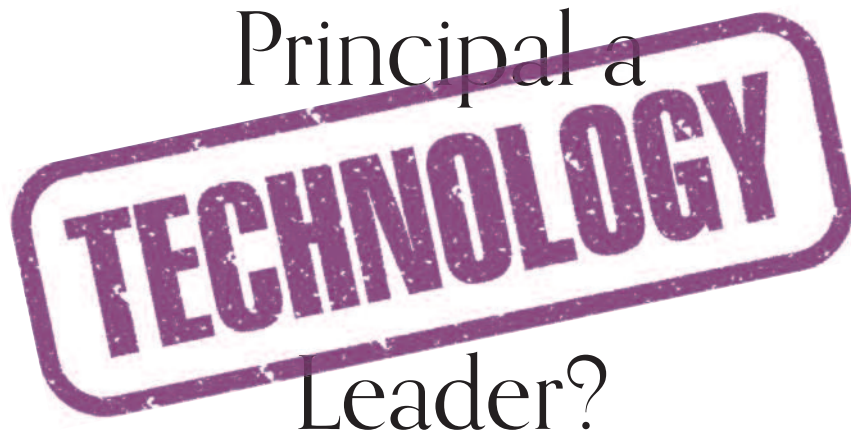


From the Principal's Desk

# Does Carrying a Smart Phone and an iPad Make the Principal a



# Leader?

**I**n the 21st century, many principals, teachers, and students use technologies that give them mobile access to information and learning resources on a continuous 24/7 basis. Text messaging and online social media sites such as Facebook and Twitter, along with micro blogs, wikis, and podcasts, enable students and educators to collaborate and engage in active learning, at any time—night or day. So, what must a principal really know to be a visionary technology leader?

Many school principals feel that

they must become technology “experts.” They feel inadequate if they are not conversant with the latest technologies used by their students and colleagues. And, often, if they don’t carry a smart phone or an iPad with an Internet connection, they feel they are behind the times technologically. Can a principal be a strong technology leader without understanding, or using, all the latest technology? The answer is that, while principals don’t need to be technology “experts,” they definitely must stay abreast of current technologies, which are changing the nature of education.

This article will describe multiple ways in which principals may become successful technology leaders. By being proactive, they can ensure that they are well informed and can make wise decisions about the integration of technology at their school.

### **Technology Expectations for Principals and Schools Worldwide**

Part of the principal’s job description is to be informed and to assume the role of a technology leader. Why?

- As new technologies are intro-

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duced in schools, principals are answerable to many stakeholders for the successful and visionary implementation of these new technologies and programs.

- Principals are usually the people held accountable for a school's major technology expenditures.

- Principals are expected to prevent students from accessing inappropriate Internet sites and to protect them from cyber bullying, "sexting" incidents, and on-line predators.

So, how do principals fulfill their responsibilities in these areas?

Worldwide, the use of technology in schools continues to evolve. Compared to only a decade ago, the use of computers (with access to social networking sites such as Facebook) and cell phones has increased exponentially, but especially in developing countries. The Pew Research Center reported from a 2010 survey of 22 developing nations that, "Cell phone ownership and computer usage have grown significantly over the last three years, and they have risen dramatically since 2002. For instance, only 8% of Russians said they owned a cell phone in 2002, compared with 82% now."<sup>1</sup> Winthrop and Smith

report that in developing countries, many new technologies, such as cell phones, radios, and e-readers are all emerging as "important low cost technology for improving teaching and learning processes and outcomes. These new technologies are serving as an important complement to the more traditional focus on computers and e-learning."<sup>2</sup>

Another recent Pew Research survey, this one in 2012, reported on the

use of cell phones for text messaging, taking pictures/videos, and using the Internet. The report stated that, "In nearly every country, the young and the well-educated are especially likely to embrace all of these technologies."<sup>3</sup>

In the U.S., Secretary of Education Arne Duncan has called for all professional educators to be well connected, through broadband and wireless, to the



world and its latest technology resources—data, information, and peers. About two years ago, the U.S. Department of Education introduced the National Education Technology Plan 2010 (NETP), which calls for at least one Internet-access device for every student and educator inside and outside of school. It also called for educators to lead and become highly effective with technology so that its incredible power can be leveraged to support continuous, lifelong learning.

In 2009, the latest school technology standards were unveiled. Officially called NETS-A (National Educational Technology Standards—Administrators), these standards clearly define what school leaders need to know in order to be effective technology leaders. The NETS-A standards list five performance indicators:

*Standard 1 - Visionary Leadership*

appeals to principals to inspire and make possible the maximum use of Digital-Age resources to support effective instructional practices and maximize student and teacher performance.

*Standard 2 - Digital-Age Learning Culture* calls for principals to create and promote a dynamic learning culture that will provide a rigorous and engaging education for all students. The goal of this standard is for educators to provide student-centered learning environments that meet the diverse needs of every pupil.

*Standard 3 - Excellence in Professional Practice* encourages principals to lead and be innovative in order to enhance student learning through an infusion of current technologies and resources. This standard also calls for school principals to become heavily involved in facilitating, stimulating, nurturing, and supporting faculty in the

study, development, and use of technology.

*Standard 4 - Systemic Improvement* recommends that school leaders provide technology resources to continuously advance their schools. Section 4.e notes that administrators should establish and maintain a robust technology infrastructure to support teaching and learning.

*Standard 5 - Digital Citizenship*

urges principals to promote and model responsible social interactions in the use of current technologies, including Web-based and mobile technologies. This standard also includes the expectation that school leaders will establish school policies to ensure safe, legal, and ethical use of digital information.<sup>4</sup>

How do principals evaluate their progress in the areas of development, knowledge, and implementation of educational technologies? An excellent self-assessment tool has been developed by the Massachusetts Department of Elementary and Secondary Education.<sup>5</sup> It identifies areas where principals need to improve and evaluates their awareness of the social, legal, and ethical issues related to technology.

### Essential Conditions to Leverage Technology for Learning

The expectations of societal, governmental, and educational leaders regarding technology integration in schools are well defined. Clearly, the rapid growth of

new technologies (social media and mobile devices such as cell phones, smartphones, iPads, etc.) presents endless instructional possibilities. But often principals face uphill battles in trying to fund and promote technology integration. Few of the conditions necessary to leverage the use of technology in classrooms may be in place. Many educators are reluctant to integrate technology into their daily teaching because they don't understand how to use it. The same is also true of many school leaders because they have not caught a vision of technology's capabilities in improving the teaching and learning. Let's carefully look at some necessary conditions as well as some significant barriers to technology integration.

According to the U.S. National Education Technology Plan (NETP), a gap in understanding exists today that "[t]oo often . . . prevents technology from being used in ways that would improve instructional practices and learning outcomes."<sup>6</sup> What are the necessary conditions for classroom tech-

nology implementation? What kinds of barriers interfere with effective technology integration?

In 2009, the International Society for Technology in Education (ISTE) identified 14 conditions as "necessary" to successfully influence the use of technology for learning:<sup>7</sup>

**1. Shared Vision.** Proactive leadership in developing a shared vision for educational technology among all education stakeholders, including teachers and support staff, school and district administrators, teacher educators, students, parents, and the community.

**2. Empowered Leaders.** Stakeholders at every level empowered to be leaders in effecting change.

**3. Implementation Planning.** A systemic plan aligned with a shared vision for school effectiveness and student learning through the infusion of information and communication technologies (ICT) and digital learning resources.

**4. Consistent and Adequate Fund-**



ing. Ongoing funding to support technology infrastructure, personnel, digital resources, and staff development.

**5. Equitable Access.** Robust and reliable access to current and emerging technologies and digital resources, with connectivity for all students, teachers, staff, and school leaders.

**6. Skilled Personnel.** Educators, support staff, and other leaders skilled in the selection and effective use of appropriate ICT resources.

**7. Ongoing Professional Learning.** Technology-related professional learning plans and opportunities with dedicated time to practice and share ideas.

**8. Technical Support.** Consistent and reliable assistance for maintaining, renewing, and using ICT and digital learning resources.

**9. Curriculum Framework.** Content standards and related digital curriculum resources that are aligned with state or other official curricula, and especially those supporting Digital-Age learning and work.

**10. Student-Centered Learning.** Planning, teaching, and assessment that center around the needs and abilities of students.

**11. Assessment and Evaluation.** Continuous assessment, both of learning and for learning, and evaluation of the use of ICT and digital resources.

**12. Engaged Communities.** Partnerships and collaboration within communities to support and fund the use of ICT and digital-learning resources.

**13. Support Policies.** Policies, financial plans, accountability measures, and incentive structures to support the use of ICT and other digital resources for learning and in-district school operations.

**14. Supportive External Context.** Policies and initiatives at the national, regional, and local levels to support schools and teacher-preparation programs in the effective implementation of technology for achieving curriculum and learning technology (ICT) standards.

In their working paper, *A New Face of Education—Bringing Technology Into the*

*Classroom in the Developing World*, Winthrop and Smith identified seven guiding principles that “can help avoid many future problems and, more importantly, can help leverage the power of technology in educating young people in some of the poorest regions of the world. Given the rapid pace of technological change, it is unlikely that the issue of technology in education will go away. Instead, we are likely to see a blossoming of new and creative ways for harnessing what technology has to offer.”<sup>8</sup>

In summary, these seven guiding principles are as follows:

1. Using technology to deal with educational problems first;
2. Making sure that technology adds value to other existing solutions;
3. Making sure that a technology adopted will last over time (sustainability);
4. Selecting technology that can be used for multiple purposes;
5. Buying the least-expensive technologies;
6. Ensuring before deployment that all technology will be reliable; and
7. Checking that technologies are easy to use.

### Barriers to Technology Integration

What kinds of barriers interfere with technology implementation and integration in schools? What can principals do about them? What if principals discover that *they* are one of the major “barriers” to a technology implementation plan? What solutions have worked to remove these obstacles?

Barriers that could thwart technology integration include: disagreement about values, theoretical models, and practices; teachers’ fear that they will lose control over the learning process, and authoritarian and dogmatic approaches to knowledge transfer. Perhaps the gravest kind of barrier occurs when stakeholders (principals, educators, students, and parents) lack a shared vision for educational technology. At the 2011 Interna-

tional Summit on ICT in Education, delegates identified 35 significant barriers to effective technology integration in classrooms. These included: lack of a shared vision, lack of a clear implementation road map, lack of policy for introducing new technologies, inadequate resources, limited access to technology, teaching that is oriented toward high-stakes exams, a lack of understanding by educators and administrators of the benefits of ICT (information and communication technologies), and resistance to change.<sup>9</sup>

What about the role of principals in technology integration? What do they see as the most difficult barriers to the integration of new technologies? Pasquerilla studied the perception of New Jersey high school principals relating to the integration of technology. He found that funding, staff resistance, and poor infrastructure all were significant barriers.<sup>10</sup> Wyszynski’s 2010 dissertation focused on elementary school principals’ perceptions of possible strategies for addressing the barriers related to technology integration. His study identified three major barriers: a lack of access to technology, inadequate time for professional development, and lack of teacher time for mastery. In essence, principals felt less successful in implementing technology than they thought they would, because of the length of time required for faculty mastery.<sup>11</sup>

A 2009 article entitled “The Administrator’s Role in Technology Integration” in *Education World* observed that the most effective way for school administrators to promote technology use is for them to become knowledgeable and effective users of technology themselves. The article also affirmed that integration is most successful when the principal is involved and excited about technology and its possibilities. The converse is also true. Integration is lowest when the principal fails to champion or demonstrate technology use. As Starr concluded, “Modeling technology usage is key if administrators want teachers to play an active role

in technology integration.”<sup>12</sup>

One challenge often cited by administrators is insufficient resources. Boss advocates five innovative, no-cost steps that can overcome technology implementation barriers. These include being innovative with tools that are already in schools, and a novel concept of having principals and teachers learn with their students. Boss urged teachers to learn about technology in the context of their own classrooms, side by side with their students.<sup>13</sup>

The Technology and Distance Education Committee K-12 (TDEC) was established in North America by the North American Division union directors of education to facilitate the integration of technology to instruction. This resource offers access to free software and holds regular webinars on various useful topics.<sup>14</sup> For Adventist principals and teachers around the world, CIRCLE (Curriculum and Instruction Resource Center Linking Educators), a service of the General Conference Department of Education, provides an ever-expanding array of resources, including hundreds of articles on technology topics such as educational technology, information technology, music technology, technology education, technology integration and technology plans.<sup>15</sup>

**What Methods Work Best for Principals as They Integrate Technology?**

In a ranking of all the things a principal must do to run a school, technology integration clearly rises to the level of high importance. So, in summary, what are the most important steps principals can take to support technol-

ogy integration and perform as technology leaders? Here are a few suggestions from settings where strong technology integration has taken place.

Principals need to see the big picture as well as all the pieces of the puzzle, as they move from planning to practice. An older but excellent Web-book, *Planning Into Practice*, gives a great overview of the connection between student learning and technology, and lists the tasks principals need to ac-

who are considering the change will feel safer, and those who are not willing will see that it may be time for them to change their attitudes or move on!”<sup>17</sup>

Two useful Websites can help principals with technology integration:

- *21 Things for the 21st Century Administrator* (2009) is based on the National Educational Technology Standards for Administrators (NETS-A).<sup>18</sup>

- *10 Internet Technologies Educators Should Be Informed About—2011 Update*.<sup>19</sup> This is a must-read regarding the latest technologies impacting and changing society and education.

Administrators will likely face some challenges in the integration journey. Gosmire and Grady’s 2007 article, “A Bumpy Road: Principal as Technology Leader,” warns that the key to success is not to pretend to know everything but to become perceptive enough to ask the right questions. These authors argue that answering the 10 questions they pose will help principals lead others to succeed with technology. Here is a sampling:

- Which technology trends do I need to know about? What do I need to

know about technology to move my school forward?

- How do I construct a safety net for technology in my school?
- How do I promote the integration of technology in the classroom?
- How will I measure success?<sup>20</sup>

In summary, there are a tremendous number of resources and experts that can assist principals in school technology integration. The few resources mentioned above will serve as excellent springboards to a more complete understanding of technology integration

**The Technology and Distance Education Committee K-12 (TDEC) was established in North America by the North American Division union directors of education to facilitate the integration of technology to instruction.**

comply in order to achieve their vision for total technology integration. This Web-book should be required reading for principals as they embark on the long journey of becoming a technology leader.<sup>16</sup>

A second important approach to integration is modeling. As Toy forcefully points out, principals, like classroom teachers, must publicly model the use of technology. He states that, “Using the hardware, software, and modeling the learning process will show the faculty what the principal values, making it more likely that those who are willing to extend will feel supported, those

and will enable principals to surmount the challenges they face along the way.

### Conclusion

Demands that principals become technology leaders are escalating. The National Education Technology Plan asserts that technology-based teaching and learning is pivotal in improving student learning and providing data on which to make successful academic decisions for improving American education.<sup>21</sup>

Although few principals will ever become technology experts, they must assert leadership in this area. The Digital Age demands more and more technology in teaching and learning, but principals don't need to become experts about the latest technologies. Nor do they need to carry a smart phone or an iPad to be a technology leader. But as Gosmire and Grady correctly assert, technology leadership is "about asking the right questions, exploring the answers to those questions, and creating a road map for the effective use of technology by the students and teachers in your building. Principals, start your engines! The keys to success for technology in your school are in your hands."<sup>22</sup>



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