



Strategies for Transformative Change

OFFICE OF COMMUNITY COLLEGE RESEARCH AND LEADERSHIP

LEVERAGING PARTNERSHIPS TO EXPAND EDUCATION, TRAINING, AND EMPLOYMENT OPPORTUNITIES

Transformative Change Initiative Overview

The Transformative Change Initiative (TCI) is dedicated to assisting community colleges to scale-up innovations that improve student outcomes and program, organization, and system performance.

Transformative Change Definition

Raising the individual, organizational and system performance of community colleges to unprecedented levels without sacrificing their historic commitment to access and equity.

The Community College Consortium for Biosciences Credentials (c3bc), led by Forsyth Technical Community College, is comprised of 12 colleges in eight states. The consortium received a Round Two TAACCCT grant from the U.S. Department of Labor to increase education and training for biosciences jobs. The consortium is organized in a hub structure that reflects the project's four areas of focus: biomanufacturing, medical devices, lab skills, and learning technologies. Each hub has a lead college and two partner colleges. While all hubs are involved in developing or expanding biosciences courses and credentials, each has a specialized focus. The colleges that comprise each hub and the focus of their activities are the following:

- **Biomanufacturing:** Montgomery County (PA) Community College (Lead College) with Bucks County Community College and Los Angeles Valley College
- **Medical Devices:** Ivy Tech Community College (Lead College) with St. Petersburg College and Salt Lake Community College
- **Lab Skills:** City College of San Francisco (Lead College) with Madison Area Technical College and Austin Community College
- **Learning Technologies:** Forsyth Technical Community College (Lead College) with Alamance Community College and Rowan-Cabarrus Community College



Key Factors that Facilitated the Building and Leveraging of Partnerships

Strengthening existing and building new collaborations with biosciences employers, industry associations, and workforce agencies have been central to the work of the consortium.

- **History of partnerships.** The college leaders envisioned the grant as an opportunity to build on their prior work together to address the need for core skills in biosciences that could facilitate development of industry-recognized credentials and placement of students in jobs with a career pathway. Colleges with existing relationships with employers built on established trust to enhance these partnerships during the c3bc project.
- **Willingness to expand partners and activities.** Colleges' inclusion of new employer partners in a variety of functions, including curriculum design and delivery, has facilitated strong partnerships between c3bc staff and employers and contributed to building mutually beneficial relationships. Colleges also expanded their relationships with workforce agencies. They provided information to the American Job Centers about the employment opportunities in biosciences and completed applications to attain preferred provider status. The willingness of workforce staff to promote biosciences employment opportunities and to work with c3bc personnel in identifying workforce clients whose skills are a match for biosciences jobs have been important factors in the success of the partnership activities.
- **Perceived benefits of collaboration.** Employers who perceived that the consortium's work would contribute to strengthening their workforce and productivity have collaborated with the colleges on a range of c3bc activities, including curriculum design and delivery, provision of internships, student recruitment and referral, student selection, and student placement into jobs. Employers' engagement in these activities has varied based on their available time, their company's needs, and company size.
- **Strong professional communities.** State biosciences associations have been instrumental in linking consortium staff to employers as well as to business and industry groups. Working as intermediaries between the colleges and employers, associations have provided information about trends in regional biosciences markets, developments in biosciences companies, and strategies to use in working with employers.

Significant Aspects of the Partnerships. More than 40 employers have worked in activities such as designing and reviewing curricula, screening program candidates, teaching courses, providing mentoring and internships, interviewing and hiring program graduates, and participating on college grant advisory councils. Discussed below are examples of these activities in particular colleges in three of the four hubs.

MEDICAL DEVICE HUB

St. Petersburg College (SPC): Biomedical Engineering Technology

SPC has focused on the development and approval of a new interdisciplinary AS Degree in Biomedical Engineering Technology (BMET). This degree includes an embedded Project Management Institute certificate and a Certified Associate in Project Management certificate, as well as preparation for the American Association for Medical Instrumentation's Certificate for Biomedical Equipment Technician. Employers have been involved in the design and delivery of BMET courses and in the decision to embed additional certificates in the program. Employers, including Con-Med, Lakeland Regional Medical Center, Oscor, AeroSonic, Philips Health Care, Baycare Health, NASA, Bovie, and Space Labs, have hosted career explorations. BMET students, as part of their professionalization, regularly attended the Bay Area Association of Medical Instrumentation meetings and the Florida Biomedical Society conferences. State and local bioscience associations have been instrumental in encouraging students to pursue careers in the medical device industry.

As of September 2015, over 400 students have enrolled in the BMET program, and 32 one-year BMET certificates have been awarded.

LAB SKILLS HUB

City College of San Francisco (CCSF): Environmental Monitoring

CCSF created a six-course Environmental Monitoring, Sampling and Assessment certificate using industry-identical instruments to evaluate, test and analyze water, soil and air quality for contaminants. As part of the curriculum development activities, faculty met with public and private employers to determine the gaps in skills in the environmental monitoring field and to identify the types of courses that could address these gaps. The faculty also identified opportunities in local community organizations for students to work and apply their skills to address environmental issues. As a result of these activities, CCSF's faculty developed an environmental monitoring certificate that is based on skills used by public utility and private sector employers.

CCSF students have participated in small-scale environmental monitoring projects with more than 20 community-based organizations.

BIOMANUFACTURING HUB

Los Angeles Valley College (LAVC): Biotechnology Training

LAVC has worked closely with industry partner SoCalBio in expanding its Biotech Bridge Training Academy and developing a new Biomanufacturing Skills Certificate. Two local employers, Baxalta and Grifols Biologicals, have been instrumental in the growth and success of the Bridge Academy through their participation in candidate selection, course content review, and interviewing and hiring graduates. Seven cohorts of students (total of 170) have completed the Bridge Training Academy six-week program and 83% have been employed.

LAVC also consulted with these two employer partners to launch a new industry-validated Biomanufacturing Skills Certificate as part of the new career pathway in biomanufacturing.



Los Angeles Valley College, Biotech Bridge Training Academy certificate ceremony, August 2015

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