

CAREER & TECHNICAL EDUCATION

Examining CTE Access, Participation, and Outcomes in Washington State

Partner Washington State Education Research and Data Center (ERDC), Washington Office of Superintendent of Public Instruction (OSPI)

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Several studies point to the positive connection between career and technical education (CTE) participation during high school and high school graduation, postsecondary enrollment, and labor market outcomes. Based on this evidence, Washington state introduced CTE participation expectations for all students: Starting with the class of 2019, all students are required to complete at least one credit of “occupational education,” and starting with the class of 2020, graduates must complete one of three Graduation Pathways—one of which is in CTE.

Given this investment, the state needed a more comprehensive understanding of what access to CTE looks like across the state, who is participating in CTE, in what ways and at what levels they are participating, and what outcomes they are achieving.

Using data to understand and improve statewide CTE programming

The Washington State Education Research and Data Center (ERDC) commissioned Education Northwest to conduct a study using more than a decade of data collected in the state’s P20W Integrated Data System. This involved analyzing data on more than 750,000 students to connect their experiences in high school through postsecondary and labor market outcomes. The study was funded through a 2019 State Longitudinal Data Systems grant from the U.S. Department of Education’s Institute of Education Sciences and involved the close participation of both ERDC and the Washington Office of Superintendent of Public Instruction (OSPI).

Washington state was especially interested in exploring the overall landscape of CTE programming in the state and the extent to which it has evolved over time, the ways in which students are participating in CTE and where access and participation are unequal, and the level of CTE participation students need to achieve different outcomes.

Research on CTE typically focuses on students who reach concentrator status in a specific career pathway versus those who do not. Washington wanted to move past this by examining participation across several credit attainment thresholds and the impact of earning different credit thresholds on outcomes, including cases in which taking more CTE courses led to more positive outcomes for students.

Education Northwest brought a combination of deep CTE content expertise and the ability to analyze massive amounts of data drawn from statewide longitudinal data systems (SLDS). In addition, we have a long history of working in Washington state and providing clear, actionable findings.

Informing CTE policy and practice

Among the key findings in the study were the following:

The provision of CTE has been very steady over the last 10 years. However, rural schools, low-income schools, and small schools offered fewer career pathways, on average.

Students are more likely to explore CTE broadly—taking classes across a variety of career pathways that do not necessarily build on each other—rather than pursue in-depth study in a single pathway.

There are gaps in CTE participation. Rates of earning at least two CTE credits in a single pathway were between 6 and 10 percentage points lower for students who experienced homelessness, identified as American Indian/Alaska Native or Black, or were nonbinary.

Earning more credits within a single CTE career pathway was generally linked to stronger postsecondary and labor market outcomes, especially in Agriculture, Finance, Manufacturing, and Transportation.

These findings have multiple implications for CTE policy and practice in Washington state. For example, work may lead to increased access to CTE in Washington and help address gaps in access and participation for underserved groups. In addition, advisors and other adults can use the findings to help students make more informed decisions about their course-taking in order to achieve their postsecondary and career goals. Finally, the study can serve as an example for other states of how SLDS data can be used to address practical, high-leverage educational issues.

In addition to the full report, Education Northwest delivered a spotlight brief about students' opportunities to earn college credit through CTE coursework, and an infographic, all of which can be found on the [ERDC website](https://www.ednw.org).