Supervising Teachers' Technology Use

Meet the challenge of observing teachers who use innovative technology in their classrooms.

By Monica Beglau

Monica Beglau *is the executive director of the eMINTS National Center at the University of Missouri in Columbia, MO.*

Teacher supervision and evaluation are hot topics at the state and national levels—topics that present challenges for principals, their teachers, and policymakers. The process of observing and evaluating teachers to help them improve student achievement can be complicated by technology. Innovative teachers may use new technologies to engage students and to bring authentic problems and projects into their classrooms.

Some districts have invested heavily in placing technology in classrooms with the expectation that it will be used to enhance learning. But principals may not be fully comfortable with or may not understand how to evaluate some of that technology. With accountability obligations coming from many sources, knowing how to supervise and evaluate teachers' use of technology is essential for principals in the 21st century.

Standards

To understand effective uses of technology, principals should become familiar with technology standards, such as the National Educational Technology Standards for Teachers (NETS-T) that were developed by the International Society for Technology in Education (ISTE). The NETS-T were created through a collaborative effort involving thousands of educators and education leaders beginning in 2000, and the standards were refreshed in 2008 to reflect changes in knowledge and understanding that came with rapid advances in technology. The NETS-T are not content-specific, but rather focus on "the skills and knowledge educators need to change the way they teach, the way they work, and the way they learn in an increasingly connected global and digital society" (ISTE, n.d.). With a focus on using digital tools to design, implement, and evaluate learning experiences for students, the NETS-T provide specific descriptions of performance indicators that principals can use to guide their supervisory activities. ISTE also provides resources to help school communities develop a shared language about the standards and to help locate professional development and other services that are aligned with the standards. For more information on the NETS-T, visit www.iste.org/standards/nets-for-teachers.aspx.

Insights

Principals must also be aware of issues that can impede the observation and evaluation of technology integration in classrooms. Whale (2006) proposed that it is difficult to capture teachers' levels of technology competence for many reasons, including the wide array of technologies available and the limited training most administrators have to properly gauge the effective uses of technology by their teachers.

Painter (2001) offered valuable insights for principals to consider as they supervise and evaluate classrooms where technology is used. The main concepts she presented include:

- Technology integration is inextricably intertwined with other aspects of teaching: high-quality technology use will be accompanied by other signs of high-quality teaching, such as clearly defined learning goals, good classroom management, and checking for student understanding. Principals do not necessarily have to know the specific function of every piece of technology to see whether

it is being used in conjunction with high-quality teaching practices.

- Technology use serves a learning goal: technology must be more than an add-on. It should be integral to teaching and learning goals and add value to instruction, resulting in higher levels of student performance. Looking beyond the glitz and sparkle of technology should reveal true learning that students will retain beyond the uses of any particular technology.
- Standard observation tools may not be sufficient to measure technology integration: typical classroom observation instruments are often based on a specific philosophy (e.g., direct instruction or inquiry-based learning) and may focus on certain facets of instruction while ignoring others. Few observation tools have items that are specifically related to technology use. Using tools that align with the teaching philosophy of the school, supplemented by tools that focus on technology use, will provide a clearer picture.
- High-quality technology integration requires "conditionalized" knowledge: selecting and integrating technologies requires knowing what is likely to result in student learning, not just how to use the technologies. Principals who spend time talking with teachers about how they make decisions about the technologies they use in their instruction are likely to learn more about the technologies and about their teachers' pedagogical insights.

Technology integration takes place in an environment of rapid change: understanding each new technology and its best instructional use is a moving target and requires constant learning on everyone's part.

Resources

One resource that will help principals understand the value-added role technology can play in teaching and learning is Grappling's Technology and Learning Spectrum, an instructional framework developed by Bernajean Porter (n.d.) that charts three categories for technology in the classroom. The spectrum describes and provides examples for each category:

- *Literacy* uses of technology focus on learning or practicing technology skills, such as learning specific software functions. Literacy uses have a place in the classroom but should not be considered an end goal.
- *Adapting* uses of technology replace traditional instructional activities. For example, having students use software to drill and practice content or use a word processing program to type book reports instead of writing them out. Adapting is a necessary next step after literacy, but still would not be the most desirable end goal and does not demonstrate value-added uses of technology in the classroom.
- *Transforming* uses of technology promote community learning of complex content. The resulting student work is something that could not

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have been produced without technology.

Tools that are provided by or based on the professional development programs that teachers are engaged in are another resource for principals to use during supervisory walk-throughs. The Enhancing Missouri's Instructional Networked Teaching Strategies (eMINTS) program at the University of Missouri provides participating teachers with two years of intensive professional development (eMINTS National Center, 2010).

The eMINTS teachers teach in technology-rich 21st century classrooms that are each equipped with an interactive whiteboard and projector, a teacher laptop, student computers, a digital camera, and a printer. Teachers in the eMINTS professional development program not only learn how to operate the technology in their classrooms but also receive pedagogical instruction to help them reach transforming uses of the technology regardless of content area or curriculum. Principals whose teachers are in the eMINTS program are given training and on-site assistance in the supervision of eMINTS teachers.

The eMINTS teachers use the "Hallmarks of en Effective eMINTS Classroom" guidelines (available at www.emints.org/tools/hallmarks.pdf) to monitor their progress in the program and to self-assess their movement through various stages of development in key areas. A set of signs to look for has been derived from the hallmarks for principals to use in supervisory walk-throughs. The "look fors" are organized by semester over a two-year period so that principals can understand the progression of their teachers' skill development in technology usage and its impact on learning.

Once principals have a better understanding of what constitutes transforming uses of technology and can consider the issues involved, their supervision and evaluation of instruction can take on new meaning and help them lead their schools toward the highest possible uses of technology. Developing deliberate conversations with teachers about their present uses of technology and comparing those to desired uses can serve as a catalyst for plans that intentionally increase the equipment and professional development resources that will best serve students. PL

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Author's note: *The eMINTS National Center is a nonprofit unit at the University of Missouri providing research-based professional development programs that have taught educators how to use technology effectively since 1999. More information can be found at www.emints.org.*