Getting to the Heart of Technology

Virginia's Instructional Technology Resource Teacher Program

Integration

By Teresa Coffman

For many states, it's been a long struggle to fund positions dedicated to helping schools integrate technology. But in Virginia, thanks to the state's forward-thinking educational leaders and lawmakers, every school division has its own team of technology-integration specialists.

It all started with the No Child Left Behind Act of 2001 and the Enhancing Education through Technology program, which both promote initiatives to give teachers, principals, and administrators the power to integrate technology effectively into teaching and learning. Hoping to take advantage of this opportunity while it lasted, these educational leaders united with the Virginia Department of Education and lawmakers to create a statewide initiative introducing a workable vision of technology integration throughout the Virginia school system. Specifically, they wanted to infuse technology into the curriculum to improve communication, task efficiency, data-driven decision making, instruction, and, ultimately, student performance.

These leaders understood that, for this vision to become reality, every school division in the state would need to have its own technology leaders. With that goal in mind, the Virginia General Assembly authorized and funded two new education positions in 2004—the instructional technology resource teacher (ITRT) and technology support staff person—and mandated that every school employ at least one of each for every 1,000 students. As of this writing, Virginia has spent more than $500 million to support this ed tech infrastructure throughout the state, and it has reaped enormous benefits in terms of successful technology integration and improved student learning and test scores.

Joint Effort

Virginia's overarching goal for its technology-integration program is to aid and create a productive environment for all teachers to develop the knowledge and skills they need to integrate technology throughout the curriculum. To that end, each of Virginia's 134 school divisions are mandated to employ technology teams built around two key positions:

- An ITRT, who is responsible for training teachers to use technology and software effectively, as well as for helping teachers integrate that technology into their curricula
- A technology support staff person, who is responsible for managing the school's information network

ITRTs. ITRTs are at the heart of this plan. Although all ITRTs are licensed to teach, they serve not as classroom teachers but as resources to classroom teachers in technology integration. It's the ITRT's job to help teachers develop technology-related knowledge and skills so they can become more effective classroom and school leaders and, in turn, become more effective at increasing student learning. ITRTs provide classroom teachers with the latest information and research on how technology can address a diverse array of learning needs and styles, and they help them implement emerging technologies that offer differentiated instruction, build relationships, and promote teacher leadership throughout each school division.

In Virginia's schools, technology integration is a joint effort that relies on collaboration between the teachers and the ITRTs in such areas as modeling technology-integration strategies and researching technologies. ITRTs also communicate instructional strategies and provide resources to classroom teachers, either by visiting the classrooms and working directly with the teachers, or by using available technology resources for communication. Some ITRTs create resource portals that teachers can access or send out weekly e-mail messages containing sample lessons and resources about integrating an available technology into the curriculum.

Each ITRT has a wide variety of administrative and instructional responsibilities, including:

- Modeling instructional strategies for students and teachers
- Providing training and professional development
- Assisting with curriculum development as it relates to ed tech
- Researching technology-based instructional strategies
- Evaluating software and hardware
- Meeting with administrators and content supervisors at the building and/or central-office level to coordinate services and resources
- Serving on building and/or division leadership teams related to technology and instruction
- Maintaining professional membership in organizations related to technology in education
- Creating and implementing a plan to communicate progress and activities to school faculty and administration
- Maintaining records necessary to document progress and activities

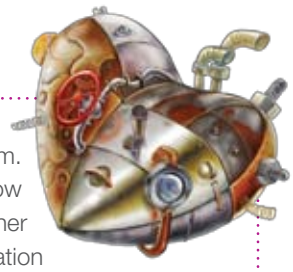
Day in the Life of an ITRT

As an ITRT in a rural school division, I work in three K–7 schools. My week is broken up into segments: I spend one day a week at each school and float on the other two days depending on where I am needed.

I usually get to work between 7:00 and 7:15 a.m. I set up my laptop and quickly review e-mails and go over my tasks for the day. These tasks might include meeting with a teacher before school to set up a lesson, demonstrating a piece of technology to a teacher, creating a lesson in a piece of software such as SmartNotebook, finding a resource on a specific standard for a teacher, demonstrating to a principal how to do something on her computer, or teaching a small- or large-group workshop.

Once school starts, I usually check in with the computer lab assistants to see how things are going there. I often attend grade-level meetings or meet with teachers during their planning periods to coordinate lessons involving specific pieces of technology, or to help set up and teach some piece of technology they will use.

My day usually ends with an hour-long professional development workshop for teachers on some type of technology. Recently I did an hour on the latest version of Google Earth and how teachers could use it in a classroom. We talked about how a first grade teacher might use the application differently than a seventh grade teacher, and I demonstrated how this might look. Teachers come away from these workshops with new ideas, new knowledge, and hopefully more confidence in their ability to use technology with their students.



I am fortunate that I have the freedom and flexibility in my position to maximize the support I offer teachers. It's a great job!

—Sean Sharp,
Floyd County Public Schools

Technology support staff. These positions provide centralized, school-based, and/or regional support for information networks, such as help desks. These positions are responsible for providing network selection, configuration, installation, operation, repair, and maintenance. They install software, troubleshoot problems, and perform security management. Technology support positions may also maintain servers, computers, multimedia devices, and networks.

The ITRTs, in coordination with the technology support staff, share a focus on improving student achievement and helping students become prepared citizens for the 21st century. And so far, research has shown that the teams have successfully advanced technology-integration efforts throughout the Virginia school system.

Making Progress

ITRTs have proven to be a tremendous resource for assisting teachers with technology integration, for training teachers to use technology effectively, and for assisting with curriculum development as it relates to ed tech. The Virginia Department of Education's Office of Educational Technology conducted a study in 2007 that found that classroom technology use has indeed increased since the introduction of the ITRT program, and that teachers are beginning to collaborate more with ITRTs on a continuous and ongoing basis. Remarkably, the study also found major improvements in 32% of the subject areas tested by the Virginia Standards of Learning (SOL) tests, the most dramatic of which was in English reading. (However, it was still too early to determine the ITRT program's influence on this rise in student achievement and to understand which subjects and at what grade levels this influence is most pronounced, so the study recommended ongoing research as the ITRT program matures.)

Virginia Tech and researchers K.M. Hooker and J.S. Streich have also identified areas of success related to the ITRT and technology support positions in Virginia's schools. These studies confirmed that ITRTs do focus on technology integration and are well qualified, and that teachers are beginning to integrate technology into their classrooms successfully. They also verified that collaboration and communication are major reasons for the ITRTs' success.

ITRTs at NECC 2009

NECC 2009 will offer plenty of opportunities to learn more about Virginia's ITRT program, including a strand of sessions sponsored by the Virginia Society for Technology in Education (VSTE), an ISTE affiliate. Search the online program at www.iste.org/necc as NECC approaches for specific session days and times.

VSTE is also hosting an ITRT Pavilion. Part playground, part lounge, this pavilion is the place where anyone involved with technology integration and training can learn about the ITRT program in Virginia. Join in to hear short presentations, participate in impromptu discussions on topics of interest, and interact with ITRTs.

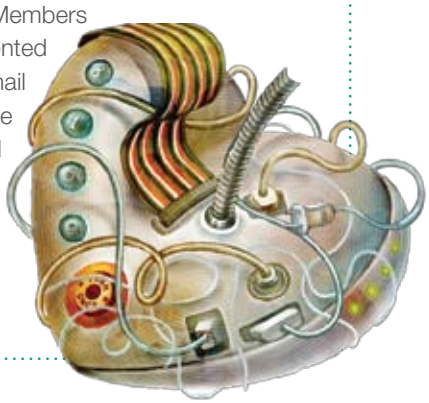
How Advocacy Helped Save the ITRT Program

New initiatives such as Virginia's ITRT program—and new direction in any organization or institution, for that matter—tend to happen only after much debate and discussion. The naysayers and critics also always seem to hang around for a while, so advocacy is important not only at the beginning of an effort, but well into its life cycle.

Although Virginia's ed tech supporters celebrated a great success when the ITRT program came into existence, their struggle didn't end there. Critics attempted to eliminate the funding by introducing a House bill in January 2007.

Without missing a beat, the Virginia Society for Technology in Education (VSTE), an ISTE affiliate, stepped up to the plate in its advocacy role to lobby the Virginia General Assembly to save the ITRT positions. Members of the House Committee on Education commented that they had been overwhelmed by VSTE's e-mail campaign. As a result, the vote to eliminate the ITRT positions never got out of the committee and never became an issue before the full assembly, thanks to the VSTE effort.

—George F. Washington, Franklin County Public Schools



Of the recommendations that researchers made for the ITRT program's continued success, perhaps the most compelling was the idea that administrators should become more involved in the program so that they can recognize effective technology use and support their teachers' integration efforts. A Technology Resource Teacher Coaching Academy in Stafford County, Virginia, echoed this sentiment. It found variable levels of administrative involvement in the county. Some ITRTs indicated that their administrators provided ample support and encouragement, and this was both necessary and beneficial. But many ITRTs felt a lack of support from their principals and other administrators for their job role and their goal of helping teachers integrate technology into the classroom, and this made their job duties more difficult.

Luckily, this obstacle is surmountable, as long as school administrators take more active roles in learning about the responsibilities that ITRTs play in their schools. Some school divisions have hired technology administrators dedicated to managing the ITRT program and providing ed tech leadership within their school divisions. Stafford County Public Schools, for example, employs a chief technology officer to offer executive-level support to the ITRTs and technology support staff.

Most ITRTs and technology support staff report to school principals or other administrators, however. For these schools, a solution may be professional learning communities or teams of key stakeholders—including administrators at the school, community, and central-office levels—that meet on a regular basis for the purposes of learning, joint lesson planning, and problem solving.

Virginia's ITRT program has made significant progress in helping school divisions throughout the state integrate technology into their instructional programs. ITRTs and support staff remain focused on engaging and motivating teachers by providing guidance for instructional improvement with technology integration, as they believe their partnerships with teachers translate into better teaching, which in turn results in increased student learning and, ultimately, the creation of true 21st-century citizens of the world.

Resources

"An analysis of the instructional technology resource teacher (ITRT) program in Virginia" by the Commonwealth of Virginia, Department of Education (2007): www.doe.virginia.gov/VDOE/Technology/OET/info_brief_itrt.pdf

"A study of instructional technology resource teachers in Virginia's public school divisions: Who are they and what do they do?" by K.M. Hooker (2006). Unpublished doctoral dissertation, East Tennessee State University.

"Evaluation of instructional technology resource teachers (ITRT) program of the Commonwealth of Virginia" by the Office of Educational Research and Outreach, Virginia Tech. Unpublished study.

"Understanding instructional technology resource teachers: Ways of knowing, ways of doing" by J.S. Streich (2007). Unpublished doctoral dissertation, George Mason University.

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