Career Pathways System

Report to the Connecticut Employment and Training Commission

YOUTH EMPLOYMENT COMMITTEE
JUNE 2013
# Table of contents

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduction</td>
<td>3</td>
</tr>
<tr>
<td>Career pathways system diagram</td>
<td>5</td>
</tr>
<tr>
<td>Career pathways system</td>
<td></td>
</tr>
<tr>
<td>Infrastructure and support</td>
<td>7</td>
</tr>
<tr>
<td>Integration of student success plan</td>
<td>9</td>
</tr>
<tr>
<td>Using a common language</td>
<td>10</td>
</tr>
<tr>
<td>Student preparation and support</td>
<td>11</td>
</tr>
<tr>
<td>Partnering with workforce professionals</td>
<td>12</td>
</tr>
<tr>
<td>Engagement with and preparation of employers</td>
<td>13</td>
</tr>
<tr>
<td>Early college/Concurrent enrollment</td>
<td>14</td>
</tr>
<tr>
<td>Engagement of parents and other adults</td>
<td>16</td>
</tr>
<tr>
<td>Credentialing</td>
<td>17</td>
</tr>
<tr>
<td>Professional development of educators</td>
<td>18</td>
</tr>
<tr>
<td>Technology and resources</td>
<td>19</td>
</tr>
<tr>
<td>Appendix A: Connecticut Alignment with Model Policies (Dual enrollment)</td>
<td>21</td>
</tr>
</tbody>
</table>
Introduction

The purpose of this paper is to develop a set of statewide guidelines for a Youth Career Pathways system. Potential benefits emerging as a result of these guidelines will include enhancing the value of the student success plan and improving career experiences for students. The guidelines will also build a framework for developing the career skills that employers are demanding young people accrue in their preparation for the world of work. To set the stage for these guidelines, it is helpful to briefly consider at the following:

- What are the major workforce changes in the economy?
- What we learned about young people who obtain work experience before seeking their first job?
- What are the demands from young people and how well are they being fulfilled?
- What are employers saying about student preparation?

What are the major workforce changes in the economy? In the United States, the economy has produced a dramatically different workforce since the end of World War II. The majority of women are engaged in the workforce; union participation has declined from a high of 35 percent in 1954 to the current (2010) rate of 11 percent\(^1\); globalization of the economy is a reality, and technology increasingly replaces workers in manufacturing and many other industries. The nature of that impact for many of these factors is unclear. For instance, there is little agreement among economists on what impact technology will have in the long run. It clearly has eliminated certain jobs such as typists and key punch operators. The fastest growing occupations are in healthcare (driven by an aging population) and include a wide range of skill requirements from home health aides to biomedical engineers. The only certainty is that the total picture is dynamic, constantly changing. Therefore, the future workforce will need preparation that allows young people to build a set of skills that give them the flexibility to contribute to a dynamic workplace—a workplace that will offer new careers throughout their lives.

What have we learned about young people who obtain work experience before seeking their first job? Employment can provide valuable and formative experiences for young people: forming good work habits, learning responsibility, developing organizational skills, earning money, and providing incentives for remaining in school. At the same time, too much time spent at work, especially during the school year, can lead young people to do poorly in their academic work; and, for some, it can lead to dropping out, especially when work time exceeds 20 hours per week. Studies in the past 10 years suggest that the quality of the work experience may be more important than the quantity of time spent there. Specifically, linking career and academic experiences and strengthening academic standards in high school are increasingly seen the critical components for later success.\(^2\) Our education system must offer a variety of career exploration and work-related experiences to ensure that students see the possibilities after school and links between what they do in school and their futures.

What are the demands from young people and how well are they being fulfilled? We believe that young people want what most of us want, a full-time job that is secure, interesting, and well-paid.

---

\(^1\) Bureau of Labor Statistics, January 27, 2012

\(^2\) Improving Career Outcomes for Youth: Lessons from the U.S. and OECD Experience, Lerman (July 200).
Unfortunately, we don’t really know what they want in terms of career development and employment. What we do know is that this question is more likely to be asked in the United Kingdom or the OECD countries than it is in the United States. In some studies of generational attitudes towards work and the workplace, it is suggested that members of generation X, Y and the millennials have different attitudes than do older workers and may have different values related to careers and the workplace. *We need to learn now what young people are thinking and continue to learn from them well into the future.*

*What are employers saying about student preparation?* A recent survey of employers by the Chronicle of Higher Education and Marketplace suggests there is a mixed message from employers. A bachelor’s degree is practically a prerequisite for getting through the front door in many industries. Yet, many of those same employers complain about the lack of personal characteristics: adaptability, communication skills, and problem solving skills. Many employers also believe workers should come fully prepare to do the job; extensive in-house training is less and less common in most industries. *While many have promoted the importance of employer engagement, we must add to that the necessity of ongoing dialogue with employers to ensure we understand their needs and they understand what is possible in terms of workforce preparation.*

The diagram on the following page provides an overview of a model Career Pathways system. The diagram presents the various stages of experience that are considered optimal in preparing young people for work and careers. As noted in the right-hand, vertical text, in the first years (from PreK through grade 6), there is a focus on career awareness. From grades 6 through 8, exploration of various careers becomes more specific. In grades 9-12, the focus is on college and career preparation through various work and career experiences (e.g., summer employment, internships). The student success plan, as noted on the left-hand vertical text, is initiated in 6th grade and continues through 12th grade. *The diagram poses a challenge to educators, communities, non-profits, businesses and others within the state to join together. Education can no longer be burden of educators alone.*
Career Pathways System Diagram

Prek-8
- Industry sector leaders visit classrooms
- Industry sector class projects including discussion on college and career training options related to the project
- Field trips to businesses in different industry sectors (Grades 3-8)

Grades 6-8
- Inventory of interests
- High school visits and selection (assistance with career-based high schools)
- Mentorships
- Service learning in areas of interest
- School leadership

Grades 9-12
- Job shadowing experiences
- Career Fairs
- Visits to college campuses and post-secondary training centers
- Financial Literacy Workshops
- Part-time/Summer employment
- Career Competency/Workforce readiness training
- Mock interviews
- SAT Readiness/PSATs on SATs
- Internship Experiences
- Capstone Internship
- Dual enrollment/early college
There are already several elements of a Career Pathways System in various stages of development either statewide or in specific regions.

- The Student Success Plan, introduced a year ago, can serve as the backbone for the Career Pathways system. It provides a planning tool for the development of academic, career, and social/emotional skills for students in 6th through 12th grades.
- The capstone requirement requires each student to complete a special project product that integrates many, if not all of the essential skills acquired over a student's seven-year history in secondary school. All capstone requirements will include research, written, and presentation components. The Capstone requirement can include a Capstone internship.
- The acquisition of career competencies has been a particular focus of some programs in out-of-school settings, with the Capitol Workforce Partners career competency system as one notable example.
- Early college efforts (e.g., Early College Experience at UCONN, Advanced Placement, College Career Pathways), some with career components, have continued to grow, although they still reach a small proportion of students.
- Nationally recognized credentials have been incorporated in some districts but efforts to incorporate them broadly is just getting started.

There are several core assumptions made in preparing these guidelines:

- Schools cannot do this alone,
- Building partnerships with new organizations and strengthening relationships with existing partners is essential.
- The Career Pathway system standards will help align various existing efforts into a coordinated system to improve academic and career outcomes.
- Businesses, non-profits and state and local organizations depend for their success on young people with a fully rounded education which includes academic, career exploration, and mental and physical health.
- Employers of all types will be most successfully engaged by an organized approach.
Career Pathways System Guidance

*Identify the nature of the infrastructure and support for the successful implementation of a district-wide program that includes career exposure, career exploration, work experiences and internships.*

The Career Pathways Technical Assistance Initiative was funded by the U.S. Department of Labor to provide assistance to grantee teams (including 9 state teams) in developing career pathways systems. In the course of this work, six key elements emerged as essential to the creation of a system. These elements along with descriptions of promising practices were described in *Career Pathways Toolkit: Six Key Elements for Success* prepared by Social Policy Research Associates in September 2011 for the U.S. Department of Labor Employment and Training Administration. Assessment, action planning and service mapping tools are included in the toolkit.

Creating a career pathways system is more than stringing together a set of discrete programs being implemented by an array of providers, neither is it one set of expectations generated by one government agency. Effective efforts have spent considerable time and effort making certain that organizations representing various constituencies are seated at the table, and that the work is collaborative and coordinated.

The elements identified by Career Pathways Initiative include:

- Build cross-agency partnerships and clarify roles;
- Identify sector or industry and engage employers;
- Design education and training programs;
- Identify funding needs and sources;
- Align policies and programs; and,
- Measure system change and performance.3

As one of the next steps, the federal Office of Vocational and Adult Education initiated a two-year project in October 2012 to advance career and technical education in career pathways systems; five states were selected to participate. Jobs for the Future is providing state teams and coaches with technical assistance in adapting and enhancing the Toolkit strategies.

---

**Virginia**

In July 2008, a task force was convened to write a strategic plan as a first step to development of a formal Career Pathways System. Represented were the Virginia Departments of Education and Labor and Industry; the Virginia Community College System, the State Council for Higher Education, and the Virginia Economic Development Partnership.

As a result of their work, middle colleges have been implemented across the state.

Additionally, there have been 130 career coaches placed in high schools across the state.

---

While the efforts of the Youth Committee to inform a youth career pathways system do not align precisely with those of the U. S. Department of Labor to create a comprehensive career pathways system for all ages, the elements listed above provide a useful frame for consideration.

**Build cross-agency partnerships and clarify roles.** Multi-stakeholder leadership is essential. Infrastructure and support planning must include administrators, teachers, counselors and administrators (middle school, high school, higher education); workforce development professionals; employers; funders; community based organizations (especially youth development practitioners); and, parents.

**Identify sector or industry and engage employers.** Success is contingent on a wide array of employers who are dedicated to sharing their knowledge and expertise with educators and counselors about their workplaces, and who are willing to partner on events (speakers, open houses for families/schools/community audiences) and ongoing activities (co- or guest teaching, shadowing, internships, cooperative work experiences). There must also be multiple ways in which employers and their employees can participate in career activities and curriculum enhancement.

**Design education and training programs.** Creating a culture of excellence for everyone is important. This includes high academic standards that promote high expectations beyond the classroom; project-based learning that promotes collaboration among students and an integration of doing and thinking, and promotion of a growth mindset (knowledge is expandable; effort equals success). There must be enhanced student access to and preparation of counselors - especially to counselors who serve in students who live in neighborhoods/districts with low socioeconomic status. Partnerships between educators and workforce and industry professionals must be created so that learning objectives include career awareness and other activities (for example, inviting in speakers and class tours of workplaces).

**Identify funding needs and sources.** Funding is essential to expand partners’ capacities. While partners can leverage resources, funders can also support improving counseling experiences; providing career-related resources (written materials, web pages); providing time and professional development opportunities for teachers to enhance education- and career-related activities and strategies; and, promoting collaboration among educators and workforce professionals and employers.

**Align policies and programs.** A well-designed career pathways system may require changes in the structure of specific programs which are either set in regulation and procedure, or codified in law. A thorough assessment of the status quo of the various components of the system will give partners a sense of where structures must be changed. The *Career Pathways Toolkit* suggests that barriers to enhancing collaboration be identified so that reasonable and timely efforts can be made to resolve them; state and local policy changes be identified and sought in order to improve assessment and implementation and encourage creativity; and, program procedures be revisited and reformed to reflect a new reality.

**Measure system change and performance.** An important piece of the change from a set of activities to a coordinated career pathways system is the appropriate assessment of ongoing improvement. While
Connecticut is making strides in making timely data available across the education and workforce systems, there are still some areas suggested within this paper about which we do not have a clear sense of the scope and depth of service provision (for example, dual enrollment, implementation of the Student Success Plan, Capstone experiences). In moving toward the construction of a pathways system, data as to the shared and disparate experiences of youth and their teachers and counselors across the state will be necessary to address equity of opportunity. Additionally, the system will need longitudinal data across many systems. The SSP can be used to collect information about all of the activities in which youth are enrolled, and serve as a living document of a youth’s progress through various academic, career and developmental experiences; but other innovations in practice, procedure and policy must have well-designed metrics to measure change and performance.

Integration of student success plan and Career Pathway System guidelines.

The Connecticut Student Success Plan (SSP) is an important tool that can be used to assess, organize and guide students’ academic, career and developmental growth from 6th grade until their graduation from high school. The SSP is one of the four key task areas of Connecticut’s Secondary School Reform effort, along with Model Curriculum, Capstone Experiences and Comprehensive Student Support Systems. But, it is only one of those key areas; and how it is integrated into both other secondary school reform initiatives, such as capstone experiences, will determine whether it is merely another piece of documentation or a template for significant thought, discussion and action.

The three core components of the SSP – Academic Development, Career Development and Social, Emotional and Physical Development – and the model criteria and recommended elements associated with each component, provide a vehicle for students to interact with caring adults and integrate the necessary skill-building experiences to ensure post-secondary and workplace success. The SSP is a student-centered activity, taking into account student’s unique experiences, interests, strengths and challenges, and intended to be used on an ongoing basis by students as they gain knowledge and skills that will lead to success in higher education and the work world.

The SSP can also provide an important framework for the activities recommended as part of a career pathways system. The SSP should be both portable (used by students, school counselors and teachers, community practitioners and parents at middle, secondary and post secondary levels) and comprehensive. A broad range of statewide stakeholders should be convened to most effectively address the full integration of the SSP into system standards. In order for the SSP to fulfill its mission, its use should be partnered with wide outreach to all partners engaged in students’ education and career path building; extensive professional development and support; promotion of best and promising practices; and, evaluation of its usefulness.

Public Act No. 11-135

Section 2(j)

For the school year commencing July 1, 2012, and each school year thereafter, each local and regional board of education shall create a student success plan for each student enrolled in a public school, beginning in grade six. Such student success plan shall include a student’s career and academic choices in grades six to twelve, inclusive.
The workforce development system can both benefit from the SSP, and contribute to its effectiveness. Especially with youth involved in Workforce Investment Act programs, workforce development staff can use the SSP in their work with youth in out-of-school activities. Some Workforce Investment Boards, like Capital Workforce Partners (CWP), have begun to partner with school systems to discuss the mutual usefulness of the SSP to both education and workforce systems. In addition, CWP can offer to schools in its catchment area a career competency model with measurable outcomes and tools for assessment and implementation. All youth in WIA programs at CWP complete a personal development profile, predicated on The 40 Developmental Assets for Adolescents (Search Institute, 1997, 2007); this can be helpful to districts which may need guidance in indentifying tools to assess their students’ social and emotional development.

The Connecticut State Department of Education is working to align the SSP efforts with other major planning efforts, such as the Comprehensive Developmental Guidance and Counseling Program, and providing training for educators on its use in transition planning for students identified with special needs, and with work-based learning projects.

The Connecticut Department of Education has posted a great deal of information related to the SSP through its website (http://www.sde.ct.gov/sde/cwp/view.asp?a=2702&Q=334064). The SSP Toolkit contains an SSP handbook, grade level templates, professional development and resources to assist educators, community members and parents in guiding student decision-making.

**Provide career readiness experiences using a common language.**

There are numerous types of career readiness experiences and there are a variety of words used to describe those experiences: job, work experience, internship, employment, etc. When there is a meeting about the general subject area, everyone comes with their own language for the various experiences students might have. While there is, in reality considerable overlap in these experiences, some common understanding is generally necessary among program managers and policy makers.

Common language is particularly important to students and employers, since their idea of what the experience will guide how they understand their responsibilities. Clarity of language can make the difference between expectations understood and fulfilled or expectations understood and unmet, leading to confusion and disappointment. A common language also ensures we are defining the same learning outcomes for students and can therefore agree on which outcomes are important and when those outcomes are achieved.

Fully defining a common language is beyond the scope of this paper. In fact, a full set of definitions and the related outcomes would be a paper in and of itself. For the purposes of these guidelines, we will note certain needs and recommend resources for accomplishing each of these needs.

The major terms to be defined are: job shadowing, job, summer job, summer employment, internship, capstone internship, job shadowing, work experience, career exploration, and work mentor. Once each experience and the associated outcomes are fully defined, the system can decide on the sequence of
these events, which experiences should precede other opportunities so that each experience prepares
the student for the next one.

The social, emotional and physical development component of the plan is not just one of three isolated
components. Social and emotional development are critical components of nearly all career
competency models.

The last four grades 9-12 can provide more intensive opportunities as the career portion of each
student’s success plan. There are a number of elements that can be included, many of which are
discussed in other parts of this guidance. Most of all, the career elements of the student success plan
can and should be incorporated into the Career Pathways system components.

Ensure full preparation and support of students as part of the career pathways system.

The first six years of children’s schooling is often ignored by the workforce system. In fact, as the first
section shows, there are at least three activities that can be used within the school curriculum and in
after school programs to help prepare young people for career exploration beginning in Grade 6.

But, beginning in Grade 6, exploration can become more deliberate. Grade 6 is the beginning of the
Student Success Plan. As a result, the plan each year can have one or more intentional efforts included
as part of each student’s plan. In grades 6-8 there are at least five elements that can be part of each
year’s plan.

Student Success Plan: The plan begins in Grade 6 and is used to guide each student’s efforts, curricular
and extra-curricular. Below are the three components.

I. Academic Development
   A. Rigorous Courses Linked to Interests, Skills & Career Pathways
   B. Courses For The Attainment of Education &/or Career Goals
   C. Successful Completion of Portfolio/Capstone Project
   D. Support & Assessment of Student Progress With Mentor/Advisor
   E. Timely Intervention & Student Support

II. Career Development
   A. Interest and Ability Inventories
   B. Career Exploration and Interest/Career Courses
   C. Post Secondary Education and Career Pathway Development

Other Recommended Elements
   • Experiential Learning (i.e., Work-based learning, community service, capstone project)

III. Social, Emotional & Physical Development
   A. Self-regulation and resiliency
   B. Positive Peer Relationships
   C. Broadened awareness of self within a global context
   D. Healthy and safe life skills/choices
Partner with workforce professionals to support employer engagement and work experience

It has been evident in discussions with many school and educational officials that many, if not most school systems do not have the expertise or resources to bring the wide range of career readiness and employer engagement activities into their systems. Meanwhile, there are numerous organizations that have such expertise and resources already being devoted to employers and workforce development.

Some of the partners currently used by school districts include:

- Regional workforce boards
- Connecticut Business and Industry Association
- Chambers of commerce
- Business and professional associations including Junior Achievement and 4H Clubs
- Other community organizations, especially those with experience in summer youth employment programs
- One-Stop centers located throughout Connecticut
- Individual businesses and organizations

For most of the potential partners, a major portion of their work involves the business and non-profit community. They may or may not have any formal job shadowing, work experience, or internship programs. However, they can contribute to the development of various program components: field trips to employers, job shadowing, career fairs, mock interviews, and career competency/work readiness training in addition to supervised work experiences, internships, and capstone internships. They can also reach out to employers with whom they have connections to ensure there are enough opportunities for students as they progress through grades 6-12. These partners can assist in the management and implementation of the program and help link career-related programs and specific career needs to curriculum (see Classroom to Career paper). One example of such a partnership is that between Capitol Workforce Partners and the Hartford Public Schools. Another is the internship partnership between the Boston PIC (the regional workforce investment board) and the Boston public schools.
Engagement with and preparation of employers

Outreach and engagement of the employer community is essential in the development and implementation of career focused programming. A coordinated outreach to the employer community is needed vs. a multitude of organizations approaching businesses for internships, job shadowing and other work-based learning opportunities. There needs to be a menu for the employers.

Engage in co-planning, orientation and monitoring between schools and employers to ensure optimal experience for student and company (Student Worksite Learning Plan). Consider employer intermediaries.

Provide employer guidebook and guidelines for internship program (timeframes, roles, responsibilities, key contacts) and document clearly the roles and responsibilities of student, school advisor, employer, others.

Schools work with an assigned workplace supervisor to ensure the Student Worksite Learning Plan is supported.

Several of the best practices noted in the call-out boxes (e.g., Byram Hills, Boston PIC) have specific frameworks that they use to engage employers and work with them to create a system. The National Academy Foundation has a number of resources in this regard and provides an approach to engaging employers in internships and in helping a school develop the types of curricula that will improve student preparation for the world of work.

Below are several recommendations for furthering the development of employer relationships.

- Develop a strategic and directed marketing approach to employers outlining the work-based learning opportunities across district and ways to get involved.
- Use school themes to attract business partners.
- Utilize existing employer intermediaries such as chambers, regional workforce boards.
• Create an Employer Advisory Group of key business leaders to provide input into the employer outreach efforts and serve as “anchor” industry supporters of the Capstone-aligned internships.
• Consider growth sectors
• Develop a strategic and directed marketing approach to employers outlining the work-based learning opportunities across district and how the internship program is a tool to develop the future work force.
• Develop a marketing strategy that expands employer participants including small and mid-size, as well as, large organizations and key sectors (e.g. technology).
• Use school themes to attract employer partners (see National Academy Foundation)
• Utilize existing Employer Advisory Groups of key business leaders to provide input into the employer outreach efforts and serve as “anchor” industry supporters of the internships and other work-based learning experiences.
• Engage in co-planning, orientation and monitoring between schools, employers and employer intermediaries to ensure optimal experience for student and company (e.g. Student Worksite Learning Plan, see Byram Hills website).

**Identify the role of early college.**

Research (Struhl and Vargas, 2012; Swanson, 2008; Karp, M. M., Calcagno, J. C., Hughes, K. L., Jeong, D. W., and Bailey, T., 2007) suggests that dual enrollment programs have both positive short- and long-term effects on high school students’ achievement and completion in high school and college.

Data suggest, that student participation in dual enrollment is positively related to earning a high school diploma, enrolling in college and more specifically, enrollment in a four-year institution, and for four-year college enrollees, full-time enrollment. Students who participated in dual enrollment in high school were significantly more likely to persist and achieve in college, as measured by persistence to the second semester and GPAs, respectively. And in one study, three years after participation, GPA and credit accumulation in the third college year were higher for dual enrollment students than non-dual enrollment students. A relationship was noted between intensity (two or more dual enrollment credits) and full-time college enrollment, persistence to year two of college, GPA after the second college year, and progress towards a degree.

Swanson (2008), analyzing data available from the National Education Longitudinal Study of 1988 (NELS:88) and the Postsecondary Education Transcript Study (PETS:2000), asserts that dual enrollment positively affects “academic momentum” toward a college degree in a statistically significant way.\(^4\)


\(^5\) B. A. Boecherer, *Defining your concurrent enrollment programs for others: Growth and development* (Keynote address at the 35th Annual Cooperative Academic Partnership Program (CAPP) Conference, University of
Swanson posits that students who participate in dual enrollment programs may anticipate their status as, and acquire the mindset of, college students. Success in college level courses while in high school may reinforce student’s expectations of achievement as college students.

Accumulating credits in high school may have created a “nest egg” effect, thereby influencing students’ decisions to remain in college and creating a positive outcome for dual enrollment participants in postsecondary education.\(^5\)

<table>
<thead>
<tr>
<th>CCP Student Success Measures*</th>
<th>Manchester Community College</th>
<th>Fall 2006-Fall 2010</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Retention</strong></td>
<td>Return Spring</td>
<td>Return Fall</td>
</tr>
<tr>
<td>CCP</td>
<td>86%</td>
<td>68%</td>
</tr>
<tr>
<td>Not CCP</td>
<td>77%</td>
<td>57%</td>
</tr>
<tr>
<td><strong>Dean’s List</strong></td>
<td>Cohort Term</td>
<td>Term+1</td>
</tr>
<tr>
<td>CCP</td>
<td>14%</td>
<td>12%</td>
</tr>
<tr>
<td>Not CCP</td>
<td>10%</td>
<td>10%</td>
</tr>
<tr>
<td><strong>Probation-Suspension</strong></td>
<td>Cohort Term</td>
<td>Term+1</td>
</tr>
<tr>
<td>CCP</td>
<td>18%</td>
<td>17%</td>
</tr>
<tr>
<td>Not CCP</td>
<td>31%</td>
<td>29%</td>
</tr>
</tbody>
</table>

\(^*\)new full-time students v. comparison group

In Connecticut, there is also some evidence that dual enrollment has an impact on student persistence and achievement in college. UCONN Early College Experience program data also indicates that, from Fall 2005 through Fall 2010, academic achievement was associated with ECE status. First and second semester college GPAs for ECE Alumni during that time period were within the 3.0 to 3.2 range whereas non-ECE Alumni achieved within the 2.7 to 2.9 range.\(^6\) According to the University of Connecticut Early College Experience data, “UCONN ECE Alumni who matriculate to UCONN graduate earlier than students who do not participate in the program.”\(^7\) Program data also indicate that UCONN ECE Alumni graduate at higher rates than students who are not UCONN ECE Alumni.

There are three (3) major dual enrollment models (Career Pathways Program, UCONN Early College Experience, and Advanced Placement) in the state, and each serves a significant number of students.

According to Jobs for the Future (JFF), there are six elements that are central to a comprehensive dual enrollment policy. They include:

- broad multidimensional eligibility and access;
- guidelines to ensure that course content, student assessments, and instructor qualifications meet college standards;
- guidelines for comprehensive academic and social supports;
- funding mechanisms based on the principle of no cost to students and no financial harm to secondary and postsecondary partners;

---

\(^{5}\) Swanson, p. 3.


\(^{7}\) Ibid.
• individual student and state-level data to monitor, report on, and set goals for participation; and,
• metrics for dual enrollment or college credit in their accountability systems.

JFF suggests that many of the elements are not in evidence in Connecticut (Appendix A). Also, the availability of programs is not consistent across districts and schools. Data is important in order to understand access to these opportunities, enrollment in various models and effectiveness with different populations of students.

**Engage parents, family and supportive adults.**

Research (Blustein, 2004; Brown, 2004; Keller, 2008; Whiston and Keller, 2004) suggests that parents may have profound influence on their children’s career choices by providing them with career-related information, resources and support for decision-making; sharing values related to the workplace; and, serving as role models. While youth may be beginning to find their own path and exerting their independence, parents are still significant to their decision making. This can cut both ways. Parents can provide information, encouragement and support for their youth to pursue their own aspirations; yet, some parents might also constrain their youth’s choices or transmit their own biases and attitudes through both direct and indirect means. We can see these, and broader societal influences, in the underrepresentation of women, Latinas and African American youth in specific fields of education and the workforce (such as STEM).

It is, therefore, essential that parents have access to current information about the breadth of careers, the pathways to successful transitions to education and the workplace, and how to best communicate with and guide their children. Helping youth to think critically about their choices and the educational requirements associated with specific careers is important, as is helping them to connect with other family and supportive adults who can provide a wider range of insight into their own education and occupational paths, and encouraging them to use the counseling staff available at their middle and high school. Family and friends can serve as role models to youth; these relationships may not be as weighted with parental expectations. Kerka (2000), citing Way and Rossman (1996a), suggests,

> By sharing workplace stories, expressing concern for children’s future and modeling work behaviors, parents serve as a context for interpreting the realities of work (p. 1).
The impact of gender, race, ethnicity, immigration status and social class on educational and occupational choices can be significant; stereotype threat must be countered so that youth do not experience lessened self-efficacy and lowered aspirations. Parents, families and other supportive adults should teach youth to be resilience in the face of overt and covert discrimination and prejudice. Additionally, parents who are underrepresented in higher education or in certain career paths may be less familiar with preparation for training beyond high school or may not know how to begin conversations about college and careers with their youth. Educators and others must work with parents to use their own strengths, giving them the information and skills to best discuss options with their youth.

In addition to parents and family, community-based organizations can play a key role in both knowledge and skill-building. Counselors, teachers and community organizations can include parents, family and the community by engaging them in career development sessions; by offering educational sessions with parents and families to bolster communication and increase student autonomy; and, by partnering to provide job shadowing experiences, informational interviewing and student employment.

**Identify the role of credentialing**

Credentialing is a means of connecting education with the world of work. It sets common standards for achievement that employers and other educational institutions recognize and gives the K-12 and post-secondary systems and employers a common language and common set of expectation. Connecticut is just beginning to have discussions about the place of these credentials. The technical high schools have begun to implement programs that give students access to National or State credentials.

Other aspects of credentialing are equally important. National credentials are portable (e.g., school-to-school, school-to-work, school-to-college). Nothing is more wasteful in education that the circumstances when one organization or institution does not recognize the certifications of another institution, forcing the individual to retake classes or relearn skills, often at considerable cost to the student. One of the more obvious examples of this is training in the military. The certifications that the military provides for individuals are often not recognized by employers or colleges, leaving a gap that veterans must bridge at their own expense.

While students will obtain most of the credentials in a variety of post-secondary activities, some credentials may be important to include along with career and work experiences. Most credentials are specific to particular career areas. Examples of those are included in the footnote at the bottom of this page. The more generic recognized standard is the National Career Readiness Certificate (NCRC).

- Nationally recognized credentials are portable and ease the transition between school and work.
- Based on approaches similar to Capital Workforce Partner’s career competencies curriculum and/or national recognized standards (e.g. National Career Readiness Certificate-NCRC), consider the establishment of a work readiness credential.
- Utilize credentialing approaches already in place at Connecticut’s technical high schools.
Determine the appropriate mix of in-service and pre-service trainings necessary for teachers and counselors to successfully carry out their supporting roles.

The guidelines thus far, have focused largely on the role of external partners. As in nearly all school-related initiatives, teachers and counselors are critical partners. However, both groups have a wide range of responsibilities. Many of those responsibilities do not connect directly with career initiatives. Counselors often focus on behavioral issues and college advising. Teachers focus on the academic requirements students must meet including the regular standardized testing. Combined with the use of outside organizations to support most of the career work, there is often no connection between the career and work experiences students have the academic experiences on which they focus most of their time.

Nonetheless, most experts believe that the teachers and counselors ought to have training and/or support for career related education. If the approach is to provide training, teachers can receive training as pre-service or in-service. Pre-service training requires engaging the schools of education in Connecticut’s post-secondary system to modify curriculum to provide training as a matter of course for teachers obtaining a degree in the state. In-service training presents other challenges. It requires post-training support and materials that support implementation of what has been learned. The in-service training certainly needs to go beyond classroom learning. A range of creative lesson plans with supporting materials should be a major supplement to in-service training. According to the research, in-service should:

- be spread over time,
- be collaborative,
- use active learning,

Credentials

Most Automotive Technology students graduate with certification from the National Technicians Education Foundations (NATEF) and Automotive Service Excellence (ASE). All students in Carpentry, Plumbing, HVAC, Masonry and Electrical graduate with OSHA 10 and Ladder and Scaffolding Safety certification from the Occupational Safety and Health Administration (OSHA).

Culinary and Hospitality students receive ServSafe Certification from the National Restaurant Association (NRA). Baking students will earn the certification beginning this year. Health Technology graduates are certified in CPR and First Aid. Manufacturing students graduate with National Institute of Metalworking Skills (NIMS) Level I credentials. Information Systems Technology students earn A+/Networking and Microsoft MOUS Certifications.

• be delivered to groups of teachers,
• include periods of practice, coaching, and follow-up,
• promote reflective practice,¹
• encourage experimentation, and
• respond to teachers' needs.

Pre-service training should make support materials available to students, especially when they obtain their first positions in a Connecticut school system.

*Identify appropriate technology and resources to make career exploration and exposure accessible to all students.*

Many school districts use various written and online resources to assist students, their counselors, educators and families in gathering information, assessing interests and exploring career pathways. Yet, these resources are not available in all schools in Connecticut; and we must find a way to make both low (printed materials and classroom visits) and high technology (via the internet) resources available to all students. The importance of a visiting scientist or author or performer spending time discussing their educational and career paths with a classroom of students can help students to see a possible self. And while these experiences do not require smart boards, it is necessary to give schools the personnel and time to make the connections to bring the world of work into the classroom and arrange for field trips to places of business.

In terms of e-communication and programs, there are many options in proprietary college- and career-directed software; examples of widely subscribed programs in the state include Naviance (http://www.naviance.com) and Career Cruising (http://public.careercruising.com/us/en). Many Connecticut districts are using these software programs to provide an interactive experience to their students and are a vital part of development of a Student Success Plan.

DO-IT Student Lounge
http://www.washington.edu/doit/Student/index.html

A resource for students with disabilities, The DO-IT (Disabilities, Opportunities. Internetworking and Technology), Student Lounge provides information about resources, programs and events that helps students with disabilities to prepare for college and careers, and helps their teachers, employers, families and mentors to better assist in career and college exploration. Students can participate in online career exploration, networking communities and mentor relationships.

Colleges and employers offer information (online) that is current and relevant about labor market information and the types of jobs offered. Non-profits engaged in youth development also have sites which provide rich information about career paths, with narratives from professionals. For example, CBIA’s Education Foundation (http://www.cbia.com/edf/) offers free downloads of their Career Pathway video series (including teacher guides) which can be a great resource to students, teachers, parents and youth development practitioners. Additionally, Capital Workforce Partners has developed a website, Career Competencies (http://careercompetencies.org/), for their program partners, students,
educators, parents and employers on which it shares its curriculum and toolbox, as well as links to resources.

Other sites of interest include:

**For students and adults**

Drive of Your Life: [www.driveofyourlife.org/](http://www.driveofyourlife.org/) (interactive)


**For adults**


### Appendix A: Connecticut Alignment with Model Policies

<table>
<thead>
<tr>
<th>Policy Element - Eligibility</th>
<th>In evidence</th>
<th>Not in evidence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eligibility requirements are determined by the secondary and postsecondary sectors together.</td>
<td>The community college and the school district provide admissions guidelines within certain parameters.</td>
<td>Postsecondary institutions determine eligibility requirements for concurrent enrollment programs.</td>
</tr>
<tr>
<td>High school students can participate in college courses based on their proficiency in those subjects, even if they are not proficient in others.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Eligibility is determined by a combination of tests, end-of-course grades, teacher recommendations, and student academic work.</td>
<td>Eligibility criteria provide multiple ways for students to become eligible for dual enrollment. For example, if students are unable to meet the minimum score on the ACT/SAT, they can still qualify for concurrent enrollment based on GPA and class rank.</td>
<td>Eligibility is determined by a student’s scholastic average and the principal’s recommendation.</td>
</tr>
<tr>
<td>Students have the opportunity to take college courses for dual credit so they earn both high school and college credits upon successfully completing courses.</td>
<td></td>
<td>Courses at an institution accredited by the Department of Higher Education will be counted for half a high school credit. It is unclear how college credits for courses are assigned. At the district level, schools can but are not required to offer concurrent or supplemental credit for high school courses taken at community colleges.</td>
</tr>
</tbody>
</table>

---

<table>
<thead>
<tr>
<th>Policy Element - System for Accountability</th>
<th>In evidence</th>
<th>Not in evidence</th>
</tr>
</thead>
<tbody>
<tr>
<td>College courses offered within secondary schools use the same syllabus and exams as comparable courses taught on a college campus.</td>
<td></td>
<td>Not set in state policy.</td>
</tr>
<tr>
<td>The postsecondary institution conferring credit sets the qualifications for faculty teaching courses taken for dual credit.</td>
<td></td>
<td>Not set in state policy.</td>
</tr>
<tr>
<td>Funding policies to support dual enrollment in the state create incentives for school districts to partner with institutions of higher education to offer dual credit opportunities for students.</td>
<td></td>
<td>The fact that postsecondary institutions pay all tuition costs and fees for high school students participating in dual enrollment programs could serve as a disincentive for these institutions to partner with high schools to offer college course-taking opportunities to high school students.</td>
</tr>
<tr>
<td>Funding policies for dual enrollment support access for low-income high school students who are interested in taking college courses. Funding streams are flexible enough that funds can be used for professional development, books, lab fees, and student transportation.</td>
<td>Postsecondary institutions pay all tuition costs and waive all fees for high school students participating in dual enrollment programs in Connecticut.</td>
<td>It is up to the discretion of individual school districts as to whether or not they will pay the cost of textbooks and transportation for college courses taken by high school students. If a district decides to decline support, the cost of books and transportation is borne by students and families.</td>
</tr>
<tr>
<td>States should designate a state board or governing body as having the authority and responsibility to guide dual enrollment policy, and develop an administrative structure to provide support to program leaders and dual enrollment partners.</td>
<td></td>
<td>The Board of Trustees approves the establishment of community college and high school partnerships programs, but Connecticut does not have a state administrative structure devoted specifically for supporting dual enrollment.</td>
</tr>
<tr>
<td>States should report annually on dual enrollment participation and impact.</td>
<td></td>
<td>The state has no policy on dual enrollment reporting.</td>
</tr>
<tr>
<td>Policy Element-Aligned Data Systems</td>
<td>In evidence</td>
<td>Not in evidence</td>
</tr>
<tr>
<td>-------------------------------------</td>
<td>-------------</td>
<td>----------------</td>
</tr>
<tr>
<td>States should develop a unit-record statewide data system that identifies dual enrollees by demographic characteristics and monitor student progress longitudinally across the K-12 and higher education systems.</td>
<td></td>
<td>Neither the state K-12 nor postsecondary data systems can identify dual enrollees.</td>
</tr>
<tr>
<td>States should require that districts and postsecondary institutions specify and document key roles and responsibilities in a memorandum of understanding or cooperative agreement.</td>
<td></td>
<td>Community colleges may enter into agreements with superintendents of schools or area districts, directors of vocational-technical high schools, and the administrative heads of parochial high schools. However, such agreements are optional and not mandated by state law.</td>
</tr>
<tr>
<td>States should require each dual enrollment partnership to provide a liaison between high school and college partners, with responsibilities for advising students, assisting with course scheduling, and linking students to support services.</td>
<td></td>
<td>The college must provide for academic advisement and support services to dual enrollees, as well as assist students in class selection during the preregistration process. These supports notwithstanding, policy does not mention provisions for a college liaison.</td>
</tr>
</tbody>
</table>