Career Clusters

The Promising Practice

Career clusters are groups of similar occupations and industries, developed for the purpose of organizing career planning. The Center for Advanced Research and Technology (CART), a high school in Clovis, California, has adopted the Linked Learning approach to combine rigorous academics with career clusters. Linked Learning offers secondary students a multi-year course of study that combines academic and technical learning organized around broad industry sectors, such as biomedical and health sciences; finance and business; information technology; public services; and arts, media and entertainment. Within each cluster are several career-specific laboratories in which students complete industry-based projects and receive academic credit for advanced English, science, social science, and technology.

Mission & Goals

According to their website, the mission of CART is to "collaborate with businesses and community agencies to educate students in a cross curricular, project-based environment that is academically rigorous, and facilitated through a business based instructional model."

CART's goals include increasing student achievement by offering students a curriculum that provides application of academics through real-world projects and experiences such as job shadowing and internships. CART seeks to prepare students for entry-level technological positions, certifications, and/or university admission.

Research Question

Does combining rigorous academics with career clusters lead to a higher percentage of student enrollments in both community college and four-year universities?

Target Audience

High school students

Research Design

The Institute for Evidence-Based Change examined educational outcomes for CART students using intersegmental transcript data from the California Partnership for Achieving Student Success (Cal-PASS) database. The results are based on a cohort of students in either the Clovis or Fresno Unified school districts who attempted one or more CART course(s) in the second semester. The CART courses include only those courses where the locally assigned course numbers matched the CART course numbers. CART technology applications courses, physics, and other CART courses without a local course number were excluded.

Students who had not attempted any of the CART courses and were enrolled in the same district, academic year, and grade level (Grade 12) were the source of the comparison group. They were selected using a propensity score matching method based on available factors such as gender, ethnicity, home language, school, 10th-grade California High School Exit Examination (CAHSEE) English Language Arts (ELA) and math scale scores, English proficiency, special education status, parent education level, participation in the National School Lunch Program (NSLP), and the California Standards Test (CST) ELA scale score from 11th grade.

NRC CTE
National Research Center for Career and Technical Education

Results

Findings from the past seven years indicated that students entered postsecondary institutions at a higher rate than a matched sample of similar students from area high schools. Students who participated in CART's Linked Learning approach from 2002-2008 had a higher percentage of enrollments in community colleges after completing Grade 12 and one year after high school. After Grade 12, 71% of students who participated in CART attended a community college, compared to 60% of a demographically similar group of non-CART students who attended community college.

Forbes (2011) reported: "The overall differences in community college enrollment for participant and comparison group were statistically significant at $\alpha = 0.5$ level and were relatively consistent across years. The differences in university enrollment were not as consistent" (p. 8). The evaluation also indicated that: "Students enrolled in the CART programs were more likely to pass the California High School Exit Examination as sophomores, to graduate from high school, and to complete college entrance requirements" (p. 3).

Source

Forbes, J., (2011, January). *A model for success: CART's linked learning program increases college enrollment.* Clovis, CA: The Center for Advanced Research and Technology. Retrieved from: *www.irvine.org/images/ stories/pdf/grantmaking/cart%20findings%20 report%20final.pdf*

Other Resources

Career Custers: *www.careerclusters.org.*

The Center for Advanced Research and Technology (CART): *www.cart.org/about/whatis.php*

Promising practices as a concept has many operational definitions. The NRCCTE approach to this designation is to identify research from reputable sources (e.g., major funded studies, institutional research, district or state analyses of data) and share this with you. Some of the research identified here is a result of very rigorous research (e.g., longitudinal designs with carefully matched samples, experimental designs). However, other studies may not rise to that level of rigor but nonetheless suggest a practice worth examining. We invite readers to follow the links provided and form their own judgments regarding the quality of the research.