the 9<sup>th</sup> grade.

“Dual credit options help young people jumpstart their career exploration and their college education, while saving them and their families extraordinary amounts of college tuition,” said Dan Newell, state assistant superintendent for secondary education. “It doesn’t get any better than that. But make no mistake — these dual credit programs are demanding and expectations are high. Success requires motivation, hard work and perseverance.”

There are many routes to dual credits in Washington.<sup>1</sup> Students may want to stay on their high school campus and take

- Advanced Placement courses
- International Baccalaureate program courses
- College in the High School program courses

Or at their local community or technical college, students may participate in

- Running Start
- Tech Prep
- Running Start for the Trades

Organized students can have career interests and future job markets analyzed, a high school through college coursework plan developed, and their academic and CTE classes sketched out by the time they begin their freshman year.

<sup>1</sup> Learn more about each option at [www.careerandcollegeready.com](http://www.careerandcollegeready.com).

“Ask questions often, regularly meet with counselors to update education and career plans, and take advantage of all the free resources and career exploration activities provided by your school and community,” Cowan advises.

Over 82,000 students took advantage of dual credit options in Washington in 2007-08.

## Running Start for the Trades

Running Start for the Trades (RSTT) is a collaboration between the Washington State Apprenticeship and Training Council (WSATC), the Department of Labor and Industries (L&I) and OSPI. It provides programs with specific training for occupations by pairing classroom learning with extensive on-the-job training. Apprentices receive wages and may receive medical and retirement benefits as they learn their trade.

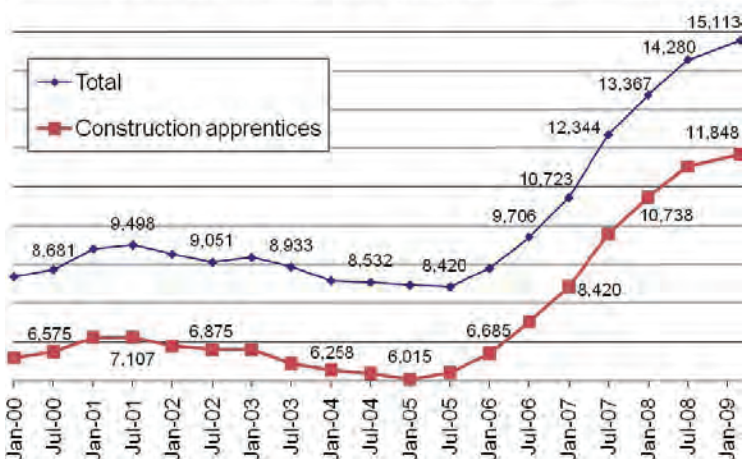
Students who participate in RSTT engage in hands-on activities, field trips to training centers, and job shadow opportunities. They hear speakers who have a depth of knowledge and experience in skilled trades. They go to career fairs, apprenticeship expos and industry-related events such as the annual Women in the Trades fair. Many students earn credits at community or technical colleges while in their high school program, and they receive “preferred entry” status for apprenticeship programs after they complete their high school education.

RSTT students go on to study trades such as carpentry, plumbing, welding, electrical work, sheet metal work, masonry, and millwrighting. Each of these programs is steeped in the math and science required to succeed in the trades: “The one thing our high school academic teachers have learned is the high applied math skills required for apprenticeships,” noted the Kelso High School Grant Report, June 2009.

The Selkirk School District report made clear that “In the hard economic times the apprenticeship programs are very competitive, so we have learned that encouraging the students to take as many articulated and college

prep courses as possible will help them compete in the labor market.” Yet each year there are more and more active apprentices in Washington.

## Active Apprentices, Last Day of Month thru March 2009



Dept. Labor & Industry *Quarterly Report Jan-Mar 2009*



***“In well-designed models of CTE — models that integrate rigorous academics with relevant, project-based learning drawn from the real world of work — students have lower dropout rates, higher test scores, higher graduation rates, higher postsecondary enrollment rates, and higher earnings than students who do not enroll in CTE offerings.”***

Institute for a Competitive Workforce  
*The Skills Imperative, 2008*

# Skills Centers

Skills centers are an integral part of an overall expansion of CTE programming in Washington. Skills centers are regional secondary schools that serve high school students from multiple school districts.

They provide instruction in preparatory programs that are either too expensive or too specialized for school districts to operate individually.

Currently, there are 10 skills centers in Washington state, and four more will be emerging in the near future.



In 2008, eight skills centers and 85 school districts participated in feasibility studies for satellite/branch campuses across the state in accordance with Second Substitute Senate Bill 5790 (2008). Skills centers will reach into rural and remote districts, as well as high-density, urban districts with the same quality services as are offered at current regional skills centers.

As a result of these studies, development of satellite/branch campuses is continuing in 17 Washington counties, representing thousands of additional students with access to skills center resources.

***“Branch campus and satellite programs will help... districts combat the twin problems of student disengagement and low academic achievement through programs that prepare students for high-demand careers in which applied science, math, engineering, and technology are necessary for success... These programs can become a major contributor helping... create a seamless career preparation system that effectively transitions students from high school to postsecondary education or apprenticeships.”***

New Market Skills Center  
Feasibility Study, 2009

# A look ahead

“We can help our young people get prepared for their future by introducing them to career education in high school,” says Kathleen Lopp, state assistant superintendent for career and college readiness. “Then they can learn how to apply academic concepts in real life ways, and begin figuring out what career they want and what educational program they should pursue after they graduate.”

This next year, the CTE program office will:

- Develop middle school STEM programs.
- Align the applied math curriculum with the state math standards, identify gaps, and develop resources to make applied math courses equivalent to algebra 1 and geometry course standards. We will partner with the Washington Applied Math Council and the Pacific Mountain Workforce Development Council’s Department of Labor (through the WIRED grant).
- Develop an interdisciplinary algebra 2 course, taught in the CTE contextual learning style. We will partner with the State Board for Community and Technical Colleges and the State Board of Education.
- Grow green technology education options.
- Administer new high-demand, FIRST Robotics and other grants.
- Explore technical innovation high schools — schools with contextual learning in all subject areas, united around a common theme (e.g. aviation, STEM, green technology).
- Expand skills centers through satellite and branch campuses.
- Enrich comprehensive high school CTE offerings.
- Strengthen our partnership with Navigation 101.

## Career and College Readiness Leadership

- Kathleen Lopp, assistant superintendent
- Dan Newell, assistant superintendent, secondary education
- Betty Klattenhoff, director, career and technical education

***“The goal of the education system should be to enable the delivery of achievement, not just in academics, but in overall career-readiness. That means more learning environments based on everyday, real-world, project-based learning that effectively prepares all students for success in both college and careers.”***

Institute for a Competitive Workforce  
*The Skills Imperative*, 2008

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