Frequently Asked Questions on Competencies and the Use of Data in CTE Teachers
September 7, 2010

Career and Technical Education (CTE) program competencies represent a mechanism for evaluating student performance in content areas. In CTE, each program competency profile document is aligned with national standards which are representative of current practices in business and industry. (e.g., Automotive Mechanics competencies are aligned to NATEF standards, Plumbing competencies are aligned to NAPHCC standards, Agriculture is aligned to National Quality Program Standards for Agriculture Education, etc.) All competencies are also aligned to National Career Clusters Standards and each CTE program is attached to a specific CIP code, to ensure the appropriate competencies are used for a particular program (e.g., Culinary Arts students are scored on Culinary Arts competencies, CIP code is 120500).

Before a program begins the teacher can discuss, review and disperse the program competency profile document to the students. This will assist the students in knowing what is expected in this program and the skills that are expected (or, in some cases, further education) for perspective employment. To achieve proficiency in a CTE program collaboration between the teacher and the students is needed.

At the start of any CTE program, the teacher and the students should all be aware of the knowledge, content and skills associated with each competency within their program. A desired outcome would be for all students to meet the knowledge, content and skills at proficient level. Teachers can use the knowledge, content and skills statements to guide curriculum development and delivery and to monitor student progress. Students can use the same competencies to inform and augment their learning. The use of the program competency profile documents by teachers and students promotes informed learning and helps lead to educational success. Competency documents are available on both the Department of Education's website (http://www.education.nh.gov/career/career/program_compet.htm) and in PerformancePLUS.

Competency guided classrooms are relatively new and there are questions related to the use of competency-based instruction. Additionally, New Hampshire's CTE competencies have served a variety of functions in the past, not all of them feasible or appropriate. This FAQ document is intended to clarify some of the common misconceptions associated with CTE competencies.

Reporting Related Questions

1. How are the competency results used and who uses them?

The results of competencies will be used in a variety of ways, depending on the audience: the Bureau of Career Development, CTE Directors and Principals or teachers.

The Bureau of Career Development at the NH Department of Education
Competency data is required as part of each center's end-of-year (EOY) reporting, and is used for the following;

- Number of program completers
- Number of program concentrators
- Overall student progress and competency attainment throughout the duration of a program; and
- To inform discussions relating to program improvement and data that may prompt questions/concerns (i.e., unusually high levels of proficiency, such as 100% of student achieving Mastery in all competencies; consistently low proficiency scores for all students in a particular content area; etc.)
- To determine when it is time to update the competencies to meet national standards (currently on a four year basis but release of national standards may alter this schedule)
- To ascertain areas of competency framework that may need revision or modernization

CTE Directors/Principals
Administrators can use the data reported in the competencies in a variety of ways:

- Identification of progress in various programs throughout the year
- To pinpoint areas for improvement in the center's next Perkins Secondary Program Improvement Application
- To plan professional development opportunities for instructors

Teachers
Teachers can use the data related to their competencies in similar ways as the administrator:

- Track student progress
- Identifying areas in the curriculum that may need additional resources or support
- One-on-one teacher/student interaction and guidance
- Adjust/modify the curriculum to address the strengths and weaknesses of any given class as the course progresses
- Student test-out if mastery level is achieved.
  Note: This would represent a local policy decision that would clearly state that testing out/challenging of the competencies would be an acceptable method for achieving course credit. Policies should also include performance based assessments as well as a system for evaluation.
- Coordinate with other instructors to ensure that all competencies are covered by the end of the program
- Network with other CTE instructors within and outside of the center to share practices and styles that positively impact student achievement
- Work with academic instructors to support students whose competency attainment is hampered by struggles with reading, writing, math and other core skills

2. How can I better utilize the competency documents in class?

The competencies are aligned with national standards to reflect current practices in business and industry. Teachers can use the competencies to ensure their curriculum and lesson plans are designed to facilitate student success in the program and prepare students to pursue further involvement in the field after high school.

Teachers can share the competency document with their students from their first day in the program, and explain how the document outlines the knowledge and skills the students will be expected to learn over the full duration of the program. Teachers who have utilized the competencies in this matter have reported great success, with students who are more engaged in class and committed to achieving positive outcomes. Periodically students and teachers can meet to discuss student progress using the competency document to guide the discussion. Teachers may also have their students use the competency document as a self-assessment prior to these meetings so that the student and instructor can discuss progress and strategies for improvement or maintenance of a skill in a collaborative manner.

3. Why do we need to report completers?

As part of federal reporting, the State is required to provide data relating to specific secondary and postsecondary performance indicators (PI's). Of the secondary-level PI's, one – "Nontraditional Completion" – requires the reporting of program completers; specifically students who have completed a program considered nontraditional for their gender. Other secondary PI's focus primarily on senior concentrators who can be "followed" into postsecondary realms of higher education, military service, or employment. (Note: NH DOE continues to work on valid and reliable methods to collect this additional postsecondary date.)

4. How should competences be reported for the 10-11 academic year?

PerformancePLUS is the required tool for reporting competency scores. PerformancePLUS (or P+) is a web-based application that allows instructors to score their students' competency achievement. P+ also allows instructors and administrators to review reports on student achievement in CTE competencies as well as standardized tests like the NECAP.

5. What am I actually scoring when I score my students?

Instructors do not actually score competencies. Rather, instructors score their students' performance on the knowledge, content and skill items that fall under a particular competency. Here is a very basic example:

COMPETENCY: Understand safe workplace practices.
KNOWLEDGE, CONTENT AND SKILL ITEMS:

1) Maintain a clean work area
2) Wear protective gear when working with hazardous Materials or equipment
3) Identify and adhere to federal, state and local regulations relating to workplace safety in this field.

As an instructor, the competency itself can be used to create lesson plans and class exercises (for example, "Lesson One: Workplace Safety"), while the knowledge, content and skill items underneath that competency comprise the "nitty gritty" of what the students need to know in order to be considered proficient in that competency. The scores of those individual skills are then compared to "cut scores" to determine the student's proficiency in the overall competency.

6. What is a "cut score"?

Cut scores represent a range of scores that align to a particular level of proficiency.

Let's go back to the example about "Workplace Safety" from the previous question. Under this particular competency, there are three skill items to be scored: *Maintain a clean work area, Wear protective gear,* and *Identify and adhere to regulations.* All CTE students are scored on a proficiency scale from 1-4:

1 = No exposure
The student was not exposed to the material during the course, but will encounter it in a later portion of the program.

2 = Below Proficient (Novice)
The student was exposed to the material but still needs significant supervision.

3 = Proficient
The student is comfortable with the material and can demonstrate his or her knowledge and skills with only moderate supervision and assistance.

4 = Proficient with Distinction (Mastery)
The student has mastered the material and is able to demonstrate his or her knowledge and skills without supervision.

That means that the maximum number of "points" a student could score for the "Workplace Safety" competency is 12:

3 items x 4 points/item = 12 total points possible

The cut scores for this competency would look like this:

- **Level 1 (No Exposure): 3 points or less**
  This cut score range is the equivalent of a student receiving a maximum score of "1" on each of the knowledge, content and skill items of the competency.

- **Level 2 (Novice): 4 - 6 points**
  This cut score range is the equivalent of a student receiving a maximum score of "2" on each of the knowledge, content and skill items of the competency.

- **Level 3 (Proficient): 7 – 9 points**
  This cut score range is the equivalent of a student receiving a maximum score of "3" on each of the knowledge, content and skill items of the competency.

- **Level 4 (Mastery): 10 – 12 points**
  This cut score range is the equivalent of a student receiving a maximum score of "4" on each of the knowledge, content and skill items of the competency.

Notice that the cut scores don't require a student to earn all 3's to earn a "Proficient" score in a particular competency, or all 4's to earn "Proficient with Distinction." Any combination of scores that fall within the cut score range for "Proficient" or better will classify that student as proficient. Returning to the example:

COMPETENCY: Understand safe workplace practices.				
KNOWLEDGE, CONTENT, and SKILL ITEMS	**Student A**	**Student B**	**Student C**	**Student D**
1) Maintain a clean work area	4	3	2	2
2) Wear protective gear when working with hazardous materials or equipment.	4	4	4	2
3) Identify and adhere to federal, state and local regulations relating to workplace safety in this field.	3	3	2	2
TOTAL SCORE: (total possible: 12)	**10**	**10**	**8**	**6**
OVERALL PROFICIENCY in the COMPETENCY:	**Level 4**	**Level 4**	**Level 3**	**Level 2**

Of the four students in the example above, three students achieved proficiency in the "Workplace Safety" competency: *Students A, B*, and *C*.

7. What happens if a teacher does not cover all of the knowledge, content and skill items in a competency?

The teacher should enter a score of **1**, which indicates "no exposure," for those knowledge, content and skill items that are not covered until a later installment of the program. For example, in a two-year Culinary Arts course students are not expected to cover all Culinary Arts competencies in the first year.

8. What is the difference between a participant and a concentrator?

A participant is a secondary student enrolled in an approved career and technical education program.

A concentrator is a student who is enrolled in the second half of an approved career and technical education program.

9. In reference to concentrators, how would a school determine the point at which a career and technical education program has entered the second half?

Prior to the implementation of competency-based learning, the first and second half of a CTE program were determined by seat time. 540 hours of CTE instruction were required to become a program completer, so once a student had surpassed 270 hours of that instruction the student could be considered a concentrator.

Seat time is no longer used to determine concentrator and completer status in CTE programs. Under a competency-based system, what constitutes the first and second half of a CTE program is determined by the local school district. There are several methods that may be employed to make this determination. One method would be to "map" a program's course offerings against the competency document for that program to determine at what point during the program a student will have accomplished 50% of the competencies and can be called a concentrator. In a program with ten competencies, for example, a student who achieved proficiency in five of those competencies and is still enrolled in the program would be considered a concentrator. It does not matter at what point during the program those competencies are covered. If more than 50% of a program's competencies are covered in the first year of a two year program, then those students who achieve proficiency in those competencies and continue with the program could be considered concentrators.

10. This seems like a lot of work for the school. Can this be done at the State level?

Every CTE center delivers their curriculum differently, even for programs in the same content area, so it would not be feasible or equitable for the State to dictate this type of information.

11. Is there a mechanism in PerformancePLUS (P+) or CATE that would be marked when a student is to be considered a concentrator?

CTE centers are required to report which students are concentrators and completers as part of their end-of-year (EOY) reporting. This data information is uploaded into CATE via the CATE/i4See workbench. This information is communicated to PerformancePLUS and can be used to filter reports, form focus groups, etc in the P+ system. As indicated above, since each center may have a different method for determining concentrator status it would be impossible to program CATE or P+ to automatically make that determination.

Currently centers are also required to report "Total Competencies Completed" for any student identified as a "Concentrator" on the center's CATE_Student_Course submission (element 1755, https://ww4.ed.state.nh.us/datadictionary/ElementDetail.aspx?ID+1755). A future enhancement to the CTE data system is expected to bridge from P+ back to CATE and communicate the number of competencies a student has completed at proficient or better, thereby alleviating the centers of having to duplicate their work.

12. Who counts as a completer?

A completer is a student who has attained 90% of the competencies at a level of proficient or better. A competency score of 3 is considered proficient, while a score of 4 is considered proficient with distinction.

13. I think my competency document is seriously out of date. What are my next steps?

As business and industry practices evolve, it is natural that the CTE competencies matched against those practices will need to evolve as well. Some disciplines will evolve faster and need more frequent revision than others. Computer repair, for example, will need to adapt at a much faster pace than accounting, because the hardware and software of the modern computer changes more frequently than the instruments and methods used in accounting. All competency documents will at some point need revision to keep pace with changes in their discipline.

So what can you do if the competency document you're working from is out of date? What if you teach accounting and you find that one of the skills you're meant to teach is the proper use of an abacus, but nowhere do you find a mention of modern accounting software? What if you teach auto mechanics and you know that most automobile dealers in the country are changing over to a new diagnostic system while your competency document still requires you to teach the previous, outdated diagnostic model? Your first step is to take your concerns to your CTE administrator. Your administrator will then communicate your observations to the Career Development Bureau, which will assess if the competency document needs to be updated and to what extent. Situations like this are not uncommon, and the process to resolve such issues is interactive and collegial. It is, however, important that the bureau be notified as early as possible about any revisions that may be needed. If changes are requested immediately before or during the course of a school year, those changes would not go into effect until at least the next school year.

14. Are competencies updated on a regular basis?

Absolutely! Competency documents are dynamic, not static. As national standards change and improve, competencies will also change and improve. Aligning competencies with national standards guarantees curricula receive regular updates so students are prepared for further study and employment in that program area.

As a general rule, unless otherwise needed, competencies are updated every four years.

15. What is the process for updating competencies?

The process of updating program competencies can take up to eight months to a year. The education facilitator uses national standards for each program area to align competencies to current national standards. Once this "crosswalk" or gap analysis is completed, representatives from business and industry and postsecondary education review the specific technical and employability skills performed in each competency area and work collaboratively to arrive at a mutually acceptable framework. The draft document is then reviewed by the teachers in the program area for comment.

The competencies and knowledge, content and skills statements are validated by the original focus group.

In completing the fourth column on the competency program document, secondary teachers can meet throughout the school year and develop scenarios/case studies that would guide performance based assessments in each class.

Review of competencies will be performed every four years, or sooner, if national standards have been updated or changes in industry warrant a revision.

16. What is the difference between proficient and proficient with distinction?

PROFICIENT:
The student is comfortable with the material and can demonstrate his or her knowledge and skills without supervision.

PROFICIENT WITH DISTINCTION (MASTERY):
The student has mastered the material and is able to demonstrate his or her knowledge and skills without supervision and be able to transfer that skill to other areas.

Determination of proficiency and proficiency with distinction are determined at the local level.

17. Are competency reports required for all students: participants, concentrators and completers?

Data is required for concentrators and completers only.

Funding Related Questions

18. Are program completion rates linked to program funding?

The state does not link program completion or the number of program completers to any federal funding.

Federal funds are formula-driven based on US Census data and the annual rate of poverty by state and town. Perkins allocations have nothing to do with program-level data.

19. I was under the impression that past information suggested a direct correlation between program completers and program funding. Does this represent new information?

No. Distribution of Perkins funding is now and has always been driven by federal legislation. The formula-based allocation of funds is part of the Perkins legislation (Section 131).

20. If completer information cannot be used at the State level to determine program funding, is it acceptable to use such information as an indicator at the local level?

Allocations from the State to the centers are governed by federal law. The Perkins legislation also details specific requirements and permissible uses of those funds at the local level (Section 135). Each center can decide how to use its local allocation to support the goals of the center's five year CTE strategic plan. Distribution of local Perkins funding is a school-level determination based on specific local criteria. Proficiency in CTE competencies may be one of many factors the school considers during that decision-making process.

In summation, State allocations to CTE centers are formula-based and defined by federal law. Qualitative criteria such as enrollment, program completion, etc do not affect the formula-based allocation process. Local distribution of Perkins funding is a school-level decision and may be based on a variety of conditions, including but not limited to qualitative criteria.

21. Regarding Performance Indicators (PI's); if a center falls below their goal on any PI, will this affect center funding?

No. The money that is allocated is the money that is received.

In the event that goals are not met, centers must submit a targeted improvement plan to their liaison at the Career Development Bureau. If a center continues to have difficulty reaching goals the Career Development Bureau may direct the area in which you must spend a portion of the funds.

22. If I have questions that are not addressed in this FAQ, who is the best person to contact?

Feel free to contact any or all of the following via email:

Your center liaison, Lisa Danley (lisa.danley@ed.state.nh.us) or Melissa Ritchings (melissa.ritchings@ed.state.nh.us). Melissa Ritchings handles all the technical information in PerformancePLUS.