



# Technology Management<sup>for</sup> School Leaders

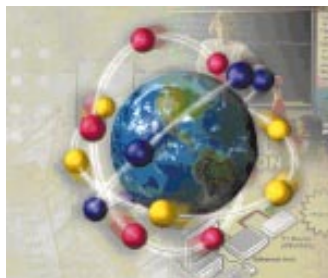
*developed by*  
the Institute for Connecting Science Research to the Classroom

[www.tmsl.org](http://www.tmsl.org)

**TMSL** is a program designed to assist school leaders in developing a knowledge-base concerning a range of issues related to eight topics essential for systemic use of technologies to support and extend student learning. Information fundamental to making cost-effective, instructionally sound decisions related to educational technologies is made available on a continuously updated website.

A professional development component of the program allows teams of school leaders to interact with their colleagues and discussion leaders in exploring solutions to problems they face in using technology to increase student achievement.

TMSL is grounded in both state and national technology standards for teachers and administrators. Following is a brief synopsis of TMSL modules that have been developed.



## Using the Internet

This module assists school leaders in exploring a range of teaching and learning options available via the Internet from their own personal use to understanding the critical issues for

schools online. The module also addresses using the worldwide web, e-mail accounts, online publishing and accessing online resources.

## Evaluating Software

Although a wide array of software is advertised to schools, the instructional merits of the material can be negligible. Despite the rapidfire, colorful images and the student input options, many software packages provide students little more than an electronic workbook. This module helps school leaders understand the evaluation process with regard to sound instructional criteria and to the professional development needed for teachers to select and evaluate software more effectively.



## Understanding and Evaluating Networks

This module focuses on the types of network connectivity available to schools and on the advantages/disadvantages and support requirements of each. The complexity of managing networks in conducting administrative and instructional tasks is analyzed in terms of needs and critical issues such as acceptable use plans, equity and access.



## Evaluating Hardware Instructional Solutions



The focus of this module is on how to support administrative and instructional software requirements, present and predicted needs, with compatible, expand-

able, affordable hardware solutions. Analysis of the key features of hardware components and their necessary support requirements is followed by analysis of an evaluation process used for selecting and purchasing hardware as well as for accepting donations of hardware.

## Evaluating School Management Software

Administrators today must deal with site-based management; an increasingly mobile and diverse student population; inclusion; increased parental, district, court, state and federal reporting. Old methods of data collection and periodic reporting are no longer sufficient. The mountain of data educators collect daily must be managed more meaningfully. Collection, analysis and dissemination of the information can enhance decision making, both at the administrative and instructional levels.



## Providing Professional Development in Using Instructional Technologies

This module assists school leaders to build on staff preferences and to identify a context for training that goes beyond honing a new skill. The subsequent professional development must be based on principles of adult learning, must incorporate the best thinking about using instructional technologies in specific curricula at appropriate development levels, and must be standards-based.



## Developing School/District Technology Plans

While almost every school district has a technology plan, not every plan is based on a sound assessment of instructional need. This module examines how to ensure quality in the planning process and in the scope of the plan itself.

## Technology and the Community

This module examines how technology can become an effective catalyst in bringing the community to the schools and in allowing students to reach into the larger community for learning anytime, anywhere. Partnerships can be formed to create communities of learners with technology enabling them to inquire and train in areas of interest over a lifetime.



**Teaching Inquiry with the Latest Technologies (TILT)** is a two stage professional development program. The first stage matches university researchers with teachers in the collaborative development of learning applications for elementary, middle and high school students. The focus is on tapping research in sciences often unavailable to K-12, such as biotechnology and materials science. The goal is for students engaged in these learning applications to use the actual protocols and technologies that practicing scientists use in their inquiries. The second phase of the program focuses on dissemination of 16 unique learning applications through systemic professional development of K-12 teachers.

All TILT learning applications are standards-based, drawing heavily on national and Virginia standards of learning for students and on professional development standards for teachers.

**The Institute for Connecting Science Research to the Classroom (ICSRC)** taps the science and technology resources of independent laboratories, centers and sponsored research projects from seven colleges on the Virginia Tech campus. Coordinated by the College of Human Resources and Education, the ICSRC brings together faculty from the colleges of Agriculture and Life Sciences, Architecture and Urban Studies, Arts and Sciences, Engineering, Natural Resources, and Veterinary Medicine; corporate leaders; and K-12 educators with common interests in enriching science and mathematics education.

The mission of the ICSRC is threefold: to broker collaborative work between K-12 teachers and university researchers; to translate research for classroom application; and to train K-12 teachers in using the applied research and administrators in managing a technology-rich learning environment.

ICSRC accomplishes its mission through the TILT and the TMSL programs.

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