June 2017

Developing Skills For a Resilient Workforce

➢ Identifying resiliency competencies through stakeholder feedback

➢ Aligning resiliency competencies with existing curricula

➢ Building resiliency competencies in community college students

Introduction

The Northeast Resiliency Consortium (NRC), a Trade Adjustment Assistance and Community College Career Training (TAACCCT) grantee, is composed of seven Northeast community colleges from four states. Led by Passaic County Community College in New Jersey, the six other consortium members are Atlantic Cape (NJ), Bunker Hill (MA), Capital and Housatonic (CT), and Kingsborough and LaGuardia (NY) community colleges.

In partnership with Achieving the Dream (ATD), the Carnegie Foundation for the Advancement of Teaching, and educational technology company Smart Sparrow, the NRC created and enhanced training opportunities for adults and dislocated workers to increase credential attainment and improve outcomes in the healthcare, information technology, and environmental technology industry sectors. National organizations ATD and Carnegie Foundation champion student success initiatives and community college improvement across the country; Smart Sparrow designs adaptive learning platforms and lesson content for curricula.

The consortium is focused on preparing a resilient workforce in these three industry sectors and has developed its own Resiliency Competency Model in support of that goal. The NRC defines resiliency as "an individual's persistent development and application of knowledge, skills, and resources that effectively help one adapt to change and overcome adversity."

Approach

The grant came together several years ago around the role of community colleges when their communities are impacted by crises and natural catastrophes, such as hurricanes, floods, shootings, or terror attacks. However, over time the project evolved, focusing on the classroom and how service-work instructors prepare individuals to handle challenge and better navigate unexpected barriers *before* crises hit—while still teaching required content knowledge and job skills.

In broader economic terms, "resiliency" can be an abstract and complex concept requiring that institutions and whole communities have the ability to effectively adapt at all times to opportunities as well as disruptions. Resiliency is also critical for workers and employers who make up those institutions and communities to remain relevant in the face of global competition, evolving technologies, and continual demand for advanced skills in a knowledge-driven economy.

The NRC developed the Resiliency Competency Model using feedback from the stakeholders who make up NRC colleges' "communities": students, faculty, staff administrators, employers, and industry groups. To better prepare a resilient workforce, instructors at NRC colleges needed to align classroom learning with employability skills more transparently.

Source: Skills Commons > Northeast Resiliency Consortium > Learning Resources Collection

"Employers told us they were tired of people who couldn't think on their feet," says Alexandra Shinert, NRC communications program assistant. "It's not just about having a certification. Students need a common language that enables them to communicate their skills effectively in the classroom and in the workplace."

To integrate the Resiliency Competency Model's language into learning experiences, the consortium used a curriculum alignment table. This tool enables educators to see where in their syllabi they can enhance or incorporate more activities that develop the resiliency competencies. The graphic on the next page represents one row from an alignment table, depicting how adaptability, self-awareness, and critical thinking competencies are incorporated at a specific point in Bunker Hill Community College's IT Problem Solving curriculum. Here, the initial obstacle-driven "programming" exercise—instructing their teacher to build a sandwich—serves as practice for programming an actual robot to respond "correctly" to select audio commands—which itself is preparation for writing code.

**Excerpt from a Curriculum Alignment Table
for an IT Problem Solving Curriculum**

Learning objectives	Course content	Activities	Assessment
Demonstrate basic programming concepts by creating a program for the NAO robot to play Simon Says	**The instructor** • runs tutorials for choreography • leads the Peanut Butter and Jelly programming exercise • shows video of Sheldon's "Friendship Algorithm" and its flowchart	Students complete the Lightbot Hour of Code online on their own and create a flowchart **Project 3** Create a flowchart and a program in which the NAO robot must respond properly to at least five verbal Simon Says commands, one of which does not include "Simon Says." The robot must not do as "Simon" commands in this case, but rather respond with, "I cannot do that, Simon." **Competencies to be assessed** Adaptability / Self-awareness Critical thinking	Rubric to assess robot program and flowchart includes: • 5 different Simon Says looping behaviors • correct looping structure • correct voice recognition implementation • a "you did not say Simon Says" loop correctly implemented

Source: Jaime Mahoney and Michael D. Harris, Bunker Hill Community College, 2015.

Our goal is to build a workplace culture in the classroom, where students improvise, adapt, and think on their feet," says Ed Fians, NRC's faculty engagement and content specialist. "Everyone has to work in a group and deal with obstacles together that may not have been anticipated."

Building Blocks Model

"The consortium's competency model and its corresponding integration process align well with the U.S. Department of Labor, Employment and Training Administration's (DOL-ETA) Building Blocks Model," says Mr. Fians. "We combined what is in the Workplace Competency and Personal Effectiveness tiers—tiers 1 and 3—as five 'resiliency competencies' with corresponding 'example actions,' that students, ergo employees, should be able to perform: the 'personal effectiveness' observed and assessed in our classrooms serving as the analog for actual workplace performance on the job. Our faculty 'coded' the tasks the Building Blocks Model has as 'Academic Competencies' in Tier 2 with our five terms—for us, the demonstration of content and skill understanding and the demonstration of employability being assessed simultaneously in resiliency-enhanced, service-workforce training courses."

Return on Investment

Between 2015 and 2017, 29 resiliency-enhanced programs or courses were offered across the NRC member colleges. A total of 1,685 students participated in a resiliency-enhanced program or course and 1,383 (82%) of those students completed their program or course of study.

Next Steps

"We are currently developing a resiliency guidebook that will feature activities, resources, and tools for faculty and staff that other colleges can use to build resiliency in individuals," says Ms. Shinert. "Working with our educational technology partner, we have created online resiliency lessons that can be integrated into classroom curricula or used as a supplement for one-on-one support services." Visit the NRC Resiliency Hub to learn more about these lessons.

Related Links

NRC Resiliency Hub
https://www.nrc-hub.org/

Skills Commons, Northeast Resiliency Consortium, Learning Resources Collection
https://www.skillscommons.org/handle/taaccct/200

"About Us | The Northeast Resiliency Consortium (YouTube video)"
https://www.youtube.com/watch?v=xaJqx0gdGXw

Achieving the Dream
http://achievingthedream.org/

Carnegie Foundation for the Advancement of Teaching
https://www.carnegiefoundation.org/

Smart Sparrow
https://www.smartsparrow.com/