
Pennsylvania Department of Education



COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF EDUCATION
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Educational Technology Report Wednesday, March 12, 2008

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Core Purpose

Mission

SUN Tech and members of its partnership have coalesced around a common vision to update the school's strategic plan. Originally adopted in 1995 and updated in 2002, 2005, and again in 2008, the plan clarifies the future direction of the school through reaffirmation of its mission and beliefs, identification of educational and organizational goals and a commitment to **continuous quality** in every aspect of SUN Tech's instructional programs and activities. This quest for excellence is reflected in the school's Mission and **Quality Statement** and signifies the school's commitment to providing the best Career and Technology instruction anywhere. The statement reads:

It is SUN Tech's mission to provide World Class Technical Education by continually improving:

**Safe and Supportive Environment +
Unparalleled Instructional Services & Curriculum +
Nationally Recognized Student Achievement =**

Highly Skilled Future Leaders!

Vision

The vision of SUN Tech is to be a center of excellence for education and adaptable to the needs and expectations of our secondary and post-secondary students.

Shared Values

Belief Statements

- All students can learn and must be encouraged and challenged to reach their full potential.
- Programs should enable students to acquire the knowledge, skills, and attitudes necessary to be productive members of society.
- Career guidance is essential for all students.
- Professional development is vital for a well-trained and creative staff.
- Students, through their actions and choices, have the final responsibility for their education.
- Students must have saleable skills upon program completion.
- The community and students must be committed to the pursuit of excellence in programs and services.
- Education is a continuing experience.
- Students must have respect for themselves and others.
- Partnering with the private sector to ensure a curriculum that is valid and business/industry responsive.
- Students must be **Self-Directed Learners** who use positive core values to create a positive vision for themselves and their future, set priorities and achievable goals, create options for themselves, monitor and evaluate their progress, and assume responsibility for their actions.

- Students must be **Collaborative Workers** who use effective leadership and group skills to develop and manage interpersonal relationships within culturally and organizationally diverse settings.
- Students must be **Complex Thinkers** who identify, access, integrate, and use available resources and information to reason, make decisions, and solve problems in a variety of contexts.
- Students must be **Community Contributors** who contribute their time and energies, and talents to improving the welfare of other and the quality of life in their diverse communities.
- Students must be **Quality Producers** who create intellectual, artistic, practical and physical products which reflect originality in high standards and use of advance technologies.

The SUN Tech strategic plan is a results-oriented document and provides a structure for public accountability. Many individuals will be asked to contribute to the work set forth in this plan in order to actualize the school's vision and mission. By working in collaboration, SUN Tech will be better prepared to provide its students with the educational opportunities needed to meet the challenges of the 21st century.

Needs Assessment

Needs Assessment

What developments in technology have emerged that you can take advantage of to improve education for your school or community?

- Remote Access
- Mobile Computers and Carts
- SmartBoards
- Projectors
- Elmo Projectors (Camera Projectors)
- Web Portals
- Blogs
- Podcasting
- Web 2.0

How do you identify potentially useful new technologies?

- Attend PETE&C (Pennsylvania Educational Technology Expo and Conference)
- Attend Regional Technology Coordinators Meetings at CSIU

- Subscriptions to the following: CIO (Chief Information Officer), CSO (Chief Security Officer), Information Week, eSchool News, District Administration, Scholastic Administrator, WindowsITPro
- Online Reviews and Technology Reports: PDE Portal, CDWG, Gartner, Technology Review — MIT, Computer Technology Review, CNet, <http://www.techlearning.com>
- Frequent interaction and discussion with peers in Information Technology

What Strengths and weaknesses, related to technology, have been identified by staff, students or parents?

The Educational Technology Committee has identified the following strengths and weaknesses in the use of technology at SUN Tech. This data was collected through the use of a school wide survey of instructors and students as well as through contributions of instructors, administrators and community stakeholders on the Educational Technology Committee.

To better understand the data collected it is important to remember that SUN Tech is a one year Career & Technology Center that offers 19 different programs of instruction. The programs range from Information Technology and Drafting CAD Technology which require extensive use of computers and related technology to Carpentry and HVAC which require a more limited use of computer technology.

The committee recognizes that students today are “living” in a culture that embraces a wide array of technology such as Web 2.0, blogging, podcasting and other types of emerging technology. It is difficult to keep up with the rapid changes in technology — but our students are living in this world and administrators and instructors must adapt and embrace these changes to effectively educate our students for the world they will live and work in.

Results of Instructor Survey:

- Most of the instructors at SUN Tech recognize the value of using technology in the classroom.
- 84% of our instructors agree that student achievement can be increased through the use of varied technology.
- The majority of instructors (58%) believe that student achievement can be increased through the use of computers.
- 84% of our instructors indicate they have opportunities to develop their skills.

Results of Student Survey:

- 73% of our students believe they are ready for the real world in reference to their presentation skills.
- 73% of our students believe they are ready for the real world in reference to their technology skills.
- 74% of our students learn well when they are working on projects or research.
- 69% of our students spend class time working on projects or research.
- 35% of our students spend class time using computers (this is likely due to the emphasis in the programs offered at SUN Tech)

The SUN Area Career & Technology Center is committed to improving the technology skills of every student and staff member. Our goal is to integrate a wider use of technology in all of our program areas.

Goals and Strategies

Goal: Improve Assessment Performance

Description: Increase the percentage of students earning a Pennsylvania Skills Certificate and/or a PDE approved industry certification each year.

Strategy: Purchase Portable Computers to be used for Testing

Description:

Activities:

Activity	Description	
Purchase 2 30-Unit Portable Carts for Portables	Purchase 2 30-unit portable computer carts. The carts will be mobile and can be used in any instructional area of the School. The carts will be stored in The Learning Center and the Large Group Instruction Room. The carts will provide secure storage for the portable computers.	
Person Responsible	Timeline for Implementation	Resources
Thomas Gray	Start: N/A Finish: N/A	\$3,000.00

Activity	Description	
Purchase 60 Portable Computers	We will purchase 60 portable computers to be used for NOCTI and other assessment testing. The portable computers will be configured to use the secured wireless network at the School and can be used in any of the instructional areas. The main sites for testing will be The Learning Center and the Large Group Instruction Room.	
Person Responsible	Timeline for Implementation	Resources
Thomas Gray	Start: N/A Finish: N/A	\$78,000.00

Goal: Improve Completion Rate

Description: Increase the percentage of students meeting program completer criteria by 2% each year.

Strategy: Use Instructional Technology in The Learning Center and Large Group Instruction Room for varied learning styles.

Description:

Activities:

Activity	Description
Provide Instructional Technology in The Learning Center and Large Group Instruction Room	Provide the following Instructional Technology to 2 learning centers to provide varied teaching styles for students. -High Resolution Document Imager

	-High Lumen Ceiling Mounted Projector -Projector Screen -DVD/VHS Player -Sound System -Senteo (Interactive Student Response System) -Classroom Management System -Instructional Podium for Technology -Extron Pole Vault System for Technology Integration	
Person Responsible	Timeline for Implementation	Resources
Thomas Gray	Start: N/A Finish: N/A	\$0.00

Goal: Improve Educational Opportunities for All Students

Description: It is SUN Tech's goal to improve the educational opportunities for all students through curriculum development, professional development, and data driven decision making.

Strategy: Improve Instructional Effectiveness

Description: Instructional effectiveness will be improved by providing improved technology and professional development.

Activities:

Activity	Description	
Provide Digital Camcorders for Podcasts	We will purchase 2 Digital Camcorders that will record instructional sessions and material to be used for school podcasts. The podcasts will be available to students via the network as well as from home via the SUN Tech webpage. Podcasts will also be available from the SUN Tech Web Page as well as on other popular Video PodCasting sites to give prospective students an opportunity to see the types of activities our students are engaged in. We would like to offer educational podcasts to a wide audience.	
Person Responsible	Timeline for Implementation	Resources
Thomas Gray	Start: N/A Finish: N/A	\$1,000.00

Activity	Description	
Provide Instructional Technology in The Learning Center and Large Group Instruction Room	Provide the following Instructional Technology to 2 Learning Centers to provide varied teaching styles for students. -High Resolution Document Imager (Elmo) -High Lumen Ceiling Mounted Projector -Projector Screen -DVD/VHS Player -Sound System -Senteo (Interactive Student Response System) -Classroom Management System -Instructional Podium for Technology -Extron Pole Vault System for Technology Integration	
Person Responsible	Timeline for Implementation	Resources

Thomas Gray	Start: N/A Finish: N/A	\$31,000.00
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Activity		Description	
Provide Instructor Training in New Technology During Staff Meetings			
Person Responsible	Timeline for Implementation	Resources	
Thomas Gray	Start: 3/6/2008 Finish: N/A	\$0.00	
Professional Development Activity Information			
Number of Hours Per Session	Total Number of Sessions Per School Year	Estimated Number of Participants Per Year	
1	4	24	
Organization or Institution Name	Type of Provider	Provider's Department of Education Approval Status	
SUN Area Career & Technology Center	<ul style="list-style-type: none"> School Entity 	Approved	
Knowledge and Skills	Research and Best Practices	Designed to Accomplish	
learn to use overhead projector learn to use camcorder learn to use Elmo learn to use Extron Switching gear learn to use Senteo hardware/software		<i>For classroom teachers, school counselors and education specialists:</i> <ul style="list-style-type: none"> Increases the educator's <u>teaching skills</u> based on research on effective practice, with attention given to interventions for struggling students. 	
Educator Groups Which Will Participate in this Activity			
Role	Grade Level		
<ul style="list-style-type: none"> Classroom teachers School counselors Other educational specialists 	<ul style="list-style-type: none"> High school (grades 9-12) 		
Follow-up Activities	Evaluation Methods		
	<ul style="list-style-type: none"> Participant survey 		

Activity	Description	
Provide Instructor-Led Improvement Opportunities in existing technologies	Opportunities to improve instructor technical skills will be provided through courses offered in the SUN Tech adult education courses. These courses are instructor led and provide hands-on training.	
Person Responsible	Timeline for Implementation	Resources
Thomas Gray	Start: 3/4/2008 Finish: N/A	\$0.00
Professional Development Activity Information		
Number of Hours Per Session	Total Number of Sessions Per School Year	Estimated Number of Participants Per Year
3	4	6
Organization or Institution Name	Type of Provider	Provider's Department of Education Approval Status
SUN Area Career & Technology Center	<ul style="list-style-type: none"> School Entity 	Approved
Knowledge and Skills	Research and Best Practices	Designed to Accomplish
There are a wide variety of courses available to instructors in the adult education curriculum. The following is a list of software instruction that is available to improve technology skills: Word Excel PowerPoint Access Vista		<p><i>For classroom teachers, school counselors and education specialists:</i></p> <ul style="list-style-type: none"> Increases the educator's <u>teaching skills</u> based on research on effective practice, with attention given to interventions for struggling students.
Educator Groups Which Will Participate in this Activity		
Role	Grade Level	
<ul style="list-style-type: none"> Classroom teachers Other educational specialists 	<ul style="list-style-type: none"> High school (grades 9-12) 	
Follow-up Activities	Evaluation Methods	
	<ul style="list-style-type: none"> Participant survey 	

Activity	Description
Provide Internet2 Connection to access Enriched Educational Content	We are participating in an EFUND grant with a number of local school districts and the CSIU. The EFUND grant will provide for a 5 Mbps Internet connection, a connection to I2 material, a connection to PAUNET, and a dedicated secure 5 Mbps VPN to the CSIU. The I2 connection and

	increased Internet bandwidth will enable students and instructors to access a wealth of educational material and to collaborate on educational activities with other Career & Technology Centers.	
Person Responsible	Timeline for Implementation	Resources
Thomas Gray	Start: N/A Finish: N/A	\$119,750.00

Activity	Description	
Provide opportunity for Instructor to use new technology with IT support	Following hands-on training in the use of the new technology in The Learning Center and Large Group Instruction rooms, instructors will be encouraged to schedule the two classrooms for instruction. Information Technology personnel will be available during the session as a safety net for the instructor.	
Person Responsible	Timeline for Implementation	Resources
Thomas Gray	Start: 3/3/2008 Finish: N/A	\$0.00
Professional Development Activity Information		
Number of Hours Per Session	Total Number of Sessions Per School Year	Estimated Number of Participants Per Year
1	1	24
Organization or Institution Name	Type of Provider	Provider's Department of Education Approval Status
SUN Area Career & Technology Center	<ul style="list-style-type: none"> School Entity 	Approved
Knowledge and Skills	Research and Best Practices	Designed to Accomplish
Instructors will learn how to use technology in The Learning Center and Large Group Instruction Room (projector, class management software, Elmo, Senteo, Extron switch).		<i>For classroom teachers, school counselors and education specialists:</i> <ul style="list-style-type: none"> Increases the educator's <u>teaching skills</u> based on research on effective practice, with attention given to interventions for struggling students.
Educator Groups Which Will Participate in this Activity		
Role	Grade Level	
<ul style="list-style-type: none"> Classroom teachers Other educational specialists 	<ul style="list-style-type: none"> High school (grades 9-12) 	

Follow-up Activities	Evaluation Methods
	<ul style="list-style-type: none"> Participant survey

Activity	Description	
Provide Small Group Instructional Training in Hands-On Use of New Technology	Provide small group training in the use of the new technology being placed in The Learning Center (TLC) and Large Group Instruction (LGI) rooms. The small groups will consist of 4-5 teachers for 2 hours of training in the morning and a second group of 4-5 instructors will receive training in the afternoon. Programs will be covered by a substitute teacher. Training will be provided by the network administrator	
Person Responsible	Timeline for Implementation	Resources
Thomas Gray	Start: 3/3/2008 Finish: N/A	\$1,200.00
Professional Development Activity Information		
Number of Hours Per Session	Total Number of Sessions Per School Year	Estimated Number of Participants Per Year
2	1	24
Organization or Institution Name	Type of Provider	Provider's Department of Education Approval Status
SUN Area Career & Technology Center	<ul style="list-style-type: none"> School Entity 	Approved
Knowledge and Skills	Research and Best Practices	Designed to Accomplish
Instructors will learn how to use technology in The Learning Center and Large Group Instruction Room (projector, class management software, Elmo, Senteo, Extron switch).		<p><i>For classroom teachers, school counselors and education specialists:</i></p> <ul style="list-style-type: none"> Increases the educator's <u>teaching skills</u> based on research on effective practice, with attention given to interventions for struggling students.
Educator Groups Which Will Participate in this Activity		
Role	Grade Level	
<ul style="list-style-type: none"> Classroom teachers School counselors Other educational specialists 	<ul style="list-style-type: none"> High school (grades 9-12) 	
Follow-up Activities	Evaluation Methods	

	<ul style="list-style-type: none"> Participant survey
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Activity	Description	
Provide Web-Based Technical Skill Improvement Courses	Numerous Web-Based courses are available through the SUN-Tech/ed2go portal. SUN Tech has partnered with ed2go to provide web-based adult education training.	
Person Responsible	Timeline for Implementation	Resources
Thomas Gray	Start: 3/4/2008 Finish: N/A	\$0.00
Professional Development Activity Information		
Number of Hours Per Session	Total Number of Sessions Per School Year	Estimated Number of Participants Per Year
2	6	6
Organization or Institution Name	Type of Provider	Provider's Department of Education Approval Status
SUN Area Career & Technology Center	<ul style="list-style-type: none"> School Entity 	Approved
Knowledge and Skills	Research and Best Practices	Designed to Accomplish
Skill Improvement in the following computer software packages are available: Microsoft Word, Microsoft Excel, Microsoft PowerPoint, Microsoft Vista, and others		<p><i>For classroom teachers, school counselors and education specialists:</i></p> <ul style="list-style-type: none"> Increases the educator's <u>teaching skills</u> based on research on effective practice, with attention given to interventions for struggling students.
Educator Groups Which Will Participate in this Activity		
Role	Grade Level	
<ul style="list-style-type: none"> Classroom teachers School counselors Other educational specialists 	<ul style="list-style-type: none"> High school (grades 9-12) 	
Follow-up Activities	Evaluation Methods	
	<ul style="list-style-type: none"> Participant survey 	

Goal: Increase Placement Rate

Description: The percentage of students going on to post-secondary education, the workforce in their field of study, or the military will be increased.

Strategy: Increase the Percentage of Students Continuing on to Post-Secondary Education.

Description: Student placement in post-secondary education will be increased by developing programs of study and articulation agreements that will ensure a seamless transition from SUN Tech to college.

Activities:

Activity	Description	
Expose Students to learning environment they will see at Post-Secondary Level	Utilize the Instructional Technology available in The Learning Center and the Large Group Room.	
Person Responsible	Timeline for Implementation	Resources
Thomas Gray	Start: N/A Finish: N/A	\$0.00

Strategy: Increase the Percentage of Students Entering the Workforce or Military

Description: The percentage of students entering the workforce in their chosen field of study will be increased by improving their employability skills and awareness of opportunities in high demand, high priority occupations that offer family sustaining wages.

The percentage of students entering the military will be increased by making students aware of opportunities available to them not only in the military but all government agencies.

Activities:

Activity	Description	
Improve and Update the Alumni Web Page	The Alumni Web Page provides a site for our alumni to communicate with each other and area businesses. This communications is needed to provide positive feedback to current students about success stories within their field of study.	
Person Responsible	Timeline for Implementation	Resources
Thomas Gray	Start: N/A Finish: N/A	\$0.00

Staff Development

IT Staff Development:

The IT staff at SUN Area Career & Technology Center are constantly involved in learning activities for new technology. The learning activities are provided by actively pursuing relevant content from a variety of online and printed material from reliable sources. The IT department also attends frequent seminars hosted by major IT vendors such as Dell, LAM Systems, Microsoft and others. These seminars are generally free to IT professionals. The network administrator attends numerous Technology groups such as the Regional Technology Coordinators meetings at the CSIU (Central Susquehanna Intermediate Unit) and PETE&C (Pennsylvania Technology Expo and Conference). These meetings provide additional opportunities to meet with hardware and software vendors as well as to discuss relevant technology topics with peers in the educational technology field.

The network technician is pursuing a MCSE (Microsoft Certified Systems Administrator) certification. The technician will be training for this certification with online sources, printed courseware, and instructor led courses.

Technology Professional Development for Instructors and Staff:

Our instructors and staff will require training in new technology that will be available in The Learning Center and the Large Group Instruction Room. This technology includes the following:

- Elmo (Document Imager)
- Extron Pole Vault System (switching hardware for technology equipment)
- Senteo Interactive Classroom Management Hardware/Software
- DVD/VCR
- Projector
- Classroom Management Software
- Digital Camcorders to record podcasts
- Podcasting

This technology will be demonstrated during three of the bi-weekly Faculty/Staff Meetings. Instructors will work in smaller groups (4-5 per group) in The Learning Center with the network administrator to "practice" using the technology. Instructors will be encouraged to schedule use of The Learning Center with their class and IT staff will be available to ensure the first use of the technology resources is successful.

Training in the use of this technology will be the responsibility of the Network Administrator. The integration and use of technology in the curriculum of each program will be the responsibility of the Curriculum Supervisor.

Budget

Summary: Potential Funding Distribution

Funding Source	2008-2009	2009-2010	2010-2011	Total
010 - ADMINISTRATIVE BUDGET	\$18,800.00	\$9,600.00	\$9,600.00	\$38,000.00
663 - PERKINS ACT - Title II, Part C - Secondary, Postsecondary And Adult Vocational Education Programs	\$105,000.00	\$0.00	\$0.00	\$105,000.00
eRATE	\$14,350.00	\$14,350.00	\$14,350.00	\$43,050.00
TOTAL	\$138,150.00	\$23,950.00	\$23,950.00	\$186,050.00

Goal: Improve Assessment Performance

Increase the percentage of students earning a Pennsylvania Skills Certificate and/or a PDE approved industry certification each year.

Purchase Portable Computers to be used for Testing	2008-2009	2009-2010	2010-2011	Total	Funding Source
Purchase 2 30-Unit Portable Carts for Portables	\$3,000.00	\$0.00	\$0.00	\$3,000.00	010 - ADMINISTRATIVE BUDGET

Purchase 60 Portable Computers	\$78,000.00	\$0.00	\$0.00	\$78,000.00	663 - PERKINS ACT - Title II, Part C - Secondary, Postsecondary And Adult Vocational Education Programs
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GRAND TOTAL	\$81,000.00	\$0.00	\$0.00	\$81,000.00	
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Goal: Improve Educational Opportunities for All Students

It is SUN Tech's goal to improve the educational opportunities for all students through curriculum development, professional development, and data driven decision making.

Improve Instructional Effectiveness	2008-2009	2009-2010	2010-2011	Total	Funding Source
Provide Digital Camcorders for Podcasts	\$1,000.00	\$0.00	\$0.00	\$1,000.00	663 - PERKINS ACT - Title II, Part C - Secondary, Postsecondary And Adult Vocational Education Programs
Provide Instructional Technology in The Learning Center and Large Group Instruction Room	\$26,000.00	\$0.00	\$0.00	\$26,000.00	663 - PERKINS ACT - Title II, Part C - Secondary, Postsecondary And Adult Vocational Education Programs
Provide Instructional Technology in The Learning Center and Large Group Instruction Room	\$5,000.00	\$0.00	\$0.00	\$5,000.00	010 - ADMINISTRATIVE BUDGET (Secondary)
Provide Internet2 Connection to access Enriched Educational Content	\$14,350.00	\$14,350.00	\$14,350.00	\$43,050.00	eRATE (Secondary)
Provide Internet2 Connection to access Enriched Educational Content	\$9,600.00	\$9,600.00	\$9,600.00	\$28,800.00	010 - ADMINISTRATIVE BUDGET

Provide Small Group Instructional Training in Hands-On Use of New Technology	\$1,200.00	\$0.00	\$0.00	\$1,200.00	010 - ADMINISTRATIVE BUDGET
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GRAND TOTAL	\$138,150.00	\$23,950.00	\$23,950.00	\$186,050.00	
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TOTAL	\$0.00	\$0.00	\$0.00	\$0.00	
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Monitoring

Technology Activities and Strategies will be monitored by the Network Administrator and the Curriculum and Instructional Supervisor. The Technology Committee will meet once per year to evaluate progress on the Strategic Plan and to suggest new strategies and activities to accomplish our goals. We will use the following methods to collect data on the activities being monitored:

- Observation
- Student Surveys
- Instructor/Staff Surveys
- Parent Surveys
- Occupational Advisory Committee (OAC) Surveys
- Program Evaluations

Progress on the technology activities and strategies will be reported annually to the Administrative Director and the Quality Management Team (QMT). The Administrative Director will report on the progress of the Strategic Plan to the Joint Operating Committee and to other stakeholders for SUN Area Career & Technology Center.

Evaluation

Each of the technology strategies and action plans will be evaluated by the Network Administrator, Curriculum & Instructional Supervisor and the Administrative Director. The Technology Committee and Quality Management Team (QMT) will also be involved in evaluating the success of each of the action plans in this report.

We will make recommendations for continual improvement on our goals to Improve Assessment Performance, Improve Educational Opportunities for all Students and to Increase Placement Rates for Students.