

CHALLENGE

CCCS is the largest postsecondary provider in the State of Colorado serving more than 151,000 learners annually. Higher education in Colorado is underfunded, yet Colorado industries are demanding a skilled entry level worker, as well as, upskilling of existing workers.

For CCCS, the traditional Career and Technology Education delivery of face-to-face courses could not increase capacity to meet demand and created a burden for rural communities by requiring people to relocate to urban centers when pursuing career pathways in 3D printing, additive manufacturing, electronics , energy, computer aided design, green building and construction management, machining manufacturing technologies, mining and extraction, oil and gas processing, solar, water quality management, welding, wind and electrical lineman.

SOLUTION

By partnering with SkillsCommons, CCCS expanded educational opportunities, facilitated collaboration for course development and shared course resources at multiple sites. Using SkillsCommons expanded capacity to share resources developed by expert faculty without increased curriculum development costs for institutions utilizing the courses contained in SkillsCommons. In the first year using SkillsCommons, seven colleges were able to utilize 165 high quality, blended learning energy courses, 85 redesigned developmental mathematics and English courses were shared in 14 colleges; and 145 advanced manufacturing courses are now used in 9 two-year and four-year post-secondary institutions.

LEARNING IMPACT

We know that 2,570 students took one or more of the 165 blended energy courses and 50,051 students accessed one or more of the 82 redesigned developmental education courses. In two years, 3052 students have benefited from the 145 redesigned blended OER advanced manufacturing courses.

RETURN ON INVESTMENT

Available internationally and nationally through SkillsCommons, 395 blended courses have been shared to all 13 CCCS colleges. These courses, hosted in SkillsCommons, provide expanded capacity for shared resources created by expert faculty with no increase in curriculum cost after the initial course creation. Average development time for a blended course includes 414 faculty hours and 135 hours of instructional design hours for a total of 549 hours. As an example know that courses developed in year 2 of the energy courses redesign were utilized in developing courses in year 1 of the advanced manufacturing courses redesign which cut development time down to approximately 270 hours.

Courses shared outside the CCCS system include use by the Colorado Advanced Manufacturing Association, the Colorado Urban Workforce Alliance; educational school systems in Montana, Idaho, Iowa, Nevada, and Kansas; and, the countries of Finland, Africa, and India. As an example, Colorado Advanced Manufacturing Association has leveraged the CCCS course material into company specific training, leveraging educational opportunities without duplicating training materials. From a student perspective, low income and resource

challenged learners who cannot travel from their home communities for post-secondary education are able to take a course, complete a certificate, or pursue an associate degree in preparation for joining, re-entering, or advancing in the workforce without incurring additional textbook purchases due to the OER content.