

# NWCET Best Practices

**Title:** Academy of Information Technology, Stamford (Connecticut) Public Schools

## **Challenge**

The goal of the project was to begin the full integration of information technology skill standards into the curriculum of the newly established Academy for Information Technology (AIT) located on the Rippowam campus in the Stamford Public Schools.

## **Solution**

An integration plan and implementation schedule were developed with the cooperation of the AIT Technology Curriculum Coordinator, Principal, and Assistant Superintendent for Instruction.

The integration plan addressed three areas: 1) a review of the extent to which the technical classes utilized IT skill standards, 2) the incorporation of the academic classes in the technical education of the students, and 3) the development of lesson plans that focused on real-life IT issues faced by the AIT.

The first part of the plan required the start of a gap analysis using the Technical and Foundation Learning Components identified in NWCET's *Building a Foundation for Tomorrow: Tech Prep Information Technology Skill Standards-Based Curriculum*. A gap analysis is the process that gives a broad overview of which learning components are covered in existing classes and to what degree. It does not give a complete picture of what changes need to be made to existing curriculum to make it skill standard-based but does give a high level picture of what major learning components are not being addressed. Technical teachers were interviewed to help compile and/or verify the data. The academic teachers at AIT were interviewed as part of the plan's second part to determine if and when technology tools were required in the sequence of their courses. The information gathered in these two exercises provided a great snapshot of the current status of the IT curriculum needs and became the basis of a master plan for future curriculum development. To begin the implementation process, however, the Assistant Superintendent wanted a real-life example of hands-on curriculum development in which both the technical and academic staff could participate and that would immediately heighten the awareness of IT skills for all of the AIT students. Since an early problem at AIT had been security breaches of the academy's network, the topic chosen for the third part of the plan was Computer Security, Privacy, and Ethics.

The implementation schedule covered a period of two months. During this time the following events were scheduled to promote Computer Security, Privacy and Ethics among the faculty and students at AIT:

- 1) Arrival of curriculum reference materials from NWCET and Shelley Cashman and distribution to all AIT staff,
- 2) Two teacher 'Retreats' (afternoon faculty workshops with food provided) at which IT skill standards-based curriculum development activities were

- conducted to prepare the new lessons on Computer Security, Privacy, and Ethics,
- 3) Campaign for two weeks called "IT's a Privilege, Protect it!" during which the new lesson plans were presented in all classes throughout the academy,
  - 4) School-wide assembly with guest speaker from a computer security business,
  - 5) Special visit by the Governor of Connecticut to acknowledge the successful startup of the AIT and the outstanding achievements of its first graduates.

### **Outcomes and Benefits**

The accomplishments of this project can be categorized into three major areas:

a) curriculum development, b) staff and community relationships, and c) student involvement.

The AIT faculty prepared and published seven new lessons on Computer Security, Privacy, and Ethics. The topics were:

- Lesson 1: Vandalism, damage or destruction of property
- Lesson 2: Security violations, hacking, unauthorized access
- Lesson 3: Cyber theft, making illegal copies
- Lesson 4: Disruptive computer lab behavior, prohibited items around computer
- Lesson 5: Copyright infringement, plagiarism
- Lesson 6: Invasion of privacy, respect for personal property
- Lesson 7: Virus creation/distribution

Technical teachers were paired with academic teachers who taught during the same class period so that the lessons presented would not overlap. The lessons incorporated a variety of instructional methods; one is project based and another requires research on the Internet. Many emphasized problem-solving techniques and utilized role-playing scenarios that they might face on the job. AIT faculty and administrators also developed an Acceptable Use Policy (AUP) which was implemented as part of the regular school enrollment procedures.

Efforts to develop the new lessons and planning for the school-wide campaign resulted in the constant interaction between the academic and technical faculty members. Since all of the faculty were new to the campus and had had few opportunities to work together, this project was the first opportunity to begin to build professional relationships across disciplines. The need for a guest speaker also meant that businesses in the community were contacted to participate in the assembly and to the AIT students as a future employee source.

Finally, the greatest rewards were experienced by the students at AIT. For most, sharing what they learned in their lessons in Computer Security, Privacy, and Ethics with John Roland, the Governor of the state at the time, was a once-in-a-lifetime opportunity. All of the students participated in the preparation for the campaign and many also digitally designed and produced banners, stickers, hall displays and decorations to increase interest in the issues of these topics in information technology.

**Next Steps**

The new lessons in Computer Security, Privacy, and Ethics will become a part of the first-week orientation course that all new students are required to take upon entering the Academy for Information Technology. The faculty will continue to complete the gap analysis and determine steps to address any deficiencies in the desired IT skill standards. The first faculty session was held at the end of the year with follow-up sessions planned.

**Key Issue**

The key issue of this project was to incorporate the most relevant information technology skill standards into the academy's curriculum in preparation for the next school year.

**Side Bar**

The Academy of Information Technology began in 1999 as Stamford School District paved the way in innovative learning technologies to prepare students with the skills necessary for an ever-changing society. AIT is the first program of its kind in Connecticut for high school students interested in all aspects of technology. For more information about the school, please visit <http://ait.echalk.com>.

**Partners**

Connecticut Business and Industry Association  
Stamford School District  
Office of the Governor of the State of Connecticut  
Protegrity  
Janus Security Firm