Introduction

Chapter 14 Planning Technology Costs

OVERVIEW

School boards, parents, and education stakeholders invariably ask "How much will this technology cost?" To ensure the success of your school or district's technology program, it's important to estimate the total investment that will be made in its various components. This chapter provides an overview of the types of costs incurred in both the short term and the long term as you build your Connected Learning Community.

Budgeting

No magic formula exists for estimating the costs associated with creating a technology-rich learning environment. Costs depend on how much technology is to be introduced in your school or district and how often you plan to upgrade to take advantage of the latest technical innovations.

Technology—and its price—has and will continue to change. The price varies not only with the cost of equipment, but with the savings or costs associated with taking advantage of new capabilities. For example, technological advances may reduce the cost of existing software and hardware but spur the development of more sophisticated software that requires even greater hardware performance. And, of course, new technologies also present new opportunities for learning. For instance, CD-ROM technology and the Internet were just beginning to make inroads in schools just a few years ago.

It's difficult to develop a formula for assessing the costs of a multiyear technology plan when you're uncertain what technology will become available and what its costs will be. So, how does one budget for the learning environment of the future?

Identifying Costs

One way of gaining experience in forecasting future technology expenditures is to measure where your school or district's technology dollars are being spent today. While no one checklist can capture every possible school environment, general categories can be monitored to track current expenditures and plan for future ones. Costs associated with implementing school and district technology programs fall into the following categories:

- *Hardware.* The purchase and installation of computers, printers, scanners, and networking components constitute the largest up-front cost. The primary factor affecting total hardware cost is density, most commonly measured by the student-to-computer ratio. Existing networks may require new hardware such as file servers and printers to be fully functional.
- *Software.* This category includes server software; specialty and productivity software; educational content, such as remote databases of information and video programming; and software needed to adapt technology for special needs users.
- *Infrastructure improvements.* Wiring and cabling, improved ventilation and cooling systems, enhanced security systems, additional telephone lines, and other modifications to school buildings, such as asbestos removal, electrical system upgrades, and even renovation, can represent a significant portion of the technology budget, depending on the current infrastructure, age, and condition of the school facility. Retrofitting is the largest one-time cost for starting a network. The quantity, distribution, and condition of any existing technology infrastructure in the school or district also affect costs.
- *Telecommunications costs.* Wide area network connections among schools and to the Internet may

involve initial hookup fees and ongoing charges for telephone lines, satellite connections, cable connections, and Internet access fees. The range of the bandwidth that a school purchases will also influence costs.

- *Ongoing technical support for teachers and administrators.* Many teachers are reluctant to use technology in their lesson plans unless they have immediate access to help during the school day. While initial training programs will get teachers up to speed, an ongoing support structure and personnel are necessary to help them make use of the network and classroom computers for instruction and administration. That may include providing on-demand help when software or hardware problems arise. Technical support for the network is also needed.
- *Professional development.* An extensive training program is necessary for teachers and other school staff to become productive using software tools and to integrate technology effectively with the curriculum. Each teacher must receive between 20 and 50 hours of initial up-front training.
- *System maintenance and upgrading.* Maintenance and upgrading of hardware and networks are necessary to preserve the school or district's investment in technology.

The budget categories presented here are a starting point and focus on an array of technologies found in networked environments. The extent of your school or district's plan and its starting point will determine the influence of these factors on your total budget.

Continuing Costs

Funding the maintenance and improvement of your school or district's technology system and the skills of its staff is an important component of your initial technology budget. However, you should view technology costs as a recurring expense because technology is central to your school and district's operations.

Moreover, it is likely that increased use of technology will profoundly affect the roles and work of school and district staffs. This may involve trade-offs among expenditures for equipment, software, connections to data resources, and personnel. Consequently, in making the transition to a technology-rich learning environment, local school staffs must actively participate in deciding how to acquire and use the technology.

The Challenge Ahead

You're headed down the home stretch: The technology plan is a reality, and its costs have been determined. Now you are ready to explore various avenues for funding. It is likely that funding for your school or district's initial technology investment will come from a variety of sources. Chapter 15, "Securing Funding and Support," will provide you with strategies for financing the costs of creating and sustaining a technology-rich school.

Chapter 15 Securing Funding and Support

OVERVIEW

Now that your school or district's technology plan has been created and its costs determined, you're ready to seek funding and support. This chapter explores financing the costs of creating and sustaining technology-rich schools and offers budgeting tips and guidelines to ease your journey.

You can travel several different routes in search of funding for your school or district's technology program. The best strategy for navigating the financial side streets is to develop multiple funding sources. Possible sources include the following:

- School and district budget restructuring
- Bond measures
- Grants
- Donations from businesses
- Categorical funding from federal and state programs
- Parent and student fundraising
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The unique financial and political condition of your state, school district, and individual school will determine the best funding sources for your technology plan.

Getting Started: Restructuring Budgets

Your school or district may not receive money earmarked solely for technology implementation. However, it can spend its available funds more creatively. You can fund many technology expenses by reallocating money for expenses that will no longer be applicable when the new systems are implemented. If school personnel and parents feel that such reallocations will improve the education of students, you are more likely to gain support for your restructuring proposal. Therefore, good strategies for engaging your constituents—and conveying to them the positive impact of technology on teaching and learning—are critical to the success of reallocation initiatives.

Resource Management

Once you've gained support for the idea of reallocating existing funds, structure expenses in such a way as to minimize the amount of dependence on any single source, especially if that source relies heavily on tax revenue. Certainly, more money is the key to jump-starting your technology plan, but having more s*ource*s of funding is critical to maintaining programs into the future. Therefore, it is important to diversify your funding streams. Spreading out the funding burden is as important as sharing the wealth or the reward.

Reallocation of Categorical Funds

Here's where the assessment of your school or district's current technology resources—conducted as part of your initial planning—will be especially useful.

Knowing your starting point allows you to readily assess your funding needs. The next step is to look at the existing budget to identify categorical funds that can be redistributed for technology expenses. An excellent source of such funds is the supplies category. Generally, at least 50 percent of those resources are devoted to textbooks. Many school districts allow the reallocation of a portion for the purchase of instructional software.

Other sources of funding available to offset the costs of technology programs include budget allocations for teacher planning time and professional development days. In some states and school districts, up to 10 or more days per teacher are allocated. If those resources can be procured from the district or state, they can be used for staff training programs supporting the development of skills needed for technology-rich learning environments. The budget categories for professional and technical services and other contracted services

may also be potential funding sources for staff development and technical assistance.

Maximizing Human Resources

Schools with adequate levels of autonomy can make critical reallocations in staffing and staff responsibilities. New positions, such as district and school-site technology coordinators and systems support technicians, can be funded by redefining existing staff positions. Of course, efforts such as these are most successful where there is strong school and public support for investing in technology.

Transferring Technology Costs from the Old to the New

Computing systems are like highways—you have to constantly invest in their repair and maintenance to ensure smooth, safe journeys for future travelers. To offset some of those costs, try to anticipate and eliminate expenses that will no longer exist once your technology-rich learning environment is in place.

- *Identify and reallocate expenses associated with obsolete or duplicated systems.* If your new system is replacing a mainframe or minicomputer, you may realize a cost savings from discontinuing unneeded maintenance and training costs. Even if you choose to retain your existing centralized host for some administrative functions, you can eliminate the preexisting data network in the schools, relying instead on the LANs installed for instructional purposes.
- *Take advantage of technology synergies.* Your new infrastructure or systems may be able to provide services that are currently hosted on costly, dedicated equipment. For example, if you are installing a wide area network, the dedicated leased lines may be able to handle voice as well as data, and a cost savings may be realized by moving voice traffic to those lines. The cost savings can then be reinvested in the maintenance and support of your teaching technologies.
- *Recover the cost of traditional tools to finance new technologies.* For example, multimedia instructional materials (interactive encyclopedias, almanacs, and other reference materials) can replace current expenses for printed reference materials. Printed library materials get lost, destroyed, and go out of date quickly; electronic information resources, which are shared electronically and readily updated at little cost to the consumer, are less susceptible to ongoing replacement costs.
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Minimizing or Eliminating Expenses Through Technology

Time, money, and accurate and up-to-date information are all valuable commodities in any school or district. Computing systems can maximize those resources by eliminating expensive and time-consuming personnel tasks. Through instantaneous paperless communications, district and school staff can access the latest memoranda, financial reports, and student data without the need for labor-intensive processes and informational meetings.

- *Photocopies.* While it's difficult to quantify exact savings, you'll find that electronic mail minimizes the need to send memoranda to faculty and staff. In the Lebanon, Connecticut, School District, for example, a single broadcast electronic mail message replaces the 350 photocopies previously required for staff-wide memos.
- *Personnel time.* Electronic mail and workgroup software enable employees to communicate faster and more effectively than ever before. In the Issaquah, Washington, School District, the bookkeeping staff has saved time on communication tasks, allowing them to concentrate on more important aspects of their job; the assistant superintendent reports being two to three times more efficient because of the electronic tools he uses, including electronic mail and voice mail; and new systems and tools mean a portion of the time formerly needed for staff meetings is now freed for other purposes, resulting in less overtime and other personnel expenses.
- *Business/administrative forms.* Electronic mail and workgroup software reduce the need for expensive, multipart forms such as purchase orders. In the Lebanon, Connecticut, School District, purchase orders are now handled electronically. As a result, purchase order processing time has been reduced from a week to just one day. This centralized system also facilitates site-based management in which department heads and administrators can review up-to-the-minute financial reports that reflect all

current purchase orders at any given time.

Rethinking School Funding: External Resources

To meet the challenge of funding your school or district's technology plan, the technology team, administrators, teachers, and parents must be willing to tap external sources of funds and embrace innovative approaches to fundraising. Alternative funding avenues are a critical way of significantly supplementing and expanding the funding base for your technology program. Meeting the challenge should include exploring the following:

- Bond measures
- Public and private grants
- Corporate and local business partnerships
- Federal and state programs
- Special-events fundraising programs

You may discover many other significant sources of revenue, but keep these in mind—they are a potential gold mine awaiting the right prospector.

Bonds

If your school or district has both one-time capital equipment investments and ongoing budgetary expenses (such as for training and support, new software, and/or maintenance), bond issues are an effective—and the most common way—to generate funds. Unfortunately, they are also the most complex. Bond issues require direct approval and funding from the public. Your success depends on many factors, including proper preparation for and implementation of your issue:

- *Consider your district's track record with bond issues.* How voters have responded in the past is the best clue to how they'll respond in the future. A hefty public relations campaign may be necessary to sway public opinion in your favor.
- *Structure your bond issue.* Instead of a single, large bond measure, consider separating your budget requirements into two or more distinct measures. If one passes, at least you've got money to get started.
- *Assign expenses.* Under which budgets or budget categories you assign particular expenses can have an impact on whether they are covered by funds from a bond measure. Many of your expenses—such as retrofitting older schools—are properly considered facilities' expenses and can be assigned under those budgets. Wiring and cabling can be considered part of the construction budgets for new schools.

Voters may reasonably question what the school district knows about technology and whether it can invest bond monies wisely. So it will be vital for your school or district to assure the community that it has a sound technology plan. Some tips follow:

- *Get others to champion your bond measure.* Your technology plan will gain more support from voters if business, civic, media, parent, and other community leaders champion it for you. Get them on board early. If you've included them on your technology committee or advisory committee, they should already be well aware of your plans. Get their approval before you seek voter consent. Encourage them to lobby on the measure's behalf, especially if your area has laws that prohibit the school district from lobbying directly.
- *Prove your expertise.* Here's where your pilot project experience can be an invaluable aid. Publicize the results of your pilot projects to prove you have the expertise to succeed on a broader scale.

Grants

A wide range of grant resources is available to help underwrite your school or district's technology investment. All enterprising technology advocates need to do is roll up their sleeves and begin the search. Most libraries

have directories of grant-providing foundations and corporations, conveniently indexed by interest. Database, online, and Internet resources are also available to aid you in your search.

If you are interested in federal grants, check *The Federal Register* frequently or check the Internet listings of government agencies. Also, call pertinent state agencies to learn how to get on the mailing lists for their requests for proposals (RFPs). At the end of this chapter you'll find a list of grant-seeking and grant-writing resources.

Successful Grant Writing

Good grant writing is both an art and a science. The hard and fast rules of grant writing are typically well documented in the request for proposal materials. While it is important to follow those rules and regulations, some tips from the experts can make the grant-writing process a bit easier:

- *Write in one voice.* It is a good idea to brainstorm with the technology committee to generate initial ideas for your school or district's proposal. However, the final proposal should be written in one voice, not a chorus of authors. It is best to have a principal author, with several proofreaders. The committee should agree upon the *content* of the final proposal before it is submitted to the prospective funder. A word of caution: The committee should restrict its comments to the content of the proposal, as it is time-consuming to obtain committee consensus on the grant's phraseology and style.
- *Set a realistic time frame.* Creating successful, persuasive proposals takes time. Allow time for drafts to register: If possible, put down the draft upon completion and return to it after a few days. Returning to the document after some time away from it, you will see things that did not occur to you upon first, second, or even tenth review.
- *Justify the amount of money you request.* Since the proposed budget is determined by the scope of the project's activities and personnel, it should be the last item you complete. Carefully determine all possible expenses associated with your technology plan and, if required, include a plan of how the project will be continued after the term of the grant funding. If you are writing a proposal for a grant that provides matching funds, be sure to ascertain whether in-kind contributions can be included to offset your share of the matching funds. Always ask for the complete amount of money the grant allows or slightly less, but justify all monies in the budget statement.
- *Follow the submission guidelines described in the application.* Always follow the formatting and style instructions the RFP provides. Remember, the grant reader has the difficult task of reading dozens (or even hundreds) of proposals. Your potential grant donor has developed a process for locating within a proposal packet the information needed to judge the merit of a proposal. Your "unique" approach may interfere with the reader's ability to quickly find the key information to support your request.
- *Copy all your work.* Make backups of all your disks, and photocopies of all your application materials. You may need to refer to specific sections at a later date, and there is no assurance your submitted materials will be returned to you. You may also discover some potential for re-use if you apply to more than one donor. There is nothing wrong with pulling out a well-written grant proposal and reshaping it to meet the objectives of a new funding source.
- *Get letters of endorsement.* Whenever possible, include letters of endorsement from those who may help implement your grant. Seek written commitments from your local business partners. Their letters should endorse the purpose of the grant as well as the school or district that is submitting the proposal, and indicate a strong statement of need.
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Business Partnerships

Partnerships are a good way for schools and businesses to attain common goals. Many businesses and corporations are committed to re-investing in the communities in which they do business. By forming realtionships with schools, businesses are able to have a positive impact on the quality of life in a community and ensure a skilled future workforce; and any financial assistance or in-kind services businesses provide help give the private sector a sense of ownership in education. As in any good relationship, all the involved parties benefit.

Many school-business alliances typically begin with a company "adopting" a school. This adoption may take the form of a program under which company employees volunteer as mentors, tutors, or other contributors. Or a business may prefer to sponsor the purchase of a specific item or underwrite a specific program so it can receive some public recognition for its contribution.

Part of your role in developing business relationships will be helping corporate investors recognize the substantial impact their generosity can have on your school or district's technology plan. Here are some tips for developing solid school partnerships with businesses and corporations:

- *Make contact personal.* Personal visits to businesses help establish a sense of trust. Extend invitations to applicable school events and to various special meetings, and include the businesses and their enterprises in decision making about technology planning.
- *Know what your needs are.* Many businesses have exactly the resources you need to solve a particular problem. Businesses sincerely want to help but frequently have no idea what a school's needs are. They may be hesitant to offer assistance, particularly if they fear stepping on someone's toes. It is up to you to develop an open relationship with businesses so you can feel free to ask for and they can feel free to offer assistance. Always be up-front about your school or district's needs.
- *Have a plan for how businesses can assist.* As you build a relationship with a potential partner, you will get a sense of their interests and resources. It is important to know not only what your needs are, but also how they can specifically assist. Some organizations are comfortable providing financial assistance alone, whereas others prefer to take a more hands-on approach to helping. Be sensitive to their corporate giving styles.
- *Publicize the work of your partners.* Whenever your partners sponsor an event, their business logos should be exhibited. At public events, formally recognize your partners and their employees who graciously donate their time, services, and funds. Make sure you tout their involvement at every opportunity.
- *Allow businesses to sponsor something specific.* Making a donation of cash or a service doesn't necessarily give a corporation the kind of community involvement and recognition it's seeking. Sometimes businesses prefer to sponsor something specific that gives them a sense of ownership. Events such as back-to-school breakfasts, academic achievement award programs, student competitions, and technology nights are perfect ways to showcase your partners. Allowing them to sponsor these events provides important community recognition for their good deeds. Corporations also like to sponsor particular aspects of a program, such as a career-shadowing component or a scholarship in the name of their business.
- *Try to pair and match businesses.* Gaining the support of one organization can often bring you the support of another. Be aware of the partnerships your sponsors have already created in the marketplace. You may be able to provide a perfect opportunity for them to publicize their partnership in the pursuit of your technology goals.
- *Foster the relationship.* Remember, companies are not just faceless engines to power your technology plan. The people that represent your corporate partner are making a real commitment of their time and resources to help you achieve your goals. Keep in touch. Don't just call them when you need a favor—remind them that your school appreciates their personal contributions. Let them know they're on your mind by sending them school newsletters, holiday greetings, and samples of special student work.
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The confidence to ask for donations should arise from your belief that the funds will be used for a worthwhile cause. Education and the improvement of student learning are such a cause, and corporations should be made to see how important and lasting their generosity can be.

Federal and State Programs

Telecommunications Discounts for Schools

As mentioned earlier, your power and telecommunications suppliers (phone and cable) may offer discount programs, and your state utility boards may have established discounted rates.

To learn more about Federal Communications Commission (FCC) policy and education initiatives, see LearnNet at

U.S. Department of Education Resources

The U.S. Department of Education provides a broad range of resources to assist communities, schools, and school districts in planning and using technology for teaching and learning. The department's Web site has program and grant information and a dynamic map of the United States you can use to identify resources and services in your area.

Within the department's home page are descriptions of Technology Challenge Grant winners and this year's Technology Challenge program. Also, white papers discuss the use and future of networking technologies for learning, with comments and reactions from teachers, students, and others around the country.

Many of the department's programs and initiatives include technology components, so it is worthwhile to surf the site for information about applicable programs, activities, publications, grants, and initiatives. The department also offers EdInfo, a three-times-a-week e-mail service providing new information and reports.

Parent and Student Fundraising and Support Building

Bringing the Outside In: Special Events

Well-planned, unique events attract publicity and build community support, including financial support, for your school's technology program. Here are some tips for planning and putting on a successful special event.

1. *Determine your objectives.* Have your overall fundraising and program objectives in mind when you begin considering an event. Think about who you want to reach and what you want them to do.
2. *Select an event.* Your technology program can inspire many different kinds of events—whether fundraising or support building—including career days, "technology nights," seminars, contests, and awards. See the sidebar "Event Ideas" for specific suggestions.
3. *Select a date.* Check your school's in-house schedule, the event schedules of other community groups, and local and national calendars for events, observances, political dates, or other significant occasions that would conflict with your event; avoid three-day weekends and holidays, when people are likely to have plans.
4. *Start planning early.* Special events require a lot of work and a lot of lead-time—plan on at least four months of preparation.
5. *Invite guests well in advance.* Invite business and community partners, parents, school board members, and other education stakeholders at least three weeks in advance.
6. *Set up media coverage.* Draft the press releases and promotional materials you plan to distribute. Invite the media, and get promotional activities under way early.
7. *Work the event.* Develop a checklist of activities, and assign one person to take the lead in coordinating those activities at the event.
8. *Follow up.* With a special event, it's not over even when it's over. Immediately afterwards, send press kits to any reporters unable to attend. Then send thank-you notes to the volunteers, speakers, entertainers, and participants/contributors.
9. *Evaluate the event.* If the event was a fundraiser, one of the measures of its effectiveness is, of course, the amount of money raised. Another measure is the publicity the event generated. Establish a file of clips from newspapers, audiotapes from radio interviews, and videotapes from TV appearances. Then, prepare a report that answers questions such as:

- How many media placements did the event receive (number of articles, interviews)?
- Did the media used reach a large number of the target audience?
- Did the coverage convey the key points of the event's purpose?
- What could be done differently for the next event?

Reaching Out

Schools can no longer exist in isolation from the larger community they serve. For education to become a better reflection of the skills, attributes, and collaborative learning models needed in the adult world, schools must become an integral part of that world. Establishing partnerships and networks with people, organizations, corporations, and agencies brings together all the stakeholders in education with the goal of significantly improving student learning. Linking the greater community to share responsibility for the future of children is the key to achieving a truly Connected Learning Community.