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ABSTRACT
                The Southern Regional Education Board (SREB) conducted two
surveys to determine what superintendents and principals have available in
training, information and technical support, and networks to give them the
skills and knowledge they need to lead schools in keeping up with rapidly
changing technology. The first survey focused on the amount and types of
technology training in educational administration programs. The second survey
was designed to gather information from practicing superintendents about how
and to what extent they use and promote technology in their roles as school
leaders. The findings indicate that there is little connection between the
demands of educational technology in schools today and the capability of
school leadership. The people who make decisions about policies and finances
in schools have little or no training in educational technology and few
resources to make informed decisions. School administrators do not appear to
be prepared for their emerging role in technology, and their lack of
understanding and resources sometimes creates barriers to change and
improvement. There is no strong link between school leadership and
educational technology. In an effort to begin to understand what
administrators need to know and be able to do, the SREB's Educational
Technology Cooperative developed "Technology Standards for School
Administrators: A Proposed Model." This model is designed to illustrate what
qualifications are needed and to promote discussions in those areas. The
technology standards and corresponding topics are provided in a sidebar as
examples. (AEF)

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SREB

William R. Thomas

Educational Technology:

Are School Administrators Ready For It?

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Introduction

Every national poll in recent years indicates that parents and business leaders want schools and students to increase their use of technology. More than $5 billion was spent on educational technology for kindergarten through 12th grade during the 1997-98 school year. Sales of electronic instructional materials alone in 1999 were estimated to be more than $1 billion. With expectations and funding levels at all-time highs, are school leaders adequately prepared to provide the quality leadership necessary? The Southern Regional Education Board conducted two surveys to determine what superintendents and principals have available in training, information and technical support, and networks to give them the skills and knowledge they need to lead schools in keeping up with rapidly changing technology.

The findings indicate that there is little connection between the demands of educational technology in schools today and the capability of school leadership. The people who make decisions about policies and finances in schools have little or no training in educational technology and few resources to make informed decisions. School administrators do not appear to be prepared for their emerging role in technology, and their lack of understanding and resources sometimes creates barriers to change and improvement. There is no strong link between school leadership and educational technology.

Preparation of School Administrators

Do educational administration programs in the SREB region's colleges and universities adequately prepare superintendents and principals to provide leadership in educational technology? The first survey focused on the amount and types of technology training in educational administration programs, and the results are not encouraging. An increasing number of educational administration faculty (71 percent) use technology tools such as e-mail, PowerPoint, spreadsheets, databases and, to some extent, the Internet. Still, issues and topics related to technology do not appear to be broadly incorporated into colleges' and universities' programs to prepare school administrators.

In addition, do faculty in these programs have sufficient knowledge of technology issues and topics and their importance? According to the survey, only 30 percent of the total faculty in many colleges of education actively use and address technology in their instruction. More than 60 percent of the respondents said that the most frequently overlooked areas in technology include legal issues, emerging technologies, and teaching and learning issues.

Some colleges did offer the encouraging news that "changes are being made." They at least seemed to recognize the importance of technology and are modifying programs and courses accordingly. A few colleges have succeeded in integrating technology into their programs to prepare future school principals and superintendents. The University of North Carolina, for example, requires each student in the administrator preparation program to demonstrate knowledge and ability to use technology in educational organizations.

Practicing School Superintendents ⎯⎯⎯⎯⎯⎯⎯⎯

The second survey was designed to gather information from practicing superintendents about how and to what extent they use and promote technology in their roles as school leaders. They were asked to describe how technology leadership affected student learning. While the superintendents personally may not use the instructional hardware and software, do they actively guide and support what is being adopted? As technology has become more available in schools, 72 percent of the superintendents said they have increased their use of technology tools to improve communications and management of the schools. For instance, the superintendent's office and central administrative staff increasingly use e-mail to communicate.

Most school districts now have technology plans that superintendents use to establish a vision and goals for the use of technology. In many SREB states, these technology plans must be submitted to the state departments of education for review or approval. It is unclear how many school districts would have technology plans and would keep them updated if they were not required by the state or included as an eligibility requirement for telecommunications discounts through the federal E-rate program.

School superintendents appear to view technology plans as an important part of promoting technology goals within their school districts. Many superintendents involve staff, parents, business partners and other community members in the development of these plans. Such involvement can be important as technology plans are implemented. The danger is that these planning committees can lack a comprehensive perspective. If planning committees are biased, they can promote poor solutions to educational technology issues. Committees can support strong leadership in educational technology, but they cannot supplant it.

Because of its complexity and rapid changes, technology frequently is seen as an overwhelming responsibility for superintendents. Opportunities for schools also present difficulties. An excellent example is the new E-rate program, which provides schools with discounts on telecommunications services and equipment based on the number of students who are eligible for free lunches. Two large school districts in the SREB region hired consultants to write and submit their E-rate applications. Their applications were rejected for several reasons: They did not adequately understand the issues, they did not monitor the consultants' work and their applications were submitted late. As a result of this late submission, one district lost nearly a million dollars in discounts for the first year alone. In another school district in the SREB region, the inflexibility of the procedures for procuring equipment impedes the ability to purchase technology equipment and services in a timely, efficient manner. Schools in this district are prohibited from selecting specific computer equipment or obtaining the best prices on their own, even though there is a lot of evidence that schools can get better prices for needed products in less time than school districts can. Many businesses today could not operate under the purchasing policies and regulations that exist in many school districts.

To whom, then, do superintendents turn for guidance as they make decisions about technology purchasing and policies? Technology can overwhelm even those with the best of intentions. As one Texas superintendent said: "There are too many 'new' things emerging — hardware and software. It is impossible to be familiar with all of these." While some superintendents seek external help from peer superintendents, regional centers and occasionally state resources, most respondents to the survey (82 percent) said the key person in most school districts today is the technology director. This person works in the central office and frequently is assigned broad responsibilities for technology; he or she often advises superintendents on numerous technology issues.

What are the qualifications for these technology advisers? Most states do not specify the qualifications for these positions, and certificate or degree programs related to these positions are a recent development. Many technology directors in school districts are competent and hard-working individuals; their personal qualifications are not the issue. Rather, the issue is the range of technology topics and issues in which they are trained and in which they are called upon to be "experts" at any one time.

Schools historically have used technology primarily for management applications, such as student and financial records, and many technology directors have a background in these types of applications. In recent years technology directors have come out of classrooms. These people generally are technicians who can keep machines running and can solve software problems. With an increasing emphasis on the integration of technology into the classroom and on complex systemwide and building-level networks, technology directors face new and increasingly complex demands.

Because school districts frequently are isolated from each other and from needed information and resources, it is no surprise that a district's technology director is designated to advise superintendents on the purchase of technology. But it is also likely that these technology directors are not prepared to address the depth and breadth of technology issues in instruction and administration. Technology directors and school administrators are expected to have more knowledge and skills in managing a technology-rich environment.

Few superintendents said they seek advice from commercial vendors. This practice typically is not used — or at least admitted — because of possible vendor bias, legal restrictions and conflict of interest, and school administrators' general inability to distinguish between the truth and propaganda. Several superintendents said that fierce competition among vendors is causing increasing pressure on superintendents holding the "purse strings."

Superintendents listed funding as the greatest barrier to the effective use of technology in their schools. Considering the amount of money flowing into K-12 for educational technology in recent years, this answer may surprise some. However, many costs follow the initial investments: networking; additional staff to provide technical support; repair, maintenance and upgrading; and training of staff. These additional costs are not covered in traditional budgets.

Considering the weak skills and information base available to most school administrators with regard to purchasing educational technology, one could argue that putting more money into technology purchasing now may not be wise. But the promising news is that superintendents also said that, even though funding was important, access to information also was very important. They recognized a need for information on best practices; ways to use technology to improve student achievement; technical support and general technology budgeting; uses of technology in the classroom; and current research in educational technology. The survey also revealed that preparatory colleges were not meeting administrators' need for information. The colleges of education were asked to what extent they offered seminars, workshops and conferences on topics in educational technology for practicing administrators in local school systems. More than 60 percent of the colleges said they did not offer anything of this sort.

School administrators also frequently turn to national professional organizations for guidance on numerous educational issues. Six national organizations in which school superintendents participate were asked about their level of support to superintendents and principals on technology-related issues. Only one, the National School Boards Association, provided many examples of publications and programs from regional and national meetings that practicing school administrators can use. Other organizations, including the Association of Supervision and Curriculum Development and the National Association of Secondary School Principals, provided some resources and information. According to the survey of superintendents, there appears to be little overlap between what superintendents indicated they need to know and what these national education organizations are offering.

Technology Standards for School Administrators: A Proposed Model

For school administrators to provide effective leadership in their schools in the 21st century, they must know about and understand technology-related issues and technology's capabilities. They also must be able to use technology appropriately in coordinating and communicating about school programs and activities. The standards and corresponding topics listed below are provided as examples for discussion purposes.

■ Understands the elements and characteristics of long-range planning for the use of current and emerging technology — *infrastructure; budgeting; staff development; technical support; personnel; upgrades*

■ Demonstrates ability to analyze and react to technology issues, concepts and proposals — *community and corporate pressures*

■ Possesses a "big-picture" vision of technology in education and schools — *educational reform movement; academic standards; time allocation*

■ Uses technology to communicate efficiently with staff, parents and the community — *voice mail; e-mail; newsletters*

■ Uses technology directly to collect and analyze data and other information that can improve decision-making and other management functions — *student academic achievement tests; gathering of data on variables not previously gathered; access to information*

■ Understands how current and available technologies can be integrated effectively into all aspects of the teaching and learning process — *application of software in each instructional area; access to research information; multimedia presentations*

■ Understands the legal and ethical issues related to technology licensing and usage — *purchasing agreements; safety and security issues*

■ Uses technology appropriately in leading and communicating about school programs and activities — *efficient management of the school enterprise; effective presentation of information to staff, parents and the community; improved decision-making.*

What should school administrators know and be able to do to use technology successfully?

Technology in its many forms is changing schools as much as it is other areas of society. School leaders require new skills and understanding to succeed in providing the vision and guidance needed to use technology effectively in schools. In an effort to begin to understand what administrators need to know and be able to do, the SREB's Educational Technology Cooperative developed *Technology Standards for School Administrators: A Proposed Model.* This model is designed to illustrate what qualifications are needed and to promote discussions in these areas.

Should there be technology standards for administrators comparable to those for teachers? While standards for teachers and students are becoming common in SREB states, none has similar standards for school administrators. Some states do apply their technology standards for educators to school administrators, but states generally have not determined what specific knowledge about technology the school administrators should have to do their jobs.

Summary

How well are school administrators and colleges of education addressing technology? The survey results and other information gathered raise serious questions about how school administrators promote technology in their daily work, how they demonstrate the use of technology and what they expect of those with whom they work. These issues have been largely overlooked. No single resource is likely to address the numerous issues and topics related to educational technology that face public school administrators. A strong link between educational technology and school leadership is necessary to support improvements in education. It makes sense to invest more into improving school administrators' ability to spend wisely the technology dollars that stream in.

Most school superintendents do not have ready access to quality information resources. State and regional efforts to provide quality, unbiased support and guidance should be promoted. Business connections also should be encouraged in a manner that would avoid conflicts of interest but would provide vital information to school leaders. Colleges of education need to establish alliances among their departments of educational administration, schools that they serve and the technology community.

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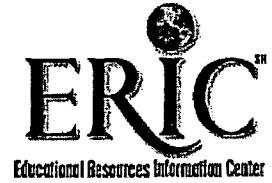
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