

# 8 CHAPTER

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## Using Technology to Exchange and Manage Information

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## CASE STUDY: ROGER CREATES A WEB PAGE

Blue River Elementary School, located in southeastern Ohio, enrolls just under 150 students. When Roger Millet became principal 17 months ago, one of his first projects was to construct the school's first Web page. Although he had constructed a personal Web page as a fifth-grade teacher in a much larger school system, this was his first effort to build a school page.

When Roger applied to be principal, he accessed the district's Web page and was surprised by its simplicity and limited information. All that was included was basic information such as the names of school board members and administrators and the names, addresses, and telephone numbers for the district, the Jr.-Sr. high school, and the elementary school. There were no pictures, announcements, or information sources that are commonly provided for students, parents, and other visitors. The district page, he learned subsequently, had been created 3 years ago by a high school math teacher; since that time, the only changes have been updates to its original content. Neither of the schools had a Web page.

Before constructing the school page, Roger sought the advice and approval of the superintendent, Ernie Progs. Mr. Progs seemed indifferent toward Roger's idea and told him, "We have no policy for or against Web pages. This is a small district and most everyone is acquainted. As such, I don't think Web pages serve much of a purpose here. But I realize they are popular, so I won't stand in your way."

After the meeting with the superintendent, Roger decided to look through the district's policy manual to verify what he had been told. He found nothing that pertained to Web pages. Rather than dissuading him from moving forward, he reacted favorably, assuming that he could develop the site without being restricted.

Roger wanted staff, students, and other stakeholders to use the Web page. He especially wanted teachers to develop personal pages that would be linked to the school page. As a teacher, he found that parents who rarely communicated with him sought information on his Web page.

Shortly after the school's page was uploaded to the Internet, four of the school's nine teachers opted to develop personal pages. Working together and with Roger's assistance, they successfully uploaded their pages. During the following 6 months, few comments were made about the Web pages. Several parents had told the principal that teacher Web pages were helpful because they listed information about assisting students with homework.

Indifference toward the school and teacher Web pages changed, however, after a divided school board voted 3 to 2 to place a tax referendum on the ballot for the next general election. The referendum was to gain taxpayer approval for funds to renovate the elementary school—a building originally constructed in 1953. Roger and the teachers expectedly were strongly in favor of the referendum.

With the school board and community divided over the referendum, Superintendent Progs encouraged Roger and the teachers to campaign for the referendum. In doing so, he did not anticipate that they would use their Web pages for that purpose. Roger posted

a banner on the school's Web page urging residents to support the referendum; shortly thereafter, the four teachers did the same on their Web pages. Roger actually boasted to the superintendent that the Web pages could prove to be a pivotal factor in winning the election. The superintendent responded that he hoped so.

About 4 weeks prior to the election, the superintendent received a certified letter from an attorney representing a group of taxpayers opposed to the referendum. The letter indicated that the pro-referendum content on the Web pages violated a state statute prohibiting school resources being used in political elections, including those entailing tax rates. A notation at the bottom of the letter indicated that a copy had been sent to the state attorney general.

Superintendent Progs contacted the district's attorney immediately after reading the letter. The attorney was unaware of the Web page controversy and informed the superintendent the banners may indeed constitute a violation of the statute. At that point, the superintendent directed Roger and the teachers to remove the Web pages from the Internet and informed the board members of the situation. After reviewing the matter, the board officially reprimanded Roger for not having exercised proper judgment. He was criticized specifically for developing Web pages without board approval and for not supervising the pages after they were published.

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## INTRODUCTION

The literature on school PR rarely mentioned technology prior to personal computers being introduced to schools. Now, decades later, it is clear that PR specialists and school administrators are expected to use technology to communicate and build relationships (Mullen, Kealy, & Sullivan, 2004). However, the extent to which they are doing so and the success of their applications is not apparent. Research conducted with not-for-profit organizations, for example, indicated that while technology was being used to achieve PR goals, the applications were not particularly geared at providing interactive communication and relationship building (Kang & Norton, 2004).

Barriers to maximizing technology for PR purposes are many and varied. They range from the absence of PR programming to community-based restrictions. In many districts and schools, a digital divide exists among stakeholders because not all citizens are able to communicate via technology (Becker, 2007). As examples, some are not connected to the Internet, some do not speak English, and some cannot use technology because of a disability. Legal analysts (e.g., Odgen & Menter, 2009) caution that school Web pages could fall under disability statutes. Creative school leaders, however, are more likely to adopt a hybrid system of communication and to eliminate use barriers than they are to avoid using technology. For instance, they make hard copy information available to those who are not connected to the Internet, they provide translations for Web page content, and they incorporate features on their Web page that comply with the disability statutes.

This chapter examines several key technology concepts and technology tools that are commonly applied to enhance PR programming.

*After reading this chapter, you should be able to do the following:*

- ◆ Correctly define technology literacy and information literacy.
- ◆ Describe the nature of a management information system and its value to PR programming.
- ◆ Identify the characteristics of effective district and school Web pages.
- ◆ Identify the nature of blogs and their advantages and disadvantages for PR programming.
- ◆ Describe electronic newsletters and their potential value to PR programming.
- ◆ Describe electronic networking and its potential value to PR programming.

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## ESSENTIAL CONSTRUCTS

To use technology effectively to improve administration generally and PR specifically, educators must understand essential constructs that are bridges between ideology and action (Petrina, 2000). Four are especially relevant to building relationships and improving schools: technology literacy, information literacy, information technology, and management information systems.

### Technology Literacy

A technology-literate educator is defined here as a person who has acquired basic knowledge and skills about technology and is able to apply the knowledge and skills effectively in the context of schools. More precisely, he or she uses technology to communicate successfully and to access, integrate, evaluate, and create data and other forms of information. The following are examples of tasks a technology-literate principal should be able to perform:

- ◆ Use the Internet.
- ◆ Modify a school Web page.
- ◆ Construct a personal database (e.g., spreadsheet).
- ◆ Access, integrate, and evaluate district or school databases (Kowalski, Lasley, & Mahoney, 2008).

### Information Literacy

Information literacy involves knowledge and skills essential for engaging in evidence-based practice (including data-based decision making). Lenox and Walker (1993) defined this category of literacy:

Implicit in a full understanding of information literacy is the realization that several conditions must be simultaneously present. First, someone must desire to know, use analytic skills to formulate questions, identify research methodologies, and utilize critical skills to evaluate experimental (and experiential) results. Second, the person must possess the skills to search for answers to those questions in increasingly diverse and complex ways. Third, once a person has identified what is sought, he or she must be able to access it. (p. 314)

An information-literate educator, therefore, is one who understands connections between accurate information and intelligent decision making. According to Doyle (1992), such a person is able to

- ◆ formulate questions based on information needs,
- ◆ identify potential sources of information,
- ◆ access sources of information through computers,
- ◆ evaluate information,
- ◆ organize information for practical application,
- ◆ integrate new information into an existing database, and
- ◆ use information in critical thinking and problem solving.

### Information Technology

Information technology is described as a computer-based tool used for storing and processing data, typically in an organizational context such as districts and schools (Haag, Cummings, & McCubbrey, 2005). The concept includes hardware (e.g., input, storage, and output devices) and software (e.g., operating systems, utility systems, and application programs). Sarmiento (2006) posits that the following three characteristics are the most promising aspects of information technology:

1. The ability to construct real-time data representations in multiple formats (e.g., numeric and graphic)
2. The ability to engage and empower individuals and groups by providing distributed access to appropriate data and analytical tools
3. The provision of automated guidance that mediates analysis and adds significant value to the mechanical process of data processing

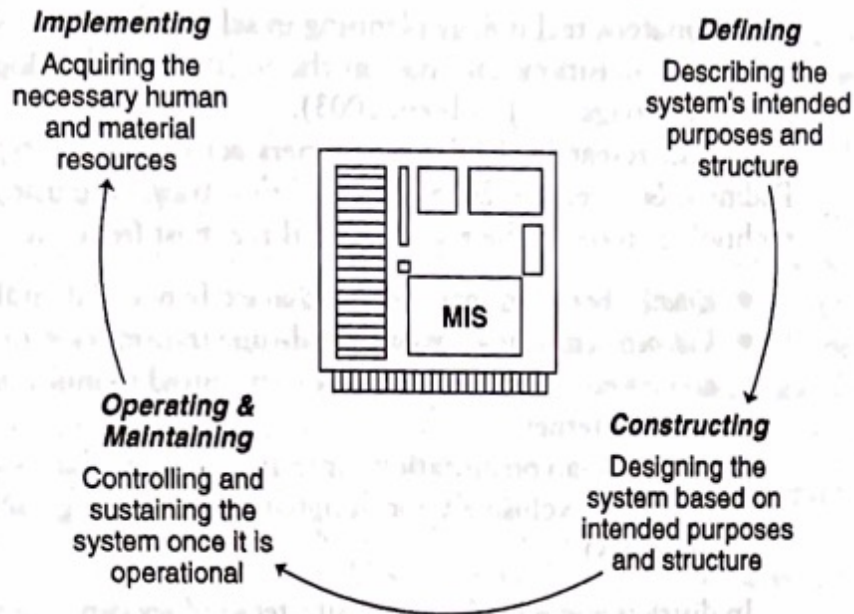
### Management Information System

A management information system (MIS) focuses on three aspects of information technology: planning, development, and use. Duffy (2000) noted that information management entails identifying an organization's current and anticipated information needs and then developing structure for using information technology to create, capture, and use information to meet the organization's goals.

Regardless of how well an MIS is designed, its utility to an education institution is diminished if it (a) cannot be used by employees, (b) contains the wrong types of information, or (c) is the right types of information in the wrong form (Kowalski et al., 2008). According to Telem (1996), an MIS is developed in four linear stages:

1. Defining the system
2. Constructing the system
3. Implementing the system
4. Operating and maintaining the system

Explanations of these stages are provided in Figure 8-1.



**FIGURE 8-1**  
Developing a Management Information System

In a district or school, PR applications are affected by the quality of the existing MIS. The following are examples of how a PR program can be enhanced:

- ◆ Maintaining demographic information about students and other stakeholders
- ◆ Accessing and analyzing stakeholder opinions
- ◆ Conducting action research projects to address specific problems
- ◆ Conducting annual program evaluations

For an MIS to meet these benchmarks, it must have the following characteristics identified by Haag and associates (2005):

- ◆ *It must be timely.* Data are made available when they are needed and they are continuously updated to ensure they remain relevant.
- ◆ *It must be accessible.* Employees who need to use the data are able to access them.
- ◆ *It must be usable.* Data provided are valid, accurate, and presented in a form that is understood by intended users.
- ◆ *It must be multidirectional.* Data are able to move downward, upward, and horizontally in a school and from the school outward to community and vice versa.

## TECHNOLOGY TOOLS

Effective district and school leaders see technology not only as a tool for transforming teaching and learning (e.g., Bailey, 1996), but also as a vital resource for building relationships (Whitehead, Jensen, & Boschee, 2003). Most organization executives discover that cost and value are related when it comes to technology. That is, the more value technology produces, the less likely it is to be perceived as costly (Rhodes, 1997).

Unfortunately, technology planning in schools has focused primarily on hardware and software acquisitions and not on the utility of technology to improve school performance (Flanagan & Jacobsen, 2003).

Recent research of PR practitioners across various types of organizations (Eyrich, Padman, & Sweetser, 2008) revealed that they were using approximately six different technology tools in their work. The three most frequently identified were as follows:

- ◆ *Email*—both internal and external exchange of digital messages
- ◆ *Videoconferencing*—two way, real-time transmission of audio and video signals using computers or other technology transmitted to multiple locations either via satellite or the Internet
- ◆ *Intranet*—an organization's internal network that is accessed via the Internet and designed exclusively for designated groups (e.g., school district employees and residents)

In districts and schools specifically, technology can be and has been applied in various ways to improve communication and enhance relationships. Although the size and nature of a school system play a pivotal role in determining the most useful mix of technology-based initiatives, the more common ones are described here.

## Email

Email, or electronic mail, is probably the most prevalent technology tool used by school administrators. In simple terms, it is identical to standard mail messages but delivery occurs electronically rather than physically. As examples, a principal can send a letter to parents via email more quickly and economically than through the U.S. Postal Service. Likewise, the principal can send a message to teachers electronically rather than as a memorandum on paper.

Email can be and often is interactive—that is, information is exchanged by the communicants. The process occurs in asynchronous time because there is a lag period between sending and receiving messages. Without question, email, more than any other technology tool, has made it possible for stakeholders to initiate conversations with school administrators.

## Electronic Newsletters

Districts and schools commonly have prepared hard-copy newsletters for distribution to stakeholders. The primary intent of the publication was to provide information; however, the value of this medium was attenuated by virtue of it being a one-way form of communication. Electronic newsletters—that is, newsletters transmitted via the Internet and often called e-newsletters—also provide information to relevant publics; but if they have an interactive (feedback) capacity, they also are an effective marketing tool (Walker & Donohue, 2004). That is, solicited and unsolicited feedback often provides data about stakeholder needs and interests.

Electronic newsletters also are more flexible and less expensive than hard-copy newsletters. As examples, they can be prepared rather quickly to respond to a crisis situation and

they can be highly focused in terms of coverage. The option does have a serious limitation in many districts; it cannot be used to reach stakeholders who do not have access to the Internet.

### District or School Web Pages

In recent years, district and school Web sites have become one of the most widely used technological products; however, this medium presents potential problems as well as benefits. Consequently, administrators should be sure comprehensive policies and rules governing Web pages are in place. Levine (2001) believes that the following issues should be decided by the school board and administrators:

- ◆ *Roles and responsibilities.* Policy should address the following roles and their responsibilities: (a) a Webmaster to oversee the technical aspects of the site, (b) an editor to monitor the content that is published, and (c) an instructional development specialist to train district staff.
- ◆ *Education value.* The Web site is intended to support the PR function, which in turn supports the school's teaching and learning objectives. Therefore, content must be regularly reviewed for value to ensure that information is accurate, fair, and relevant to the viewing publics.
- ◆ *Student privacy.* The Federal Education Rights and Privacy Act, the Children's Online Privacy and Protection Act, and the Federal Bureau of Investigation (FBI) provide safeguards that administrators should follow. In the fall of 2000, for example, the FBI urged schools not to put student photos on Web sites. A district policy should be adopted regarding student confidentiality before a Web site is allowed to post information, and, at a minimum, photo release forms should be revised to include use in electronic formats.
- ◆ *Copyright laws.* Most school districts already have policies regarding adherence to fair use provisions of copyright laws (a topic discussed previously in Chapter 3), but these should be revisited periodically to ensure awareness that Internet publishing is considered a "public performance" and that stricter guidelines pertain to material transmitted via this medium. The three critical copyright issues for Web pages are permissions (policy on granting and getting permission to use material from a Web site), fair use, and public domain (Is the material available without permission?; Butler, 2004).
- ◆ *Use policy.* Web pages can have passive or dynamic servers. Dynamic servers allow material to be posted and discarded, typically by all or selected employees. When dynamic servers are used, policy should outline the purposes of the Web site, the standards for acceptable material, and the conditions under which material can be altered or removed (Reilly, 2003).
- ◆ *Technical standards.* Cogent standards include issues such as the size of files permitted on the Web page and the server used for the Web page (e.g., Will the school district's server be used for individual school Web pages?).
- ◆ *Commercial sites and services.* A school's Web policy should forbid the use of third-party sites that have not been approved by school personnel. For example, an unscrupulous business enterprise may create sites or fund-raising programs that have no official ties to the district or school.

In addition to developing pertinent policies and rules, administrators have other responsibilities in relation to Web pages. Padgett (2005) recommends the following actions by principals:

- ◆ Establish and communicate the purpose of the Web page.
- ◆ Publicize the page to make all publics aware that it exists.
- ◆ Make the page visually attractive and information rich.
- ◆ Visit the page at least once a week to ensure that it is being properly maintained and updated. Provide an adequate search engine for the site.
- ◆ Delete incorrect or outdated information.
- ◆ Control links that are inserted; make sure they are working and set policy as to the types of links that are permissible.

Essential information (e.g., the name of the school, its location, the name of the principal) should be put on the first viewable screen. Moreover, the Web page should convey symbolic messages reinforcing institutional mission, vision, and culture. For example, if students, the community, and academic achievement are valued, only including pictures of staff, buildings, and athletic events sends a different message.

An ideal Web site is visually appealing to its audience. The primary goal for the administrator is to ensure the site assumes the personality of the school. A homepage that is thoroughly effective will serve to welcome visitors to the school's total environment. Homepage basics should include the school phone number, its location, and driving directions from major highways. Staff names and contact information are also well-advised additions. If possible, it is worthwhile to display links to district and student services so that user-friendliness is attained. The key consideration, and one that the principal must attend to, is that information included on the Web site must be valuable to its users. This requires an inquiry process of some sort, which will render the needed facts. Finally, a Web page should be a key source of information. For example, many of them contain online school "report cards" and important information for parents, staff, and students. With effective translations, a Web site can help a school reach out to non-English-speaking parents and stakeholders.

### Electronic Networking

Network-based communication describes a variety of systems that enable educators to communicate with other people through computers and networks (Romiszowski & Mason, 1996). Broadly categorized, communication occurring over networks is either synchronous or asynchronous. Although both are text-based, synchronous communication takes place in real time, just as if two people were talking on the telephone. Examples of synchronous formats include virtual hallways, network videoconferencing, and chat rooms. Common asynchronous network communication mediums (those having time lapses) are email, newsgroups, threaded forums, and electronic bulletin boards (Hawkes, 2001).

Two-way communication, horizontal and vertical, is vital in any organization. If formal information channels are not kept open, rumors and misinformation flourish through informal channels, and ultimately employee morale suffers. Although there

are some disadvantages of network communication (e.g., loss of verbal communication), the process allows educators to connect to other educators, parents, or other persons in an efficient manner. Networks exist among school districts (e.g., connecting all the school districts in a state or region), within a school district (e.g., connecting all the schools and offices in a district), among peer administrators across districts (e.g., superintendent or principal networks in a state or region), and among workstations in a school. The refinement of wireless networking has made school-level connections more feasible, especially in older facilities. For example, laser, infrared, and radio frequency options allow networking where wiring would be unduly expensive or unsafe (Ahmed, 2004).

Networking also is a means for connecting classrooms to the public. If done properly, students, teachers, and administrators will have access to supportive communities when they venture electronically outside of their physical learning environment. Conversely, networking gives district residents, business executives, and government officials opportunities to become more involved in public education (Conte, 1998).

Although there are many formal ways to communicate about PR activities, one of the best is to exchange information through a network connecting persons who serve on the district's school PR advisory committees. In larger school systems, the network should be coordinated by the PR director. Such a network also can encourage informal exchanges among principals and PR committee members.

## Videoconferencing

As described earlier, videoconferencing entails two-way, synchronous transmission of audio and video signals using computers or other technology transmitted to multiple locations either via satellite or the Internet. Live video feeds allow participants to see each other in real time; for example, they have the advantage of both verbal and nonverbal communication. Typically, participants have a sense of involvement that is not much lower than in face-to-face conferences. Depending on the hardware and software being used, videoconferencing can be relatively expensive.

Web conferences (or Webinars) are a modification of videoconferencing. The sessions are not interactive; participants only see the material on their screen. Because they do not have a live video component, they only require Internet access. Thus, Web conferences are less flexible, less interactive, and less expensive than true videoconferences.

Web conferencing has more utility in districts and schools because of its lower cost. Because potential participants in PR activities reside within a relatively small geographic area, savings realized by avoiding face-to-face conferencing may be outweighed by the cost of planning, producing, and controlling videoconferencing.

## Chat Rooms

A chat room is a designated online area where people with similar interests can come together to communicate. Their conversations occur in real time in a dialogue format. From one perspective, chat rooms may encourage open and candid information exchanges that may not occur in face-to-face encounters. They can be useful for enhancing dialogue

among school employees, between school employees and students, and between school employees and stakeholders outside a school (e.g., parents).

Like most technology tools, chat rooms also include some risk. For example, a participant may have no control over who is at the other end of the Internet connection; a student could pretend to be his or her parent. And as is common with all informal communication networks, chat rooms can be conduits for rumors, propaganda, and misinformation.

## Blogs

A blog is a log or diary found on the Web that includes postings sorted in reverse chronological order (Trammell & Keshelashvili, 2005). Thus, the most recent entry appears at the top of the listed messages. Unlike chat rooms where communication is synchronous, blogs allow communicators to publish their thoughts so they can be accessed as long as the posting remains online. Because they are available in the public domain, school officials should know that posted messages in them can be positive or negative and accurate or inaccurate. Naturally, then, there are doubts about their value in relation to school PR.

Examining the utility of blogs for organizational PR, Kent (2007) identified several strengths and weaknesses. They include the following:

### Strengths

- ◆ *Conducting research.* Blogs can provide data and other forms of information (e.g., language usage) that reveals changing conditions, needs, or wants among stakeholders.
- ◆ *Framing issues.* How we define an issue, such as a problem, shapes our decisions in relation to it (Kowalski et al., 2008). Blogs provide a medium for assessing how stakeholders are framing issues (e.g., how they view the condition of existing school facilities).
- ◆ *Providing a dialogic medium.* Approximately 90% of blogs are thought to be interactive (i.e., a two-way communication medium combining aspects of chatting and blogging). Thus, postings not only reveal how stakeholders frame issues, they also exhibit how stakeholders respond to dissimilar views.

### Weaknesses

- ◆ *Communicative risks.* Often, blog participants represent only a small portion of a school district's population; these persons usually feel passionately about issues being discussed. Hence, blogs may provide fanatical viewpoints that partially or totally contradict the actual opinions of a district's or a school's overall population. In fact, many or most of an institution's stakeholders may never even access a blog to determine if they agree or disagree with postings.
- ◆ *Questionable findings.* When used as a research tool, blogs can lead administrators to make erroneous assumptions. This is because school officials have no control over participants. In a focus group or traditional opinion polling, for example, researchers can control sampling in an effort to increase the validity and reliability of data. This critical advantage is typically not possible with blogs.
- ◆ *Assumed credibility.* Arguably, blogs have received the greatest attention in the area of news and politics. When a blog beats the mainstream media to exposing a newsworthy event, the concept is praised as a major innovation. In truth, much of what gets posted is not credible information.

At this point in time, declaring that blogs provide a major PR breakthrough for schools would be premature—if not inaccurate. This is especially true if postings are anonymous and exclusive (i.e., conducted by only a limited number of citizens). Far more research needs to be conducted on blogs before their value to PR in schools or any other organization can be validated (Kent, 2007).

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## SUMMARY

Literature on PR across organizations reveals how technology has revolutionized this essential program. In many private organizations, administrators have been able to improve the quantity and quality of communication and customer relations while holding operating costs constant or actually lowering them. Although the same improvements have been espoused for school PR programs, the extent to which technology has been used to improve communication and relationships among school stakeholders is largely unknown.

The first part of this chapter described basic technology concepts. Unless they are known and accepted by school administrators, the deployment of technology for PR programming is unlikely to improve. The second part of the chapter examined technology tools that have become common in many schools. They include email, electronic newsletters, electronic networking, Web pages, videoconferencing, chat rooms, and blogs. While each tool has the potential to improve PR programming, each can generate serious problems if not constructed and managed properly.

As you reflect on the content in this chapter, consider how technology is being used in your school system to communicate and build relationships. Experiences with putting personal computers in classrooms provide a quintessential example of the difference between acquiring technology and using it effectively. When teachers were given computers in the early 1980s, many of them were not computer literate; thus, the equipment accumulated dust or was used ineffectively. The same problem exists relative to using technology administratively to improve communication and relationships. Simply having hardware and software does not ensure that it will be used successfully.

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## QUESTIONS AND SUGGESTED ACTIVITIES

### CASE STUDY

1. Did the principal act responsibly in establishing the Web page? Why or why not?
2. Did the principal act responsibly in allowing political messages to be put on the Web page? Why or why not?
3. To what extent is the superintendent responsible for the pending legal problem?
4. Do you agree with the superintendent that Web pages in small districts or communities have limited value? Why or why not?
5. What should be done to minimize the recurrence of legal problems over Web pages?