

# Pennsylvania's Career and Technical Education Excellence Awards 2015-16

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**COMMONWEALTH OF PENNSYLVANIA**  
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## Introduction

Students who concentrate in and are on track to complete a state approved career and technical education (CTE) program in Pennsylvania are expected to participate in Student Occupational Competency Testing at the end of their senior year. To recognize outstanding achievement on these assessments, the [Pennsylvania Department of Education](#) (PDE) annually grants the CTE Excellence Award to schools in which at least seventy-five percent of students in all of the school's approved CTE programs achieved the highest score attainable (Advanced) on the NOCTI or NIMS exam.<sup>1</sup> At the February 2017 *Pathways to Career Readiness: An Education and Workforce Development Symposium* in Hershey, Pennsylvania, PDE Deputy Secretary for Elementary and Secondary Education Matthew Stem presented the award to the following thirteen schools for their 2015-16 assessment results:<sup>2</sup>

1. [Admiral Peary Area Vocational Technical School](#)
2. [Berks Career and Technology Center](#), East Campus
3. [Berks Career and Technology Center](#), West Campus
4. [Central High School](#), Spring Cove School District
5. [Clarion County Career Center](#)
6. [Franklin Learning Center](#)
7. [Greater Johnstown Career and Technology Center](#)
8. [Indiana County Technology Center](#)
9. [McGuffey High School](#), McGuffey School District
10. [Milton High School](#), Milton Area School District
11. [Northern Lebanon Senior High School](#), Northern Lebanon School District
12. [Parkway West Career and Technology Center](#)
13. [Upper Bucks County Technical School](#)

The purpose of this document is to share practices that are believed to have contributed to students' successful assessment results. School leaders and other experts who have provided professional coaching and technical expertise to many of these schools were interviewed for this purpose.

## Background: CTE Program Accountability

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<sup>1</sup> CTE programs with fewer than eleven students taking the NOCTI or NIMS exam are excluded from data that determines award winners.

<sup>2</sup> In February 2018, another cohort of award winners was announced by PDE. The names of these schools are listed at the end of this report.

Pennsylvania offers more than 1,700 approved CTE programs in over 200 schools, including career and technology centers (CTCs) and district high schools.<sup>3</sup>

Competency-based learning is the foundation of CTE programs; students work toward mastering a state-approved list of competencies (also referred to as task lists) that align with an end-of-program assessment determined by the PDE [Bureau of Career and Technical Education](#) (BCTE) in accordance with state and federal regulations and policies.

[NOCTI](#) exams are the most commonly used series of assessments for Pennsylvania's CTE programs, and NOCTI results are the criteria used for earning the CTE Excellence Award. According to its website, NOCTI "is the largest provider of industry-based credentials and partner industry certifications for career and technical education (CTE) programs across the nation."<sup>4</sup>

PDE is one of NOCTI's consortium members and is therefore entitled to receive customized assessments aligned to its approved programs. Although PDE does not mandate a testing window, NOCTI is typically administered during the last months of students' senior year. An optional pre-NOCTI exam may be administered to students in fall of their junior year to gauge progress and predict senior year NOCTI scores. (The senior year exam is often referred to as "post-NOCTI.") Results are reported using the following performance levels:<sup>5</sup>

**Advanced Level** reflects the technical skills, knowledge and abilities required to successfully perform the duties of an entry-level job in a safe and effective manner with minimal supervision.

**Competent Level** reflects the technical skills, knowledge and abilities required to adequately perform duties on the very first day of a job in a safe and effective manner with an appropriate amount of "new employee" supervision.

**Basic Level** does not meet the competent level.

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<sup>3</sup> At the time of this writing, 1,762 approved CTE programs are offered in 219 schools: 108 career and technology centers, 110 district high schools and one charter school.

<sup>4</sup> NOCTI. "Our Story." <http://www.nocti.org/about.cfm> (accessed January 4, 2018).

<sup>5</sup> [\*A Guide to Student Occupational Competency Testing in Pennsylvania 2017-18.\*](#) Pennsylvania CTE Resource Center. [Accessed: http://www.careertechpa.org/Portals/0/docs/StudentTesting/Testing%20Overview%20and%20Requirements/A%20Guide%20to%20Student%20Occ%20Testing%202017-18.pdf?ver=2017-09-13-105414-983](http://www.careertechpa.org/Portals/0/docs/StudentTesting/Testing%20Overview%20and%20Requirements/A%20Guide%20to%20Student%20Occ%20Testing%202017-18.pdf?ver=2017-09-13-105414-983).

PDE established two certificates that CTE program completers may earn:

**Pennsylvania Skills Certificate** recognizes CTE students who demonstrated high achievement in their chosen technical area; an Advanced Level score on end-of-program assessment is required.

**Pennsylvania Certificate of Competency** recognizes CTE students who achieved a competent skill level in their chosen technical area; a Competent Level score on end-of-program assessment is required.

School administrators receive and distribute students' certificates and assessment result data. As explained later in this document, this data often drives instructional decisions, professional development, and in some cases, building-wide practices.

A second end-of-program assessment is utilized for certain programs in Pennsylvania. Students completing metalworking programs sit for the National Institute for Metalworking Skills, or [NIMS](#), assessment. Both NOCTI and NIMS exams include a written component (administered in a classroom setting with a proctor who is not the program instructor) and performance component (evaluated in a one-on-one setting by an industry expert from outside of the school).

NOCTI and NIMS differ from other industry-based assessments in two important ways. First, students may be required to purchase assessments leading to some industry-recognized certificates. In this case, test results are generally delivered directly to the student leaving school staff without access to this data. Additionally, some industry-based assessments report only an aggregate final score; students and test-takers do not know the performance level for each skill assessed. By contrast, NOCTI assessment reports provide individual, class and schoolwide data that may be utilized in multiple ways as described later in this report.

Readers interested in a more in-depth review of Pennsylvania's end-of-program assessments for CTE may wish to review [A Guide to Student Occupational Competency Testing in Pennsylvania 2017-18](#).

## **Identifying Program Success Factors**

CTE educators, students and other stakeholders value NOCTI and NIMS assessment results as a means to gauge program effectiveness and as an indicator of students' level of achievement in both technical knowledge and application. Therefore, when students do well on these assessments, it is worth examining and sharing the practices

that may have led to their success so that these practices may be continued or replicated. That is the purpose of this report. To capture this information, researchers invited an administrator from each of the award-winning schools to participate in a telephone interview; administrators from eight of the thirteen schools responded to this request.

The authors of this report identified four contributing factors, each of which is detailed in this document:

Strategy 1: Use assessment data to make instructional decisions.

Strategy 2: Create a positive school culture.

Strategy 3: Foster improvements in programs and teaching practices.

Strategy 4: Implement student-focused test preparation and administration.

### **Strategy 1: Use assessment data to make instructional decisions.**

A continuous cycle of data collection and analysis is one of the most essential practices to support student success on NOCTI and NIMS assessments, according to several administrators interviewed for this report. When used purposefully, assessment data drives instructional and organizational decisions.

At the instructional level, effective data analysis involves examining students' pre-NOCTI (junior year) and post-NOCTI (senior year) performance for each competency. From this analysis, both the instructor and students identify competencies that have and have not been mastered. Teachers often utilize differentiated instruction and individualized learning goals for students who have taken the pre-NOCTI assessment and are preparing for the post-NOCTI exam. Students can assume greater responsibility for their success when they are informed about their learning progress and knowledge/skill gaps.

Examining assessment data for each competency from a whole class perspective may help teachers better identify effective instructional strategies, especially when a multi-year average score is utilized. When many students do not demonstrate mastery of a particular competency over time, for example, the teacher may assume that his or her instructional approach needs to be modified.

At the organizational level, data analysis from multiple programs may uncover schoolwide practices or trends that are either successful or in need of improvement. For example, educators may notice that a three-year trend in higher student absenteeism correlates with a trend in lower assessment scores. Professional development and school-wide initiatives are often implemented to address these issues.

Although administrators and instructors analyze their own data, several interviewees mentioned collaboration with Todd Luke, President of [MAX Teaching](#),<sup>6</sup> as a key component to their success in data analysis. Mr. Luke is a staunch supporter of CTE, having been both a CTE student and teacher in Pennsylvania. To show his appreciation for CTE, Mr. Luke provides no-cost analysis of NOCTI reports – using a software program he developed - to any Pennsylvania administrator who requests it. Mr. Luke provided assistance to the following schools profiled in this report:

- Berks Career and Technology Center, East Campus;
- Berks Career and Technology Center, West Campus;
- Clarion County Career Center;
- Franklin Learning Center;
- Greater Johnstown Career and Technology Center;
- Indiana County Technology Center;
- Milton High School, Milton Area School District; and
- Parkway West Career and Technology Center.

NOCTI provides schools with several assessment results reports. Mr. Luke runs these reports through his computer program to break out the performance of each competency both by program and by individual student performance. Mr. Luke categorizes the class means along three-point breaks: (1) below 50 percent; (2) between 50 percent and 79 percent; and, (3) above 80 percent. The data report also provides an itemized competency list of students who scored below 50 percent. Mr. Luke compares the performance of the previous year's NOCTI test results to the current year's results on a program level. Important information is uncovered by comparing these data sets even though two different groups of test-takers are involved: when students from both groups score low on the same competencies, it may indicate that instructors need to modify the way in which they teach this competency.

Mr. Luke also developed a manual to demonstrate ways in which teachers may break down NOCTI data to improve their instruction and ultimately their students' achievement. According to Mr. Luke, "If you pay attention to the data and are willing to change your instruction, students' NOCTI results will improve." Several school leaders interviewed for this report echoed Mr. Luke's philosophy.

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<sup>6</sup> Max Teaching is a firm specializing in professional learning for CTE educators, and as a contractor for the PA Department of Education, provides services to career and technical centers involved in the state's Technical Assistance Program.

Administrators from the schools highlighted below offered additional insight into their data analysis practices.

#### Berks Career and Technology Center

West and East Campus Principals Ronald Wilson and Christian Hansen are confident that data collection and analysis contribute to students' high NOCTI achievement. A continuous cycle of improvement, predicated on data collection and analysis, is in place at both Berks Career and Technology (BCTC) campuses.

Summer: Administrators meet for two and a half days of data planning. All available student data from the recently concluded school year is reviewed (e.g., attendance, discipline, retention, NOCTI results). Teachers who met performance goals are identified.

September to early October: Director Dr. James Kraft reviews all data with staff during the first professional development session of the school year. Previous year's NOCTI and NIMS result data for each program is shared publicly. Dr. Kraft commented, "Teachers who had 100 percent of their students score Competent or Advanced on their program's NOCTI and NIMS are recognized with a certificate. Teachers proudly display the certificates in their classrooms and challenge the upcoming classes to continue the proud tradition. We also recognize and celebrate teachers with students achieving 100 percent Advanced on their program NOCTI and NIMS."

Teachers participate in a one-on-one, hour-long meeting with their principal to discuss performance indicators pertaining to the prior year's data. Administrators develop NOCTI deviations from the norm to help identify programs that are under-performing; root causes and action steps to improve NOCTI scores are discussed. Teachers meet with senior students to revisit their junior year pre-NOCTI result data. Personalized remediation plans may be developed based on these conversations.

BCTC principals create a data report for administrators at their 16 sending districts to provide a CTE performance status for their shared students. Further, BCTE principals personally meet with administrators at each district to analyze and discuss the report. Following is the template developed to distribute this data:

CONFIDENTIAL											
District Performance - Deviations From the Norm											
2016-2017											
DISTRICT	Enroll Draw < 13%	Percent of S.E. Enroll > 50%	Non-Trad. Enroll < 6%	Withdrawal Rates > 15% or > 5% Increase	NOCTI < 85% at Adv/Comp	Industry Certification Seniors < 2.4	Attendance < 92%	Conflict Day Attendance < 70%	Discipline Incidents > 40% of Enroll	Instruct Time Outside of Spec. < 2.50 Hours	Total Deviations
Antietam											
Boyetown Area											
Brandywine Heights Area											
Conrad Weiser Area											
Daniel Boone Area											
Exeter Township											

Spring: Teachers conduct one-on-one meetings with eleventh grade students to review their pre-NOCTI/NIMS exam results (taken in fall). This allows students to begin senior year with a clear understanding of learning gaps they must close before taking the post-NOCTI exam.

#### Milton High School

Administration and faculty “continually use data to improve student performance,” according to Principal Andrew Rantz. NOCTI scores in particular are a key data point and a strong focus in each of the school’s five CTE programs.

Mr. Rantz is able to ensure that all eligible juniors take the NOCTI pre-test and are given NOCTI study guides through BCTE’s [Technical Assistance Program](#) (TAP). Teachers use assessment results to create targeted Student Learning Objectives (SLOs).<sup>7</sup>

Don Foellner, the TAP Career and Technical Distinguished School Leader (CTDSL)<sup>8</sup> assigned to Milton High School, recommended that teachers and students utilize leveled task grids in order for each student to track weekly progress of competency (task) development. (BCTE developed a task list of competencies that students should master at each level of the program. CTE programs are organized into one to four levels; competencies within each level are typically completed in one school year. A

<sup>7</sup> As stated on PDE’s Standard Aligned System (SAS) website, “[Student Learning Objectives \(SLO\)](#) is a process to document a measure of educator effectiveness based on student achievement of content standards. SLOs are a part of Pennsylvania’s multiple-measure, comprehensive system of Educator Effectiveness authorized by Act 82 (HB 1901). Accessed: <https://www.pdesas.org/Page/Viewer/ViewPage/7>

<sup>8</sup> The PDE Bureau of Career and Technical Education administer the Technical Assistance Program (TAP). A CTDSL is a retired CTE administrator, acting as a contractor, who provides coaching and support to administrators at a number of designated CTCs.

task grid refers to the organization of this information). Mr. Rantz provided an example of a leveled task grid that includes the rubric used to assess each competency:

Unit/Standard Number	Student Name:		Graduation Years:	Student Initial	Teacher Initial	Date	Performance Level
	18 Child Care and Support Management Services Task Grid 2016, 2017, and 2018						
							
	<b>Levels of Skill Attainment</b> 4 Proficient Task performed independently with no supervision 3 Competent Task understood, performed with minimal supervision 2 Basic Needs supervision with guided practice to complete task 1 Needs Improvement Minimal exposure to task, needs further practice NY Not Yet Task included in the program of study, not taught yet						
<b>Secondary Competency Task List - Level 1</b>							
100	<b>ORIENTATION AND SAFETY</b>						
101	Identify and follow school, classroom and clinical rules and regulations.						
200	<b>PROFESSIONALISM</b>						
201	Compare and analyze types of early learning programs.						
202	Identify personal qualities and career opportunities needed for employment.						
203	Develop a personal and professional portfolio.						
204	Investigate the requirements of the CDA Credential and School-Age Credential.						
205	Analyze NAEYC Standards and the Code of Ethical Conduct.						
208	Identify resources for professional development.						
209	Identify state, national and international models of pre-kindergarten.						
300	<b>HEALTH AND SAFETY</b>						
301	Identify Department of Human Services regulations and PA Department of Education codes.						

According to Mr. Rantz, using leveled task grids in this way is a significant improvement because it provides teachers and students with proficiency data that is tracked weekly.

### Parkway West Career and Technology Center

Administrators and instructors at Parkway West Career and Technology Center (PWCTC) use pre-NOCTI test results and practice questions to help students prepare for the post-NOCTI assessment. Instructors are required to develop learning plans for students who score below expectations on the pre-NOCTI exam. In addition, instructors identify the competencies that were problematic for many students; these competencies are retaught and practiced.

PWCTC partners with a local union at the Carpenters Training Center to gauge NOCTI readiness for senior students enrolled in the Building Construction Technology Program. Students travel to the center a month before sitting for the NOCTI exam, and union member volunteers evaluate students on their performance of tasks predetermined by the teacher. Two important benefits result from this activity. First, students demonstrate skills while being evaluated by someone they do not know; this mirrors the NOCTI assessment. Secondly, teachers may immediately tailor instruction to areas in which students underperformed because evaluators provide student results within one day.

Mike Curley, a CTDSL assigned to PWCTC, recently implemented another data analysis process that impacts end-of-year assessment results. Dr. Curley recognized that the performance level of students in the Public Safety Program at several CTCs in

the region was a concern. To increase student achievement, Dr. Curley collected program data from all of these CTCs; this data was then passed on to Mr. Luke who ran the data through the analysis program. Next, Dr. Curley convened the Public Safety Program instructors and facilitated a discussion about what they are doing well and what needed improvement. This approach promotes shared professional learning between instructors at different CTCs and ultimately may have a positive impact on test performance.

#### Indiana County Technology Center

Director Eric Palmer believes three steps lead to NOCTI success: “Set goals, be aware of what you’re doing and stick to it.” Although simple and direct in their approach, Indiana County Technology Center (ICTC) administrators and staff conduct in-depth data analysis and use this information to develop specific goals and steer instruction.

Mr. Luke provides ICTC administrators with a detailed analysis of their students’ pre- and post-NOCTI scores. Teachers utilize this data to set learning goals for individual students as well as whole-group instruction. Before collaborating with Mr. Luke, ICTC administrators provided teachers with instruction on how to conduct the analysis without the use of a computer. Administrators believe this exercise led to a deeper understanding of the data.

Mr. Palmer notes that it took about three years for teachers to embrace and authentically utilize data. After this shift in perspective, however, teachers recognized that data analysis has a positive impact on their instructional decisions.

#### Upper Bucks County Technical School

Teachers at Upper Bucks County Technical School (UBCTS) have a nine-year history of using NOCTI data. Currently, teachers develop SLOs that focus on a specific NOCTI area in need of improvement. Teachers use historical and pre-test data to drive these decisions. Before SLOs were implemented by PDE, teachers at UBCTS developed annual NOCTI improvement plans and student success plans based on data.

### **Strategy 2: Create a positive school culture.**

School culture is the powerful set of expectations and values that affect how faculty, students, and other stakeholders think, feel and act in school (Peterson & Deal). Further, strong positive culture often includes “a shared sense of what is important, a shared ethos of caring and concern, and a shared commitment to helping students

learn". It includes other factors as well including the celebration of student achievement.<sup>9</sup>

Several of the award-winning school administrators referenced aspects of school culture when asked about practices that contributed to their students' high performance on end-of-program assessments. PWCTC Executive Director Dr. Darby Copeland captured the input of other administrators when he stated, "The culture of our school is that NOCTI is important." Similarly, Milton High School Principal Andrew Rantz said, "Teachers make NOCTI results a point of pride every year". In part, high expectations for student achievement, an emphasis on the importance of NOCTI/NIMS assessments and celebrations of student achievement define and motivate the learning community of successful schools.

#### McGuffey High School

The Vocational Agriculture Program is an integral part of the school culture at McGuffey High School, and Principal Mark Bonus believes the culture contributes to student success on the NOCTI assessment. The program, he shared, is "at the heart of our community and who we are". Further, Mr. Bonus contends that the agriculture program "is one of the school's strongest ties to the community and is considered by many to be one of the best agriculture programs in the state."

Agriculture education has been offered at the McGuffey High School since it opened in 1961; completing the program is a family tradition for many students. Mr. Bonus reports that there is "a lot of pride" in the program for many stakeholders including community members. Students are aware that their performance on the NOCTI exam reflects the high standards the staff and community expect of the program. Respect for the program and its traditions are similar to the excitement built around some school's athletic teams.

Each year, McGuffey High School staff anticipates, supports and celebrates strong performances on the NOCTI assessment. Mr. Bonus traveled to Hershey, Pennsylvania to receive the CTE Excellence Award and a recognition ceremony was held at McGuffey High School. Pennsylvania State Senator Camera Bartolotta attended the event, applauded students and staff for their outstanding achievement and spoke about career opportunities in the agri-business sector.

#### Indiana Career Technology Center

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<sup>9</sup> Peterson, Kent D. and Deal, Terrence E. (1998). How Leaders Influence the Culture of School. *Education Leadership*, Volume 56 Number 1. Accessed: [http://www.ascd.org/ASCD/pdf/journals/ed\\_lead/el199809\\_peterson.pdf](http://www.ascd.org/ASCD/pdf/journals/ed_lead/el199809_peterson.pdf)

A “culture of excellence” contributes to students’ motivation and success, according to ICTC Director, Eric Palmer. Because students historically perform well on NOCTI assessments, it may have been easy for the staff to focus on maintaining the status quo. Instead, after nearly five years of intense data analysis, school leaders and instructors recognized that they could challenge themselves and students to reach even higher levels of NOCTI assessment achievement. A target minimum score of 85 percent<sup>10</sup> was set for all programs, and as Director Palmer stated, the staff adopted a positive attitude: “Every kid can do it. We can get them there”.

A strong emphasis on celebrating successes goes hand-in-hand with high expectations for student achievement. For example, students scoring Advanced on the NOCTI or NIMS assessments are invited to a celebration where chicken wings – a favorite among students – are served. Students from classes in which every student scored either Competent or Advanced are also invited. According to Mr. Palmer, the positive school culture has momentum and continues to create a high-achieving learning environment for students.

#### Upper Bucks County Technical School

Student-centered, community-minded and grounded in collaboration describes UBCTS’s culture. All staff members maintain high expectations for students and communicate the importance of NOCTI consistently. UBCTS students consider NOCTI exams as an opportunity to prove mastery of career skills. UBCTS’ special education specialists and the sending school case managers are very knowledgeable about NOCTI testing, and it is a topic of discussion at IEP<sup>11</sup> meetings. Students’ achievement is celebrated with awards and special privileges.

Relationship building is important at UBCTS; staff members know students well and are dedicated to their success. Results from a 2017 school survey support this, indicating that almost 90 percent of students felt the staff cared about them and 93 percent reported that they would recommend UBCTS to their peers.

### **Strategy 3: Foster improvements in programs and teaching practices.**

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<sup>10</sup> Cut scores (percentages) determine the NOCTI assessments levels (Advanced, Competent, and Basic) for each program. By targeting a minimum score of 85% for students in all programs, ICTC staff was raising performance expectations beyond the NOCTI cut scores for some programs.

<sup>11</sup> The Individualized Education Plan, or IEP, guides the educational programming for a student with disabilities on a yearly basis. Every child who receives special education services must have an IEP.

Student achievement is affected by the quality of CTE programs and the way in which curriculum is presented. An expectation that instruction is delivered using research-proven strategies is in place, and professional learning opportunities are provided to teachers to support this expectation. At the state level, BCTE works to ensure program quality and CTE teacher preparation. For example, BCTE staff conducts CTE program re-approval evaluations every five years. CTE teachers must obtain a state teaching credential, and they participate in a new teacher induction program developed and delivered within their school. Further, Pennsylvania requires that each district and CTC implement a teacher evaluation system that complies with state guidelines.

Increasing the integration of rigorous academics in all CTE program instruction, usually referred to as academic integration, has been a BCTE priority since the late 1990s. Further, the emphasis on academic integration increased through Technical Assistance Program activities. It is expected that CTE students will develop, “strong reading, writing, numeracy, problem solving, and teamwork skills in addition to the practical and tangible career skills that motivate students and help them develop a career path for future education and work.”<sup>12</sup> Several administrators interviewed for this report cite an ongoing commitment to academic integration as a contributing factor to their students’ end-of-program assessment achievement.

Career Technical Student Organizations,<sup>13</sup> or CTSOs, enhance the quality of career and technical programs through extended teaching and learning activities. CTSOs provide opportunities for students to develop and practice employability skills, engage in skills competitions regionally and nationally and participate in leadership-building activities. Several administrators cited students’ and staff engagement in CTSO activities as having a positive impact on their NOCTI scores. PDE coordinates the following eight CTSOs:

- [DECA](#) (an association of marketing students)
- [FBLA](#) (Future Business Leaders of America)
- [FCCLA](#) (Family, Career and Community Leaders of America)
- [FFA](#) (an association of agriculture education)
- [HOSA](#) (Health Science Technology Education Association)
- [PYFA](#) (Pennsylvania Young Farmers Association)
- [SkillsUSA](#)

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<sup>12</sup> *Career and Technical Education*. PA Department of Education. Accessed: <http://www.education.pa.gov/K-12/Career%20and%20Technical%20Education/Pages/default.aspx#tab-1>

<sup>13</sup> See [Career and Technical Student Organizations Serving Career and Technical Education in Pennsylvania](#) for more information.

- [TSA](#) (Technology Student Association)

Additional practices that support program and teaching effectiveness emerged during interviews:

#### Upper Bucks County Technical School

An expectation for high quality instruction begins in the new teacher induction program with supports that include one-to-one mentorships and learning walks.<sup>14</sup> These practices offer new staff members the opportunity to learn from experienced peers.

UBCTS teachers are provided with extensive supports to engage and optimize learning for all students. For example, twelve specialized staff members help remove barriers to learning: eight instructional facilitators, a math instructional facilitator, a clinical assistant and two special education specialists. Continuous supervision and professional learning opportunities offer further support for program and teaching effectiveness. Ten professional development days are typically scheduled in each school year. Teachers attend five professional development days that have been organized by a committee of teachers and administrators who meet monthly to plan professional development. The remaining five days are considered flexible (referred to as “flex days”); teachers identify and schedule professional learning independently outside of school time.

Daily common planning time allows teachers to consistently participate in learning communities, an activity believed to have a positive impact on teaching effectiveness. Recent examples of learning communities include a focus on technology integration and the utilization of the Harvard Model of Instructional Rounds, a process that involves classroom visitations, collecting and examining evidence, examination of a problem of practice and developing a theory of action and action plan.

Finally, UBCTS programs are enhanced by the “live work” students offer to the community and the CTC’s sending school districts. Through these opportunities, such as the school-based restaurant and cosmetology clinic, students apply the skills they are learning in the classroom to paying customers.

#### Milton High School

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<sup>14</sup> A learning walk is a professional learning activity for teachers and administrators. While visiting classrooms for a brief and non-evaluative visit, educators informally record their observations and later reflect on specific elements (e.g., learning strategies, classroom management and culture, student interaction with the content, student engagement).

Every educator at Milton High School has access to an instructional coach. K-12 instructional coaches rotate through each of the district's schools every nine weeks. Instructional coaches serve a caseload of teachers in each building.

#### McGuffey High School

Student participation in FAA enhances program effectiveness. FAA provides opportunities for students to participate in regional and state competitions, allowing them to demonstrate technical and leadership skills among a wider group of peers. According to Principal Bonus, "FAA is tied to our school. Both students and teachers are heavily involved in the organization and our local chapter. Through FAA activities, kids are able to practice the skills they will demonstrate on the NOCTI assessment."

#### Berks Career and Technology Center

A culture of continuous improvement for the entire school community including students, instructors and administrators drives program and teaching effectiveness at BCTC. BCTC teachers, according to Dr. Kraft, are "conscious instructors" who take seriously their role in preparing students for the NOCTI assessment. Two instructional coaches are on staff to collaborate with any instructor who wishes to do so. In addition, a shared system of resources offers teachers access to high quality lesson plans and instructional strategies.

BCTC administrators consider their primary role to be instructional leaders. As such, they are a visible presence in the school and often can be found in classrooms taking an interest in what teachers are doing and supporting their instructional practices.

#### Parkway West Career and Technology Center

To support teacher effectiveness, PCCTC instructors whose students underperformed on NOCTI assessments are required to develop a remediation plan. Submission of weekly lesson plans and expanded collaboration with an administrator are components of the plans.

### **Strategy 4: Implement student-focused test preparation and administration.**

Several test preparation and administration practices were cited as contributing factors in students' outstanding NOCTI and NIMS assessment performance:

1. Testing is done in a familiar and distraction-free environment where students are comfortable.
2. Students are prepared for all assessment topics.

3. Students are prepared for the testing structure and have practice in test-taking strategies.

Schools commonly facilitate some type of NOCTI “boot camp,” an intensive review of skills and knowledge anticipated on the assessment, during the weeks leading up to testing. As described in this section, interviewees shared other ways in which the testing environment and experience are prepared for students.

#### Upper Bucks County Technical School

Only senior students report to UBCTS on testing days; all non test-taking students remain at their sending district high school. Test-takers receive a complimentary breakfast on testing days. Trained instructional facilitators administer the written component of the NOCTI assessment with small groups of students. Extra care is given to ensure students are accommodated according to their IEP.

#### Parkway West Career and Technology Center

Teachers create and utilize a NOCTI question-of-the-day to prepare students for the assessment. Discussions surrounding each day’s question sometimes uncover students’ confusion about the structure of the question and this can lead to important mini lessons on test-taking strategies.

#### Berks Career and Technology Center

Teacher, counselors and instructional assistants focus on “getting kids in the zone” through a series of review week activities prior to the NOCTI exam. Seniors take practice quizzes and demonstrate performance at practice stations. Students who are working at an off-campus job arranged through the school’s cooperative education coordinator return to the classroom two weeks in advance of the NOCTI assessment to prepare for the exam.

## **Conclusion**

At eight of the thirteen CTE Excellence Award winning schools, students’ high achievement on end-of-year assessments is due to a variety of factors ranging from school-wide initiatives to classroom-specific practices. Although this report most likely does not provide an exhaustive list of the practices, administrators and instructors committed to increasing student achievement may benefit from implementing these four strategies:

- Make instructional decisions informed by assessment data.
- Create a positive school culture.
- Foster improvements in programs and teaching practices.

- Implement student-focused test preparation and administration.

## **2015-2016 CTE Excellence Award Winning Schools**

Admiral Peary Area Vocational Technical School  
948 Ben Franklin Highway  
Ebensburg, PA 15931  
814.472.6490

Berks Career and Technology Center, East Campus  
3307 Friedensburg Road  
Oley, PA 19547  
610.987.6201

Berks Career and Technology Center, West Campus  
1057 County Road  
Leesport, PA 19533  
610.374.4073

Central High School, Spring Cove School District  
718 Central High Road  
Martinsburg, PA 16662  
814.793.2111

Clarion County Career Center  
447 Career Lane  
Shippenville, PA 16254  
814.226.4391

Franklin Learning Center  
616 North 15th Street  
Philadelphia, PA 19130  
215.400.7570

Greater Johnstown Career and Technology Center  
445 Schoolhouse Road  
Johnstown, PA 15904  
814.266.6073

Indiana County Technology Center  
441 Hamill Road  
Indiana, PA 15701

724.349.6700

McGuffey High School, McGuffey School District  
86 McGuffey Drive  
Claysville, PA 15323  
724.948.3328

Milton High School, Milton Area School District  
700 Mahoning Street  
Milton, PA 17847  
570.742.7611

Northern Lebanon Senior High School  
345 School Drive  
PO Box 100  
Fredericksburg, PA 17026  
717.865.2117

Parkway West Career and Technology Center  
[7101 Steubenville Pike](#)  
Oakdale, PA 15071  
412.923.1772

Upper Bucks County Technical School  
3115 Ridge Road  
Perkasie, PA 18944  
215.795.2911

**2016-2017 recipients of the Career and Technical Excellence Award  
(announced February 2018)**

1. Admiral Peary Area Vocational Technical School
2. Altoona Area High School
3. Berks Career and Technology Center – East Campus
4. Carbon Career and Technical Institute
5. Delaware County Technical High School – Aston
6. Franklin Learning Center
7. Indiana County Technology Center
8. Mercer County Career Center
9. Mount Union Area Senior High School

10. Science Leadership Academy
11. Tyrone Area High School
12. Williamsport Area Senior High School