

## Central Pennsylvania Institute of Science and Technology

**Program Title:** Strengthening Student Engagement at CPI

### **Goals/Objectives:**

- To develop and cultivate one-on-one relationships with students and parents.
- To learn new skills and habits related to instruction and interaction with millennial students.
- To incorporate systematic strategies that facilitate student engagement.
- To promote a culture of student engagement.
- To increase group and individual professional development activities that focus on student engagement.

### **Brief Description of Program:**

In 2008, students chose to attend the Central PA Institute of Science and Technology for several “unhealthy” reasons. A majority of students attended the career and technical education center to avoid a full-day of education at the sending school, because they were told by a parent, teacher(s), or guidance counselor that they would not be successful anywhere so they should just go to the “vo-tech”, and because it was an “easy” way to spend part of their day. Student engagement and performance in many of the program areas was non-existent as evidenced by low attendance and NOCTI scores and high instances of student discipline issues. Teachers found it easier to lower expectations for students from both an educational and behavioral standpoint because very little support was provided to increase expectations. The school culture for the students and teachers needed obvious reform to increase the engagement and performance of students who really wanted to accomplish something in life, but lacked the necessary support to do so.

Simply telling or encouraging students to become more engaged in their class work is seldom enough. Engagement-based learning and teaching provides the foundation for developing and strengthening student engagement and the overall learning process. With the help of all educational stakeholders, school wide practices can be developed to cultivate student engagement beliefs, values, feelings, motivation, behavioral habits, and skills that are the focus of high levels of student engagement. It was time for the administration, teachers, and students to make the needed changes to increase student engagement, achievement, and performance.

### **Results of Activity:**

- I. Utilization of an outside instructional coach
  - A. New instructional techniques offered in several areas
    1. Math
    2. Reading
    3. Understanding the millennial students needs and expectations
    4. Classroom management

5. Curriculum alignment to state/national standards and programs of study
  - B. Schedule
    1. 1<sup>st</sup> year – all in-service days and three visits each 9-weeks
    2. 2<sup>nd</sup> year – all in-service days and three visits per semester
- II. Focus on writing in all program areas
- A. In-service activity providing the necessary format for helping all students become successful writers.
  - B. Change in expectation that writing WOULD BE completed at the CTC rather than avoided.
  - C. All students in all classes complete four formal essays per year. Two essays per year per student are provided to administration for their review of writing development.
- III. Focus on math in all program areas (in addition to the math that naturally results from the CTC curriculum)
- A. Math days.
  - B. Use of bell ringers to increase the amount of math in each program area.
  - C. Review of CTC curriculum by math coach in one of the sending districts.
  - D. Interviews by sending school math coach to determine the areas of math weakness experienced by the students in the CTC curriculum.
- IV. Systematic changes in all program areas
- A. NOCTI preparation as part of the three-year curriculum rather than an after-thought one week before testing begins.
  - B. Provide all students with as many certifications as possible so they build their confidence to enter the workforce or for their post-secondary plans.
  - C. Raise expectations in all areas and keep them at a high level regardless of resistance.
  - D. Weekly observations by administration in all areas
    1. Increase in on-task time by students
    2. Increase in instructional time by teachers
    3. Development of better relationships with students and teachers.
  - E. Teachers call parents for positive and negative behaviors – teachers should not expect administrators to make these calls unless a significant discipline issue is involved.
- V. Attendance Initiative
- A. Better monitoring of student attendance by individual program instructors
  - B. Better monitoring of student attendance by administration
    1. Student meetings
    2. Communication with parents
    3. Policy to withdrawal students who miss more than 10 consecutive days.
- VI. Confidence Building
- A. Concurrent enrollment opportunities with Penn College Now Program
  - B. Dale Carnegie Class available to CPI students through local industry support
  - C. Industry certifications to all students in all program areas
- VII. Relationship Building
- A. With students

1. Understand the millennial student.
  2. Take an interest in them as a person and in their lives.
  3. Use a democratic approach rather than a dictatorship style in the classroom.
  4. Provide students with constant information regarding their performance.
- B. With CPI staff
1. Team-building activities complete at in-service days
  2. Monthly celebration activities by administration to show appreciation to staff.
- VIII. Professional Development
- A. Group Activities
1. Utilization of an instructional coach
  2. Increasing NOCTI and PSSA Scores
  3. Team-building.
- B. Individual Activities
1. Utilization of an instructional coach
  2. Attendance at conferences/seminars related to program area/industry
  3. Quantitative Analysis Report reviewed with administration.

### **Evaluation Tools & Procedures:**

The Strengthening Student Engagement Program at CPI had an impact on student achievement in several ways. More specifically, student attendance, student enrollment, discipline, and post-secondary placements have been positively impacted by this program.

Student attendance rates have increased by 1.3% from the 2009 to 2011 school year with an overall average attendance at the present time of 92.8% for the three sending schools. This average is satisfactory to the sending school superintendents and the CPI administration. In the past, average yearly student attendance rates were as low as 89%. Students are now held accountable for their attendance and they have learned the value of better attendance as an indicator of future success in the workforce.

Advanced and competent NOCTI scores have increased from 44.7% in 2008 to 68.1% in 2011 – an increase of 23.4% in three school years. NIMS certifications have increased from 50% of all students completing four NIMS certifications in 2008 to 100% of all students receiving the same number of certifications in 2011. While CPI does not believe that the curriculum should be governed by end-of-the-year assessments, it is an expectation that that the three-year curriculum will cover all areas without eliminating other areas of the curriculum. Teachers are now expected to begin preparing students for the NOCTI during their 10<sup>th</sup> grade year which includes helping them understand the positive outcome that an advanced or competent score can have on their entrance into the industry.

Student enrollment has remained the same over the past three years with a current population of 475 students in 20 program areas. This is an impressive statistic since two of the three sending schools have experienced a decrease in student enrollment in grades 10-12 and one sending school has remained the same for this same period. CPI is fortunate to attract an average of 29% of the student population in grades 10 through 12 from the three sending schools. The previously

mentioned image of CPI has changed and students are now aware of the expectations of the CTC. This statistic is mentioned as an evaluation tool of this program because it illustrates that students really do want to attend the CTC to gain the technical skills necessary for success in the workforce. While not all stakeholders involved in the educational process understand the importance of a CTC to many students, it is comforting to know that students are taking a proactive approach on their behalf and gaining the technical skills that many of their peers will not receive.

Although exact numbers are not available, student discipline has decreased by approximately 20% since 2008. The number of major violations involving drugs, weapons, fighting/assaults, and terroristic threats has drastically decreased with only one instance of a drug paraphernalia violation during the 2010-2011 school year. Minor violations have also decreased with fewer students seen by the Director of Secondary Education for multiple violations. Students and teachers are engaged in teaching and learning more often than in the past which helps decrease student discipline. Expectations have increased and students now know that they will be dismissed from CPI for frequent or major discipline violations.

Post-Secondary placement rates have also increased over the last two years. In 2009, 79% of CPI students were employed in their program-specific area, entering the military, or attending a post-secondary institution. In 2010, this number increased to 84% overall for these three specific areas. Students now believe that they can be successful on the next level. Regardless of the reason they chose to attend CPI, they leave with the necessary certifications, confidence, skills, and experience to be successful at whatever path they choose. This is a significant shift in attitude from several years ago. Students now attend CPI because they want to have successful futures, not because someone told them they would never succeed.

#### **Resources and Other Related Information:**

- Central PA Institute of Science and Technology - [www.cpi.edu](http://www.cpi.edu)
- Dale Carnegie Training - <http://www.dalecarnegie.com/>
- Penn College Now - <http://www.pct.edu/k12/penncollegenow/>

#### **Contact Information:**

Mary Ann Volders  
Director of Secondary Education  
Central Pennsylvania Institute of Science and Technology  
540 N. Harrison Road  
Pleasant Gap, PA 16823