

PROGRAM YEAR 2009-2010

PERFORMANCE REPORT

ON

**CAREER AND TECHNICAL EDUCATION
IN NEW HAMPSHIRE**

New Hampshire Department of Education

I. Implementation of State Leadership Funds

Required Uses of Funds:

Assessing Career and Technical Education Programs

Secondary programs in early childhood education, business, and marketing received close attention this year. These programs were selected for reviews based on overall enrollments, program diversity, and links to postsecondary programs. The competency profile for business programs was also reviewed to determine how well it has been implemented. The reviews of these programs will continue into next year as further work needs to be completed. Overall, the statewide programmatic reviews began are expected to continue in the years to come.

In conjunction with Program Advisory Boards, curriculum and program reviews are conducted annually by the Community College System of New Hampshire (CCSNH). This review of programs also addresses the need for the development of new programs, the improvement of programs, and considers the modernization and expansion of capacity needs of every program. The colleges follow the established procedures for new program development established through the CCSNH Academic Policies. This policy requires the colleges to submit a comprehensive program proposal, including a needs analyses, marketing plan, and impact study on colleges both external and internal to the CCSNH system. Final review is made by the CCSNH Leadership Team, and ultimate approval is made by the CCSNH Board of Trustees.

Developing, Improving, or Expanding the Use of Technology

Instructors gained a superb tool for tracking student's competency attainment during the year. New Hampshire has created a web-based resource for teachers to keep up to date about the competencies in their program areas. They can consult the website to review competency attainment standards, update their curricula and assessments, and keep accurate records on the progress made by their students. Once the student-level data is entered, teachers and administrators can generate reports broken out by a number of levels, including student, class, instructor, and secondary

school/center. These reports provided valuable information for instructors, guidance counselors, and school/center administrators.

Professional development was provided to secondary and postsecondary instructors in information technology programs. In some cases, this was the first time representatives from both educational levels met for the purpose of aligning their curricula. Attendees learned how to link their curricula into programs of study—including dual credit options—to help secondary students prepare for college.

Online course delivery increased once again this year in the community college system. There was a continued increase in online course offerings from the previous year resulting in increased online registrations. Total online registrations increased by more than 10% from last year. All consortium colleges will continue to develop, expand, and assess the quality of their online offerings, which now stand at approximately 500 online and hybrid courses.

Offering Professional Development

During Program Year 2010, a series of eight professional development trainings were provided in program areas addressing the development, improvement, or use of technology. These trainings cut across a number of program areas involving the application of technology. These trainings were in the following program areas:

- Information technology (described above),
- Horticulture,
- Manufacturing,
- Culinary arts,
- Graphic arts,
- Finance,
- Automotive, and
- General office/business.

Most of this professional development satisfied multiple required uses of State Leadership funds and may be mentioned again later in this narrative.

Considerable professional development was also provided for staff at the New Hampshire Department of Corrections. This effort is described in more detail later in this report.

Integrating Academics with Career and Technical Education

State Leadership funds were again used to make better use of CTE in developing local secondary Alternative Learning Plans (ALP) for students. State leadership funds were used to leverage State funding for dropout prevention in districts with high dropout rates. The statewide Dropout Prevention and Recovery Council formed partnerships with local CTE centers in developing alternatives for students. During the year, professional development was then provided to local educational agencies on methods of integrating CTE into students' alternative learning plans.

For another year New Hampshire used the National Research Center for Career and Technical Education's Math-in-CTE model to integrate academics with CTE. Starting with a five-day workshop in July, CTE instructors and academic math teachers formed teams that collaborated for the full year on implementing the model. Teams met four times throughout the year to learn methods of integrating math content into CTE curricula. The CTE program areas involved in this project included: culinary arts, marketing, building trades, and automotive.

Exposing Special-Population Students to High-Skill, High-Wage Occupations

College recruiters for nontraditional programs visited secondary schools across the state to bring awareness to provide students with information about opportunities made possible with nontraditional programs. Individual college campuses have put supports in place for students pursuing programs that are nontraditional for their gender. Some campuses complimented state leadership efforts by subsidizing tuition grants, and providing counseling and mentoring to help students overcome gender-based hurdles and complete their programs.

With funding from the National Science Foundation, the Community College System of New Hampshire (CCSNH) collaborated with secondary CTE and academic faculties on a pilot effort to promote STEM Equity throughout secondary and postsecondary programs in NH. One representative from each individual college served on the committee designed to increase the participation of students with

disabilities, racial/ethnic populations, and students in fields non-traditional for their gender,

New Hampshire was one of the two states involved in the STEM Equity Pipeline initiative for the third year. Activities included technical assistance in areas such as mobilizing state teams to oversee piloting and implementing the initiative and accessing assistance from experts in the field. Professional development was also provided in the initiative's five-step program improvement process.

Supporting Partnerships

Partnerships participating in the Rigorous Program of Study project produced agreements between secondary and postsecondary programs in Accounting and Health Science. Articulated competencies, dual-enrollment agreements, and supporting documents were finalized with the assistance of industry representatives, college faculty, and secondary administrators, faculty, and guidance counselors. These articulations will now be used by high school guidance counselors when developing career pathway plans with students.

Eight out of the ten professional development workshops listed above involved partnerships among attendees. Much like the Rigorous Plans of Study project, the purpose of these trainings was to match secondary CTE educators with postsecondary faculty in the same program areas to create dual-credit options for students. Constituents at these events included secondary guidance counselors who would promote the opportunities available with dual-credit courses when advising students on their plans after high school.

Representatives from secondary and postsecondary education also worked closely throughout the year to increase articulation agreements and dual enrollment opportunities for students. The Career Pathway Plan of Study (CPPOS) workshops that took place across the state allowed for collaboration among educators and laid the foundation for developing a seamless transition from high school to further education. Collaboration between these groups in the Syllabus Development workshops have allowed for a better understanding of postsecondary expectations.

To strengthen connections between secondary and postsecondary programs, the New Hampshire Department of Education also made such connections a core requirement of new secondary CTE programs. Connections with key stakeholder groups have always been required of new programs, but the addition of linkages specifically between postsecondary institutions and secondary CTE centers were given more attention as the State has moved increasingly toward the programs of study framework emphasized in Perkins IV.

Serving Individuals in State Institutions

Three grants were awarded to correctional institutions in Program Year 2009-10, two of which went to the same institution. As in recent years, New Hampshire awarded grants by gender. The reason for this policy was to ensure that programs supporting women have equity with grants serving men. Two gender-based grants went to the Strafford County Department of Corrections: an \$11,140 grant to serve women and an \$18,450 grant to serve men. The third award went to the Merrimack County Department of Corrections in the amount of \$9,126 to serve inmates of both genders as the county does not segregate inmates in CTE programs. As these grant amounts indicate, men's programs received more funding than programs for women inmates, evidencing the need for more work on gender equity.

The New Hampshire Department of Corrections received extensive professional development in a series of meetings during the year. Over the years, the department has received numerous grants under the State Institutions category of State Leadership support. Usually, the grants were used for equipment purchases, and for programs that serve men.

Professional development focused on expanding program offerings for the inmate populations. After looking into five new career clusters for expanded offerings, the department selected two clusters to pursue in the short run: marketing and graphic arts. Programs reserved for the long run included hospitality/culinary arts, horticulture, and information technology.

Preparing Students for Nontraditional Occupations

The STEM Equity Pipeline initiative expanded statewide capacity to prepare students in occupations nontraditional for their gender. As mentioned earlier, New Hampshire completed its third year in the initiative, providing schools with professional development for teachers and technical assistance for schools and colleges.

Close to one half of all administrators of secondary CTE centers in New Hampshire feel professional development is important (32%) or very important (16%) to the success of nontraditional programs. Of these same administrators surveyed in 2009, peer influence was seen most often (63%) as important in student participation, while role models was seen second most often (48%) as important. These and other survey findings were reviewed for designing improvements in nontraditional programs during the following year.

A frequently asked questions document was developed over the year to accurately describe and clarify misconceptions about special populations, especially at the state correctional institution for women. Too often, special populations were narrowly conceived as either students with disabilities or students in programs nontraditional for their gender. The FAQ laid out the full set of six special population subgroups identified in Perkins IV. Most importantly, the FAQ suggested activities and considerations to keep in mind when planning ways to meet the needs of all special populations.

Offering Technical Assistance to Eligible Recipients

Together with State Alternative Education funds, State Leadership funds were used to provide technical assistance in dropout prevention and recovery to ten secondary schools, three of which were charter schools. One of the more creative partnerships in this effort was the Virtual Learning Academy Charter School. The school developed systems that allowed students to gain core academic credits through extended learning opportunities, which blend hands-on experiential opportunities with on-line coursework that the charter school provides.

The Department of Education developed frequently asked questions documents for secondary administrators that described competencies, clarified misconceptions about competencies, described how to report information on students' attainment of

competencies, and illustrated ways to use reports based on this information.

The occasion prompting the release of these FAQ's was implementation of a significantly updated set of competency statements. The statements identified the knowledge, content, and skills that students need to attain for particular CTE programs. These competency statements were presented at training sessions and made available on the web at <http://www.education.nh.gov/data/pplus.htm>.

A similar document for teachers will be released in Program Year 2010-11.

Permissible Activities:

Providing Guidance and Counseling Assistance

Staff from secondary CTE centers and all community colleges participated in workshops on New Hampshire's model for programs of study, Career Pathway Plans of Study (CPPOS). These trainings were designed for teams representing secondary and postsecondary programs. Teams learned how to design CPPOS's that inform students and parents of the secondary courses that students need to take to be well prepared for programs. Feedback from workshop participants indicated overall satisfaction with the program, with participants frequently reporting improved relations between the secondary centers and postsecondary institutions.

Establishing Agreements between Secondary and Postsecondary CTE

Each of the eight professional development workshops mentioned earlier in this report addressed specific program/cluster areas, but all had the underlying theme of establishing secondary-to--postsecondary connections. The backbone of CPPOS's were agreements between secondary and postsecondary programs that included articulation agreements and formal agreements governing dual-credit opportunities. These agreements formed the core of the Running Start program offered by the community college system, where secondary students could earn college credit at significantly reduced cost to the student.

By the end of PY 2009-10, there were 337 secondary CTE programs in New Hampshire, of which 11% had CPPOS's in place. One third (32%) of the 337 programs statewide had articulation agreements, of which 34 were newly developed or renewed during the year. The Running Start program had 13 dual-credit agreements between the CCSNH and 13 secondary CTE centers.

Supporting Partnerships with Business

One of the more effective state-level initiatives that attracted significant numbers of business partners was the Rigorous Plans of Study project. New Hampshire received a federal grant for two years, the second of which was PY 2009-10. Throughout both years, the project has resulted in numerous partnerships with business. The project focused on health care and accounting, and not surprisingly, the largest number of business partners came from the health sciences and accounting professions, providing generous support and needed direction.

Supporting the Improvement or Development of New Courses and Initiatives

The Department of Education worked with eight secondary centers to gain approval of new CTE programs. As the table below shows, nine applications were submitted for State approval. Two gained full approval and seven were conditionally approved.

Proposed Program	Application Status
Engineering	Full
Cosmetology	Full
Radio & TV Broadcasting Technology	Conditional
Biotechnology	Conditional
Engineering	Conditional
Security and Protective Services	Conditional
Manufacturing Technology	Conditional
Radio & Broadcasting Technology	Conditional
Animal Science	Conditional

Conditional approval meant that the applicant was given one year to finish planning the proposed program.

Providing CTE to Adults and Dropouts to Complete Secondary Education

During the year, New Hampshire joined five other states in receiving a grant to work on dropout prevention and recovery. The National Governors' Association (NGA) granted these competitive awards for one year to each state, starting in January of 2010. In New Hampshire most of the work focused on dropout prevention, with a goal of zero percent dropouts by 2012, the national goal set for states under the NCLB. Among the ten local projects funded with the NGA subgrants, one of the more promising is the development of an early warning system in the Manchester school system for identifying students at risk of dropping out.

Another project supported with Alternative Education funds was the Technology Application Program based in Concord. The program gives at-risk students the option to earn their diplomas through alternative means, especially offering instruction in afternoon classes. Each semester the program offers a combination of CTE and core academics instruction. During the year, the following classes were offered that aligned academic content with CTE instruction:

CTE Program	Academic Subject
Automotive	Mathematics
Construction	Mathematics
Media Arts	English
Forensic Science	Physical Science

In a new, promising venture, the CCSNH partnered with the Virtual Academy to offer web-based instruction. Enrollees could complete their diploma programs and/or recoup lost credits. Through this program, unemployed adult learners could also access instruction that could help them return to the workforce.

Developing Valid and Reliable Assessments of Technical Skills

As resources would allow, New Hampshire continued replacing the older system of local assessments based on state-approved competencies with a newer system of industry based or state-level assessments. The assessments by industry or states were judged to be much more valid because they were developed by employers or state agencies, and reliable because the same test was used under identical protocols each time the test was offered. Additional detail on this work is described in the next section of this report.

Developing and Enhancing Secondary Postsecondary Data Systems

The definitions used for gathering and reporting Perkins-related data have gone through a number of revisions, particularly at the secondary level. These revisions include:

- 1S1 and 1S2: The use of indices rather than percentages to align with New Hampshire's NCLB accountabilities;
- 2S1 and 6S2: Expanding accountability from senior concentrators to all concentrators;
- 3P1: Removing the earning of a degree from accountability in favor of the leaving of postsecondary education.
- Tech Prep Student: Shifting the threshold defining tech prep students from the 50% point of secondary instruction to enrollment in postsecondary education.

New Hampshire made significant strides in systems for submitting and reporting secondary CTE data. The new database for collecting CTE data, the Career and Technical Education (CATE), system, was fully implemented statewide after being piloted in five secondary centers during PY 2008-09. CATE serves as the portal for submitting secondary information on CTE programs, instructors, and students. Staff from all centers received extensive training on use of CATE throughout the 09-10 year.

Complimenting CATE was the introduction of Performance Tracker, a system for conducting assessment and generating reports on CATE data. Through Performance Tracker, the secondary center administrators and instructors gained access to information for all students enrolled in CTE programs at their center. Another capacity introduced through Performance Tracker was the ability to record

and track students' attainment of program competencies. In addition, instructors could access Performance Tracker online for the most current program competencies.

Recruiting and Retaining CTE Educators

To meet the demands of increased enrollment throughout the community college system, the Colleges actively recruited qualified adjunct faculty members from business, industry, and educational institutions to teach career and technical program requirements. A number of these adjunct faculty members have been recruited from the ranks of program advisory committees so they were very familiar with the college programs.

During the year, the colleges had a number of ways to assist these adjunct faculty members, who may have had limited teaching experience, to transition to the postsecondary educational environment. For example, Nashua Community College provided an Adjunct Faculty Training Program (ATP) which was structured to meet the needs of inexperienced faculty members. The ATP has been very successful since its inception three years ago. In another instance, the Office of Online Learning and The Center for Teaching and Learning at Manchester Community College continued to provide a variety of workshops and other experiences supporting teaching in the CTE programs.

During the program year, the Manchester Center for Teaching and Learning offered workshops on classroom assessment techniques, active learning strategies including group discussion, and teaching the students of today. At Lakes Region Community College, computer training sessions on Blackboard were offered throughout the academic year along with advising workshops. Also, Department Chairs and Program Coordinators spent considerable time supervising and mentoring adjunct faculty members across all campuses to ensure that faculty meet expectations.

II. Progress in Developing and Implementing Technical Skills Assessments

New Hampshire reported the results of technical skills assessments (2S!) for two program areas, one based on industry standards and the other on state-level credentials. The industry based assessments were closely aligned with the National Automotive Technicians Educational

Foundation's skill standards and accepted. Passing these assessments was accepted as evidence that students have completed Automotive Mechanics programs. Credentials attained through state assessments for Licensed Nursing Assistants and Emergency Medical Technicians were accepted as evidence that students have successfully attained competencies for Health Professions programs.

III. Implementation of State Improvement Plans

New Hampshire exceeded all of the postsecondary accountabilities, but failed to meet the 90% threshold on three of the secondary accountabilities: English/language arts, mathematics, and technical skills attainment.

Unfortunately, the academic attainment data for the two NCLB indicators are reported as percentages, but New Hampshire's goals for both are expressed as indices. Further calculations are needed to re-express the academic attainment results into the indexed form. The effect of such calculations will be to increase the value of the numerators, which will bring one or both of the indicator performance levels above the 90% threshold. An improvement plan(s) will be developed if these calculations do not raise statewide performance above the 90% thresholds.

Current reporting on students' attainment of technical skills needs improvement. Some of the third parties administering skill attainment assessments provide data that may be incomplete, thereby pulling performance down by undercounting students achieving successful outcomes. An example of this is the health sciences programs. The Nursing Licensing Board will not release information on which students sat for the assessments and which passed. Moreover, many students sit for these exams after the school year is over. Currently, data for these exams is provided by the secondary centers, based on plans that students report when they graduate. More complete data on performance on these exams will increase the number of students counted as "successes" as measured by the nursing board's exams.

IV. Implementation of Local Program Improvement Plans

Secondary CTE centers that were unsuccessful at making the 90%-threshold for any of the indicators developed performance improvement plans for implementation during School Year 2010-11. Not surprisingly,

indicator goals not met at the statewide level were the same indicators that eligible recipients missed at the local level: English/language arts, mathematics, and technical skill attainment.

Improvement strategies for the two NCLB accountabilities stressed either curricular improvements or the introduction of programs that are more challenging, such as programs that focus on STEM competencies. The latter strategy is intended to raise academic performance, not by strengthening the curricula of existing programs, but by recruiting students who are more likely than the current CTE student body to attain proficiency on the two NCLB indicators.

Secondary centers that performed poorly on their accountability for technical skills attainment will work on improving the completeness of their performance reports. The State will partner with these centers, both as a resource for technical assistance and as an intermediary with the third parties that conduct the assessments.

V. Tech Prep

Tech Prep funds were granted on a non-competitive, formula basis. Grants were allocated on the basis of work that each consortium was to complete for the following year. The work to be accomplished was negotiated between the State and each consortium.

Three consortia received Tech Prep funds. The following chart identifies these consortia and their respective grant amounts:

Consortium	Grant Amount
North Country Tech Prep Partnership	\$141,000.00
Eastern Region Tech Prep Partnership	\$120,000.00
Information Technology and Manufacturing Partnership	\$123,933.97

Tech Prep students' performance on the secondary performance indicators varies widely in terms of exceeding the goals. Performance on placement exceeds the goal by the largest margin, where close to three out of ten Tech Prep students were successfully placed in continuing education, employment, or some combination thereof. At the other extreme is the performance of Tech Prep students on the mathematics assessment and on technical skills attainment.

Indicator	Tech Prep	State Goal	Variance
Reading/Language Arts	68.62 pts.	84.00 pts.	-15.38 pts.
Mathematics	24.34 pts.	58.00 pts.	-33.66 pts.
Technical Skills Attainment	10.18%	47.89%	-37.71 pts.
Secondary School Completion	88.10%	86.78%	1.32 pts.
Graduation Rate	92.87%	76.00%	16.87 pts.
Placement	87.08%	55.67%	31.41 pts.
Nontraditional Program Participation	22.42%	22.38%	0.04 pts.
Nontraditional Program Completion	25.70%	15.85%	9.85 pts.

On the four secondary Tech Prep accountabilities students were most likely to have positive outcomes on the postsecondary enrollments and the dual credit measures. In both instances, close to one out of five Tech Prep students attained positive results. Most of the Tech Prep students admitted into postsecondary programs enrolled in programs related to their secondary Tech Programs. Fortunately, the fewest proportion of Tech Prep students need remediation upon entering postsecondary education.

Secondary Tech Prep

Indicator	Performance
Postsecondary Enrollment (1STP1),	19.37%
Program-Related Postsecondary Enrollment (1STP2),	14.27%
Certification/Licensure (1STP3),	10.18%
Dual Credit Attainment (1STP4),	19.75%
Remedial math, writing, or reading (1STP5).	5.47%

Data on the performance of Tech Prep students on the four postsecondary accountabilities need to wait one more year. The entering class/cohort of postsecondary Tech Prep students finished their first year in the summer of 2010, but all postsecondary Tech Prep accountabilities pertain to outcomes that take place after graduation.

Postsecondary Tech Prep

Indicator	Performance
Post-graduation Employment (1PTP1), Certification/Licensure (1PTP2), Two-year College Program Completion (1PTP3),	N/P
Four-year College Program Completion (1PTP4).	N/P