Building Resilience

by the Northeast Resiliency Consortium
with Nan L. Travers and Achieving the Dream

A How-to Guidebook on Integrating Resiliency Competencies Into Curriculum

VERSION TWO

NORTHEAST RESILIENCY CONSORTIUM

Achieving the Dream™

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Preface

Helping Community College Students Develop Resiliency in Academics and in Life

The Northeast Resiliency Consortium (NRC) was a coalition of seven community colleges in four states in partnership with Achieving the Dream (ATD). The consortium formed in 2013 to help students, colleges, and communities successfully overcome adversity. For students who have experienced tragedy or trauma due to natural or manmade disasters or dramatic economic shifts, the right skills and habits of mind can often turn tragedy or trauma into triumphs. We know that students who are able to adapt to change and overcome adversity are often better prepared to overcome barriers to completing certificates and degrees, securing good jobs, earning higher salaries, and contributing to their communities. They are resilient.

A cornerstone of the NRC's work, presented in this comprehensive practitioner guidebook, is the Resiliency Competency Model. The model outlines the knowledge, skills, and resources students can learn to use to adapt to change. Competencies inside the model include self-awareness, adaptability, critical thinking, reflective learning, and collaboration, which help people in different ways to rise above the challenges they face. For veterans and workers affected by changes in global trade and other demands, the NRC's focus on resiliency in the classroom and through student support services along with work with regional employers made a difference in their ability to obtain skills, competencies, and credentials that enabled seamless transitions into high-demand occupations.

The NRC's success in building resiliency reflects ATD's continued commitment to strengthening institutional capacity in order to improve student success, particularly in the area of teaching and learning. With our NRC college colleagues, we have developed tools, curricula, and approaches for sharing what we have learned about building resiliency. This guidebook—prepared with consortium members—is a result of that work, to provide community college leaders, faculty, and staff with insights, tools, and strategies to use to help students be resilient in their studies, their work, and their lives. We hope this guidebook will be a valuable tool for our Network and others to use and build upon as we continue our efforts to support students and institutions in the ongoing effort to strengthen our communities, our workforce, and our nation.

Dr. Karen A. Stout
President and CEO
Achieving the Dream

Introduction

Formation of the Northeast Resiliency Consortium

As higher education continues to address the pressing need to help more students not only to enroll but also to persist and complete certificates and degrees, community colleges find themselves at the front lines of the nation's efforts to help an increasingly diverse and disadvantaged population get the skills and credentials they need to get good jobs that pay a living wage. Now more than ever, students face significant barriers to success beyond the traditional academic challenges of college. For many, the financial and logistical difficulties of attending college while also dealing with the realities of work and family can make the pursuit of a degree or certificate a long and arduous endeavor that requires commitment and resolve. Working students cannot easily pay their way through school and, too often, work has to take precedence over learning, or a personal or family emergency forces students to stop or even drop out. These factors are particularly pressing for working adults and students who are returning to college due to unforeseen changes in their employment, such as corporate downsizing or offshoring of jobs.

Beyond the challenges of daily life, traumatic events such as natural disasters, civil unrest, racial discord, and gang violence can hit close to home and can severely affect students and the communities where they live, work, and go to school, as well as the colleges themselves. These events, which seem to dominate the news, can be overwhelming in themselves, even as students must push on in their academic pursuits.

In 2013, a group of seven northeastern community colleges formed the Northeastern Resiliency Consortium (NRC) to tackle this problem. The

The Northeast Resiliency Consortium

- **Passaic County Community College (NJ), Project Leader**
- Atlantic Cape Community College (NJ)
- Bunker Hill Community College (MA)
- Capital Community College (CT)
- Housatonic Community College (CT)
- Kingsborough Community College (NY)
- LaGuardia Community College (NY)

Achieving the Dream served as the consortium's convening partner and as an intermediary to support peer learning among the colleges, provide technical assistance, host in-person consortium meetings, and promote promising strategies implemented by the consortium.

focus of the NRC is to take strategic action to build resilient workers, institutions, and communities capable of meeting urgent environmental, social, and economic threats, such as the devastating hurricanes, shootings, and bombings that had recently occurred in the states where NRC colleges are located.

To address this challenge, the NRC applied for, and was awarded, a $23.5 million grant from the U.S. Department of Labor's Trade Adjustment Assistance Community College Career Training (TAACCCT) program.

> If you can teach individuals to become resilient, they will have the capability to endure challenges in their studies and in their work. The resilient worker is able to respond to issues and complexity and implement solutions quickly, efficiently, and effectively.

The goal of the grant was to develop capacity and programming at the colleges to build an adaptive, resilient workforce in industries central to preventing, responding, and recovering from disasters and crises. Specifically, the NRC sought to develop career pathways at the member colleges in three of the Northeast's largest growth industries: health care, where remaining adept at responding to emergencies and crises is critical for survival; information technology, where data networks must remain functional during catastrophes; and environmental technologies, where resilient infrastructures can help states and communities prevent and recover from disasters. The NRC worked to expand colleges' ability to train workers affected by changes in global trade for employment in high-demand industries by implementing interconnected evidence-based and innovative strategies so that:

- workers could gain a foundational set of employer-identified competencies;
- colleges could fill academic gaps by establishing and enhancing industry-recognized certificates and programs of study;
- workers could access courses regionwide through the use of new technology platforms, transfer and articulation agreements, and curriculum development and sharing; and
- colleges could rely on regional standards for credit for prior learning, and work-based learning, and integrated student supports and advising to keep workers, including those eligible for Trade Adjustment Assistance, on track to meet their educational and employment goals.

Through work that is detailed in this publication, the NRC colleges have collaborated to develop the Resiliency Competency Model, along with a rich and robust set of principles, strategies, resources, and guidelines for helping students develop strong resiliency.

The Resiliency Competency Model

The foundational work of the NRC was to first define what it meant for students to be resilient and then to develop a model to help students gain knowledge, skills, and abilities that can help them persist during times of crisis and build the personal capacity to thrive in the workplace and in their personal lives.

The NRC's working definition of resiliency is ***"an individual's persistent development and application of knowledge, skills, and resources that effectively help one adapt to change and overcome adversity."***

From this definition, the NRC colleges and partners worked collaboratively and gathered significant feedback through surveys, focus groups, and direct input from students, employers, and faculty, staff, and administrators to develop the Resiliency Competency Model.

Five core competencies make up the model:

- **Critical thinking:** Purposeful use of reasoning to identify strengths and weaknesses of alternative approaches in diverse situations.
- **Adaptability:** Successful adjustment to a variety of positive and negative conditions and circumstances.
- **Self-awareness:** Clear understanding of one's qualities, characteristics, strengths, and weaknesses, and how they impact one's self and others.
- **Reflective learning:** Integration and application of prior and current learning to new situations.
- **Collaboration:** Working with others to achieve a goal.

For each of these competencies, the NRC also developed a set of actions and behaviors that demonstrate mastery of the competency. The work aims to encourage students to use—and integrate—all of these competencies to help overcome adverse situations.

Based on this model, the NRC has developed a host of materials to help faculty and staff modify or design courses with these competencies embedded within their teaching, coursework, and the assessment of student progress on the competencies overall.

Using professional development provided by the NRC, 30 instructors and college staff members across the seven colleges integrated resiliency competencies into 29 of their programs of study, courses, and trainings: eight resiliency enhanced programs of study, 16 resiliency enhanced courses, and five resiliency enhanced trainings. These programs, courses, and trainings were applied across multiple academic disciplines to help educate a more adaptive, resilient workforce. The model is now available for use outside of the consortium colleges. This guidebook supports that process.

Northeast Resiliency Consortium Resiliency Competency Model

Resiliency: *Resiliency is an individual's persistent development and application of knowledge, skills, and resources that effectively help one adapt to change and overcome adversity*

CRITICAL THINKING

Purposeful use of reasoning to identify strengths and weaknesses of alternative approaches in diverse situations.

Example actions

CT1 Focuses on relevant and unique factors

CT2 Analyzes situations for opportunities and challenges

CT3 Identifies current resources and evaluates the gaps in needed resources

CT4 Proposes alternative options and strategies using analysis and evaluation

CT5 Makes informed decisions

ADAPTABILITY

Successful adjustment to a variety of positive and negative conditions and circumstances.

Example actions

AD1 Demonstrates curiosity, flexibility and openness to change

AD2 Pursues alternative solutions, including effective use of technology

AD3 Acknowledges when change is needed and takes proper action

SELF-AWARENESS

Clear understanding of one's qualities, characteristics, strengths and weaknesses, and how they impact one's self and others.

Example actions

SA1 Engages in self-assessment and introspection, recognizing one's own emotions

SA2 Identifies potential barriers (e.g., physical, emotional, and psychological)

SA3 Makes confident, committed, and motivated choices

SA4 Asks for support when appropriate

REFLECTIVE LEARNING

Integration and application of prior and current learning to new situations.

Example actions

RL1 Describes own best learning strategies

RL2 Builds on prior knowledge and experiences with current knowledge

RL3 Determines what learning is needed to move forward

RL4 Learns from the effects of one's actions and makes improvements

COLLABORATION

Works with others to achieve a goal.

Example actions

CO1 Initiates giving and receiving information, facilitating communications among the group

CO2 Resolves conflicts by advocating for and engaging in compromise

CO3 Engages in the development of relationships

CO4 Prioritizes group goals while recognizing individual interests

CO5 Demonstrates willingness to come to agreement with others

CO6 Uses technology effectively to foster communication and teamwork

Note: *The two-letter/number codes refer to the example actions for each competency. These codes will be used throughout the Guidebook to represent these example actions.*

How to Use This Book

The purpose of this publication is to provide tools for putting the Resiliency Competency Model into action. The book is designed to work both for faculty members who wish to integrate resiliency into their curricula and pedagogy and for trainers who will work with groups of faculty members and other education professionals toward the same goals.

Section I of this book is called "How to Get Started With Resiliency in the Classroom." Section I is designed to help instructors get started with practical ideas one can apply in the classroom today! Readers will find applied ways to introduce resiliency competencies into teaching and students' learning. In this section are stories of resiliency in action, including student stories and tips from college faculty and staff on how they approached teaching resiliency. This section also describes how instructors might share resiliency competencies with students.

Section II of this book is called "How to Use the Resiliency Competency Model to Design Curricula." Section II provides an in-depth look using the Resiliency Competency Model in professional development and instructional design. Providing a deeper look at how resiliency competencies can be integrated into the curriculum, this section introduces several tools and techniques, including the Resiliency Outcomes Matrix, Curriculum Alignment Tables, and resiliency-based Instructional Design Tables. The section moves into a step-by-step discussion of processes for integrating resiliency competencies into the curriculum and concludes with discussion about how to assess resiliency competency work.


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Section I

How to Get Started with Resiliency in the Classroom

This section is designed to help instructors get started with practical ideas one can apply in the classroom today! Faculty will find applied ways to introduce resiliency competencies into teaching and students' learning. In this section are stories of resiliency in action, including student stories and tips from college faculty on how they approached teaching resiliency.

This section also describes how faculty might share resiliency competencies with students. What are some discussions to have with students about the decision to explore resiliency in class? How could one explain why this is important and why it will help students? Instructors should explain the relevance of the competencies and concepts to students and help students be able to demonstrate and articulate the importance of these competencies in the classroom and in the workplace.

Why Students Need Resiliency and What Actions You Should Take

Being resilient is important! Resilient individuals successfully endure change and adverse situations and can help others do the same. Resiliency matters for working, learning, and living in our changing world, and it matters for communities.

The **Resiliency Competency Model** was developed to help students gain the knowledge, skills, and abilities to endure and provide services during crises and disasters, while also building personal resiliency and abilities to thrive in changing work environments and labor markets. The resiliency competencies can be taught and developed over time through a variety of experiences.

Having the ability to integrate what one knows and can do and be able to apply these knowledge and skills in many different contexts is of critical importance. This is what faculty and employers want students to be able to demonstrate. The Resiliency Competency Model was developed using a comprehensive process and extensive feedback from key stakeholders, including students, college administrators, staff and faculty, employers, national experts, and industry groups.

Having the ability to integrate what one knows and can do and be able to apply these knowledge and skills in many different contexts is of critical importance.

Critical thinking, adaptability, self-awareness, reflective learning, and collaboration are the competencies that make up the Resiliency

Competency Model. When these competencies are in place for a learner, the learner is able to integrate his or her learning and is able to apply it in different situations, including as the learner transitions from the classroom to the workplace. If learners are taught to become resilient, they will have the capability to endure challenges in their studies and in their work. The resilient worker is able to respond to issues and complexity and implement solutions quickly, efficiently, and effectively. In turn, the resilient worker serves as an indispensable team member who helps others to also respond in resilient ways. As an instructor, it is important to be purposeful and transparent to support students in thinking about, engaging with, and demonstrating these competencies. Employers demand that employees be able to function within the workplace and know how to deal with complexities and change. Demonstrating the resiliency competencies helps students become better students and better employees.

If learners are taught to become resilient, they will have the capability to endure challenges in their studies and in their work.

Getting Started with Integrating Resiliency into Teaching and Curriculum

The resiliency competencies can be integrated throughout the curriculum, into instruction, activities, and assessments. Regardless of the approach, careful consideration of the resiliency competencies, how they fit into the curriculum, and how they are applied in various situations and settings is warranted.

There is no one set rule for how to integrate the resiliency competencies into teaching and curriculum, but the five elements and toolbox activities highlighted in this section will help you get started with teaching resiliency.

Five elements of teaching resiliency

1. Be purposeful about integrating resiliency competencies into your curriculum. To do this, think about how the teaching topic applies beyond the immediate classroom. Key questions include:
   - What are the knowledge and skills you are teaching?
   - What is the context of what you are teaching?
   - How will it be applied?

- Which activities that already exist align to the example actions of each competency, demonstrating successful indicators of student behavior within each competency?

Answers to these questions will help faculty determine what the teaching strategies should be. Consider activities in class. Each example action can be made into a beginning activity. For example, consider critical thinking, which is the purposeful use of reasoning to identify strengths and weaknesses of alternative approaches in diverse situations. One of the example actions for critical thinking is "focuses on relevant and unique features." So in a reading activity or lesson, an instructor can ask learners, "What are the key points? What are important factors about these points?" Prompt students to think beyond the text and determine how what they are reading is relevant to their studies, work, and the world.

2. Help students recognize when lessons and activities are aligned with the Resiliency Competency Model. Here is an example. When teaching a statistics course, an instructor would build the adaptability competency in the course in terms of the impact of the results. So in the classroom, when teaching students how to interpret data and what that might mean in their workplace, an instructor could also talk about how the data could impact change and

then specifically say, "This is about adaptability." Students would not naturally pick up that they are learning adaptability and that is why it is important for faculty to frame what is being taught and to be transparent about what is being taught for student learning.

3. Create resiliency as one of the intended learning outcomes. Resiliency is not just a byproduct of activities or course content. Instead, a learning outcome might be "Students engage resiliency competencies in their approach to course materials, activities, and assessment." This intentionality fosters transparency and focus in teaching and in students' learning.

4. Ensure transparency and discussion of resiliency. It is important to discuss with students why you are focusing on the Resiliency Competency Model. A first step is to discuss resiliency. Discussion points include:

   - What is it?
   - How can you recognize it?
   - What are the resilient behaviors?
   - Why is resiliency important?
   - What are the benefits of being a resilient person?
   - What are the practices of resiliency?
   - How can you develop it?
   - Can you be a resilient person all the time?
   - How do you approach resiliency as a practice?"

5. Focusing on helping students understand that developing resiliency is, in fact, a developmental process is important. No one is resilient 100% of the time. It is not something you get once and keep forever. Becoming resilient is a developmental process and is about a way of thinking. Faculty will need to help students understand that there are times they will be more resilient, and that there will be triggers that will make them less resilient, so they will need to be able to identify and understand these triggers. For example, an emergency medical technician (EMT) student may be resilient to all kinds of tragedy, but there may be a situation in which the patient on the stretcher reminds the student of his or her grandmother. It will be important to discuss different behaviors and reactions to situations and strategies for students to apply and integrate learnings and knowledge across different contexts. Learners develop levels of resiliency proficiency that vary depending on context and situations.

Resiliency Toolbox Activities

Resiliency Toolbox Activities are specific examples of how to begin incorporating development of resiliency competencies into the classroom. These toolbox activities reflect the five key elements of teaching resiliency.

TOOLBOX ACTIVITY 1: Develop a Resiliency Tracking Chart

Students can create a resiliency chart and use it to map when they engage resiliency competencies in course activities or on their own. Take time to reflect on these charts. Have students reflect on and discuss how they engaged resiliency competencies. How did they do? How might they either repeat or alter their approach next time? How did they engage the resiliency competencies in different situations and contexts? When students start to mark where they are demonstrating critical thinking, or self-awareness, or collaboration, these competencies become part of learners' awareness in a much more purposeful way.

How this activity teaches resiliency: *This activity reflects ensuring transparency and discussion of resiliency in the classroom and understanding building resilience is a developmental process.*

TOOLBOX ACTIVITY 2: Student-Generated Rubrics

Students can also use a resiliency tracking chart as a formative assessment. Students will be able to identify when they are engaging in resilient behaviors. The instructor will be able to see whether the student is identifying the competency, what behaviors students are identifying as resiliency competencies, and what changes in the course would help them better understand resiliency competencies. The chart can be used throughout the semester so it becomes a progressive formative assessment that is a touchpoint all along. As instructors think about learners' activities, they also need to think about the assessments they will use and make sure that various parts of the assessments will pick up whether a student is using the resiliency competencies.

Not only does this activity build transparency, but it also starts to help students develop indicators

for when they observe certain resiliency behaviors or they themselves engage in them. It could be an ongoing activity in which they start the semester building a rubric, revise the rubric periodically during the semester, and have a tool that they can take with them at the end of the semester. At the same time, the rubric could be used in the assessment process. Having the students help generate the rubric gives them the strategy, but it also gives them the internal calibration of how they can think about their own work and how they can start to understand how to get it to the next level. This technique could be used for any topic.

How this activity teaches resiliency: *Not only does the development of student-generated rubrics reflect purposeful integration of resiliency competencies, but it also helps students recognize when lessons and activities are aligned with the Resiliency Competency Model. Here, again, ensuring transparency and discussion of resiliency is part of teaching and learning is critical.*

TOOLBOX ACTIVITY 3: Scenarios and Role Playing

Building scenarios is an important activity that can contribute to building resiliency. Learners should be able to build scenarios and should have a chance to reflect on those scenarios and discuss them with others. Questions to consider when students build and reflect on scenarios include:

- What is the situation?
- What would you do?
- What are the factors in the scenario that are important?
- What's missing here?
- What else would you want to know?

How this activity teaches resiliency: *Building and reflecting on scenarios enables students to think beyond their own experiences and prepares them for different experiences. Working on scenarios can cue prescripts for students' thinking for when they get into a situation. When they have these scenarios to pull from, they are better able to react in different situations in school and the workplace.*

Role playing how to demonstrate resiliency competencies can be useful, too, but not all students enjoy or are comfortable role playing.

TOOLBOX ACTIVITY 4: Resiliency Interviews

Have students interview people in the workplace and include specific questions about how resiliency plays a role in people's work.

Students can then document and discuss how resiliency is practiced in the workplace.

How this activity teaches resiliency: *This exercise intentionally incorporates discussion and identification of resiliency not only in student assignments, but also in employment.*

Using Resiliency in the Classroom at Northeast Resiliency Consortium Colleges

The examples that follow provide specific ideas from Northeast Resiliency Consortium Colleges for integrating resiliency competency into courses. These examples may be adopted into classes or curricula at other colleges.

This section begins with a case study from Passaic County Community College describing how the college developed and implemented a month-long, intensive program that incorporates adult basic education, traditional job search and job readiness training, and resiliency competencies for students receiving Supplemental Nutrition Assistance Program (SNAP). Early results for this program are promising and the college plans to use this program to benefit other student populations.

Next, read a case study describing how Kingsborough Community College revamped a bridge training (orientation) curriculum by incorporating activities that encompassed resiliency competencies and then modularized parts of the bridge training into freestanding workshops. After the case study, readers will find an example bridge training lesson on identifying triggers. This lesson was developed to help students learn to overcome adversity and develop resiliency within the workplace. This example also includes a story of how one of Kingsborough Community College's culinary arts students developed resilience.

Following Kingsborough Community College's example, read about how LaGuardia Community College used role play and scenarios for skills labs in prehospital care programs. At LaGuardia Community College, prehospital care programs use a curriculum called Escape Psychological Trauma with Social Support, Control, Anticipation, and Planning (eSCAPe) which structures the therapeutic contact and communication EMTs and paramedics have with patients to reduce psychological trauma. The curriculum aligns with the resiliency competency model and formed the basis of the college's job readiness microcredential for prehospital care workers.

Then, see a lesson plan that develops students' resiliency competency and introduces a major theme of the Community Health Worker course at Housatonic Community College, cultural humility. It also provides a story of how one Housatonic Community College Community Health Worker student developed resilience. At Housatonic Community College, the Community Health Worker program teaches students how to work with community members in the areas of health and wellbeing, supporting them with preventative care and ensuring there is good understanding and communication between community members and their health care providers.

Included in the Bunker Hill Community College example are three activities to develop resilience in first semester, intermediate, and advanced levels of Computer Media Technology courses. The example also includes ideas for class activities such as argument and public speaking as well as research papers. Finally, this example includes a curriculum alignment table, a tool each of the Northeast Resiliency Consortium colleges used to map resiliency across a course, the curriculum, or a program. At Bunker Hill Community College, the Computer Information Technology Department and Computer Media Technology Department worked together to integrate resiliency competency development into coursework.

This section ends with a description of the Dot Resiliency Series hosed in the Resiliency Hub. The Dot Resiliency Series, developed for the Northeast Resiliency Consortium by Smart Sparrow, is 10 adaptive, online lessons that explore elements of resiliency and a game that provides assessment for levels of resiliency.

Passaic County Community College's Case Study: SNAP-ing into Action[1]

Introduction

In 2016, the State of New Jersey experimented with serving Supplemental Nutrition Assistance Program (SNAP) recipients at community colleges in areas with the highest concentrations of SNAP recipients. The New Jersey Department of Labor partnered with seven community colleges, including Passaic County Community College, to pilot ways to educate and train individuals enrolled in SNAP.

Passaic County Community College, whose main campus is located in Paterson, the state's third largest city, saw an opportunity to pilot a program that incorporated academic skills enhancement, traditional job search and job readiness training,

1 Adapted from "Snap-ing into Action: Passaic County Community College," by Michael Powell and Robin Wanner for the NRC, licensed under CC BY 4.0.

and newly developed resiliency competencies into a short-term therapeutic approach designed to increase participants' emotional and cognitive regulation. The hope was that participants would achieve greater results, achieve long-term successes, and complete their programs by building new resiliency skills, learning triggers that lead to reactive states, and the relevant coping skills to apply.

Passaic County Community College designed the Passaic Skills Enhancement Program to ensure SNAP recipients received a valuable educational opportunity to acquire the skills and competencies necessary for employment and lifelong success. As part of the NRC, Passaic has been committed to developing and improving resiliency in its communities by preparing students and the workforce to adapt to new challenges and thrive in an ever-changing economy. The concept of resiliency and five competencies (critical thinking, adaptability, self-awareness, reflective learning, and collaboration) were linked to dialectical behavioral therapy (DBT) and incorporated with academic and job readiness elements for SNAP recipients.

Resiliency Competencies Developed

Critical thinking, adaptability, self-awareness, reflective learning, and collaboration

SNAP-ing into Action

A 20-hour per week pilot of this program was launched that included an innovative three-pronged approach designed to increase basic academic

skills, integrate resiliency and DBT, and offer a career connections element consisting of job search, resume development, and use of the state's online employment portal. An analysis of program participants found that one in four lacked a high school diploma, and half of all participants had no education beyond high school. In an effort to address these significant educational achievement gaps, Passaic employed a web-based basic academic skills program called Edmentum. Edmentum offers initial assessment and provides an academic prescription plan that maps out an individualized curriculum to increase grade levels in reading comprehension, math, and language arts.

Through the first seven cohorts, the Skills Enhancement Program achieved a 75% completion rate. Despite the challenges participants experienced, including homelessness and no transportation or employment, surveyed participants noted that the program gave them hope and inspired their completion.

DBT, an evidence-based therapeutic model foundationally connected to cognitive behavioral therapy, and resiliency were utilized in the program in a component that integrated the resiliency competencies of critical thinking, adaptability, self-awareness, reflective learning, and collaboration through lecture and skill reinforcement, coaching, and activity-based learning exercises. This approach provided students with a forum to practice, model, observe, and provide feedback to each other. The belief was that aligning DBT with the resiliency competencies would enhance participants' critical thinking skills, self-awareness, and reflective learning. These tools were crucial in enabling participants to identify and achieve short- and long-term educational and employment goals. Finally, career connections, a more traditional job readiness component, was incorporated to address the occupational training and employment needs of participants. Class activities included learning styles assessment, resume building, career inventories, interviewing skills, job searching, and goal setting. Through these activities, students gained increased levels of self-awareness regarding their academic strengths and occupational interests, as well as valuable information designed to secure future employment and academic achievement.

Preliminary Findings and Potential Implications

Passaic is optimistic about the preliminary findings associated with the Skills Enhancement Program and believes there are several implications for the future. Through the first seven cohorts, the Skills Enhancement Program achieved a 75% completion rate. Despite the challenges participants experienced, including homelessness and no transportation or employment, surveyed

participants noted that the program gave them hope and inspired their completion. Participants also commented that the quality of support services they received made them feel valued and gave them the opportunity to contribute to decisions regarding their academic and employment goals. Also, this holistic approach, including basic academic skills enhancement and occupational and resiliency training, provided an environment in which participants were continually engaged in activities that focused on individual growth and development.

Each monthly cohort gained approximately two grade levels using the Edmentum component of the program. Lengthening the program to three or four months could potentially increase such gains, enabling participants to qualify for various grant-funded programs and potentially articulate into college degree programs or certificates. The resiliency element of the pilot included both pretests and posttests, which assessed how well participants grasped and implemented the resiliency competencies. Results have shown higher average scores on the posttest, indicating a measure of internalization and application of the competencies. However, it is important to note that the sample size is small (36 participants), making it difficult to draw any concrete conclusions. Nevertheless, the initial findings are promising.

The career connections element of the program saw nearly every one of the 128 participants complete a resume, go on a mock or actual interview, and improve their employability. The State of New Jersey rolled out a Career Connections website that engaged participants in learning styles assessment,

Resiliency Element Pre-test and Post-test Scores

Competency Measure	Average Number Correct	
	Pre-test	Post-test
Reflective learning/ self-awareness	2.1	2.3
Adaptability/self-management	3.5	3.6
Critical thinking/ social awareness	3.5	3.9*
Collaboration/ relationship skills	2.6	2.8
Critical thinking/ decision making	2.1	2.5
TOTAL	**13.8**	**15.1***

*Results of a paired samples T-test showed significantly higher average scores on the post-test for the overall instrument, and for the critical thinking/social awareness subscale. $t(36) = 3.716$, $p < .001$ (two-tailed)

resume building, career inventories, interviewing skills enhancement, job search, and goal setting.

Helping individuals with robust barriers is never easy. SNAP is designed to provide a basic level of security to help those in the deepest need turn their situation around, and initial results of the Skill Enhancement Program suggest that it could help provide some of this security. The melding of resiliency competencies, basic academic skills instruction, DBT, and career connections elements provide a stable foundation for future success and employment. As an anchor institution in a high-poverty community, Passaic County Community College felt it was important to pilot this program to offer individuals an opportunity to obtain some of the foundational skills necessary for lifelong success through accelerated education and building individual resiliency. Passaic has learned a great deal through this effort and is in discussions with the New Jersey Department of Labor to explore extending the program's length to further the academic achievement elements as well as the resiliency programming.

For more information on the resiliency offerings in this course, see the syllabus and the weekly course class schedule on pages 108-109.

Kingsborough Community College's Case Study: Developing Resiliency through a Bridge Training[2]

Kingsborough Community College (KCC) is located in the southernmost part of Brooklyn, New York, and is surrounded by water on three sides. Since 2007, the Center for Economic and Workforce Development (CEWD) at KCC has collaborated with industry partners to develop programs that respond to employer needs. CEWD serves unemployed and underemployed New Yorkers and disconnected youth by providing the training and skills necessary for participants to advance their careers and/or continue toward a higher educational goal. In October 2012, Hurricane Sandy pummeled the East Coast, leaving the area surrounding Kingsborough in shambles. Waterlogged cars were strewn along sidewalks and lawns, neighborhoods were devastated, and the power was out for weeks. Although the campus reopened within a week of the storm, local businesses recovered much more slowly. Despite the impact of the storm, CEWD's employer partners recounted tales of heroic employees who prioritized their obligations to the companies that employed them and the clients they served. Others shared stories of employees immobilized by the storm, stranded by lack of transportation and unable to leave their badly damaged homes, and those who were forced to relocate because their houses were uninhabitable,

2 Text is from "Bridge Training: Kingsborough Community College" by Alissa Levine and Babette Audant for the NRC, licensed under CC BY 4.0.

Passaic County Community College Student's Story: Marialuisa

When Marialuisa immigrated to the United States 12 years ago, she was 25 years old and uncertain about her future. She began working as a maid at a local fitness facility and worked her way up to managing the facility's front desk and teaching aerobics classes for senior citizens. During that time, her father was diagnosed with diabetes, and as she watched him struggle with his health and eventually pass away, the experience made her realize she wanted to do more with her life and have a greater impact on society. That realization served as the catalyst for her enrolling in the Community Health Worker Program at Passaic County Community College, offered through the NRC.

The program's curriculum includes role playing to learn about how to adapt in multicultural environments, reflective learning that teaches students how they can best connect clients to resources, and group participation exercises that require students to collaborate to serve clients at community events. Marialuisa was also able to gain experience in the field by completing a 40-hour a week internship at the American Cancer Society.

Not long after completing the program, Marialuisa accepted a full-time job as family support worker at the Passaic County Healthy Families Program, where she works with low-income and minority families who are struggling with managing child care, financial, and health care issues.

"My classroom experiences as a student at PCCC [Passaic County Community College] is the reason why I am now employed and successful in my career," she said. Marialuisa was equipped with the skills to work as a part of a team, build relationships with families she had never met before, and adapt within different situations where cultural dynamics play a role. Even more, she felt herself become more persistent. "My experiences within the NRC program propelled me to keep believing in myself, and to also pursue my ambition of helping other people through my career." This ability was something her supervisor at the Passaic County Healthy Families Program recognized about her. "I saw the passion that she had...and that she really wanted to make a difference in people's lives. When there are challenges, she doesn't get scared--she tries to find a solution."

preventing them from returning to work. While CEWD's mandate had been to design and implement workforce training programs, as part of the NRC CEWD leaders knew that addressing resiliency, as it related to preparing for and overcoming obstacles to retain employment and advance within a career, would be critical moving forward.

Since CEWD participants are registered through the Office of Continuing Education and considered noncredit, they are ineligible to receive some of the supportive services offered at the college. As a result, CEWD has sought funding to provide in-house career development services and counseling support. Bridge Training (orientation) was introduced during early iterations of CEWD's Culinary Arts training programs to serve disconnected young adults. Bridge Training was soon expanded to serve all adult workforce programs and was composed of icebreaker activities, a college tour, introductions to staff, and an overview of the curriculum, all intended to help participants within the cohort bond and acclimate them to the college.

After Hurricane Sandy, CEWD recognized that a component of supporting participants as they enter employment and work toward job retention and career advancement goals includes providing participants with the skills to overcome challenges they encounter along the way. To help participants identify their strengths, learn to anticipate and address barriers to success, and prepare to overcome potential adversity in their personal, professional, and academic careers, CEWD incorporated relevant lessons and activities into Bridge Training. CEWD expected that this would increase the likelihood of participants successfully completing training and entering employment or enrolling in college. CEWD revamped the traditional Bridge Training, incorporating activities that encompassed resiliency competencies. Counselors

facilitating Bridge Training conducted activities such as goal setting, time management, stress management, drawing personal boundaries, conflict resolution, communication skills, and identifying triggers. They also incorporated workshops about personal and family emergency preparation and management skills. Over time, Bridge Training morphed from a four-day bridge to include ongoing, weekly professional development sessions, allowing resiliency to be incorporated throughout the course of the occupational training.

As NRC progressed, the Bridge Training curriculum continued to evolve. Since some occupational training tracks (i.e., Certified Alcohol and Substance Abuse Counselor, EMT) offered by NRC did not allow for full Bridge Training, lessons and activities developed for the bridge were conducted as freestanding workshops. The resiliency curriculum was complemented by campus wide events, including a workshop conducted by New York State Citizen Preparedness Corps. NRC also utilized Federal Emergency Management Agency online trainings and certifications, including Diversity Awareness, which helped students learn to work successfully with a culturally diverse population, providing opportunities to discuss the dissimilarity in viewpoints and ways to create commonalities between people.

As of February 2017, 499 NRC participants (66% of the total enrolled) had received resiliency training in Bridge Training or as a professional development workshop. Seventy percent of training participants enrolled in NRC have successfully completed occupational training.

"Application of Resiliency Skills in the Real World: A Pilot Study"[3] was conducted with a small sample of NRC students at KCC who had participated in at least one component of the resiliency curriculum. A third of participants found the resiliency curriculum helpful (pointing to specific lessons in conflict resolution), a third did not find it helpful (and would have preferred using that time on more practical skills, such as Blackboard school-related technology), and a third did not recall their participation in a resiliency component. Although the authors of the pilot study were unable to make broad generalizations based on the study due to multiple factors, anecdotally, counselors report that participants are more receptive to the idea of resiliency and more likely to use the terminology when the objectives of each lesson are made clear and when linking the activities to the competencies—and ultimately to real-world situations—is intentional.

3 Min-Kyung S. Park and Yong Lin Huang. (2016). Application of Resiliency Skills in the Real World: A Pilot Study, unpublished manuscript.

Lesson Plan from Kingsborough Community College's Bridge Program: Identifying Triggers

Introduction

The example Bridge Training lesson provided below is for identifying triggers—recognizing what sets you off and how you deal with that. In-class experiences made to generate self-awareness like the ones listed here (divested of new content knowledge because it's only orientation) can serve as a strong point of reference for the whole cohort later and throughout their time together.

Resiliency Competencies Developed

This module addresses each of the five competencies included in the NRC Resiliency Competency Model: critical thinking, adaptability, self-awareness, reflective learning, and collaboration. Within the lesson below you will see how different activities are meant to develop specific resiliency competencies.

Students learn to:

- Identify emotional triggers and examine responses.
- Learn to anticipate stressors and plan to respond effectively.
- Identify a healthy or toxic work environment.
- Overcome adversity and develop resiliency within the workplace.

What Students Do

This workshop asks participants to identify emotional triggers in the workplace (can be extended for use in the classroom setting) and examine their responses. Participants complete a questionnaire[4] about their levels of stress or discomfort in certain situations. Counselor facilitates discussion about results of questionnaire and helps participants anticipate stressors and identify effective responses. *(Resiliency competencies developed: Reflective learning, self-awareness)*

The discussion continues with knowing one's rights in the workplace, how to identify mental and physical stressors, and effective coping mechanisms.[5]

Finally, the counselor discusses career-threatening coworkers (personalities commonly found in the workplace). The counselor can facilitate the accompanying game or have students pair up to discuss one of the identified personalities, discuss how they would deal with that situation, and then share with to the group. *(Resiliency competencies developed: Collaboration)*

4 Do2Learn. (2010). Identify Your School Triggers. http://do2learn.com/activities/SocialSkills/Stress/StressTriggers.html.

5 Heads Up. (2014). Taking Care of Your Mental Health in the Workplace: A Guide for Employees. https://www.headsup.org.au/docs/default-source/resources/bl1247-booklet---taking-care-of-your-mental-health-in-the-workplace.pdf.

Card game: Students list what coworkers do that upsets them. Instructor distributes the behaviors on the board into six types (courtesy of author Julie Jansen and reporter Molly Triffin)[6]: the complainer, the idea stealer, the bully, the slacker, the gossiper, and the know-it-all. Instructor explains a response to each, recording on the board students' trepidations regarding the suggested approaches. Then students are divided into groups; each group is provided with an index card (three per group) describing a hypothetical coworker and a reaction. Each group has the opportunity to defend the reaction on the card—whether it's a good one or a bad one. All groups have to 1) guess what type of coworker it is and 2) vote if the reaction was a good one. Each group that names the right type or doesn't vote for a bad reaction gets two points; the group with the card gets a point for each vote in its favor. Grade earned for that one project is for reaching a particular point total; the winning team gets extra credit added to another project. *(Resiliency competencies developed: Adaptability, critical thinking)*

6 Triffin, M. (2014, March 10). How to Deal with Difficult Coworkers. DailyWorth. https://www.dailyworth.com/posts/2504-how-to-deal-with-difficult-coworkers/1.

LaGuardia Community College's Prehospital Care Programs and Psychological Trauma Prevention: Skills Lab Role Play Activity[7]

Introduction

The instructors of the Prehospital Care Programs in LaGuardia Community College Adult Continuing Education saw a problem—the psychological trauma of living through, witnessing, and treating physical trauma or illness 1) was not being addressed in training or in the field enough and 2) can be prevented. So the college's senior paramedic faculty teamed up with psychotherapists and trauma experts Shelly Rosen and Rosemary Masters from the Institute for Contemporary Psychotherapy and designed a protocol called Escape Psychological Trauma with Social Support, Control, Anticipation, and Planning (eSCAPe), which structures the therapeutic contact and communication EMTs and paramedics have with patients. The curriculum helps students learn the principles of eSCAPe to combat a patient's feelings of isolation, helplessness, confusion, fear, and anxiety with social support, choice and control, anticipation, and planning and organizing. eSCAPe aligns with the Resiliency Competency Model and has formed the basis of a job readiness microcredential for prehospital care workers.

Patient-centric care models within the health care sector created a need for workers who were trained in and could document technical and job readiness skills. For prehospital care workers, job readiness skills translate into psychological trauma prevention.

Activity: Role Play and Scenarios in Skills Labs

The curriculum uses a Psychological Trauma Prevention Training protocol; the eSCAPe protocol is taught and practiced right at the beginning, then assessed throughout the course every time students perform a new skill in a role play demonstration.

Resiliency Competencies Developed

Adaptability, critical thinking, self-awareness, and collaboration.

What Students Do

In skills labs, students role play in pairs or trios for skills practice. During role plays, students are expected to demonstrate eSCAPe protocol skills, along with safe and effective performance of prehospital emergency care, such as bleeding control and spinal immobilization.

The curriculum uses approximately five scenarios per program, and students must demonstrate multiple skills and adaptability while in a novel scenario. For example, in one scenario, one student

7 Adapted from "Psychological Trauma Prevention: LaGuardia Community College." by Francesca Fiore and Christine Alvarez for the NRC, licensed under CC BY 4.0.

is a standby ambulance crew member at a house fire; the other student is a 70-year old woman at the scene, crying, distraught, with no medical insurance or medical history, and no family. To assess these scenarios, use a scenario exit interview or open discussion; provide feedback to the student playing the patient as well as to the EMT.

Assessment

Assessment of the skills labs and scenarios includes a comprehensive, qualitative checklist mapped to the four terms of the eSCAPe protocol:

1. Social support: demonstrates genuine social support verbally in prehospital emergency care skills practice.
2. Choice and control: offers choice and control back to patient in skills practice.
3. Anticipation: calmly and correctly informs patient of what to anticipate next in skills practice.
4. Planning and organizing: appropriately assists and encourages patient to plan effectively for departure from the scene to the hospital.

Where to Lean More

For additional detail on use of the eSCAPe protocol, see the appendix. There, faculty may find the Curriculum Alignment Table for the eSCAPe protocol, along with the agenda and a description of the full-day faculty in-service training on how to teach the protocol.

Housatonic Community College's Community Health Worker Program and Example Cultural Humility Lesson Plan[8]

Introduction

Housatonic Community College is located in Bridgeport, Connecticut's largest city, and serves an 11-town area in Southwestern Connecticut. A member of Connecticut State Colleges and Universities, the college strives to provide high-quality, accessible instructional and student services in an environment of mutual respect among faculty, staff, and students.

The Community Health Worker (CHW) Program was a collaborative project of three Connecticut community colleges, including Housatonic Community College, which came together and created the Continuing Education course. This collaboration was critical to align the curriculum for the upcoming state credentialing. The CHW course teaches a student how to work with community members in areas of health and well-being. CHWs are critical to helping patients with preventive care and ensuring that there is good understanding and communication with the provider.

The CHW program is in part based on the industry-standard curriculum established by the Minnesota Community Health Worker Alliance.

8 Excerpts from "Community Health Worker: Housatonic Community College" by Alese Mulvihill and Loretta Ebron for the NRC, licensed under CC BY 4.0

Below is an example of a lesson plan that introduces a major theme in the course—cultural humility—through a balance of content knowledge, on-your-feet practice, and reflection.

Community Health Worker Lesson Plan–Cultural Humility

Resiliency Competencies Developed

Adaptability, collaboration, critical thinking, and reflective learning.

What Students Learn

Students will be able to:

- Explain the changing demographics in the United States, this region, and their local neighborhoods and how this will continue to affect the work of CHWs as the adaptive, collaborative figures in a community.
- Discuss critically with peers and clients how historical and institutional discrimination affects the health of targeted communities and influences a CHW's ability to collaborate with public health providers.
- Define the concept of cultural humility in terms of self-awareness of one's biases and listening and reacting with a critical-thinking mind-set.

- Analyze and articulate the importance of becoming reflective, lifelong learners and adaptive practitioners of cultural humility.

What Students Do

Warm-Up: Cultural Bingo

Each student finds other students in the room who know or have experienced as many of the diverse cultural experiences and bits of knowledge written in each square on their board.

The game requires on-the-spot listening and improvised oral communication—basic interview skills. Students become aware of the range of diversity and cultural knowledge in their classroom, as well as an awareness of how much they may or may not know (or have misunderstood) about the cultures in their community.

Activity 1: BARNGA

Students play BARNGA, a simulation game on cultural clashes. Players explore communication breakdowns in intercultural situations.

The class is divided into groups; each group gets cards and rules to play "Five Tricks." However, unbeknownst to anyone, each group has a slightly different rule sheet for the same game (e.g., aces high versus low). Students learn their version of the game, the rules are removed, and from then on, they aren't allowed to speak (gestures and drawing pictures are allowed). The groups are then recombined to play again; the instructor allows the inevitable confusion to set in. After one round is complete, the class then debriefs with the instructor on what ensued.

By playing the game as such, with the obstacles, students can witness firsthand their self-confidence and critical-thinking skills being overwhelmed by dissonance and frustration—something their clients will likely have experienced and something they as CHWs will very likely experience in the field at some point.

To close out, the class reviews a chapter from the textbook and discusses the values of cultural humility (e.g., openness, appreciation, acceptance, and flexibility) in terms of their BARNGA experience and what it will mean to be resilient on the job (adaptable, collaborative, critically thinking, reflective, and self-aware).

BARNGA: A Simulation Game on Cultural Clashes by Sivasailm Thiagarajn and Raja Thigarajan is available for purchase online.

BARNGA can be modified for fewer or more students.

Activity 2: Cultural Humility

Watch and discuss the 30-minute video "Cultural Humility: People, Principle and Practices" in terms of cultural humility and resiliency competencies. (The video also is on YouTube in four seven-minute pieces.)

Activity 3: Census Data

As a class, students compare the census information in the textbook with the more contemporary data in "Overview of Race and Hispanic Origin: 2010" from the census, specifically reflecting on the earlier cultural bingo experience, how the diversity in the classroom lines up with the data, how their own communities may have changed over time, as well as how CHWs have had to adapt over time.

Activity 4: Histories of Discrimination

Students read select pages the textbook and page 10 in the PDF "Public Health 101: Module II" to kick off a discussion on cultural competence in health care. If the reading is done for homework before class, the six-minute video "The Tuskegee Syphilis Experiment" https://www.youtube.com/watch?v=x-YMdaEdbcg run first thing gives a good visual overview to start class. Using the questions in the textbook, the instructor can bring the discussion around to how history might affect clients' perceptions of CHWs and CHW services and how a CHW might adapt to an untrusting, resistant client.

Activity 5: Cultural Competencies

Watch the five-minute video "Luciana's Story" about a CHW program graduate reflecting on the importance of cultural awareness. Discuss the various ways that she defines herself and her culture:

- How does she define her own gender identity?
- How does her definition compare with how others perceive her?
- As a class, students review a chapter in the textbook and discuss what racial stereotypes,

Housatonic Community College Student's Story: Breno

Breno's passion for computers was evident as early as elementary school. When the time came to pursue his career, he enrolled in Computer Information Systems as part of the FORWARD Northeast Resiliency Consortium program at Housatonic Community College. When Breno was completing coursework for a Java programming class, one of the final requirements for the associate's degree, his professor saw how invested he was in excelling academically and finding a job when he graduated. Breno's professor helped him secure an internship at a local bank, where he worked on-site with the software engineering team. Breno's ability to adapt to new situations and collaborate with others to solve problems helped him secure a full-time position at the bank as a junior software engineer within two months. "My classroom experiences as a student in the FORWARD program, along with the support of a professor who truly believed in me, has helped me to find a job that I love," he said. After his first year in his full-time position, Esteban received an exceptional annual review and was promoted to be a mid-level software engineer. "It truly does not feel like work to me. It feels like a hobby, a true passion," he said. Breno completed his associate's degree at Housatonic and is now working toward his bachelor's degree at the University of Bridgeport, while continuing to work at the bank.

gender stereotypes, and assumptions they have faced:

- Have you ever had someone mistakenly assume one of your cultural identities?
- How did this make you feel?
- How did you react?

Students, as members of the classroom community, are immersed in a large-scale, collaborative interview of their peers on the topic, reflecting and responding improvisationally to both common experiences and to their own and diverse ones. The self-awareness it takes to be vulnerable and honest in the moment is honed by the inherent collaborative nature of the discussion.

Activity 6: Cultural Pie

Students list five to 10 personal identifications to any of the following major groups: gender,

sexual identity, religious affiliation, race, ethnicity, occupation, etc. Then they draw a pie chart, or create one online with Meta-Chart. The pie chart should visually represent how much emphasis they place on their cultural identities. Students can also create this pie chart for homework to discuss the following class period.

Have students share a stereotype they have heard said about one of their identities that fails to describe them accurately. Ask them to complete the following sentence by filling in the blanks: "I am___ , but I am not___ ." For example, "I am a Christian, but I am not conservative."

Students must reflect on their own public identity first to contribute and then experience the application of that self-awareness to the group at large, gauging responses; students continue to train one another collaboratively in their own cultural biases and feelings about their identity in that context, as well as what cultural humility means to CHW work.

Activity 7: Cultural Awareness

To continue to build cultural self-awareness, students will take a self-assessment, plus select pages from the PDF "Public Health 101: Module II" to discuss their knowledge of cultural influences. As a class, they answer the eight questions in the textbook which tie cultural awareness into working adaptively and effectively as a CHW.

Closing

Instructor returns to the quote "Cultivating a high degree of self-awareness is the first major step in becoming a culturally effective CHW" and have students include on their usual end-of-class index cards answers to the following:

- Can you identify opportunities and areas for further learning?
- Are there communities that you are less comfortable working with and need to learn more about?

Assessment

Students will be assessed based on their interactions with others throughout the lesson's activities, discussions, and reflections on self-awareness. The instructional design table tool can be used to write more specific lines for rubrics and observation feedback sheets for more transparently evaluating resiliency competency development as well.

Where to Learn More

The Curriculum Alignment Table for this course (page 99) describes how the 120-hour course content and activities (plus internship), which ask students to look inward to their own biases and outward to one another's response in kind, can develop resiliency competencies.

How Bunker Hill Community College Develops Resiliency in Community Information Technology and Computer Media Technology Courses

Introduction

At Bunker Hill Community College in Boston, Massachusetts, the Computer Information Technology Department and Computer Media Technology Department developed cross-departmental efforts to integrate obstacles, and thus resiliency development, throughout their coursework. This approach—building roadblocks and snares for students to fall into, discover, and then work through alone or in groups—works in any discipline. Thus, students get the same kind of workplace training in multiple courses, allowing instructors to track a student's development over semesters rather than just months, as well as affirming the necessity of being resilient to work with humans and technology—as both are quite unpredictable.

The college frequently meets with decision makers from industry to understand the skills needed for employment in the region. Employers describe the need for students to have strong soft skills. These soft skills align specifically with the resiliency competencies: critical thinking, adaptability, self-awareness, reflective learning, and collaboration. Bunker Hill Community College wants students to be prepared to address the needs of employers, and so it develops students' resiliency so students can use these competencies in college and in the workforce.

One key way the college is infusing resiliency into curricula is by modeling workplace scenarios and teaching skills needed to navigate many environments by having students evaluate gaps and find information necessary for successful completion of projects.

The college's areas of practice are computer-related—grouped as Computer Media Technology Courses (Web Design, Game Design) and Computer Information Technology Courses (Big Data, Mobile App Development). Ideas presented in the lessons and tools Bunker Hill provides over the following pages can be implemented in any discipline.

Resiliency Activities in Computer Information Technology Courses

Projects with insufficient information and roadblocks built in are taught at all levels—from a first-year Learning Community Seminar to projects completed in the last semester before graduation. At each level, the process works a little differently. Below are examples from the Computer Information Technology course, categorized as first semester, intermediate, or advanced. (The resiliency competencies developed and assessed in each example lesson are listed with the lesson description.)

Activity from a first semester course, Introduction to Computer Science and Object-Oriented Programming (a Learning Community Seminar)

Resiliency competencies developed

Critical thinking, adaptability, self-awareness, reflective learning.

What Students Learn

Complete a series of tasks despite insufficient information (and begin to discuss the concept of sorting methods in computer science).

What Students Do

1. Silently line up around the room in order of height. This task is easy and involves a lot of hand gestures while students "evaluate" each other's position. Discuss the process.
2. Silently line up around the room by shades of color of their clothes in "rainbow" fashion—red to violet, then black, gray, and white. This task is slightly more challenging, and errors center around perceived color and shades. Again, discuss the process, emphasizing the variations in interpretation.
3. Silently, and without hand gestures, line up by birth month. Usually, students born in January, June, and December head to the appropriate positions, then students self-sort between them. Again, discuss the process, emphasizing guessing on the basis of known information. Silently, and without hand gestures, line up by birth date. Again, students with birth dates of the 1st, 15th, and 30th or 31st will sort themselves, but filling the gaps appropriately is much more difficult. Because there is less information, this part of the exercise can feel very uncomfortable for students not at the ends. In discussion, request that students reflect on how they felt sorting themselves. Students frequently worry that they are wrong and feel embarrassed for being wrong. Were they willing to take a risk, or did they want to hold back? What were the consequences of being wrong here (embarrassment, feeling others won't like them)? Note: Frequently, this is the most difficult sort because students feel they should somehow know exactly where they should be in the line and are embarrassed when they are switched.

4. Silently, and without hand gestures, line up by length of time to commute to school. Again, discuss. Why was this one harder to perform? What assumptions did students have to draw on? Was this one harder or easier to risk being wrong than for the previous task?

Activity from an Intermediate Course: Introduction to Big Data

Resiliency Competencies Developed

Adaptability, reflective learning, critical thinking.

What Students Learn

Create, format, and display time series data.

What Students Do

The student must create a time series plot of three countries for time versus revenue in the software RStudio from the data provided.

The assignment has several steps, which all have roadblocks that must be overcome before going on.

Students are not directly given the answers to the roadblocks. They must research and attempt the solutions on their own.

Students are given a large dataset, but must:

- subset the dataset,
- extract relevant columns,
- change data type,
- create a log scale to show trends, and
- transform the data format from data wide to data long.

Activity from an Advanced Course: Working in Groups

Resiliency competencies developed

Critical thinking, adaptability, self-awareness, reflective learning, collaboration.

What Students Learn

Complete semester-long group project, determine individual strengths, collaborate in groups to accomplish required group work such as building a resource-based simulation or game and a graphic interface using Java FX.

What Students Do

Students are told they are going to be doing a semester-long group project and need to form groups of five. Before group formation, discuss the hallmarks of a good group and the work done at Google on groups. If available, use the StrengthsQuest online assessment to help students determine their individual strengths before forming groups, and ideally there has been enough practice in self-awareness for students to effectively communicate with their peers what makes them a good team member and what might be an issue.

Once groups are formed, the bones of the project are outlined: project goal (e.g., build a resource-based simulation or game) and some of the deliverables. Deliverables outlined at the beginning are predominantly ones that students already have knowledge of how to create (e.g., a graphic interface using JavaFX).

As the semester progresses, new skills are attained. For each major new skill, an aspect is added to the project that utilizes that skill: When databases are introduced, the students must add the ability to store and retrieve information from a database into their project; when networking is introduced, the students must add the ability to access their information from over a network; when testing and documentation tools are introduced, they must add them to their projects.

Assessment

The project has a deliverable at least every three weeks during the semester, either as a group or as an individual, as well as reflective check-ins for students to evaluate the performance of each

member of their team as well as themselves. Performance is discussed with the students on an anonymous and individual basis.

Bunker Hill Community College's Ideas for Extending the Resiliency Competencies into Other Activities

These activities to develop resiliency competency may be extended across multiple disciplines. It is important to consider how to ensure transparency and purposeful discussion of resiliency as part of these activities.

Research Papers

Resiliency competencies developed

Critical thinking, adaptability, reflective learning, collaboration.

What Students Do

- A week or two into the paper, change the assignment to require a formal presentation (PowerPoint, Prezi, etc.) in place of the paper or to complement it.
- Allowing for enough time, require the addition of a well-researched and well-argued counterargument to the initial thesis.
- Require research that is more difficult to attain than an online source (e.g., finding printed material from the library or doing an interview).
- Require a peer to write a blurb for the paper or report (like on the back of a dust jacket of a book) that the writer has to hand in with their paper on the original due date.

Argument and Public Speaking

Resiliency competencies developed

Critical thinking, adaptability, reflective learning, collaboration, self-awareness.

What Students Do

- Assign a controversial current event, and have students pick the side of the argument that they believe and find evidence to support it. Then have students switch argument sides, re-research a new point of view, and debate this second point of view in class. Write a reflection on the process.
- Break the classroom into four groups; give each group a position on a broad topic on which to build a short presentation in about a half hour—nothing too grand, but rich enough in evidence and somewhat creative. Each group must pick a presenter. At the 30-minute mark, rotate presenters to a new group. Give each group three minutes to teach the new presenter the group's position and the evidence. Reflect on how the last-minute change affected the outcome and what students felt they had to do to complete the task.

Adaptive Lessons to Develop Resiliency Competencies: The Dot Resiliency Series

Introduction

Using the Resiliency Competency Model as the starting point, the NRC's education technology partner Smart Sparrow designed three bundles of adaptive online lessons, the Dot Resiliency Series, and two courseware collections, Student Success and Health Services. The Health Services collection is Lesson Zero for LaGuardia Community College's Psychological Trauma Prevention (see case study, page 30). The Dot Resiliency Series and student success lessons can be integrated into traditional, hybrid, or entirely online classroom curricula for any subject, as well as supplemental one-on-one support services as work to be done between sessions.

Resiliency Competencies Developed

Critical thinking, adaptability, self-awareness, reflective learning, and collaboration

What Students Do and Learn

The Dot Resiliency Series is 10 lessons that explore elements of resiliency and a game that provides assessment for levels of resiliency. The series is presented in an online learn space that encourages open exploration of materials. The lack of specific sequencing provides a high level of flexibility, allowing instructors to pick and choose which lessons should be assigned to students. There is an opportunity for students to work through all game and lesson experiences, completing the entire series, or to focus on just one or two target areas.

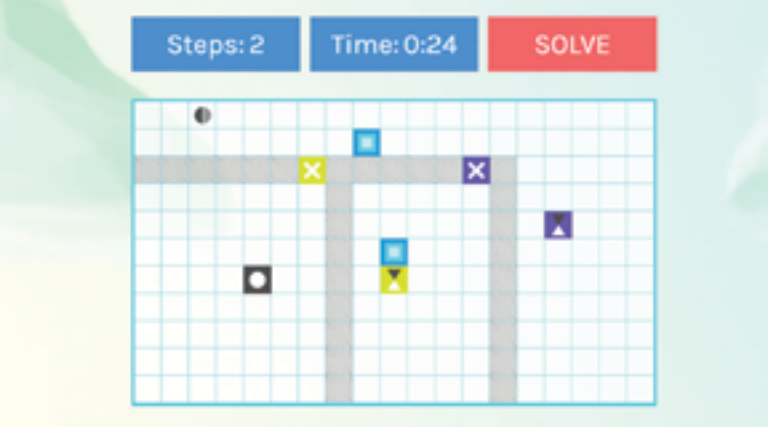
Each lesson centers around conversations with an artificial intelligence character named Dot as it attempts to understand human resiliency. By grounding students' learning experiences in this conversation, the material pushes students to consider how resiliency already plays a part in their lives and asks them to make sense of the content in their own way. All interactions are designed to foster reflective learning patterns and to encourage a greater level of student self-awareness. Along with the emphasis on conversational learning, the series makes all learning moments interactive, engaging, and approachable.

All five resiliency competencies are uncovered or explored through games, puzzles, and challenges, making students take an active role in their development of knowledge.

What Instructors Do

Online materials to guide instructors through a preparation process are available as well. These materials support instructors in considering how they are addressing resiliency in the classroom and provide a process to support the integration of resiliency into their specific content areas.

Included here is a link to the Resiliency Hub, where the lessons are hosted, as well as screenshots to show the visual elements of the lesson and the supporting literature explaining how the lessons were made and how they can be integrated. To access



each lesson and to learn more about integrating resiliency, visit: https://www.nrc-hub.org/.

For Further Information

The information in this section is intended to help faculty get started teaching resilience. For additional support on campus regarding teaching resilience, seek out your college's teaching and learning center. Also consider working with fellow faculty, as did departmental colleagues at Bunker Hill Community College. Creating a community of practice can strengthen your efforts.

Assessing the results of this work is also important, and speaking with your college's institutional research and institutional effectiveness staff can help you determine how you can measure the results of your work. (Details about assessment of resiliency competency work can be found in Section II.)

Achieving the Dream, with consortium college partners, is also happy to provide trainings on how to accomplish this work on campus. Teaching and other resources from the NRC are available on skillscommons.org, an important repository of work that is supported by the U.S. Department of Labor.

For more focus on the principles and theory behind resiliency competency education and how the competencies can be integrated into curriculum, continue on to Section II of this guidebook. That section is particularly germane for use in faculty workshops and professional development programs, train the trainer programs, instructional and curricular designs, and case making.

Section II

How to Use the Resiliency Competency Model to Design Curricula

About This Section

As a complement to Section I of this book, this section takes an in-depth look at the principles and theory behind resiliency competency education. This section outlines the Resiliency Competency Model and the five core resiliency competencies. Then, taking a deeper look at how resiliency competencies can be integrated into the curriculum, this section provides an in-depth look at several tools and techniques, including the Resiliency Outcomes Matrix, Curriculum Alignment Tables, and resiliency-based Instructional Design Tables. The section moves into a step-by-step discussion of processes for integrating resiliency competencies into the curriculum and concludes with discussion about how to assess resiliency competency work.

Section II is designed to support several activities:

- Delving deeply into the principles behind developing resiliency and tools to help integrate resiliency competencies into curriculum.
- *Faculty workshops and other professional development programs.* Combine the information in Section I and II of this book as a workbook that can help introduce faculty members to concepts of resiliency competency and principles and tips for introducing it into courses and curriculum.
- *Train the trainer programs.* Combined, Section I and II of this book provide a conceptual framework for trainers to learn principles and classroom applications of resiliency competency that they can then teach to others.
- *Instructional and curricular design.* The conceptual framework in Section II, combined with insights in Section I about applying the framework in courses and curriculum, can provide and invaluable foundation for pedagogical development and curricular design.
- *Background for higher education administrators.* Combine the information in Section I and II of this book to gain an overview of the principles and application of resiliency competency education.

Resiliency Competency Model

To determine and define what constitutes resiliency, the Northeast Resiliency Consortium (NRC) colleges, working in concert with Achieving the Dream, created a public process for arriving at the core competencies of resiliency. After engaging a prominent industrial organizational psychologist with a proven track record in competency development and a master facilitator with deep expertise in resilience training, the NRC set out to determine what competencies define resiliency and the example actions that illustrate mastery of these competencies.

> The idea behind this work is that if you can teach individuals to become resilient, they will have the capability to endure challenges in their studies and in their work. The resilient worker is able to respond to issues and complexity and implement solutions quickly, efficiently, and effectively. In turn, the resilient individual serves as an indispensable team member who helps others to also respond in resilient ways.

Defining Resiliency

The NRC was formed around the principle that adversity can be faced in many ways and that by developing resilience, individuals, institutions, and communities may prove more successful in their core pursuits. The consortium defines resiliency as follows:

> *An individual's persistent development and application of knowledge, skills, and resources that effectively help one adapt to change and overcome adversity.*

Five Core Competencies

The consortium identified five core resiliency competencies:

- critical thinking,
- adaptability,
- self-awareness,
- reflective learning, and
- collaboration.

These five competencies were developed using multiple methods of systematically collecting and processing feedback from stakeholders, including students, faculty, staff, administration, employers, and industry groups. (Details regarding these methods and their results are available from the NRC.)

The five resiliency competencies form the core of the **Resiliency Competency Model**, which is visualized in the graphic on page 9. The Resiliency Competency Model provides a definition of each

competency and provides a set of example actions to demonstrate successful indicators of student behavior within each competency.

These five resiliency competencies are comparable to those identified as critical for the workplace by the Association of American Colleges and Universities Employer Priorities for Most Important College Learning Outcomes.[9,10] They are also fundamental to a liberal arts education. The resiliency competencies also overlap other frameworks, such as the Connecting Credentials Framework, Degree Qualifications Profile, and the Global Learning Qualifications Framework, which organize knowledge, skills and abilities to ensure that learning in higher education is college-level and connects to the workplace.

9 Association of American Colleges and Universities. (2015). Employer Priorities for Most Important College Learning Outcomes. https://www.aacu.org/leap/public-opinion-research/2015-employer-priorities

10 Association of American Colleges and Universities. Essential Learning Outcomes. https://www.aacu.org/leap/essential-learning-outcomes.

Insights from Nan L. Travers

Currently the director of the Center for Leadership in Credentialing Learning at Empire State College, Nan L. Travers is an expert on competency and credentialing. In an interview, she provided these insights about the competencies that have been brought together in the Resiliency Competency Model.

"When we think about what students know and what they can do at the end of their education, it could be distilled into their having the ability to integrate what one knows and what one can do and being able to apply that in many different contexts. If we had graduates who uniformly could always integrate all their learning and be able to apply that into different kinds of contexts, there probably wouldn't be a complaint about higher education. When we look at what employers need and when we look at those life skills that are essential for functioning as adults in a democratic society, those are the kinds of things that we need to have in place.

"When we start to think about those specific competencies that have been brought together under the umbrella of the Resiliency Competency Model, what has been identified is a set of competencies that when they're in place have a greater chance of integration in learning and a student being able to apply it in different situations. The competency model significance has to do with taking a set of very important competencies, bringing them together, and connecting them, and helping people start to think through about this targeted focus-- be being very purposeful about it,

(continued on next page)

In the Resiliency Competency Model, the five competencies work together to develop an individual's capabilities to engage and solve problems and situations. The clustering of these five competencies provides a focus on essential knowledge and skills and a way to integrate them into the curriculum. By directing attention to these competencies, individuals become aware of resiliency and how they can become more resilient in their learning and work.

Resiliency Example Actions

In the model, each competency has codes representing example actions that an individual can apply to put the resiliency competency into practice. These definitions and their corresponding action codes are combined in the graphic on page 9.

For example, the competency of self-awareness is defined as "a clear understanding of one's qualities, characteristics, strengths, and weaknesses, and how they impact one's self and others." Example actions for this competency include:

Insights from Nan L. Travers, cont'd.

and being transparent, and getting students to really think about and engage with those competencies.

"If you asked me the question, 'Are these the perfect set of competencies?' I would say, 'I don't know,' but the idea of bringing them together and having a focus on them, that's the right direction. I think the significance is in bringing a set of very important competencies together. Within higher education I think it's extremely important because it gives faculty a tool to start to unite these competencies with a purposeful focus and getting students to really engage with them.

"I've seen a couple things happening in the world of competencies. One is deconstructing a course and reconstructing it into competency language. I've also seen where there are some sets of competencies so instead of by course it might be by a program or by an institution. Every student graduating will have these competencies. I think what this does is it starts to talk about cross cutting competencies so it isn't about a discipline, it's not about a field, it's not about education, it's not just about employment. These competencies are cross-cutting everything. To think about the model's significance in a national effort around competencies raises the discussion about what are the key competencies that crosscut everything, that really become important for education to support and bring forward so that people become better employed.

"Resiliency helps students become better students and it helps them become better employees. It strengthens that route for college students."

- Engages in self-assessment and introspection, recognizing one's own emotions.
- Identifies potential barriers (e.g., physical, emotional, and psychological).
- Makes confident, committed, and motivated choices.
- Asks for support when appropriate.

The five competencies work in concert. For example, to engage in introspection, one is also engaging reflective learning. To make confident and motivated choices, one is also engaging critical thinking. The convergence and integration of these five competencies is what brings about resiliency. These interactions are represented in the Resiliency Outcomes Matrix, which is discussed in detail below (see page 52). One caveat: although the five competencies work together in concert and the list of action codes is comprehensive, it is not exhaustive. What other action choices, perhaps specific to your discipline, might also be relevant?

Building Evidence

Any individual or college embarking on teaching resiliency should decide on a few measures of success and then purposefully collect, analyze, and use data to examine what effect teaching resiliency has on student success measures, including student learning, student resiliency, and faculty practice. Indicators could include course or program completion, faculty evaluations, student feedback, and employer feedback. Consider including department chairs, deans, and institutional research and institutional effectiveness staff in planning, designing, and implementing the measurement of this work and plan for measurement over more than one term. Faculty can conduct focus groups to gather relevant feedback. Colleges should analyze and discuss the results of measurement among relevant stakeholders and use the analysis of results to inform action that will improve the development of resiliency competencies.

Of all NRC student participants across the seven colleges, 41% took at least one resiliency enhanced program of study, course, or training. Of these 1,685 students who participated in a resiliency enhanced offering, 82%, or 1,383, of these students successfully completed their program of study or course.

See the end of this section on page 72 for more about assessing student learning.

Integrating Resiliency Competencies into the Curriculum

The resiliency competencies can be integrated throughout the curriculum, into instruction, activities, and assessments. Regardless of the approach, careful consideration of the resiliency competencies, how they fit into the curriculum, and how they are applied in various situations and settings is warranted.

Several tools are designed to help in that process:

- Resiliency Outcomes Matrix,
- Curriculum Alignment Table, and
- Instructional Design Table.

A Closer Look at Curriculum

Start by thinking about curriculum in the context of resiliency competencies.

Curriculum alignment, learning engagement, learning assessments, and academic effectiveness are at the top of everyone's list in evaluating effective education. From quality assurance processes (e.g., accreditation, program review) to program development and innovations, the common goal is to know what is planned for individuals to learn and the expected outcomes.

Inherent within that goal are assurances of quality, integrity, and equity, which are defined by purpose, context, and application. Curriculum captures the total individual's experience within a framework that in turn sits within a field of knowledge. It is a passageway to take the learner from one point to the next; it provides alignment between learning that occurs and its intent; and it has sequence structured through the learning environment, learning objectives, expected outcomes, instructional activities, learning experiences, feedback, and assessments.

The components of curriculum help define the purpose, context, and application. They are a roadmap, and help teachers and learners to stay on course. They integrate the progression of knowledge, skills, and abilities with experiences and application. They give the basis for assessment, feedback, and reflection and the direction for next levels of learning.

Learning Objectives and Outcomes

Learning objectives describe what is planned for an individual to learn during the program, course, unit, or lesson. They can be broad or topic-specific statements providing the goals and direction for instruction, activities, and experiences. Learning outcomes are specific to what an individual will know or is able to do as a result of the instructional activities and learning experiences. Learning outcomes are action statements (using verbs) and are targeted to specific learning goals and topics. They are measurable; data can be collected to

demonstrate the knowledge, skills, and abilities that students will have acquired. There should be a clear path from the learning objectives through the instructional activities, learning experiences, and assessments to the expected learning outcomes.

Activity and Assignment Types

Activities and assignments are extremely important to provide learners with opportunities to experience and experiment with the concepts. This is the time a person can gain insight as to how the concepts apply to the work environment and other studies. Integrating the resiliency competencies into activities and assignments is important to help learners further develop the knowledge, skills, and abilities that develop resiliency.

Common types of activities and assignments that support the integration of the resiliency competencies into the curriculum are:

- **Demonstrations and simulations** provide hands-on experiences, including approaches such as role play, problem-based projects, experiments, etc. These types of activities and assignments can be done in groups or by learners individually.
- **Reflective work** provides opportunities to examine concepts more fully and determine what is already known and what still is needed, and to examine different perspectives. Reflective work is also a time when learners can explore what-if situations or imagine different ways of approaching a situation. These types of activities and assignments can be done in groups or by individuals.
- **Group work** provides opportunities to collaborate and work in teams. It supports learning about other perspectives and building on each other's ideas.

Each of these approaches can be used to develop the resiliency competencies. As individuals engage with learning experiences, solving problems, exploring solutions, and working with each other, they are also using critical thinking, adaptability, self-awareness, reflective learning, and collaboration.

The following pages describe several tools that can help guide the development and sequencing into a coherent curriculum, including the Resiliency Outcomes Matrix, Curriculum Alignment Table, and Instructional Design Table.

The Resiliency Outcomes Matrix

The Resiliency Outcomes Matrix shows how the five resiliency competencies overlap and support each other. The resiliency competencies are not performed in isolation; competencies always overlap. Recognizing theseoverlaps is important in developing course content, activities and assignments, and assessments.

The Resiliency Outcomes Matrix also maps the resiliency competencies against the corresponding example actions for each competency. The matrix emphasizes the interrelationships across the competencies and helps to identify which competencies are being reinforced through the curriculum. The resiliency outcomes are the results of individuals' acquisition of the resiliency competencies and can be observed and measured through performance.

The chart provides the resiliency competencies along with the example actions, as numbered items. These numbers can be used as shortcuts to the full statements.

Resiliency Outcomes Matrix

EXAMPLE ACTIONS	RESILIENCY COMPETENCIES: Critical Thinking (CT)	Adaptability (AD)	Self-Awareness (SA)	Reflective Learning (RL)	Collaboration (CO)
Critical Thinking (CT)	CT1, CT2, CT3, CT4, CT5	CT2, CT3,CT4	CT1, CT2	CT1, CT2, CT4	CT2, CT3, CT4
Adaptability (AD)	AD2, AD3	AD1, AD2, AD3	AD1, AD3	AD1, AD2	AD2, AD3
Self-Awareness (SA)	SA2, SA3, SA4	SA1, SA2, SA4	SA1, SA2, SA3, SA4	SA1, SA2, SA4	SA1, SA4
Reflective Learning (RL)	RL2, RL3, RL4	RL3, RL4	RL1, RL3, RL4	RL1, RL2, RL3, RL4	RL2, RL3, RL4
Collaboration (CO)	CO2, CO4	CO1, CO2, CO5	CO1, CO2, CO5	CO1, CO3, CO4	CO1, CO2, CO3, CO4, CO5, CO6

Using the Resiliency Outcomes Matrix, you can design:

- course content that emphasizes different competencies,
- activities that support more than one competency at a time and strengthen the relationship across the competencies, and
- assessment strategies that address and measure the expected resiliency outcomes relationship across the competencies

In the design of instruction or activities, the Resiliency Outcomes Matrix can help in thinking through the ways in which the resiliency competencies are integrated.

For example, reflective learning may be one of the resiliency competencies to be integrated if the topic is responding to an ethical dilemma. The Resiliency Outcomes Matrix (page 52) would provide a way to think through and integrate all of the competencies and example actions (indicated that would contribute to building resilience. In this case, the response would require an individual to:

- ***focus on relevant and unique factors (CT1)*** of the dilemma, ***analyze the situation for opportunities and challenges (CT2)***, and ***find alternative options and strategies using the analysis and evaluation (CT4)*** to solve the dilemma.
- be ***curious, flexible and open to change (AD1)*** while ***pursuing alternative solutions (AD2)*** and to ***build on prior knowledge and experiences with the current knowledge (RL2)*** of the situation.
- ***engage in a self-assessment*** and ***recognize one's own emotions (SA1)*** and ***best learning strategies (RL1)*** to assess the situation, and remain calm while in charge of the situation.
- ***identify potential barriers (SA2)*** and ***determine what is needed to know to move forward (RL3)***.
- ***initiate giving and receiving of information (CO1)*** and ***facilitate communications across those involved (CO1)***.
- ***develop relationships (CO3)*** to build trust and gain the needed information and to ***prioritize the group's goals while recognizing individual interests (CO4)***.
- ***ask for support (SA4)*** as needed to resolve the situation.

Once these resiliency competencies are placed in relationship with each other, developing the course objectives, learning outcomes, instruction, and student activities become easier and aligned. The assessment of the learning is also easier to align to the learning outcomes.

Applying the Resiliency Outcomes Matrix: Critical Thinking

As one example of how to apply the Resiliency Outcomes Matrix, the example reflected in the chart below suggests ways to design resiliency competencies around critical thinking and shows specific interrelated example action codes that demonstrate how while one is engaging in critical thinking, other resiliency competencies are also being engaged.

Resiliency Outcomes Matrix Example - Critical Thinking

CRITICAL THINKING	ADAPTABILITY	SELF-AWARENESS	REFLECTIVE LEARNING	COLLABORATION
Example actions	**Example actions**	**Example actions**	**Example actions**	**Example actions**
CT1 Focuses on relevant and unique factors	**AD2** Pursues alternative solutions, including effective use of technology	**SA2** Identifies potential barriers (e.g., physical, emotional, and psychological)	**RL2** Builds on prior knowledge and experiences with current knowledge	**CO2** Resolves conflicts by advocating for and engaging in compromise
CT2 Analyzes situations for opportunities and challenges	**AD3** Acknowledges when change is needed and takes proper action	**SA3** Makes confident, committed, and motivated choices	**RL3** Determines what learning is needed to move forward	**CO4** Prioritizes group goals while recognizing individual interests
CT3 Identifies current resources and evaluates the gaps in needed resources		**SA4** Asks for support when appropriate	**RL4** Learns from the effects of one's actions and makes improvements	
CT4 Proposes alternative options and strategies using analysis and evaluation				
CT5 Makes informed decisions				

While engaging in critical thinking, other resiliency competencies are also being engaged. The resiliency outcomes matrix for critical thinking shows how while engaging in critical thinking, other competencies are also engaged.

When designing curriculum for critical thinking, think also how the content and instruction, activities and assignments, and assessments can support the other competencies' example actions. In other words, while designing content that uses the example actions for critical thinking, also integrate those that are mapped from the other competencies.

Content and instruction: When providing lessons on how to focus on relevant and unique factors (CT1) and analyze situations for opportunities and challenges (CT2), also include how to build on prior knowledge and experiences with current knowledge (RL2) and determine what learning is needed to move forward (RL3).

A lesson could be designed around how making informed decisions (CT5) is engaged when prioritizing group goals while recognizing individual interests (CO2) and resolving conflicts by advocating for and engaging in compromise (CO4), because one cannot do either of these actions without gathering critical factors that support making an informed decision. In the same way, learning from the effects of one's actions and making improvements (RL4) or asking for support when appropriate (SA4) also engages critical thinking.

Activities and assignments: When instructors give assignments that require students to identify current resources and evaluate the gaps in needed resources (CT3), also have them identify potential barriers (e.g., physical, emotional, and psychological) (SA2) and identify when change is needed and plan how to take proper action (AD3).

When having them propose alternative options and strategies using analysis and evaluation (CT4) and make informed decisions (CT5), have them consider how to pursue alternative solutions, including effective use of technology (AD2) and make confident, committed, and motivated choices (SA3) as they propose their solution.

Assessments: Determining the extent to which individuals have acquired the critical thinking competency also reveals information about how the other competencies have been acquired (and vice versa). The Resiliency Outcomes Matrix can be used to identify which example actions are being addressed across the Resiliency Competency Model and measured with the different assessments. On the Instructional Design Table, described in depth later in this section (see page 60), there is a place to capture which assessment components are measuring the competencies to ensure an alignment across the various elements of the curriculum.

Curriculum Alignment Table

The **Curriculum Alignment Table** helps instructors develop new or adapt existing curriculum to integrate the Resiliency Competency Model into coursework. With the Curriculum Alignment Table, instructors can develop a schema of their program or course elements: learning objectives, course content, activities, and assessments.

Through the mapping of these four elements in columns, instructors can find points to integrate the five resiliency competencies into the instruction, activities, and assessments. The exercise of the mapping in itself can provide insight and clarity to the program or course. By aligning all the program or course elements, an instructor has a roadmap to follow for purposefully applying the Resiliency Competency Model. The process also creates a transparency with the resiliency competencies that can be shared.

Explaining the Columns on the Curriculum Alignment Table

1. **Learning or Skill Objectives:** What individuals are to (or will) learn from the instruction and activities. The learning objectives are mapped

Curriculum Alignment Table

Learning or Skill Objectives	Course Content	Activities & Assignments	Assessments
What individuals are to learn (indicate related resiliency competencies)	What the instructor provides before and after the activities and assignments (indicate related resiliency competencies)	The tasks involved to learn the objectives (indicate related resiliency competencies)	How you know that an individual has learned the objectives (indicate related resiliency competencies)
1.			
2.			
etc.			

to the resiliency competencies that will be used. These may come directly from approved course outlines or may be new, depending on if you are adapting an existing course or developing a new one.

2. **Course Content:** What the instructor provides before and after activities and assignments (and possibly assessments) and may be delivered online or in-person through lecture, presentations, textbooks, videos, or other sources. This section of the table should include enough details so that the areas of instruction are transparent to everyone. Specific resiliency competencies that will be included in the instructional portion should be indicated, as appropriate.
3. **Activities and Assignments:** Describes the activities and assignments asked of individuals to explore and reinforce the concepts being taught. Specify as much detail as needed to make expectations clear. Close alignment of the activities and assignments with the assessment strategies should be evident.
4. **Assessments:** Provides information about an individual's mastery of the concepts. This is how you know that the individual has learned the objectives or acquired the learning outcomes or competencies. There are many different strategies to obtain summative and formative assessments of an individual's knowledge, skills, and abilities.

Using the Curriculum Alignment Table

The Curriculum Alignment Table can be used for a program, a course, a single objective, or an activity. In any of these cases, each row should be a complete thought in terms of what you plan to do, how that will happen, and how you will assess the results. Here are some tips for completing the Curriculum Alignment Table:

- The resiliency competencies should be mapped across the rows, so it is clear where the resiliency competencies are being taught. It is easy to see whether learners are learning the

competencies through instruction, activities, or assignments. The related assessments should also be aligned with the resiliency competencies.

- The resiliency competencies should be integrated throughout the program or course with frequent experiences so that they are practiced and applied. The table helps to plan how the competencies are integrated.
- There should also be progression or sequencing of the resiliency competencies as the student moves through the course and program.
- Most complete the table left to right and find this approach helpful to organize the sequence of objectives and learning outcomes. Some find that developing the assessments after the objectives helps to determine the course content and activities. The key is to make sure everything is aligned and sequenced.

- If you are working on a competency-based program or course, substitute your competencies for the learning objectives.

Following are three examples of completing the Curriculum Alignment Table. Note: These examples have used a shortcut to indicate the resiliency competencies—critical thinking (CT), adaptability (AD), self-awareness (SA), reflective learning (RL), and collaboration (CO).

This example Curriculum Alignment Table was developed by Michael Harris at Bunker Hill Community College for an Introduction to Big Data Course. It is using an older version of the curriculum alignment table format but is a stellar example.

Curriculum Alignment Table - Intro to Big Data

Learning or Skill Objectives	Course Content	Activities	Assessments
Analyze and report on data in a neutral, unbiased manner Discern and report on bias in written reports, live presentations, and online media content	• Basic data-gathering principles • A general overview of what is in a good report • Discussion of the NFL's "Investigative Report Concerning Footballs Used During the AFC Championship Game on January 18, 2015," informally known as the Wells Report on the "Deflate-gate" scandal (footballs used by the beloved local team, the New England Patriots, in a playoff game were inflated to below regulation pressure); to reinforce the learning objective, the professor wears a Patriots hat while discussing the report with students	A student—who is likely to be or at least know a Patriots fan—must give an analysis of the report, its presentation by the professor, and their own biases: • What did the report do right? • What did the report do wrong? • What are its areas of bias? • Does the report take a neutral stance or try to persuade the reader to reach a biased conclusion? • Is the professor framing the argument with his own bias? • What biases do you have listening and discussing the report? **CT SA RL**	Analysis articulates clearly the degree of bias in: • the Wells Report • the professor's presentation of the report • their own biases about the issue —and the relationship between the three

CT = CRITICAL THINKING | AD = ADAPTABILITY | SA = SELF-AWARENESS | RL = REFLECTIVE LEARNING | CO = COLLABORATION

Curriculum Alignment Table Example 1 - Intro to Big Data, cont'd.

Learning or Skill Objectives	Course Content	Activities	Assessments
Create an accurate plot using multiple datasets Properly identify and carry out an unforeseen but necessary step or series of steps to create a plot Recognize their own gaps in knowledge and fill them independently	Data from the UN World Tourism Database	The student must create a time series plot of three different countries in RStudio for "time vs revenue" from the data provided The assignment has different steps, which all have roadblocks that must be overcome before going on. They include: • subsetting datasets • extracting relevant columns • changing data type • creating a log scale to show trends • transforming from 'data wide' format to 'data long.' **AD RL CT**	Time series plot is evaluated for: • completed output • the source code used to get the solution • bonus points are awarded for proper use of new functions not discussed in class
Create a function with looping that will webscrape information from a wiki and plot the information out in terms of "date vs hits"	• Webscraping • Looping • Creating functions • Building on other basic R functions	The students must synthesize all they have learned and perform the following: • overcome roadblocks (e.g., the data listed on wiki added differently to a date field) • use online resources (e.g., OpenStack) to solve problems • complete all tasks (e.g., adding a single query to a data.frame and looping it so it concatenates to a larger data.frame) **AD CT RL**	Function and plot are evaluated for: • completed output • the source code used to get the solution • bonus points are awarded for proper use of new functions not discussed in class

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Curriculum Alignment Table Example 1 - Intro to Big Data, cont'd.

Learning or Skill Objectives	Course Content	Activities	Assessments
Create a storyboard and dashboard in Tableau	• Basic functions in Tableau • How to deliver interesting data visualizations with the software • How to use data to tell a story	**Dashboard & storyboard** As a team, students: • find a database to work with • live link it with Tableau • start to formulate what questions they want the database to answer through exploratory data analysis **Peer evaluation** Student assesses each teammate's performance using an online rubric **Example projects** • correlating obesity with other factors • examining the cost per hospital for Medicare patients • heat mapping meteor strikes in the US • internet penetration vs personal freedoms across the globe **CO SA CT RL**	**Dashboard & storyboard** Each team project is evaluated by the class members for: • completed output • insight gathered through the EDA process • how the data is used to explain a narrative the students want to share through their EDA **Peer evaluation** Using an online form, each student evaluates his or her own contribution plus each teammate's contribution to: • researching and gathering information • sharing information • responding to communication • solving problems —as well as how well they: • fulfilled team duties and goals • listened to their teammate • cooperated with teammates

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Instructional Design Table

Another tool, the Instructional Design Table, expands on the Curriculum Alignment Table and offers greater detail and clarity around the learning objectives, learning outcomes, or competencies; instructional plans; activities and assignments; and assessments. The Curriculum Alignment Table provides a solid overview and outline of the program or course.

The Instructional Design Table is divided into three sections: Objectives and Outcomes, Instructional and Student Activities, and Assessments. These same sections are seen in the Curriculum Alignment Table; however, in the Instructional Design Table, each section is expanded to provide more detail on curricular plans and alignment with the resiliency competencies.

More specifically, the Instructional Design Table expands by creating an area to indicate:

- Objectives, Outcomes, and Competencies
  - Learning Objectives
  - Learning Outcomes
  - Resiliency Competency Example Actions
  - Resiliency Outcomes
- Instructional and Student Activities
  - Types of Activities
  - Products/Results/Artifacts from the Activities
- Assessments
  - Assessment Components Mapped to the Resiliency Outcomes

Instructional Design Aligned with the Resiliency Competencies

Objectives, Outcomes, Competencies

Learning Objectives	Learning Outcomes	Resiliency Competencies	Example Actions	Resiliency Outcomes
		Critical Thinking		
		Adaptability		
		Self-Awareness		
		Reflective Learning		
		Collaboration		

Instructional and Student Activities

Instructional Activities/Course Content	Students' Activities	
Products/Results/Artifacts	Individual Tasks	Group Tasks

Assessments

Assessment Strategies	Assessment Components Mapped to the Outcomes

The Instructional Design Table has three horizontal sections:

- **Objectives, outcomes, and competencies**
  - Learning objectives: *what individuals are to (or will) learn from the instruction and activities.*
  - Learning outcomes: *what individuals acquire through the instruction and activities; these are observable and measurable.*
  - Resiliency competencies: *competencies for individuals to develop and demonstrate (from the Resiliency Competency Model).*
  - Resiliency outcomes: *the resulting outcomes from developing the resiliency competencies; these are observable and measurable.*
- **Instructional and Student Activities**
  - Instructor activities and course content: *what the instructor provides before and after activities and assignments.*
  - Activities and assignments: *the different activities and assignments asked of individuals to explore and reinforce the concepts being taught. This may also indicate activity type, such as simulation, role play, group work, reflective work, etc.*
  - Products/Results/Artifacts: *the results of the activities and assignments; they can be used to assess learning outcomes.*
- **Assessments**
  - Assessment strategies: *the types of assessments used to measure learning and resiliency outcomes.*
  - Assessment components: *the contents of the assessments mapped to the learning and resiliency outcomes.*

The first section of the table focuses on mapping learning objectives with the specific resiliency competencies and identifying expected outcomes. The second section focuses on developing targeted instructional and student activities aligned to reaching those expected outcomes. The third section focuses on developing targeted assessment strategies to meet the resiliency outcomes.

Users can start filling out the table in any order. If, for example, you have yet to identify your learning

objectives, you can start elsewhere in the table and build it from there. As you complete one section, you are likely to have thoughts that will inform the way you fill out other sections.

To map learning objectives with the specific resiliency competencies, first list the learning objectives and related learning outcomes from the course. Then, looking at each of those objectives and the learning outcomes, identify which of the resiliency competencies align to your learning objectives and outcomes. (Note that given objectives may fit on multiple lines in the chart, which is fine.)

The column "example actions" is where you will articulate the specific resiliency competencies that you want your students to develop in the context of your course. Here is where to define a clear understanding of the student qualities, characteristics, strengths, and weaknesses that you hope students in your course will develop. What is observable on a student's part?

In the second section of the table, "activities," you will articulate targeted instructional and student activities. Let's say you're teaching anatomy and physiology and there's a particular lesson that you want students to do. Here is where you would delineate that lesson, again with an eye toward which of the resiliency competencies the lesson will address and how it ties to objectives for developing those competencies. Through which activities are we asking students to address those competencies? What product, result, or artifact is likely to result from those activities?

Instructional Design Table Aligned with the Resiliency Competencies: College Statistics

The Instructional Design Table provides a more in-depth plan of how the resiliency competencies are integrated at all levels: objectives, outcomes, instruction, student activities and assignments, and assessments. Here is an example instructional design table completed for a college statistics course.

Learning Objectives	Learning Outcomes	Resiliency Competency	Example Actions	Resiliency Outcomes
Ask good questions and relate these to appropriate statistical analyses Design a research strategy to examine one of the questions Work in teams to conduct research and solve a question using statistics.	Distinguish between different types of questions and identify which ones can be analyzed and solved Match questions to appropriate statistical analyses Coordinate with research team to design a research strategy Employ research strategies to solve an identified question Present findings using a research study format Work effectively in a team	**Critical Thinking**	CT1: Focuses on relevant and unique factors CT2: Analyzes situations for opportunities and challenges CT3: Identifies current resources and evaluates the gaps in needed resources CT4: Proposes alternative options and strategies using analysis and evaluation CT5: Makes informed decisions	Identifies and analyzes question elements to determine appropriateness for researching and applying statistical analyses Identifies needed resources and strategies to conduct research question Designs research study based on identified questions Decides on research question, strategy, and statistical analyses

Instructional Design Table Aligned with the Resiliency Competencies: College Statistics, cont'd.

Learning Objectives	Learning Outcomes	Resiliency Competency	Example Actions	Resiliency Outcomes
Ask good questions and relate these to appropriate statistical analyses Design a research strategy to examine one of the questions Work in teams to conduct research and solve a question using statistics.	Distinguish between different types of questions and identify which ones can be analyzed and solved Match questions to appropriate statistical analyses Coordinate with research team to design a research strategy Employ research strategies to solve an identified question Present findings using a research study format Work effectively in a team	**Adaptability**	AD1: Demonstrates curiosity, flexibility and openness to change AD2: Pursues alternative solutions, including effective use of technology AD3: Acknowledges when change is needed and takes proper action	While designing research approach, adjusts approach based on feasibility and appropriateness of question and study and makes adjustments appropriately
		Self-Awareness	SA1: Engages in self-assessment and introspection, recognizing one's own emotions SA2: Identifies potential barriers (e.g., physical, emotional, and psychological) SA3: Makes confident, committed, and motivated choices SA4: Asks for support when appropriate	Aware of and assesses one's own contributions to the team's research question and approach appropriately Contributes to the teams decision-making process and uses confident, committed and motivated choices Seeks support from team and instructor when appropriate

Instructional Design Table Aligned with the Resiliency Competencies: College Statistics, cont'd.

Learning Objectives	Learning Outcomes	Resiliency Competency	Example Actions	Resiliency Outcomes
Ask good questions and relate these to appropriate statistical analyses Design a research strategy to examine one of the questions Work in teams to conduct research and solve a question using statistics.	Distinguish between different types of questions and identify which ones can be analyzed and solved Match questions to appropriate statistical analyses Coordinate with research team to design a research strategy Employ research strategies to solve an identified question Present findings using a research study format Work effectively in a team	**Reflective Learning**	RL1: Describes own best learning strategies RL2: Builds on prior knowledge and experiences with current knowledge RL3: Determines what learning is needed to move forward RL4: Learns from the effects of one's actions and makes improvements	Uses declarative, procedural, and strategic knowledge to describe and document research process Determines gaps in knowledge to conduct research and report on findings and seeks solutions
		Collaboration	CO1: Initiates giving and receiving information, facilitating communications among the group CO2: Resolves conflicts by advocating for and engaging in compromise CO3: Engages in the development of relationships CO4: Prioritizes group goals while recognizing individual interests CO5: Demonstrates willingness to come to agreement with others CO6: Uses technology effectively to foster communication and teamwork	Participates in team work, including the giving and receiving of information and facilitating appropriate communications among the team Works as an equal team member and supports others to accomplish the research study Facilitates the development of the research study goals and seeks to accomplish these goals as a team member Uses technology effectively to foster communication and teamwork

Instructional Design Table Aligned with the Resiliency Competencies: College Statistics, cont'd.

Instructional Activities/Course Content	Students' Activities	
	Individual Tasks	**Group Tasks**
1. Research Questions a. What makes a good question b. Researchable questions c. Measurable questions 2. Relationship between research questions and statistical analyses a. How language determines which analyses are used b. Types of statistical analyses (Provided throughout the course in parallel to the research design) i. Measures of central tendency ii. Standard deviation iii. Analyses of relationships (correlations, predictive models) 3. Relationship between research questions and research design a. How language determines which research design to use b. Types of research designs c. Feasibility of research designs d. Ethical considerations 4. Relationship between research questions, research design and statistical analyses a. Determining goals of study b. Designing the study with the questions, procedures, analysis, and anticipated outcomes	Homework - take the list of questions and prioritize based on your interest. Pick the top 3 questions and make sure there is a strategy and identified analyses for each of those questions (individual) **CT RL** Pick a theme and form a group (individual & group) **CT RL CO** Assess project (individual & group) **CT RL SA CO**	1. Brainstorm research question examples (whole class) **CT RL** 2. Break into groups: a. Identify which questions are research-able. Also indicate which statistical analyses would be used (group) **CT RL AD CO** b. Pick 2-3 questions and draft a strategy for answering each question (group) **CT RL CO** 3. Homework - take the list of questions and prioritize based on your interest. Pick the top 3 questions and make sure there is a strategy and identified analyses for each of those questions (individual) **CT RL** 4. Theme research questions and revise based on themes (whole class) **CT AD RL** 5. Pick a theme and form a group (individual & group) **CT RL CO** 6. Adjust groups to equalize (whole class) **CO AD SA** 7. Design Study (group) **CT RL SA CO**

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Instructional Design Table Aligned with the Resiliency Competencies: College Statistics, cont'd.

Instructional Activities/Course Content	Students' Activities	
	Individual Tasks	**Group Tasks**
5. Description of team project and setting up of teams a. Team procedures and expectations b. Assignment of teams 6. Conducting research a. Tips on strategies b. Procedures 7. Analysis findings a. Practicing statistical analyses b. Applying statistical analyses c. Interpreting results 8. Writing a research report a. Components of a report b. Writing style for research c. Citations 9. Conducting self-assessments and group assessments a. Strategies b. Writing style and etiquette c. Appropriate documentation	Homework - take the list of questions and prioritize based on your interest. Pick the top 3 questions and make sure there is a strategy and identified analyses for each of those questions (individual) **CT RL** Pick a theme and form a group (individual & group) **CT RL CO** Assess project (individual & group) **CT RL SA CO**	8. Conduct Study (group) **CT RL CO** 9. Analyze results (group) **CT AD RL CO** 10. Write research results (group) **CT AD RL SA CO** 11. Assess project (individual & group) **CT RL SA CO**
Products/Results/Artifacts		
List of questions aligned with statistical analyses and research strategies Research study design Data collection and analyses Completed research report Assessment of process and individual contributions		

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Instructional Design Table Aligned with the Resiliency Competencies: College Statistics, cont'd.

Assessment Strategies	Assessment Components Mapped to the Resiliency Outcomes
6. As a team, develop researchable questions aligned to statistical analyses. **CT RL** 7. As a team, develop a research study based on approved question(s). **CT AD RL SA CO** 8. Conduct research study and apply statistical analyses accurately. **CT AD RL CO** 9. Complete a report that provides the research question, procedures, instrumentation (if appropriate), results and conclusion. **CT AD RL SA CO** 10. Assess one's own contribution and team effectiveness to reach project goals and complete study. **CT RL SA CO**	1. Develop research questions **CT RL** 2. Align research questions to analyses **CT RL** 3. Design feasible research study **CT AD RL SA CO** 4. Conduct research study **CT AD RL CO** 5. Apply statistical analyses to data collected **CT AD RL CO** 6. Determine results **CT AD RL CO** 7. Compose research report **CT AD RL SA CO** 8. Analyze own contributions and those of others **CT RL SA CO** 9. Provide an assessment of overall project and its results **CT RL SA CO**

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Assessing Learning and the Resiliency Competencies

Assessment is a critical aspect of the learning process. Assessments are important for both learners and instructors to know more about:

- what a learner knows and can do,
- what that learner still needs to know and which skills still need to be developed, and
- how the individual learns and types of supports that may be needed.

By providing frequent and formative assessments, a feedback loop is established that helps learners:

- affirm what is known, identify gaps, and strategize next learning goals;
- shape perceptions of themselves as learners; and
- enhance their abilities to self-assess, building upon their brains' natural capabilities.

"... students need to develop their own repertoire of assessment-related practices that they will be able to use when confronted with learning challenges throughout their working live."[11]

In other words, the process of assessment within learning environments also help students develop ways to address the complexities of work and their personal lives. Assessment becomes a lifelong and lifewide skill.

Assessment is important when helping learners develop strong resiliency competencies. When teaching the resiliency competencies, one is also teaching how to self-assess and self-regulate learning. They are reciprocal processes.

Types of Assessments

Assessments can be categorized based on:

- purpose of the assessment,
- what is being assessed,
- who is conducting the assessment,
- strategies employed during the assessment, and
- final expected outcomes from the assessment.

Each choice affects the type of information gained from the assessment and how learners can use the results. This chart is designed to help you make decisions about the assessments you use and develop an assessment plan. An explanation of each of the categories follows on the subsequent pages.

Assessment Plan	Purpose	What is Assessed?	Who is Assessing?	Strategies	Expected Outcomes

11 Boud, D., and Falchikov, N. eds. (2007). Rethinking Assessment in Higher Education: Learning for the Longer Term. Routledge: New York.

The Purposes of Assessment

The purposes of assessment can range from seeking information about an individual learner's starting point to providing frequent incremental feedback to cumulative synopses of learning.

- Pre-assessments provide important information regarding knowledge the learner already has acquired and any gaps. This is an important place to start so that the learner doesn't have to repeat prior learning and can stay focused on what he or she still has to learn.
- Interim or formative assessments aim to inform progress and identify areas that may need to be addressed. They should be integrated into the learning process.
- Summative assessments provide a picture of knowledge, skills, and abilities at a termed end point. They can provide a learner with feedback, but tend to focus on what was gained during the designated time period.

The Monroe County Intermediate School District in Michigan (www.monroeisd.us/departments/curriculum/instructionalservices/assessment/typesofassessment/) provides the following descriptions of formative, interim and summative assessments, which you may find helpful in thinking about which type of assessment you want to use.

Formative assessment occurs in the short term, as learners are in the process of making meaning of new content and of integrating it into what they already know. Feedback is immediate (or nearly so), to enable the learner to change his or her behavior and understandings right away. Formative assessment also enables the teacher to make quick adjustments and rethink instructional strategies, activities, and content on the basis of student understanding and performance. The instructor's role here is comparable to that of a coach.

Formative assessment can be as informal as observing the learner's work or as formal as a written assessment. It is the most powerful type of assessment for improving individual understanding and performance.

Examples: an interactive class discussion; a warm-up, closure, or exit slip; an on-the-spot performance; a quiz.

Interim assessment takes place occasionally throughout a longer time period. Feedback is quick, but may not be immediate. Interim assessments tend to be more formal, using tools such as projects, written assignments, and tests. The learner should be given the opportunity to redemonstrate his or her understanding once the feedback has been digested and acted upon. Interim assessments can help teachers identify gaps in understanding and instruction, and ideally teachers address these before moving on or by weaving remedies into upcoming instruction and activities.

Examples: Chapter test, extended essay, a project scored with a rubric.

Summative assessment takes place at the end of a large chunk of learning, with the results primarily for the teacher's or school's use. Results may take time to be returned, feedback to the student is usually limited, and learners usually have no opportunity to be reassessed. Thus, summative assessment tends to have the least impact on improving a learner's understanding or performance.

Results of summative assessments can be used to see where the student's performance lies compared with a set standard or a group of students. The results of these assessments can be used to identify strengths and weaknesses of curriculum and instruction, with improvements affecting the next year's or term's students.

Examples: Standardized testing (MEAP, MME, ACT, WorkKeys, Terra Nova, etc.); final exams; major cumulative projects, research projects, and performances.

What Is Being Assessed

The type of knowledge, skills, and abilities being assessed can affect the type of assessments to be used. The reverse is true, too; the type of assessment used determines what can be measured. For example, if a test asks for definitions, the response will be a demonstration of declarative knowledge; it cannot determine if a learner knows how to do something procedurally. If the instructor wants to see if a student has assimilated lessons to a certain point, the assessment needs to prompt a demonstration of integration, not steps in a procedure.

Therefore, determining what is to be assessed is important to select the assessment strategy. The following charts provide different learning domains with indicators of knowledge, skills, and abilities and evaluation strategies.

Summary of Knowledge Domains

Type of Knowledge	Indicators of Knowledge, Skills and Abilities	Evaluative Strategies
Declarative knowledge	Learner can give: • Specific facts • Terminology • Trends and sequences • Classification and categories • Principles and generalizations • Theories and structures • Learner can communicate information, arguments, and theories	• Ask for specific declarative information • Prompt for recall • Have learners use the information to explain theories and arguments
Procedural knowledge	• Learners can describe and demonstrate procedures, tasks, or skills • A learner is able to address methodology and apply pertinent information based on specific criteria	• Have learners describe a process • Ask learners about pertinent information and to apply within a given situation • Have learners present situations where there were problems to be solved within the process/ procedure • Propose situations to solve (e.g., case study) or ask the student to solve problems which apply their knowledge within situational contexts • Observe learners demonstrating a procedure or a performance-based problem or task • Ask learners to employ key techniques of the discipline

Summary of Knowledge Domains, cont'd.

Type of Knowledge	Indicators of Knowledge, Skills and Abilities	Evaluative Strategies
Strategic knowledge (Metacognitive knowledge)	• Learners can connect relevant declarative and procedural knowledge structures to create and implement a plan. • Learners can employ translation, interpretation, or extrapolation techniques to solve problems. • Learners can analyze elements, relationships, and principles • Learners can synthesize: the production of a unique plan, set of operations, or abstract relations • Learners can employ appropriate evaluation strategies by using internal evidence & external criteria • Learners applies effective research strategies	• Ask learners to describe how s/he has solved problems or situations within multiple applications and/or when multiple solutions were possible • Ask learners to describe how s/he has applied her/his learning in different situations, especially when novel and/or when solutions may not have clear outcomes • Have learners evaluate evidence, arguments, and assumptions and ways these are applied to solve problems • Have learners justify conclusions drawn from information and research
Self knowledge	• Learners can reflect upon their own abilities as a learner in various areas • Learners are able to engage self-assessments strategies (evaluations in terms of one's self beliefs, attitudes, emotions) • Learners manage their own learning to make use of the environment, information, and feedback • Learners are able to situate their own knowledge within the context and discipline • Learners are able to situate their own self within the broader context of work, society and cultures	• Have learners engage self-assessments • Utilize reflective dialogue with learners around their learning • Have learners demonstrate self-regulated learning and autonomy by tackling and solving problems, advancing her/his knowledge, and developing new skills (life-long learning) • Have learners provide originality and creativity and describe her/his thinking process • Have the student use "what if" scenarios that place the learner into situations with problems have to solve and determine plans of action

Summary of Knowledge Domains, cont'd.

Type of Knowledge	Indicators of Knowledge, Skills and Abilities	Evaluative Strategies
Tacit knowledge	• Learners can reflect upon how the different knowledge bases are linked and related • Learners can perform action-based skills within novel situations • Learners reflect and create links among the different levels of knowledge bases • Learners relate different connections, even with missing or incomplete information • Learners demonstrate more advanced levels of proficiencies within area	• Have learners provide situational problems and reflect on how they solve these types of problems • Ask learners to think aloud while solving situational problems to determine how different knowledge structures are linked and the extent that uncertainty, ambiguity, and knowledge limits are integrated into schemes • Observe learners engaged in performance-based problems or task
Integrated knowledge	• Learners can link different knowledge structures and create new interpretations, strategies and/or new knowledge during novel situations • Learners create new knowledge structures from novel situations	• Through multiple methods, have learners link different knowledge structures during unfamiliar situations or procedures • Have learners describe new knowledge and how it is applied into novel situations

Adapted from: Scheckley, B. G., & Keeton, M. (2001). Improving Employee Development: Perspectives from Research and practice. Bloomington, IN: Author House and (The) Framework for Higher Education Qualifications in England, Wales, and Northern Ireland (2008)

Who Is Conducting the Assessment

Who is conducting the assessment matters. It affects what can be expected from the assessment and the resulting outcomes. It also affects the strategies used for the assessment. The assessor can be the student, other students, the instructor, or a third party.

- **Self-assessment:** Learners assess their own work. This type of assessment provides an opportunity for learners to apply criteria to their own work and develop assessment skills. Excellent to develop critical thinking, self-awareness, and reflective learning competencies. Tends to be formative in nature.
- **Peer-assessment:** Learners assess each other's work. This type of assessment gives learners a chance to apply criteria to work other than their own. It also provides an opportunity to discuss outcomes of the assessment with other people. Excellent to develop critical thinking and collaboration competencies. Tends to be formative in nature.
- **Instructor assessment:** Instructor assesses learners' work. Provides opportunities for feedback and monitoring progress, and can develop critical thinking and adaptability competencies, especially when a chance for change is provided through feedback as part of the assessment process. Can be formative or summative in nature.
- **Third-party assessment:** Assessments are provided by a third party, not part of the learning environment, such as standardized examinations and assessments for licenses or certifications. Assessment provides a validation of learning compared with recognized standards and criteria. Can be used to compare results with other individuals or established norms. Tends to be summative in nature, and usually no feedback is available.

Assessment Strategies

The strategy chosen should fit within the assessment plan so that it measures the knowledge, skills, and abilities in the way that you have chosen to assess.

Some self-assessment strategies include:

- **Weekly letters to the instructor.** These letters are a way to have learners self-assess their learning, ask questions, and focus on special interests or confusion. Letters allow a private, one-on-one dialogue with the instructor. The key to this assessment is the feedback that the instructor gives to the learner. The letters are returned with comments, which also helps the instructor to target feedback and develop a rapport with each learner.
- **Grid for tracking competencies.** Individuals complete a grid with the learning outcomes or competencies expected for the course. On the grid, they indicate what they have learned and

how they have learned it. This approach keeps learners focused on what they are to learn and how it aligns to the lessons and activities in the course.

- **Student rubrics.** The rubric helps individuals develop criteria from which to assess their learning. Learners use the rubric to evaluate their assignments and provide themselves with a rating. This rating can be compared to an instructor rating and open a chance for discussion about how the work meets the criteria and where there is room for improvement.
- **Portfolio.** Learners compile a portfolio of their work to show progress and critical elements of their learning. When learners decide what to place in their portfolio, it helps assess what they see as their important points of learning. Portfolios are a good way to capture learning in process and document learning over time. There are many electronic portfolio options available; even a Word document can be used to put together a portfolio.
- **Individually generated tests and quizzes.** Ask learners to create tests and quizzes that either they take or are shared with others. The questions that learners develop for these instruments provide a window into what they think are the important points. As a collaborative technique, learners can also be the graders of the tests and quizzes and be required to give each other feedback on the results.

Assessment Outcomes

The outcome of the assessment process minimally gives a snapshot of what a learner knows or can do. Ideally, it provides an accurate picture of how expected knowledge, skills, and abilities have been developed. Assessments can also reinforce the learning process and prepare the individual for future learning and assessments.

However, assessments can't really provide a blueprint of what has been learned. We can't see into the brain and know how the brain has developed and connected knowledge. In fact, assessments can only measure indicators of the learning. Therefore, the assessments need well-defined outcomes based on the indicators that can be observed and measured. There needs to be a clear alignment with:

- course objectives, expected learning outcomes, and resiliency competencies;
- course content, activities, and assignments; and
- assessment purpose, what is included, approach, and strategies.

These items follow the three rows in the **Instructional Design Table**. When they all align, the assessments provide a clearer picture of the individual's learning.

- When determining the assessment outcomes, ask yourself:
- When someone gets it, what is "it"?
- When someone doesn't get it, what is "it"?

If at the end of the day, the learner is only going to walk away with one or two things, what are the most essential things you want that person to know or be able to do?

If you can answer these questions, you will have a definition of your learning outcomes. Now compare these outcomes with your learning objectives and competencies. They should align. If they don't, there needs to be an adjustment. Remember, the learning objectives (and outcomes and competencies) should be reciprocal to the assessments. In design, each should inform and help develop the other. You may need to tweak them back and forth, but at the end they should be aligned and support each other.

Future Considerations

Individuals may use this guidebook to support teaching resilience. Achieving the Dream, with consortium college partners, is also happy to provide trainings on how to accomplish this work on campus. Teaching and other resources from the NRC are available on skillscommons.org, an important repository of work that is supported by the U.S. Department of Labor.

Our hope is that this guidebook will be a tool for our Network and others to use and build upon as we continue our efforts to support students and institutions in the ongoing effort to strengthen our communities, our workforce, and our nation.

Section III

Appendices

Appendix A: Glossary

This is the glossary of terms used throughout the guidebook. Glossary terms when used in sections are bold links that jump back to the definition.

Resiliency Competency Model

resiliency competencies
the knowledge, skills, and abilities that are important to the success of students as they exit college and enter or re-enter the workforce

resiliency competency
a learnable and measurable role-relevant and behavior-based characteristic

example actions
observable behavior that can be evaluated for the measurable degree of competence

Resiliency Outcomes Matrix

a chart of possible **example actions** that can be demonstrated in an activity designed to have a learner practice a particular **resiliency competency**

Curriculum Alignment Table

activities
series of tasks the individual performs that are assessed for **course content** retention and **resiliency competencies**. Each task that makes up the activity gets marked with a two-letter **competency code** for the resiliency competency that's both apparent and assessed in the task(s) performed

assessments
the documented evaluation performed of every task listed in the **activities** column that received a **competency code**

competency codes

- adaptability **AD**
- collaboration **CO**
- critical thinking **CT**
- reflective learning **RL**
- self-awareness **SA**

course content
information delivered by the instructor

learning objectives
the intentions of the course, unit, task, or instructional interaction—more than likely lifted directly from the mandated course outline

Instructional Design Table

assessment strategy
how the instructor means to gather empirical data on progress towards the given **learning outcome**, e.g., self-assessment, quiz, rubric for a project, etc. The table can account for multiple strategies to assess for one or more **learning outcomes** manifest in one or more activities

assessment components
the criteria for **assessment** that form what an individual receives back from you as an evaluation—ideally they can see these repeated across multiple tasks

group task
the assessed task performed by two or more participants that receives one collective evaluation

individual tasks
particular tasks each learner is responsible for—including those that comprise the work of a group project—that are assessed

instructor activity
knowledge or skill instruction provided by the instructor or counselor in any medium, mode, or forum

learning objective
the intentions of the course, unit, task, or instructional interaction—more than likely lifted directly from the mandated course outline

learning outcome
what a learner is expected to be able to understand, explain, and do well after successful completion of the course, unit, task, or instructional interaction

product
the end result of a task or series of tasks—transitory or tangible

activity
a series of tasks assigned to the learner or group of learners that generates a **product**

Appendix B: Further Reading

Credentialing and Learning Qualifications Frameworks

Connecting Credentials. (2015). Connecting credentials: a beta credentials framework. Retrieved from www.connectingcredentials.org/framework/

The Beta Credentials Framework uses competencies – what the learner knows and is able to do – as common reference points to help understand and compare levels of knowledge, skills, and abilities that underlie degrees, certificates, industry certifications, licenses, apprenticeships, badges, and other credentials. Competencies are understood both in industry and academia and can be applied in multiple contexts, making them a powerful unifying way to examine credentials.

SUNY Empire State College. (2016). The Global Learning Qualifications Framework. Retrieved from https://www.esc.edu/global-learning-qualifications-framework/

The Global Learning Qualifications Framework (GLQF) was developed through extensive research conducted by a faculty team, reviewed by outside experts, and tested in a variety of settings. The development research examining over 90 different countries frameworks to determine expectations of college-level learning. The team conducted a meta-content analysis to determine similar and dissimilar structures of an undergraduate education across the various frameworks, and from this analysis compiled the GLQF.

Writing Learning Objectives and Learning Outcomes

Eberly Center for Teaching Excellence & Educational Innovation. (2015). Learning objectives. Retrieved from https://www.cmu.edu/teaching/designteach/design/learningobjectives.html

Monroe County Intermediate School District. (2017). Three types of assessment. Retrieved from https://www.monroeisd.us/departments/curriculum/instructionalservices/assessment/typesofassessment/

O'Reilly, L. (2007). Module 3: Learning objectives. Retrieved from http://www.ucdenver.edu/faculty_staff/faculty/center-for-faculty-development/Documents/Tutorials/Assessment/module3/index.htm

The University of North Carolina at Charlotte Center for Teaching and Learning. (2017). Writing objectives using Bloom's Taxonomy. Retrieved from https://teaching.uncc.edu/services-programs/teaching-guides/course-design/blooms-educational-objectives

Assessment Strategies

Lambert, K. (2012). Tools for formative assessment. Retrieved from http://www.levy.k12.fl.us/instruction/Instructional_Tools/60formativeassessment.pdf

Regier, N. (2012). Book two: 60 formative assessment strategies. Retrieved from https://portal.gssd.ca/public/mr3xg4k4nrxxq5dvfz4hq5lomq/Lists/SharedDocuments/Assessment/Formative%20Assessment%20Ideas-Natalie%20Regier.pdf

The University of Tennessee Chattanooga Walker Center for Teaching and Learning. (n.d.). Techniques for assessing course-related knowledge and skills. Retrieved from http://www.utc.edu/walker-center-teaching-learning/teaching-resources/classroom-assessment-strategies.php#recall

Resiliency

Carnegie Foundation for Advancement of Teaching. (n.d.). Productive persistence. Retrieved from https://www.carnegiefoundation.org/our-work/carnegie-math-pathways/productive-persistence/

The Carnegie Foundation for the Advancement of Teaching explored psychological attributes of students that navigate developmental math. "Productive persistence" is defined as a set of behaviors that involves the tenacity and good strategies students need to be academically successful. Research found social ties and student mindsets were closely related to pass rates.

Childress, L., Price, D., Roach, R., Sedlak, W. (2016). Supporting resilience: building resilient communities through enhanced student supports. Retrieved from: http://www.equalmeasure.org/wp-content/uploads/2016/10/NRC-Resiliency-Brief_FINAL-102516.pdf

NRC's independent evaluator Equal Measure provides evaluation and philanthropic services to social sector organizations, specializing in network collaborative initiatives that improve educational outcomes and build career pathways. DVP-PRAXIS Ltd. is a consulting firm focused on higher education and the workforce specializing in mixed-method formative and summative evaluation services to inform implementation and measure impact. They provide strategic advising services for project development and implementation, and conduct research and policy analysis.

Duckworth, A. (n.d.). *Research.* Retrieved from http://angeladuckworth.com/research/

Angela Lee Duckworth is a psychology professor at University of Pennsylvania, a 2013 MacArthur "Genius" fellow, and co-founder and scientific director of Character Lab. Her research at West Point lead to the creation of a "grit scale," measuring one's "tendency to sustain interest in and effort towards very long-term goals." A person's grit score, she found, is the best predictor of success.

Stanford University. (n.d.). Department of Psychology faculty page: Carol Dweck. Retrieved from https://profiles.stanford.edu/carol-dweck

Carol Dweck's research (listed in the last section of her CV) shows students do better if they think of intelligence as flexible rather than fixed, and that beliefs about intelligence lead students to react emotionally to failures and setbacks, thereby impacting resiliency.

Peak Learning. (2016). Recently completed research. Retrieved from http://www.peaklearning.com/aq-researchers_research_completed.php

Peak Learning founder and CEO Paul Stoltz pioneered a measurement system to assess an individual's response to adversity and programs to improve the mindset and capacity to respond constructively to challenges.

Positive Psychology Center. (n.d). Research. Retrieved from http://ppc.sas.upenn.edu/
Martin E.P. Seigleman, a psychology professor at the University of Pennsylvania and director of the Positive Psychology Center, is known as the father of the "positive psychology movement" – the study of the strengths and virtues that enable individuals and communities to thrive. His research found that the small percentage of people who don't give up because of "learned helplessness" interpret setbacks as temporary, local, and changeable.

Powell, M., Hatch, M. A., Fians, E., Shinert, A., & Richie, D. (2016). Strategies for transformative change: Creating resiliency and pathways to opportunity. Retrieved from http://occrl.illinois.edu/docs/librariesprovider4/tci/strategies-for-transformative-change/resiliency.pdf
This document on the NRC's work with resiliency is part of a series from Transformative Change Initiative (TCI) describing strategies implemented by TAACCCT consortia.

Appendix C: Resources from Case Studies in the Guidebook

Bunker Hill Community College - Curriculum Alignment Table: Mobile App Development

Learning or Skill Objectives	Course Content	Activities	Assessments
Clearly articulate what their personal strengths and weaknesses currently are and how they could affect work outcomes in terms of individual performance, as well as how they perform as a team member	• StrengthsQuest strengths concepts • Growth mindset	Students take the StrengthsQuest online assessment (strengthsquest.com) to determine their top-five strength categories. **SA RL** Students play the StrengthsQuest Scavenger Hunt to find others in the class who have strengths that are not the same as theirs. **SA RL CO** Students write a reflection piece on how their particular strengths will help or hinder them in their career. **SA RL**	Participation grade for this block of activities is based on: • completing the assignment (taking the assessment) prior to class • participating in the Scavenger Hunt • identifying how their strengths will help and hinder them going forward clearly in written piece
Use basic elements of standard mobile development languages such as Java, Swift, and C# successfully	Different programming languages and operating systems for mobile app development	Both individually and in groups, students develop apps using a blocks coding environment and Java, Swift, and C# languages **CT AD CO**	Students successfully build working apps using several coding environments

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Bunker Hill Community College - Curriculum Alignment Table: Mobile App Development, cont'd.

Learning or Skill Objectives	Course Content	Activities	Assessments
Complete an app design and implementation	Basic use of MIT App Inventor, a blocks-type development tool	Students create "their own" app based on tutorials they have followed. **CT CO** Students present their idea to the group as an "elevator pitch" and incorporate suggestions from the class & instructor into their final design. **CT AD SA CO** Students design an MVP (minimum viable product) specification and a Best Case specification. **CT AD RL** Students present their final app. **CT AD**	Participation grade based on: • how students support and teach each other what they have learned. • incorporation of suggestions from classmates • ability to defend their design Project grade based on working app that meets MVP specifications
Employ basics of looping and procedures (functions) properly	The necessity for clear, concise, and complete instructions for a computer in any programming language	Students write out the procedure to create two peanut butter & jelly sandwiches. Instructor demonstrates instructions as if she were a computer (only do what is specified). **CT AD RL** Students practice coding using the online Hour of Code LightBot project. **CT AD**	Participation grade based on: • how students support and teach each other what they have learned • incorporation of suggestions from classmates • ability to defend their procedure Students complete all three modules including difficult puzzles in the LightBot program

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Bunker Hill Community College - Curriculum Alignment Table: Mobile App Development, cont'd.

Learning or Skill Objectives	Course Content	Activities	Assessments
Employ basics of the Swift programming language properly	The basics of the Swift programming language and how it is different from Java and C#	Because OSX and iDevices are not available, students practice the basics of the Swift programming language (used for developing iOS apps) using the Make School.com tutorial. **CT AD**	Students complete tutorial and create a turn-based iOS game.

Bunker Hill Community College - Curriculum Alignment Table: IT Problem Solving

Learning or Skill Objectives	Course Content	Activities	Assessments
Create a personal e-Portfolio which includes embedded video, text modules, graphics modules, and self-reflection	• Problem-solving methodology (the STAIR acronym): **state** the problem, **tools** for the job, **algorithm** development, **implementation** of the algorithm, and **refinement** • Lightbulb problem to solve using STAIR • Play *Zahada* to discuss using resources to solve a problem • Digication e-Portfolio platform	Class does a college resource scavenger hunt to facilitate teambuilding **Project 1** Students create a Digication page that must include: • his or her name on the home page • at least 4 photos/graphics • at least 3 text modules • at least 1 embedded video • a journal entry on a lesson from the first half of Randy Pausch's *The Last Lecture* Students review each others e-Portfolios in pairs **CT SA RL**	e-Portfolio is assessed for completion of four components plus the journal entry on Pausch The journal entry on a Pausch lesson is evaluated for: • critical thought • self-awareness

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Bunker Hill Community College - Curriculum Alignment Table: IT Problem Solving, cont'd.

Learning or Skill Objectives	Course Content	Activities	Assessments
Research, identify, and recommend several hardware and software systems needed to meet provided specifications Create an Excel workbook and Word letter or memo with table and columns	• Facilitate team formation and rubric explanation • Present Excel basics • Facilitate student research and deliverable development • Provide networking resources	Class does a hardware scavenger hunt to facilitate teambuilding and hardware recognition **Project 2** In teams, students research, identify, and recommend hardware and software systems for use in a gaming lounge: • a recommendation memo in Word • a spreadsheet in Excel documenting the features of systems researched and their costs • complete the networking activities Mr. Robust provides **CT AD CO**	Rubric to assess Excel workbook, Word document, and networking activities includes: • critical thought • self-awareness **Peer evaluation** Using an online form, each student evaluates his or her own contribution plus each teammate's contribution to: • researching and gathering information • sharing information • responding to communication • solving problems —as well as how well they: • fulfilled team duties and goals • listened to and cooperated with teammates

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Bunker Hill Community College - Curriculum Alignment Table: IT Problem Solving, cont'd.

Learning or Skill Objectives	Course Content	Activities	Assessments
Demonstrate basic programming concepts by creating a program for the NAO robot to play Simon Says	• Facilitate team formation and rubric explanation • Present Excel basics • Facilitate student research and deliverable development • Provide networking resources	Students complete the Lightbot Hour of Code 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." **CT AD SA**	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

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Bunker Hill Community College - Curriculum Alignment Table: IT Problem Solving, cont'd.

Learning or Skill Objectives	Course Content	Activities	Assessments
Demonstrate the transformation of data into usable information through data analysis and Excel, use of Word, and understanding of computer concepts such as cloud computing, hardware, sustainability, energy efficiency, and computer recycling and its challenges	• Facilitate team formation and rubric explanation • Hand out Kill-O-Watt meters • Facilitate student research and deliverable development • Set up and facilitate BHCC's Device Recycling Day	**Project 4** Students, in teams: • make an Excel workbook with a chart • a Word document recommending how you might decrease energy consumption and dispose of outdated equipment • a poster or video explaining what e-waste is and announcing BHCC's Device Recycling Day **CT AD CO**	Excel workbook, Word document, and poster/video are evaluated for: • correct formula usage • correct totals for month and year estimates • correct total savings **Peer evaluation** Using an online form, each student evaluates his or her own contribution plus each teammate's contribution to: • researching and gathering information • sharing information • responding to communication • solving problems —as well as how well they: • fulfilled team duties and goals • listened to and cooperated with teammates

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Bunker Hill Community College - Curriculum Alignment Table: IT Problem Solving, cont'd.

Learning or Skill Objectives	Course Content	Activities	Assessments
Articulate clearly future career ambitions in IT and the educational plan to achieve them employing self-awareness	• Online career exploration tools • Course and career advising by instructor for education planning • College's education planning tools	**Project 5** After finding a job posting of interest in the Boston area, students must: • research the necessary education, experience, and certifications for succeeding at the position using Web sites such as Monster.com, hotjobs.com, indeed.com, etc. • research the company, its business sector, and the job forecast for that position • complete the Do What You Are survey on collegescope.com • write a journal entry about what was discovered about themselves and their career path—considering whether they have changed their mind • set up a LinkedIn account and profile • write an education plan • write a journal entry on your e-Portfolio on another lesson from the first half of Randy Pausch's *The Last Lecture* **CT AD SA RL**	The job posting report, personality report, LinkedIn profile, and education plan are evaluated for: • accuracy, completeness, how their do what you are relates to their journal entry The journal entry on a Pausch lesson is evaluated for: • critical thought • self-awareness

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Bunker Hill Community College - Curriculum Alignment Table: IT Problem Solving, cont'd.

Learning or Skill Objectives	Course Content	Activities	Assessments
Present an idea as part of a team for a mobile app in PowerPoint Create a mobile application as part of a team that is interactive using App Inventor	Instruction and guidance in: • PowerPoint and making presentations in front of a class • team formation • logging into App Inventor • walkthrough of first app • App Inventor tutorials • "Program Your Friend" exercise	**Project 6** Each team builds an app, which must include: • three objects that you place in the app • three interactive items • object motion and/or color change **CT AD SA CO**	The team PowerPoint presentation is evaluated for: • problem solving The app in App Inventor are evaluated for: • functional ability **Peer evaluation** Using an online form, each student evaluates his or her own contribution plus each teammate's contribution to: • researching and gathering information • sharing information • responding to communication • solving problems —as well as how well they: • fulfilled team duties and goals • listened to and cooperated with teammates

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Bunker Hill Community College - Curriculum Alignment Table: IT Problem Solving, cont'd.

Learning or Skill Objectives	Course Content	Activities	Assessments
Perform well-researched search engine reconnaissance Make a clear argument regarding hacktivists' actions and the ethical issues surrounding hacktivism Demonstrate hands-on, basic hacking techniques	• Research and deliverable development instruction • Various social engineering tasks • *Anonymous: We Are Legion* documentary	**Project 7** Students complete the following: • play Werewolf to enhance social engineering skills • play *Agent Surefire:* finding security vulnerabilities in an office as a detective • report on a company using info collected from legal web searches using basic reconnaissance techniques • research and report on a hacktivist individual or organization that the student supports or agrees with as well as one they do not agree with • complete missions on hackthissite.org and report on them, focusing issues of ethics and the fate of the hacker **CT AD SA RL**	Hackthissite.org missions and *Agent Surefire* game must be completed Reports on the company, the opposing hacktivists, and the hackthissite.org missions are evaluated for: • problem solving • critical thought • self-awareness

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Housatonic Community College - Curriculum Alignment Table: Community Health Worker

Learning or Skill Objectives	Course Content	Activities	Assessments
Self-identify as a student Articulate a purpose for taking the course, at a minimum		Survey on assumptions about the field and personal goals for taking the course **SA RL**	Pre-assessment provides instructor with each student's starting point for both content knowledge and self-awareness and reflective learning practice
Articulate in writing the connection between new knowledge and past learning Express the self-awareness needed in interacting and reacting in the field to others		**End-of-class reflective writing assignment** Sometimes known as an "exit ticket," at the end of each class period, students write out the following for the instructor to collect: • three things you learned • a strong opinion on something you learned • a question you didn't ask • one word that encapsulates how this class impacted you This practice is a knowledge retention and personal growth tracking device for both instructor and student. **CT SA RL**	As a collection of assignments, they are assessed for: • acknowledgment by student of the relationship between past knowledge and new knowledge • movement in their writing over the course of the course from "I" statements to statements about others' experiences

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Housatonic Community College - Curriculum Alignment Table: Community Health Worker, cont'd.

Learning or Skill Objectives	Course Content	Activities	Assessments
Identify and explain the differences between specialties in the community health work field Employ a particular note-taking strategy to retain course content Choose a specialty and agency for their internship	**Guest speaker seminars** 7 to 10 guest speakers from local organizations that will serve as internship sites give 40-minute seminars. Examples include: • AmeriCares • Homes for the Brave • SWCAA • RYASAP-Street Safe • United Way • Bridgeport Advocacy Youth Coalition • Bridgeport Hospital • Norwalk Housing Authority • The Witness Project • SNAP • Local pharmacists • Southwest Community Health **Note-taking** During guest seminars, students to take down • names of agencies • contact person at each agency • individuals who are representatives • type of services provided • population served	**Guest speaker seminars** Students take their own notes on each seminar and are responsible for learning the new content *on their own* **CT AD SA** **Internship reflective writing assignment** Students identify which organization piques their interest; this assignment is done before their internship begins so as to identify to the career development coordinator which population and/or which agency they want to be placed with and why **SA RL**	**Quiz on seminars** Internship reflective writing assignment is evaluated for: • assured language regarding what the student has experienced that would help them better aid their chosen agency's population • clear description of what they feel they are capable of, at this point in their career, to help better the lives of the clients they'd be working with • clarity in articulating the needs of the agency's clientele

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Housatonic Community College - Curriculum Alignment Table: Community Health Worker, cont'd.

Learning or Skill Objectives	Course Content	Activities	Assessments
Apply an effective LEARN motivational interview technique to a developing and unscripted circumstance	• Finding and adding to strengths versus reacting to the negative • Motivational interviewing (the LEARN acronym): **listen** with sympathy, **explain** what you observe, **acknowledge** differing response and discuss, **recommend** treatment, and **negotiate** agreement • Definitions of bias, confidentiality, and HIPPA • Connection between trust and service	**Role play** Students participate in pairs playing roles of both client and CHW, employing the LEARN technique **CT AD RL** **Mock interview** Five students are coached by instructor to respond poorly as clients by being either apathetic, defensive, or confrontational with their body language; up to student-as-CHW to identify behaviors and adapt to difficult behaviors **AD**	Observation rubric of all role-play work includes: • Eye-contact & body language • Use of open- *and* closed-ended questions • Listening skills: telling a story or talking about yourself vs letting the "client" speak • Using knowledge base in live, in-person scenario Verbal feedback is provided by peers
Reading a client's space during a home visit completely—for both strong, positive choices, as well as the easier-to-see negative or unsafe choices		**Home visit assessment** Students are provided with a picture of a small, cluttered apartment occupied by a mother and several children. Without prompting from the instructor, students analyze the picture on a provided sheet. Invariably, initial feedback is mostly negative—poor, unsafe choices the mother has made. Instructors collects first sheets and provides students with a second sheet. Students then are prompted to look for evidence of strong, positive choices being made in the home. **AD CT**	Two sheets collected from each student must form a complete picture of the home—strong choices that need support as well as poor ones that need correcting

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Housatonic Community College - Curriculum Alignment Table: Community Health Worker, cont'd.

Learning or Skill Objectives	Course Content	Activities	Assessments
Articulate the difference between cultural bias and cultural humility in service Clearly identify one's own biases Identify cultures in and thus the requisite needs of one's community	• Cultural bias vs. cultural humility vs. cultural competency • Cultural humility video • What it means to work within the "scope of practice" • Negotiating biases continues as theme throughout the course	**Cultural bias self-assessment** **SA RL** ***Sicko* packet** Short-answer test questions about the film *Sicko* regarding cultural differences and health care **CT RL** **Apology letter** Written to themselves regarding their own barriers and triggers **SA CT**	Cultural bias self-assessment is evaluated for connections between own self-bias and the examples in video Quiz (four or five questions) based on short-answer *Sicko* packet Letter must show understanding of: • what triggers are • the language around bias and humility • how similar they are and the people they know are to the people they will serve as clients
Articulate the connection between one's life experience and practicing conflict resolution as a CHW out in the community	• Behaviors and indicators of constructive and destructive conflict • Watch and discuss different conflict scenarios in video (satirical and dramatic) where conflict is present (ex. lateness)	**Conflict resolution reflective writing assignment** Students write about conflicts from their own family histories that they've witnessed or participated in **CT AD RL**	Assignment is evaluated for: • acknowledgment by student of the relationship between past knowledge and new knowledge • the ratio of "I" statements to statements about others' experiences

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Housatonic Community College - Curriculum Alignment Table: Community Health Worker, cont'd.

Learning or Skill Objectives	Course Content	Activities	Assessments
Identify how services serve their own community differently Plainly articulate the truths of the on-going obstacles to support services Ask the right questions in order to gain enough appropriate and useful information to allow a client access to the right agency's services Demonstrate empathy and understanding of a client's experience finding an agency on her or his own	• Various referral processes • Usefulness of 211 info-line • Challenges of accessibility to agencies clients may find • Interview checklist • Video on why CHW won't recommend certain agency that isn't right—anticipating frustration and asking the right questions	**Resource project** Students pick three agencies and provide the following: • what they do • who they serve • a reflection on the online and in-person research process in terms of what a client would go through doing the same **RL CT AD**	The resource project must demonstrate or include: • a clear understanding of services provided and population served • the most up-to-date and clear information on the agency, its services, and its contacts • a referral form from the agency • the obstacles faced by population served by agency

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Housatonic Community College - Curriculum Alignment Table: Community Health Worker, cont'd.

Learning or Skill Objectives	Course Content	Activities	Assessments
Apply conflict resolution and LEARN skills independently while working with others	Behaviors and indicators of constructive and destructive conflict	**Collaborative educational activity** Students create and run on their own, as a class, an educational event for students' family members and friends **CO AD RL SA** **Example events** • skits on what a CHW does • a fair with different agencies attending	The success of the event is "assessed" via attendee and student feedback
Apply conflict resolution and LEARN skills Demonstrate cultural humility in collaborative setting Identify and support leadership within group		**Graduation ceremony** Students themselves plan their own graduation ceremony by pooling their own community's resources to reflect their own cultural diversity: • food for up to 80 people • decorations • presentations on their work • music and dance performance **SA CO AD**	The success of the event is "assessed" via attendee and student feedback

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Housatonic Community College - Curriculum Alignment Table: Community Health Worker, cont'd.

Learning or Skill Objectives	Course Content	Activities	Assessments
Apply content knowledge and skill practice from their training to working with clients in the field		50-hour internship with the agency that best fits the student's interests and skills **SA RL CT CO AD**	Performance is evaluated by both the student and their supervisor for the following criteria on a three-point scale ("Needs improvement," "Meets expectations," and "Excellent"): • achievement of learning objectives • quality of work • ability to learn • initiative/creativity • character traits • dependability • attendance/punctuality organization fit • response to supervision Students come together as well for an 8-hour internship symposium for reflective discussions and writing assignments about their internship experience

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LaGuardia Community College - Curriculum Alignment Table: Psychological Trauma Prevention Training

Learning or Skill Objectives	Course Content	Activities	Assessments
Demonstrates genuine social support verbally in pre-hospital emergency care skills practice (bleeding control, spinal immobilization, et al.)	PowerPoint, lecture, and in-class discussion of eSCAPe acronym/mnemonic: **social** support, **choice** & control, **anticipation**, and **plan**	**Skills labs** Role play in pairs or trios for skills practice: once the eSCAPe lesson is completed initially, "skillful empathy" is then assessed alongside safe and effective performance of the new skill being tested that day **AD CT SA CO** **Scenarios (approx. five per program)** Students must show multiple skills and adaptability while in a "novel" scenario—e.g., "Stand-by ambulance crew member at house fire: 70-year-old woman at scene, crying, distraught; no medical insurance or medical history, no family." **AD CT CO SA RL**	Skills lab and scenario assessment includes a comprehensive, qualitative "checklist" mapped to the four terms of the eSCAPe protocol; feedback provided on skills sheets which are returned to the student 25-question multiple-choice quiz Scenario exit interview/open discussion, providing feedback for student playing the patient, as well as the EMT (written notes provided to NRC)

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LaGuardia Community College - Curriculum Alignment Table: Psychological Trauma Prevention Training, cont'd.

Learning or Skill Objectives	Course Content	Activities	Assessments
Offers choice and control back to patient in skills practice	PowerPoint, lecture, and discussion of eSCAPe acronym/mnemonic	**Skills lab** **AD CO CT SA** **Scenarios** **AD CT SA CO RL**	Skills lab and scenario assessment Quiz Exit interview
Calmly and correctly informs patient of what to anticipate next in skills practice	PowerPoint, lecture, and discussion of eSCAPe acronym/mnemonic	**Skills lab** **AD CO CT SA** **Scenarios** **AD CT SA CO RL**	Lab and scenario assessment Quiz Exit interview/discussion
Appropriately assists and encourages patient to plan effectively for departure from the scene to the hospital	PowerPoint, lecture, and discussion of eSCAPe acronym/mnemonic	**Skills lab** **AD CO CT SA** **Scenarios** **AD CT SA CO RL**	Lab and scenario assessment Quiz Exit interview/discussion

CT = CRITICAL THINKING **AD = ADAPTABILITY** **SA = SELF-AWARENESS** **RL = REFLECTIVE LEARNING** **CO = COLLABORATION**

LaGuardia Community College - Principles of Psychological Trauma Prevention Agenda for Faculty In-Service Training

9:00 - 9:30: **Introduction and Overview**

Video: *Why Teach Psychological Competency?*

Overview of the day's agenda

9:30 - 11:00: **View PowerPoint - The Nature and Causes of Psychological Trauma and the Four Principles of Prevention**

11:00 - 11:15: **Discussion**

11:15 - 11:30: **Break**

11:30 - 11:45: **Demonstration: Good/Poor Affective Domain Management**

11:45 - 12:00: **Introduction of Skill Sheets**

12:00 - 12:30: **Lunch**

12:30 - 2:00: **Skills Based Practice Using Psychomotor Skill Sheets**

Small group practice, rotate stations (5-6 per group)

Begin with 2 isolated skills, then pt. assessment

2:00 - 2:15: **Discussion**

2:15 - 2:30: **Break**

2:30 - 4:00: **Scenarios**

Small group practice (5-6 per group)

Begin with a simple scenario, move to complex if group is ready

4:00 - 4:30: **Bringing Psychological Trauma Prevention into the Classroom**

Discussion

4:30 - 5:00: **Summary of Workshop**

Post-test / Evaluations

Passaic Community College - Syllabus: Resiliency Competency Course

Course Information

Resiliency Competency Course
Class Meeting Days: Monday through Thursday
Time: 1.5 hours

Instructors

Kristin Birchenough, LPC
Jacqueline Szabo, LCSW

Course Description

This course will assist participants in developing and enhancing their resiliency as defined by the Northeast Resiliency Consortium's Resiliency Competency Model: critical thinking, adaptability, self-awareness, reflective learning, and collaboration. The format of this course will include lectures as well as classroom exercises and role-play.

Course Objectives

1. Reflective learning/Self-awareness: Participants will be able to accurately recognize their emotions and thoughts and their influence on behavior. This includes accurately assessing one's strengths and limitations and possessing a well-grounded sense of confidence and optimism.

2. Adaptability/Self-management: Participants will be able to manage their emotions, thoughts, and behaviors effectively in different situations. This includes managing stress, motivating oneself, and setting and working toward achieving personal and academic goals.

3. Critical thinking/Social awareness: Participants will be able to take the perspective of and empathize with others from diverse backgrounds and cultures, to understand social and ethical norms for behavior, and to recognize family, school, and community resources and supports.

4. Collaboration/Relationship skills: Participants will be able to establish and maintain healthy and rewarding relationships with diverse individuals and groups. This includes communicating clearly, listening actively, cooperating, negotiating conflict constructively, and seeking and offering help when needed.

5. Critical thinking/Responsible decision-making: Participants will be able to make constructive and respectful choices about social interactions based on consideration of safety concerns, social norms, the realistic evaluation of consequences of various actions, and the well-being of self and others.

Passaic Community College - Weekly Class Schedule: Resiliency Competency Course

Date	Topic
Week 1 **Day 1**	**Introduction** 1.1 Review of structure and Rules of the Road (rules for completing class assignments and attendance) 1.2 Goals for participants What gets in the way of reaching goals? **Overview of Resiliency** The Resiliency Competency Model 1.3 Options for Solving Any Problem **Reflective learning/Self-awareness and Critical Thinking/Social awareness** What is dialectical thinking? 2.1 Dialectics: What Is It? What's the Big Deal in Building Resiliency? 2.2 Dialectical Thinking: "How-To" Guide **2.3 Homework: Practice Thinking and Acting Dialectically**

Date	Topic
Week 1 **Day 2**	**Review of the role of dialectics in self-awareness** Homework review The importance of thinking and acting dialectically **Mindfulness and Thinking with "Wise Mind" Values** 3.1 Mindfulness: Taking Hold of Your Mind 3.2 Mindfulness. Why Bother? 3.3 Mindfulness: Three States of Mind 3.4 Practicing Wise Mind 3.5 Homework: Practicing Observing Yourself in Three States of Mind **Mindfulness in Developing Resiliency and Reflective Learning/Self-awareness** What is mindfulness? Individual reflection Small group or whole group activities, sharing, and discussion **SKILLS** 4.1 The "What" Skills of how to practice mindfulness 4.2 Mindfulness: Observing Practice **Homework: Practicing "What" Skills**

Passaic Community College - Weekly Class Schedule: Resiliency Competency Course, cont'd.

Date	Topic
Week 1 **Day 3**	**Reflective learning/Self-awareness** Homework review How does mindfulness play a role in reflective listening and self-awareness? **SKILLS** 5.1 The "How" Skills to practice mindfulness **5.2 Homework: Practicing "How" Skills**
Week 2 **Day 1**	**Distress Tolerance Skills and Adaptability/Self-Management** **SKILLS** Overview of crisis survival and distress tolerance skills 6.2. When to Use Crisis Survival Skills 6.3. Crisis Survival Skills Why bother coping with painful feelings and urges? 6.4 Distract with ACCEPTS Skills 7.1 Self-Soothe Skills IMPROVE the Moment **6.5 Homework: Practicing Wise Mind ACCEPTS** **7.1 Homework: Practicing IMPROVE the Moment**

Date	Topic
Week 2 **Day 2**	Homework review **Distress Tolerance Skills and Adaptability/Self-Management** **SKILLS** 8.1 / 8.2 TIP Skills for Self-Management 9.1/9.2 Pros and Cons Reality Acceptance skills Radical Acceptance **7.4. Homework: Creating Your Crisis Survival Kit**
Week 2 **Day 3**	Homework review **Critical thinking/Responsible decision-making and Using Distress Tolerance Skills** 10.1 Distress Tolerance: Overview of Reality Acceptance Skills 10.2 Distress Tolerance: Accepting Reality 10.3. Distress Tolerance: Radical Acceptance Step by Step 10.4 Choosing Things for Radical Acceptance Practice 11.1 Turning the Mind 11.2 Willingness vs. Willfulness Mindfulness of Current Thought **11.3 Homework: Distress Tolerance: Practice with Turning the Mind and Willingness** **Distress Tolerance Test**

Passaic Community College - Weekly Class Schedule: Resiliency Competency Course, cont'd.

Date	Topic
Week 2 **Day 4**	Homework review **Mindfulness in Developing Resiliency and Adaptability/Self-management** 12.1 Distress Tolerance: Mindfulness of Current Thoughts, Step by Step 12.2 Distress Tolerance: Ways to Practice Mindfulness of Current Thoughts Mindfulness: Wise Mind **12.3. Homework: Distress Tolerance: Practicing Mindfulness of Current Thoughts**
Week 3 **Day 1**	Homework review **Adaptability/Self-management** 15.1 Goals of Emotion Control and Self-Management 15.2 Short List of Emotions 15.3 What Good Are Emotions? Goals for self-management and the function of emotions **15.4 Myths About Emotions** **15.5 Homework: Emotion Diary**

Date	Topic
Week 3 **Day 2**	Homework review **Adaptability/Self-management** 16.1 Model of Emotion 16.2a Ways to Describe Emotions (Anger) 16.2b Ways to Describe Emotions (Fear) 16.2c Ways to Describe Emotions (Happiness) 16.2d Ways to Describe Emotions (Jealousy) 16.2e Ways to Describe Emotions (Love) 16.2f Ways to Describe Emotions (Sadness) 16.2g Ways to Describe Emotions (Shame) 16.2h Ways to Describe Emotions (Guilt) **SKILLS** Describing Emotions Check the Facts and Opposite Action to Emotion **16.3 Homework: Practice with the Model of Emotion** **Homework: Check the Facts**

Passaic Community College - Weekly Class Schedule: Resiliency Competency Course, cont'd.

Date	Topic
Week 3 **Day 3**	Homework review **Adaptability/Self-management** 17.1 Overview of Skills for Changing Emotional Responses **SKILLS** Describing Emotions 17.2 Check the Facts and Opposite Action to Emotion Problem Solving 17.3 Examples of Emotions That Fit the Facts 17.4 Opposite Action to Change Emotions **Homework: Myths About Emotions** **17.5 Homework: Changing Emotions by Opposite Action** **17.6. Homework: Practice with Emotions by Opposite Action**

Date	Topic
Week 3 **Day 4**	Homework review **Reflective learning/Self-awareness** 18.1 Problem Solving 18.2 Putting Opposite Action and Problem Solving Together 19.1 Overview of ABC PLEASE 19.2 Accumulating Positive Experiences in the Short Term 19.3 Pleasant Activities List 19.4 Accumulating Positive Experiences in the Long Term **SKILLS** 20.1 PLEASE Skills The A of ABC PLEASE The BC of ABC PLEASE **18.3 Homework: Practice with Problem Solving to Change Emotions** **19.2 Homework: Practice with Accumulating Positive Experiences** **19.6 Homework: Practice with Accumulating Positive Experiences (Short and Long Term)**

Passaic Community College - Weekly Class Schedule: Resiliency Competency Course, cont'd.

Date	Topic
Week 4 **Day 1**	Homework review **Critical thinking and Adaptability/Self-management** 20.2 Building Mastery and Coping Ahead 20.3 Food and Your Mood 20.4 Tips for Better Sleep Hygiene The Wave Skill-Mindfulness of Current Emotion Components of the Emotion Model **SKILLS** 21.1 Ride the Wave Skill-Mindfulness of Current Emotion 21.2 Components of the Emotion Model **20.5 Homework: Practicing with Build Mastery, Cope Ahead and PLEASE Skills** **21.3 Homework: Practicing the Wave Skill** **Self-Management Test**

Date	Topic
Week 4 **Day 2**	Homework review How does a wise mind increase resilience? Mindfulness: Wise Mind Review Mindfulness: "What" and How" Skills Review 19.5 Wise Mind Values and Priorities List **23.1 Homework: Getting into Wise Mind/ Mindfulness** **24.1 Homework: Mindfulness: Observing, Describing, Participating Checklist** **24.2 Homework: Non-Judgementalness, One-Mindfulness, Effectiveness Checklist**
Week 4 **Day 3**	Homework review **Collaboration/Relationship skills and Interpersonal Effectiveness** 25.1 Interpersonal Effectiveness: Goals and Overview 25.2 What is Your Goal? 25.3 What Stops You from Achieving Your Goals? **25.4 Homework: Clarifying Priorities in Interpersonal Situations**

Passaic Community College - Weekly Class Schedule: Resiliency Competency Course, cont'd.

Date	Topic
Week 4 **Day 4**	Homework review **Collaboration/Relationship skills and Interpersonal Effectiveness** 26.1 Getting Someone to Do What You Want 26.2 Practice Cards for Learning the DEAR MAN Skills **SKILLS** DEAR MAN Skills **26.3 Homework: Practicing the DEAR MAN Skills**
Week 5 **Day 1**	Homework review **Collaboration/Relationship skills and Interpersonal Effectiveness** 27.1 Building and Maintaining Positive Relationships **SKILLS** GIVE Skills **27.2 Homework: Practicing the GIVE Skills**

Date	Topic
Week 5 **Day 2**	Homework review **Collaboration/Relationship skills and Interpersonal Effectiveness** 28.1 Maintaining Your Self-Respect **SKILLS** FAST Skills **28.2 Homework: Practicing the FAST Skills**
Week 5 **Day 3**	Homework review **Collaboration/Relationship skills and Reflective Learning/Self-awareness** **SKILLS** GIVE Skills **27.2 Homework: Practicing the GIVE Skills**
Week 5 **Day 4**	Homework review **Collaboration/Relationship skills and Interpersonal Effectiveness** Building and Maintaining Positive Relationships 29.1 Evaluating Your Options 29.2 Factors to Consider 29.3 Figuring Out How Strongly to Ask or Say No **29.4 Homework: Using Interpersonal Effectiveness Skills at the Same Time** **Interpersonal Effectiveness Test**

Appendix D: Putting It All Together: Step-by-step Processes for Integrating the Resiliency Competencies into Curriculum

This section shows how to use this guidebook to integrate the resiliency competencies into curriculum and instruction. To show this practice, we rely on an example from an introductory college-level statistics class. (Other examples can be found in Section I and in the appendix.)

Step-by-step Processes for Integrating the Resiliency Competencies into Curriculum

There is no one set rule for how to integrate the resiliency competencies into curriculum, but the following steps can help you move through the process.

Step 1: Identify your course objectives and learning outcomes.

Step 2: Determine which of the resiliency competencies align with the course objectives and learning outcomes.

- Use the Resiliency Competency Model and the Resiliency Outcomes Matrix to determine key resiliency competencies and which additional ones intersect with the course objectives and learning outcomes.
- Specify the Resiliency Outcomes for the course. These are the resiliency example actions that are adapted specifically to the course outcomes.

Step 3: Complete the Curriculum Alignment Table. The Curriculum Alignment Table provides a clear, big-picture view of the curriculum and where and how the resiliency competencies are integrated.

Step 4: Complete the Instructional Design Table. The Instructional Design Table provides a more in-depth plan of how the resiliency competencies are integrated at all levels: instruction, student activities and assignments, and assessments.

Step 5: Enjoy teaching and working with your students and watching the resiliency competencies grow!

Example for a college-level statistics course:

Step 1: Identify your course objectives and learning outcomes. (See "Learning Objectives and Outcomes" p. 50)

- What are you teaching?
  - Research skills as part of a statistics course.
- What are the objectives?
  - Ask good questions and relate these questions to appropriate statistical analyses.
  - Design a research strategy to examine one of the questions.
  - Work in teams to conduct research and solve a question using statistics.
- What are the expected learning outcomes?
  - Distinguish between different types of questions and identify which ones can be analyzed and solved.
  - Match questions to appropriate statistical analyses.
  - Coordinate with research team to design a research strategy.
  - Employ research strategies to solve an identified question in a team.
  - Present findings using a research study format.

Step 2: Determine which of the resiliency competencies align with the course objectives and learning outcomes. (See "Using the Resiliency Outcomes Matrix" p. 52)

- Use the Resiliency Competency Model and the Resiliency Outcomes Matrix to determine key resiliency competencies and which additional ones intersect with the course objectives and learning outcomes.
- Specify the Resiliency Outcomes for the course. These are the resiliency example actions that are adapted specifically to the course outcomes.

Which Resiliency Competencies Align with Course Objectives and Learning Outcomes: College Statistics

Course Content for Statistics Example	Resiliency Example Actions	Resiliency Outcomes for Statistics Example
1. Research Questions a. What makes a good question b. Answering questions i. Researchable questions 2. Measurable questions 3. Relationship between research questions and statistical analyses a. How language determines which analyses are used b. Types of statistical analyses (Provided through out the course in parallel to the research design) i. Measures of central tendency ii. Standard deviation iii. Analyses of relationships (correlations, predictive models) 4. Relationship between research questions and research design a. How language determines which research design to use b. Types of research designs c. Feasibility of research designs d. Ethical considerations 5. Relationship between research questions, research design and statistical analyses a. Determining goals of study b. Designing the study with the questions, procedures, analysis, and anticipated outcomes	**Critical Thinking (CT): Purposeful use of reasoning to identify strengths and weaknesses of alternative approaches in diverse situations.** **CT1:** Focuses on relevant and unique factors **CT2:** Analyzes situations for opportunities and challenges **CT3:** Identifies current resources and evaluates the gaps in needed resources **CT4:** Proposes alternative options and strategies using analysis and evaluation **CT5:** Makes informed decisions	1. Identifies and analyses question elements to determine appropriateness for researching and applying statistical analyses 2. Identifies needed resources and strategies to conduct research question 3. Designs research study based on identified questions 4. Decides on research question, strategy, and statistical analyses

Which Resiliency Competencies Align with Course Objectives and Learning Outcomes: College Statistics, cont'd.

Course Content for Statistics Example	Resiliency Example Actions	Resiliency Outcomes for Statistics Example
6. Description of team project and setting up of teams a. Team procedures and expectations b. Assignment of teams 7. Conducting research a. Tips on strategies b. Procedures 8. Analysis findings a. Practicing statistical analyses b. Applying statistical analyses c. Interpreting results 9. Writing a research report a. Components of a report b. Writing style for research c. Citations	**Adaptability (AD): Successful adjustment to a variety of positive and negative conditions and circumstances.** AD1: Demonstrates curiosity, flexibility and openness to change AD2: Pursues alternative solutions, including effective use of technology AD3: Acknowledges when change is needed and takes proper action	5. While designing research approach, adjusts approach based on feasibility and appropriateness of question and study and makes adjustments appropriately
	Reflective Learning (RL): Integration and application of prior and current learning to new situations. RL1: Describes own best learning strategies RL2: Builds on prior knowledge and experiences with current knowledge RL3: Determines what learning is needed to move forward RL4: Learns from the effects of one's actions and makes improvements	6. Uses declarative, procedural, and strategic knowledge to describe and document research process 7. Determines gaps in knowledge to conduct research and report on findings and seeks solutions
	Collaboration (CO): Works with others to achieve a goal. CO1: Initiates giving and receiving information, facilitating communications among the group CO2: Resolves conflicts by advocating for and engaging in compromise CO3: Engages in the development of relationships CO4: Prioritizes group goals while recognizing individual interests CO5: Demonstrates willingness to come to agreement with others CO6: Uses technology effectively to foster communication and teamwork	8. Participates in teamwork, including the giving and receiving of information and facilitating appropriate communications among the team 9. Works as an equal team member and supports others to accomplish the research study 10. Facilitates the development of the research study goals and seeks to accomplish these goals as a team member 11. Uses technology effectively to foster communication and teamwork

Which Resiliency Competencies Align with Course Objectives and Learning Outcomes: College Statistics, cont'd.

Course Content for Statistics Example	Resiliency Example Actions	Resiliency Outcomes for Statistics Example
10. Conducting self-assessments and group assessments a. Strategies b. Writing style and etiquette c. Appropriate documentation	**Self-Awareness (SA): Clear understanding of one's qualities, characteristics, strengths and weaknesses, and how they impact one's self and others** SA1: Engages in self-assessment and introspection, recognizing one's own emotions SA2: Identifies potential barriers (e.g., physical, emotional, and psychological) SA3: Makes confident, committed, and motivated choices SA4: Asks for support when appropriate	12. Aware of and assesses one's own contributions to the team's research question and approach appropriately 13. Contributes to the team's decision-making process and uses confident, committed and motivated choices 14. Seeks support from team and instructor when appropriate

Step 3: Complete the Curriculum Alignment Table. (See "Curriculum Alignment Table" p. 56)

The Curriculum Alignment Table provides a clear, big-picture view of the curriculum and where and how the resiliency competencies are integrated.

Curriculum Alignment Table: College Statistics

Learning or Skill Objectives	Course Content	Activities & Assignments	Assessments
What individuals are to learn (indicate related resiliency competencies)	*What the instructor provides before and after the activities and assignments (indicate related resiliency competencies)*	*The tasks involved to learn the objectives (indicate related resiliency competencies)*	*How you know that an individual has learned the objectives (indicate related resiliency competencies)*
1. Ask good questions and relate these to appropriate statistical analyses. **CT RL CO**	1. Research Questions a. What makes a good question b. Researchable questions c. Measurable questions 2. Relationship between research questions and statistical analyses a. How language determines which analyses are used b. Types of statistical analyses (Provided throughout the course in parallel to the research design) i. Measures of central tendency ii. Standard deviation iii. Analyses of relationships (correlations, predictive models)	1. Brainstorm research question examples. (whole class) **CT RL** 2. Break into groups: a. Identify which questions are researchable. Also indicate which statistical analyses would be used. (group) **CT RL AD CO** b. Pick 2-3 questions and draft a strategy for answering each question. (group) **CT RL CO** 3. Homework - take the list of questions and prioritize based on your interest. Pick the top 3 questions and make sure there is a strategy and identified analyses for each of those questions (individual) **CT RL** 4. Theme research questions and revise based on themes (whole class) **CT AD RL** 5. Pick a theme and form a group (individual & group) **CT RL CO** 6. Adjust groups to equalize (whole class) **CO AD SA**	1. As a team, develop researchable questions aligned to statistical analyses **CT RL**

CT = CRITICAL THINKING **AD = ADAPTABILITY** **SA = SELF-AWARENESS** **RL = REFLECTIVE LEARNING** **CO = COLLABORATION**

Curriculum Alignment Table: College Statistics, cont'd.

Learning or Skill Objectives	Course Content	Activities & Assignments	Assessments
What individuals are to learn (indicate related resiliency competencies)	*What the instructor provides before and after the activities and assignments (indicate related resiliency competencies)*	*The tasks involved to learn the objectives (indicate related resiliency competencies)*	*How you know that an individual has learned the objectives (indicate related resiliency competencies)*
2. Design a research strategy to examine one of the questions. **CT RL CO**	3. Relationship between research questions and research design a. How language determines which research design to use b. Types of research designs c. Feasibility of research designs d. Ethical considerations 4. Relationship between research questions, research design and statistical analyses a. Determining goals of study b. Designing the study with the questions, procedures, analysis, and anticipated outcomes	7. Design Study (group) **CT RL SA CO**	2. As a team, develop a research study based on approved question(s) **CT AD RL SA CO**

CT = CRITICAL THINKING | AD = ADAPTABILITY | SA = SELF-AWARENESS | RL = REFLECTIVE LEARNING | CO = COLLABORATION

Curriculum Alignment Table: College Statistics, cont'd.

Learning or Skill Objectives	Course Content	Activities & Assignments	Assessments
What individuals are to learn (indicate related resiliency competencies)	*What the instructor provides before and after the activities and assignments (indicate related resiliency competencies)*	*The tasks involved to learn the objectives (indicate related resiliency competencies)*	*How you know that an individual has learned the objectives (indicate related resiliency competencies)*
3. Work in teams to conduct research and solve a question using statistics. **CT RL CO**	5. Description of team project and setting up of teams a. Team procedures and expectations b. Assignment of teams 6. Conducting research a. Tips on strategies b. Procedures 7. Analysis findings a. Practicing statistical analyses b. Applying statistical analyses c. Interpreting results 8. Writing a research report a. Components of a report b. Writing style for research c. Citations 9. Conducting self-assessments and group assessments a. Strategies b. Writing style and etiquette c. Appropriate documentation	8. Conduct Study (group) **CT RL CO** 9. Analyze results (group) **CT AD RL CO** 10. Write research results (group) **CT AD RL SA CO** 11. Assess project (individual & group) **CT RL SA CO**	3. Conduct research study and apply statistical analyses accurately **CT AD RL CO** 4. Complete a report that provides the research question, procedures, instrumentation (if appropriate), results and conclusion **CT AD RL SA CO** 5. Assess one's own contribution and team effectiveness to reach project goals and complete study **CT RL SA CO**

CT = CRITICAL THINKING **AD = ADAPTABILITY** **SA = SELF-AWARENESS** **RL = REFLECTIVE LEARNING** **CO = COLLABORATION**

Step 4: Complete the Instructional Design Table. (See “Instructional Design Table” p. 62)

The Instructional Design Table provides a more in-depth plan of how the resiliency competencies are integrated at all levels: instruction, student activities and assignments, and assessments.

FOR MORE INFORMATION ABOUT ACHIEVING THE DREAM:

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