Building
Technology Facilitators and Leaders
A Standards-based Approach

By Jo Williamson and Traci Redish

While instructional technologists are busy helping others achieve national technology standards, they often do not realize that there are published standards to guide their own practice. With ISTE's Technology Facilitation (TF) and Technology Leadership (TL) standards, tech specialists can experience the same types of professional benefits from the standards movement as other educators.

W have noticed a rather ironic phenomenon in the technology standards movement. Instructional technologists are extremely familiar with the technology standards for students (NETS•S), teachers (NETS•T), and administrators (NETS•A). They use these standards to help educators envision new roles for themselves and specify the knowledge and skills necessary to assume these roles. They also depend on these standards to help others reflect on their professional practice and chart progress toward higher levels of performance.

Yet few instructional technologists realize that national standards to structure their own professional learning are also available. Given the critical roles that technology specialists play in advancing technology use in schools, this is a potentially serious gap in the standards movement.

To address this issue, we will introduce *L&L* readers to ISTE's Technology Facilitation (TF) and Technology Leadership (TL) standards and offer suggestions as to how these standards might be used to improve the performance and professional status of instructional technology specialists in the field.

Overview

In fall 2001, ISTE partnered with the National Council for Accreditation of Teacher Education (NCATE) to publish the TF and the TL standards. The TF standards are designed for lead teachers or instructional technology specialists who facilitate technology integration at the building level. The TL standards are designed for PK–12 coordinators, specialists, or directors who lead technology programs at the district, regional, state, or national level.

Understanding the Standards

The standards categories and the performance indicators are the same for both TF and TL, but the performance standards and sample performance tasks for each are different. The chart below provides a comparison of TF and TL Standard I.A and the performance indicators/tasks provided for each standard.

Standard Categories

The TF and TL standards are aligned to both the NETS•T and NETS•A, with two additional standard categories. The extra categories are necessary to retain the in-depth technical knowledge and instructional focus

embodied in the NETS•T and also to embrace the leadership, vision, and administrative functions represented in the NETS•A. All the TF/TL standard categories appear in the NETS•T or the NETS•A except one. TF/TL Standard VII (Procedures, Policies, Planning, and Budgeting for Technology) is aligned to NETS•A, Standard V (Support, Management, and Operations). However, the revised wording reflects the unique functions fulfilled by technology specialists.

Performance Standards

Because the TF standards serve as prerequisites to the TL standards, the two sets are constructed as a continuum for technology professionals who begin their work in local schools as technology facilitators and then broaden their sphere of influence and increase their responsibilities over time as technology leaders. Because of this, the TF and TL standards differ in the following ways:

Location of performance. In general, facilitators perform mainly at the school level, while leaders operate in district, state, or regional levels (see TF/TL Standard II on page 24).

TF/TL-I. Technology Operations and Concepts	
TF-I.A. Educational technology facilitators demonstrate an in-depth understanding of technology operations and concepts. Educational technology facilitators:	**TL-I.A.** Educational technology leaders demonstrate an advanced understanding of technology operations and concepts. Educational technology leaders:
TF/TL I.A. Demonstrate knowledge, skills, and understanding of concepts as related to technology (as described in the ISTE NETS•T)	
TF-I.A.1. Assist teachers in the ongoing development of knowledge, skills, and understanding of technology systems, resources, and services that are aligned with district and state technology plans.	**TL-I.A.1.** Identify and evaluate components needed for the continual growth of knowledge, skills, and understanding of concepts related to technology.
TF-I.A.2. Provide assistance to teachers in identifying technology systems, resources, and services to meet specific learning needs.	**TL-I.A.2.** Offer a variety of professional development opportunities that facilitate the ongoing development of knowledge, skills, and understanding of concepts related to technology.

Breadth, depth, and complexity of performance. Facilitators are expected to have in-depth knowledge, while leaders are expected to have advanced knowledge. (See TF/TL Standard I.) Facilitators must apply, implement, assist, promote, and contribute, but leaders also design, disseminate, evaluate, and develop. While facilitators implement the strategic directions and apply materials that others develop, leaders are often responsible for creating strategic plans, programs, and materials that meet specific needs. In many cases, technology leaders are responsible for ensuring that technology facilitators have the resources, knowledge, and skills necessary to promote effective technology use at the school level. For example, in TF/TL Standard IV, facilitators apply technology for assessment and evaluation, but leaders are expected to construct and communicate a research-based rationale for the same types of activities. These principles are also illustrated in TF/TL Standards III, V, VI, VII, and VIII.

Performance Indicators and Tasks

The TF and TL Standards documents are each accompanied by a performance rubric. These rubrics include the performance indicator from the actual standards document in the meets column, but the documents also provide sample performance tasks that approach and exceed the standard.

With these additional performance tasks, the TF/TL performance rubrics provide the clearest picture yet of the continuum of technology facilitation and technology leadership performances. Performances that exceed expectations on the facilitator rubric are identical to those that approach expectations on the leadership rubric. When considered together, the documents create a powerful tool for understanding what technology professionals must know and be able to do in PK–12 education.

TF/TL Standards

Technology Operations and Concepts

TF-I. Educational technology facilitators demonstrate an in-depth understanding of technology operations and concepts.

TL-I. Educational technology leaders demonstrate an advanced understanding of technology operations and concepts.

Planning and Designing Learning Environments and Experiences

TF-II. Educational technology facilitators plan, design, and model effective learning environments and multiple experiences supported by technology.

TL-II. Educational technology leaders assist by planning, designing, and modeling effective learning environments and experiences supported by technology at the district/state/regional level.

Teaching, Learning, and the Curriculum

TF-III. Educational technology facilitators apply and implement curriculum plans that include methods and strategies for utilizing technology to maximize student learning.

TL-III. Educational technology leaders model, design, and disseminate curriculum plans that include methods and strategies for applying technology to maximize student learning.

Assessment and Evaluation

TF-IV. Educational technology facilitators apply technology to facilitate a variety of effective assessment and evaluation strategies.

TL-IV. Educational technology leaders communicate research on the use of technology to implement effective assessment and evaluation strategies.

Productivity and Professional Practice

TF-V. Educational technology facilitators apply technology to enhance and improve personal productivity and professional practice.

TL-V. Educational technology leaders design, develop, evaluate, and model products created using technology resources to improve and enhance their productivity and professional practice.

Social, Ethical, Legal, and Human Issues

TF-VI. Educational technology facilitators understand the social, ethical, legal, and human issues surrounding the use of technology in PK–12 schools and assist teachers in applying that understanding in their practice.

TL-VI. Educational technology leaders understand the social, ethical, legal, and human issues surrounding the use of technology in PK–12 schools and develop programs facilitating application of that understanding in practice throughout their district/region/state.

Procedures, Policies, Planning, and Budgeting for Technology Environments

TF-VII. Educational technology facilitators promote the development and implementation of technology infrastructure, procedures, policies, plans, and budgets for PK–12 schools.

TL-VII. Educational technology leaders coordinate development and direct implementation of technology infrastructure procedures, policies, plans, and budgets for PK–12 schools.

Leadership and Vision

TF-VIII. Educational technology facilitators will contribute to the shared vision for campus integration of technology and foster an environment and culture conducive to the realization of the vision.

TL-VIII. Educational technology leaders will facilitate development of a shared vision for comprehensive integration of technology and foster an environment and culture conducive to the realization of the vision.

Benefits of the Standards

Like all national technology standards, the TF/TL standards were intended to influence university preparation programs, district/state policies and practices, and inservice professional development in the field.

Without a full adoption of the TF/TL standards and the presence of qualified staff to implement them, schools and school districts will fail to realize the potential of modern technologies for learning. The TF/TL standards accomplish objectives that other national educational technology standards cannot. The following are among the most important of these objectives:

Validating the role of technology professionals. Formal positions for technology facilitators and leaders in education are relatively new, and other educators, board members, and community stakeholders may not understand the full range of what technology professionals do or why technology facilitation and leadership is a critical component of school improvement. Increased understanding is also important to ensure that technologists are awarded professional status, credibility, and compensation equivalent to other educators with similar duties and responsibilities. Some states, including Louisiana, Illinois, Pennsylvania, and North Carolina, have chosen to implement technology endorsement or certification programs based on the TF standards as a strategy to formalize these professional roles.

Shaping the identity of school technologists. The standards can assist technologists in reflecting on what they do, forming a professional identity congruent to their work, and explaining their roles to others.

Improving the performance of current technology facilitators and leaders. The standards provide practicing technology facilitators and leaders

with a framework to assess their own performance and identify gaps where they must provide for their own professional development. The standards also provide a framework for the design and delivery of inservice professional learning programs for technologists.

This framework should be especially beneficial to district technology leaders who must provide for technology facilitators on their local teams. University outreach centers, intermediate service agencies, and not-for-profit organizations should also find the

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standards a valuable resource as they attempt to serve the needs of inservice PK–12 technologists.

Recruiting and training future technology facilitators and leaders. Many current technology leaders and facilitators are first-generation technologists. However, as the profession matures, training, recruiting, and preparing new personnel will become even more critical. The standards have already become an important framework for graduate and add-on endorsement programs at universities. However, current technology facilitators and leaders can use the standards as a tool to describe their work to promising candidates and to develop local mentoring programs as well.

Building successful human resource structures for technology. To ensure that appropriate support for technology is firmly embedded in school cultures, educators and other key stakeholders must reflect on the current capacity to deliver technology leadership and facilitation in their school, district, or region. Key questions may include: Are all the TF/TL standards being implemented? Are there enough personnel to fully implement the standards? Is there a good balance between leaders, who operate at a broader strategic level, and facilitators, who are critical to day-to-day instructional support? Are leadership and facilitation roles well defined, well articulated, and symbiotic? Are existing personnel addressing the standards? Are they currently able to do so? Why or why not?

To answer these questions and others, decision makers will need tools to guide their reflection and assessment.

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The TF/TL standards, as they now stand, can serve as an initial guide for assessing current conditions, but the standards can provide a framework for the development of more specific, customized types of tools. These tools include more formal reflection guides, job descriptions, instruments for evaluating technology facilitators and leaders, and checklists for establishing new performance goals.

Enacting the Standards

The objectives listed in the previous section are critical to successful technology implementations that lead to improved student achievement. Without the presence of well-prepared, capable educational technology professionals to shape the future of PK–12 technology integration, we cannot meet the learning goals established in our national, state, district, and school-level plans.

The following represent some practical next steps to fully leverage the potential of the TF/TL standards:

1. Locate, download, and study the standards documents and supporting rubrics.
2. Provide standards to key stakeholders and brief them on their importance.
3. Ensure that local universities are implementing standards-based programs that produce strong technology facilitators and leaders.
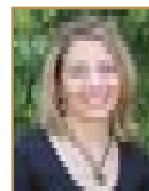4. Use the standards to reflect on current levels of technology leadership and facilitation positions in your school, district, or region.
5. Use the standards to reflect on your current practice.
6. Identify areas where standards are not being met and design strategies, including professional learning programs, to address the gaps.
7. Review and revise local job descriptions based on the standards.
8. Develop evaluation tools and other job performance documents for technology facilitators and leaders.
9. Communicate the results of your standards-based needs assessment to foster needed change.

Resources

Shamburg, C., Twomey, C. R., & Zieger, L. (2006). *Teachers as technology leaders: A guide to ISTE technology facilitation and technology leadership accreditation.* Eugene, OR: ISTE.

TF/TL Standards: http://cnets.iste.org/ncate/

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