

Taxonomies of the School Library Media Program

2nd Edition

David V. Loertscher





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Salt Lake City, UT

Hi Willow Research & Publishing

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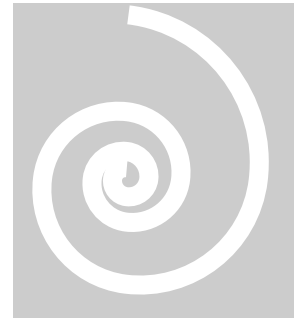
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Taxonomies of the Library Media Program

Part 1, chapters 1-6, provides the basic progressive and orderly view of creating a library media program from a neglected space or facility and making it into a fully functioning and mature library media program. This process is explained first in theory and then from the perspectives of the major players: the library media specialist, the teacher, the student, and the administrator.

Each taxonomy is aimed at a critical audience that must participate fully if a program is to be effective. Just as the success of a sports team depends on the consistent and distinguished contribution of each team player, so also a school library media center program is no better than the weakest of its contributing players.

The Emerging Concept of the School Library Media Center

Looking at our Roots

If you were alive in 1979, you have lived the entire history of the microcomputer. Likewise, if you were alive during World War II, you have lived almost the entire history of the school library media center. True, school libraries, particularly high school libraries, existed at the turn of the century, but their development was limited.

Like the microcomputer, the school library media program has undergone a radical change in philosophy and conception since its beginning. Like any other rapid change in ideas, the development of school libraries is unbalanced. Many centers are indispensable to the educational program, others are peripheral to it. Some centers have moved with the times, others are moving, and still others have remained unchanged.

To understand the current philosophy of the role that a library media center should play in a school, a short historical tour of library development is necessary. Three developmental stages have taken place. These may be titled the "three revolutions."

THE FIRST REVOLUTION: Centralization of Information Storage and Retrieval

The first revolution began just after World War II, when a number of leaders in the library and audiovisual worlds conceived a revolutionary idea for school libraries. These visionaries challenged the idea that a school library should be just a repository for books designed to supplement a child's reading. In the place of a warehouse, these leaders dreamed of a center in each school, staffed by a trained professional educator,

which would contain not only printed materials but also a wide range of audiovisual materials and equipment. The function of that center would be not only to house a vast range of material but also to interpret that collection to the teachers and students of the school. At first, audiovisual collections were added to book collections. In the 1980s, computer technology made storage and retrieval of vast quantities of information possible and this technology began to take its place in the library.

The library world's first revolutionary soldiers were professors in university library science and audiovisual departments, state library supervisors, district level library supervisors, and visionary building level personnel. Mary Gaver, Bob Brown, Frances Henne, Carolyn Whitenack, Margaret Rufsvold, Mary Peacock Douglas, Harvey Frye, and James Finn are but a few of the brilliant minds who lent their strength to the cause. What did they do? What did they advocate?

Classroom collections were merged to form centralized collections, and audiovisual media and equipment and computers were purchased. Print collections were improved and made more appealing. Facilities were constructed and remodeled. Professional and clerical staff were employed. Public relations programs were fostered. And most important, leaders encouraged and succeeded in getting local, state, and federal governments to spend money to create these new organizations within the school.

At first there was some parallel development, with libraries containing only print media and audiovisual centers containing audiovisual materials and equipment. The most influential leaders, however, encouraged a merging and blending of all media into a comprehensive center with the appropriately trained personnel to handle the entire spectrum of media services. Practically, most schools could afford to hire only one specialist and so looked for a single and broadly educated professional who was knowledgeable about all the media. More recently, we have begun to see the split re-emerge as schools have created technology plans and installed hundreds of computers. Some schools divided responsibility for information between the librarian (print formats) and technology coordinators (electronic information delivery). Still, visionary leaders see providing information in all forms ever invented or that ever will be invented as the true function of a single administrative entity: the school library or library media center.

THE SECOND REVOLUTION: Integration of the LMC into the Curriculum

Often, so much effort is expended in creating the LMC of the first revolution that when it is complete, answers to the question of what to do next are often uncertain and sometimes embarrassingly absent. This has been particularly true in the decade before the millennium as computer technology has been installed in vast quantities in K-12 schools. Everyone seems to agree that there is great potential in the LMC program for education, but the problem of ensuring that teachers and students use it properly and capitalize on that potential becomes a stumbling block. The old saying, "out of sight, out of mind," applies to LMCs because a teacher and a student must make a concerted effort to leave the learning environment of the classroom and go to a separate location in the building to use either computer lab facilities or the LMC. Many fine facilities, stocked with plenty of books, audiovisual materials, and computer equipment, are underused. In such cases, administrators become rightfully anxious about the situation, and in the absence of evidence of worth begin to cut back on the rate of investment in a facility and program that do not carry their own weight.

In the 1990s, educational theorists popularized constructivist education, as opposed to behaviorist (more traditional) education. Traditional or behaviorist teaching is commonly known as the lecture method, or textbook teaching. Constructivist educators become coaches of learning, allowing the student a much greater part in educational planning. The constructivist teachers often emphasize project-based learning, inquiry, groups of students doing investigative projects, or "engaging problems." Suddenly students need more than just lecture notes and textbook resources to succeed. They require a rich information and technological environment from which they will be extracting, producing, and using their projects.

This new role is a natural extension of the role of the library media specialist and of the center. The specialist who knows materials in all the modern formats and who understands how to use these materials across the technologies to make an impact on instruction is the logical partner to the teacher. Instead of one person at the head of the class carrying the entire burden of instruction, the library media specialist, as a second adult expert, shares in the coaching of learners as they build expertise in the various disciplines. The LMC is thrust into the very heart of the instructional program. It becomes accountable for progress in every facet of the school's curriculum. Thus, the library media specialist is just as interested in student achievement as is the teacher. If achievement is low in any area of the curriculum, the library media specialist and the teacher review ways to improve

student performance by using materials and educational technology more meaningfully.

But have these second revolutionary ideas worked? Have they been embraced by school library media specialists, teachers, and administrators and adopted into the operational plans of the school? The answer is both yes and no. Some library media specialists and districts have adopted second revolution methodologies and are excelling. Others have accepted the philosophical concepts but seem to be going through an identity crisis. These are the educators who have learned the rudiments of constructivist ideas but have not been able to practice them. They feel that their present program of education is already overwhelming without adopting something totally new. Yet they are attracted to the constructivist ideas, so they feel guilty. They perceive a gap between what they think they should be doing and what they are able to do. Still others do not grasp the new view of library media programs because they have not been able to coordinate all the philosophical ideas of the last 40 years into a coherent pattern, an overall look at what should be done.

There seems to be no consistent pattern of library media services or its philosophy of integration into the curriculum. As a wave of retirements in the school library media field hits after 30 years of service since the school library was invented, questions abound concerning what new person and what new role should be pursued. One thing is certain: As the next millennium begins, the push for technology in the schools has not produced automatic gains in educational performance. Revolutionaries of the second order are working hard to integrate machines, learners, and teachers into an effective learning/teaching environment. The task seems as formidable as ever.

THE THIRD REVOLUTION: Transformation of the Entire School into an LMC

Library professionals and many principals usually think of the library as the "hub of the school," a place where everyone goes to get materials and equipment. Now, however, in the age of technology, the library has become "Network Central," with its tentacles reaching from a single nucleus into every space of the school and beyond into the home. Where we once thought of the library as a single learning laboratory, now the entire school becomes a learning laboratory served by Network Central. It becomes both centralized and decentralized at the same time.

The LMC staff combines the advantages of the first two revolutions but becomes the human interface between print and electronic

information systems, technology, and networks on the one hand and the learners and teachers on the other. This essential element is illustrated in figure 1.1.)

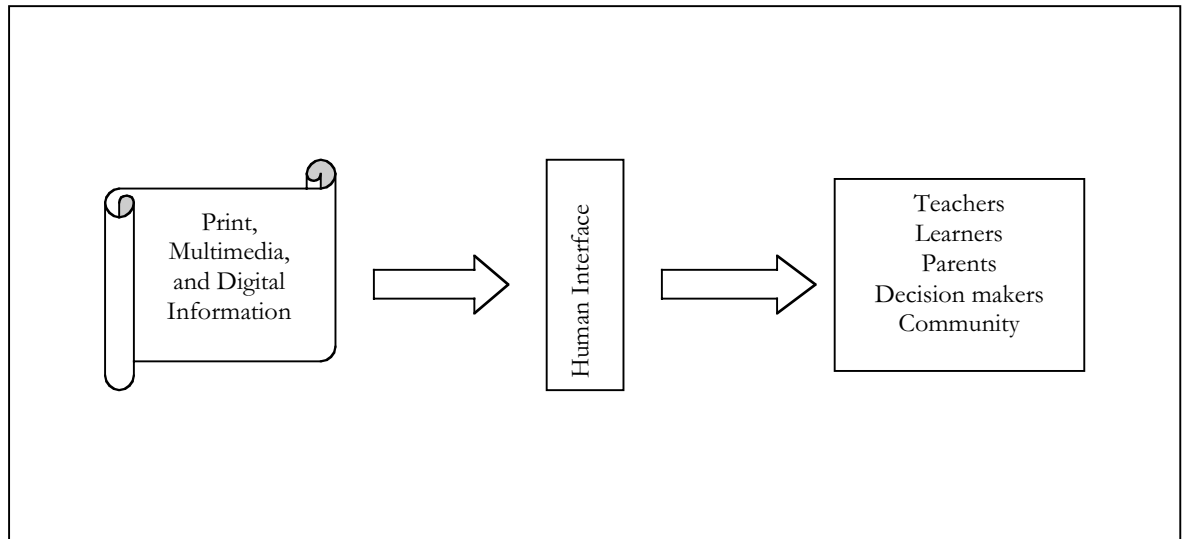


Fig. 1.1. Human interface

As this system develops, the LMC program and information technology extend from a central location into every learning space in the school and into the home. Figure 1.2 clarifies the newer concept.

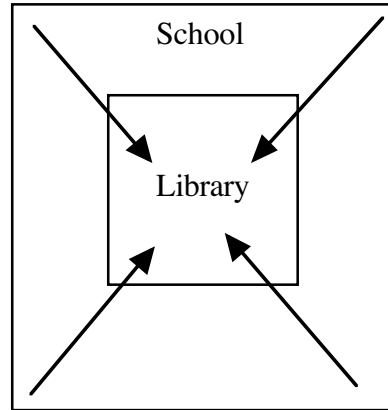
Traditional

- Print rich
- ^a Print and AV oriented
- Centralized (one location)
- Rigidly scheduled
- Single person staff
- A quiet, almost-empty place

New

- Information rich in every format
- Multiple technologies
- Centralized and decentralized simultaneously
- Flexibly scheduled
- Professional and technical staff
- A busy, bustling learning laboratory

OLDER LIBRARY CONCEPT



NEWER LIBRARY CONCEPT

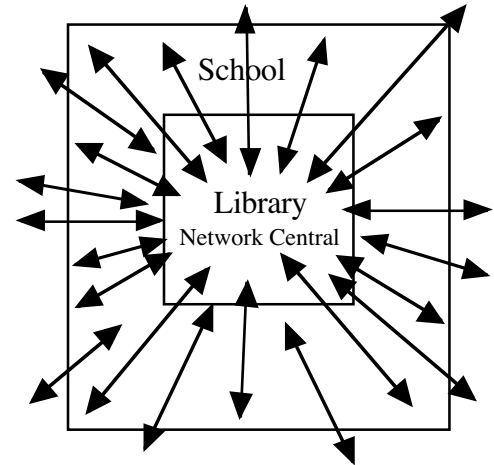


Fig. 1.2. Traditional library concept versus newer concept.

With the advent of high technology and sophisticated networks, some schools have approached high technology as if it were separate and distinct from "the library." But after the wires are in and the equipment in place, it soon becomes evident that materials and information merely have new paths to take, while the concept of a vast store of materials and information poised to serve teachers and learners, called "the library," the "LMC," or "Network Central," remains intact.

Revolutionaries of the third kind include administrators, library media specialists, and teachers, all of whom decide that an evolutionary pattern of change for the library media program is unacceptable. These people are too impatient to wait while the LMC evolves gradually from a passive warehouse/technological facility into an active participant in instruction. They demand an immediate payoff in the investment made in the LMC. They want a return on the million dollar investment, NOW!

These revolutionaries review the current concept of the library media program, see where it must go, and re-evaluate every policy and every practice that has existed in the past. Throwing out much of the past, these people ask: What will it take to see that technology really enhances learning in this school? What will it take to see that each teacher collaborates with the library media staff to raise academic achievement? These persons reinvent the library media program and are ready to hold it accountable to learning.

Radical change is not easy to implement in any organization. But sometimes it is the only way to make progress. Often the change can be implemented as an experiment to be tried and then evaluated after a period of time. The following examples illustrate this type of revolutionary change.

Example 1: The principal and the teachers note that the library media specialist in an elementary school has no time to work with units of instruction because scheduled classes of library skills instruction take up the bulk of the specialist's time. There is no one to help guide teachers in the use of technology, no one to help students learn information literacy skills so they won't drown in information overload. The administrators and teachers decide to do away with scheduled library time and replace it with flexible access time so that all have access to the LMC all day long. A program of collaborative planning and use of the center is created and reported upon monthly for review by the site council and the principal.

Example 2: The principal of a high school notes that the LMC is being used to research term papers by the English and social studies departments but not by any other departments. Most teachers in the building are getting some materials and technology from the center, but it is largely empty. In this school, every classroom has been equipped with a few computers but there is little evidence that the computers are being used. With the encouragement of the library media specialists, department heads, and technology coordinators, the principal assigns a specialist to be a functioning part of each department. A program of joint planning with departments is instituted. Summer planning days are held with teachers who have not previously worked with the LMC and its technology. These teachers and the library media staff plan units of instruction designed to take advantage of an information-rich environment, implement those units during the school year, and report their progress to the administration. One by one, each department in the school takes on such a planning session until the LMC is a part of the total curriculum.

READINGS

Overall Concept of the Library Media Center

Donham, Jean. *Enhancing Teaching and Learning: A Leadership Guide for School Library Media Specialists*. New York: Neal-Schuman, 1998. A look at the role of the school library media program in the educational environment of the school and the structure of that program to build and support quality education.

Haycock, Ken. ed. *Foundations for Effective School Library Media Programs*. Englewood, Colo.: Libraries Unlimited, 1999. A group of articles appearing in *Emergency Librarian* (now *Teacher Librarian*) on topics spanning the range of the school library concept.

Loertscher, David V. *Reinvent Your School's Library in the Age of Technology: A Handbook for Principals and Superintendents*. San Jose, Calif.: Hi Willow Research & Publishing, 1999. Updated frequently, this manual for administrators contains "one concept per page" to explain the role and implementation of a library media program.

The History of School Libraries

Gillespie, John T., and Diana L. Spirt. *Creating a School Media Program*. New York: R. R. Bowker, 1973. See chapter 1, "School Library to Media Center," for an excellent, brief history of the school library media center.

Latrobe, Kathy Howard, ed. *The Emerging School Library Media Center: Historical Issues and Perspectives*. Englewood, Colo.: Libraries Unlimited, 1998. Essays written on a wide variety of historical issues, including topics such as the education of school librarians, school libraries and progressive education, intellectual freedom in twentieth-century school libraries, collection development over time, and the development of a body of research literature.

Saettler, Paul. *The Evolution of American Educational Technology*. Englewood, Colo.: Libraries Unlimited, 1990. The definitive history of the audiovisual movement in the United States as it developed into educational technology.

Woolfs, Blanche. *Managing School Library Media Programs*. 2nd ed. Englewood, Colo.: Libraries Unlimited, 1999. See the first chapter for an interesting and informative view of the history of school libraries.

What Is a Library Media Program?

Building an exemplary library media program is like building a magnificent structure. Each component of the structure must be in its proper place if the building is to be functional and permanent. Figure 2.1 illustrates the components of the library media program.

The model illustrates three basic foundation stones of a school library media program. The first is an information infrastructure providing easy access to the storehouse of materials, equipment, and facilities not only in a central location but throughout the school and on into the home through digital networks.

The second foundation stone, direct services to students and teachers, provides individual attention to students and teachers, reference work, gathering of materials, public relations, and support of teaching units upon request. This area can be pictured as the human interface within the information infrastructure, the personalized element between technology and individual learners and teachers.

The four areas of collaboration, reading, enhancing learning through technology, and information literacy constitute the main programmatic thrust of the LMC program and are the third foundation stone. Each of these areas directly affects and enhances the educational program of the school, leading to increased academic achievement.

The model can be divided into two triangles, the lower right one depicting the technical and paraprofessional role and the upper left one describing the professional role. In terms of time and energy spent, the technical and paraprofessional role assumes the major responsibility for infrastructure and warehousing functions, some participation in direct services, and a small part in the four program areas. The professional, on the other hand, invests a major portion of each working day in the creation, execution, and evaluation of the four central program areas in a cooperative venture with teachers. The professional spends

considerable time providing individualized services and supervises the infrastructure and warehousing functions.

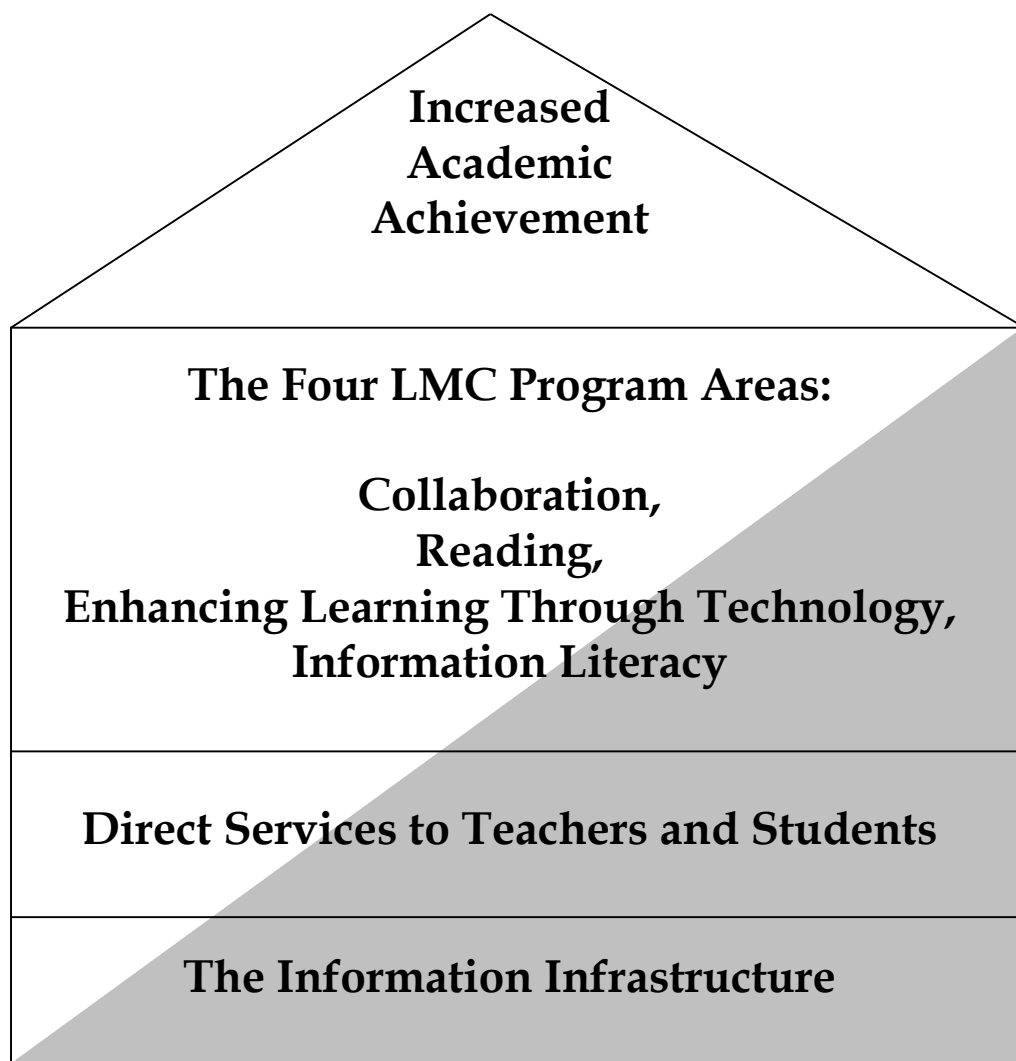
The exact nature of the four main programmatic elements is a function of the talent of the library media specialist, who takes into consideration a wide range of factors in their design, including the goals of the school; the level (elementary, middle, or high school); the nature of the curriculum; the cultural backgrounds of the students; and the district, state, and national visions. Whatever program design the center adopts, the library media staff is held accountable for achieving excellence.

The major difference between the program of a school library and a public library is the educational focus of the program elements. These elements are designed by a library media specialist who has a solid teaching background and understands how materials and technology can have a direct impact on learning. This person designs a program focus to be integrated into the curricular structure of the school, not independent from it. A few examples illustrate this point.

Example 1: In an elementary school, the reading motivation program is an integral part of the reading skills program of the school and is incorporated into a language arts program, one that combines reading, writing, and oral expression into an integrated whole. Reading teachers, classroom teachers, and library media specialists work in a concerted and cooperative manner to ensure that there is a sustained silent reading program, every child is read to every day, parents are involved in promoting reading, books are "shoveled" at students, reading is made a "cool" thing to do, fiction and informational books are used with or instead of basal readers, and both reading in the content areas and writing are integrated into every aspect of the curriculum.

Example 2: In another school, inquiry learning holds center stage in the philosophy of the school. Realizing that a rich information environment and extensive access to information networks will be required, the library media specialist designs the entire infrastructure to serve every student, whether in the LMC, in the classroom, or at home. An automated catalog provides resources not just in the library collection within the walls of the school but also to quality Internet sites and libraries in the community, the state, the nation, and the world. Production capabilities abound and students are comfortable creating projects in any of a wide variety of multimedia formats. Both teachers and students are comfortable working in an information-rich and technology-rich environment. Because of increased capabilities, they tackle more difficult educational problems, leading to greater achievements both in content knowledge and increased life-long learning strategies.

The School Library Media Program



Professional Role Technical and Paraprofessional Role

Figure 2.1. The school library media program.

The Library Media Specialist Taxonomy

A taxonomy is an array of concepts or principles in an order reflective of difficulty, achievement, level of depth, or some other meaningful measure. The library media specialist taxonomy was developed by this author 20 years ago to assist professionals in understanding a conceptual framework of their role in an educational institution. (See figure 3.1) At its base lie elements that establish an organizational entity, but as its numbered levels increase, so do the library media specialist's power over and influence on academic achievement in the school.¹

The potential for building partnerships between teachers and librarians is no accident. State certification rules in many states of the United States require that the school librarian be educated first as a teacher and then as a library media specialist—the latter usually being a part of a master's degree program. In the majority of cases, librarians have had background as a classroom teacher. In Canada, teacher-librarians must have experience as classroom teachers first. In both the United States and Canada, the requirements emphasize the idea of a teacher-librarian, a colleague with the classroom teacher in the instructional process, one who is sympathetic to and supportive of the teacher's role.

The first responsibility of the library media specialist is to put into operation the four major programmatic elements of the library media program—collaboration, reading literacy, enhancing learning through technology, and information literacy—no matter what the shape or condition of the

¹ The taxonomy was first published in a slightly different form in David V. Loertscher, "Second Revolution: A Taxonomy for the 1980s," *Wilson Library Bulletin* 56 (February 1982): 412-21. It also appeared in the first edition of this book at a time when resource-based teaching and learning were the central focus of the programmatic element of the library. Revisions in the taxonomy for this edition reflect the preponderance of information technology in education and the multifaceted nature of the LMC program elements.

information infrastructure, the facilities, or the materials available. That is, the library media specialist begins at the top of the taxonomy, not at the bottom, in the quest to make a difference in teaching and learning in the school.

Each level of the taxonomy is an important piece of the total program, but each can also have its drawbacks. The library media specialist can become so involved in any one level of the taxonomy or in any one of the four programmatic elements that other levels are excluded or simply ignored. The best program is one that includes a healthy mix of all the levels of the taxonomy.

The Library Media Specialist's Taxonomy

1. NO INVOLVEMENT

The LMC is bypassed entirely.

2. SMOOTHLY OPERATING INFORMATION INFRASTRUCTURE

Facilities, materials, networks, and information resources are available for the self-starter delivered to the point of need.

3. INDIVIDUAL REFERENCE ASSISTANCE

The library media specialist serves as the human interface between information systems and the user.

4. SPONTANEOUS INTERACTION AND GATHERING

Networks respond 24 hours a day and 7 days a week to patron requests, and the LMC facilities can be used by individuals and small groups with no advance notice.

5. CURSORY PLANNING

There is informal and brief planning with teachers and students for LMC facilities or network usage—usually done through casual contact in the LMC, in the hall, in the teacher's lounge, in the lunch room, or by e-mail. (For example: Here's an idea for an activity/web site/new materials to use. Have you seen ...? There's a software upgrade on the network.)

6. PLANNED GATHERING

Gathering of materials/access to important digital resources is done in advance of a class project upon teacher or student request.

7. EVANGELISTIC OUTREACH/ADVOCACY

A concerted effort is made to promote the philosophy of the LMC program.

8. IMPLEMENTATION OF THE FOUR MAJOR PROGRAMMATIC ELEMENTS OF THE LMC PROGRAM

The four LMC program elements—
collaboration,
reading literacy,
enhancing learning through technology, and
information literacy—

are operational in the school. The LMC is on its way to achieving its goal of contributing to academic achievement.

9. THE MATURE LMC PROGRAM

The LMC program reaches the needs of every student and teacher who will accept its offerings in each of the four programmatic elements.

10. CURRICULUM DEVELOPMENT

Along with other educators, the library media specialist contributes to the planning and organization of what will actually be taught in the school or district.

Fig.3.1. The library media specialist's taxonomy.

THE LIBRARY MEDIA CENTER TAXONOMY EXPLAINED

The Solid Warehousing Services Building Block

Level 1—No involvement: The LMC is bypassed entirely. Here the library media specialist, for whatever reason, makes no attempt to be involved in a particular sequence of instruction.

Not every unit can be plugged into the center during the school day. A problem occurs, however, if nonuse is a habitual pattern for either teachers or students. Not all the teachers will ever be reached, nor will all the students, but these nonusers should be in the minority. The library media specialist must never give up trying to work with the nonuser even though success will be difficult to achieve.

Level 2—Smoothly operating information infrastructure: Facilities, materials, networks, and information resources are available for the self-starter delivered to the point of need.

Level 2 is basic to the complete program of library media services. At this level, the library media specialist has organized materials and equipment and information networks for the browser. The center is inviting and attractive. Patrons can find the materials or equipment they need, know how to use them, and can check them out for use at home or in the classroom. Information networks provide access to every educational space in the school and beyond into the students' homes. This level involves the selection, acquisition, presentation, and maintenance of the collection and information networks. Services at this level are the kind that no one notices when they are running smoothly but about which everyone complains when things go wrong. At its best, the information infrastructure is invisible to the user.

The major problem with this level is that infrastructure services expand to fill the time available. It is very easy to get stuck in this warehouse and never really progress beyond level 2. The infrastructure is never finished. Books must get shelved, software or hardware malfunctions must be diagnosed and fixed, cataloging of materials for the automated system must be completed. An entire day can be filled with exhausting warehousing functions and will be unprofitable in terms of a solid contribution to education.

The Direct Services to Teachers and Students Building Block

Level 3—Individual reference assistance: The library media specialist serves as the human interface between information systems and the user.

Here the library media specialist assumes the magician's role, or in more formal terms, becomes the human interface between technology and users, making use of the ability to know where to locate important and trivial information and materials from a vast array of sources, whether these be in the LMC's collection, in a neighboring LMC, from the district LMC, from the public library, from an academic library, or from a national network or database. Level 3 includes reading, viewing, and listening advisory services for students and teachers.

Movement toward the "information society" adds another dimension to level 3. Students will need to learn how to handle information from sophisticated databases and high technology sources. This level assumes that the library media specialist may at times deliver the information directly to the user but will continually work to help patrons gain the skills they need to find and use information themselves through information systems and networks.

Level 3 services can often dominate the time of the library media specialist, and because this level of service is particularly interesting and stimulating, other levels of service can easily be pushed into the background.

Level 4—Spontaneous interaction and gathering: Networks respond 24 hours a day and 7 days a week to patron requests and the LMC facilities can be used by individuals and small groups with no advance notice.

During many instructional periods, a teacher and/or student will discover a new direction that is not in the instructional plan yet is too exciting to neglect. The library media specialist might respond at a moment's notice with materials, resource people, access to web sites, production activities, research projects, games, or any other activity that capitalizes on the unique teaching moment. These instant projects might last a few minutes in a single class or might grow to involve the whole school for a semester or even a year.

Spontaneous services, however, might become an excuse for a lack of planning by teachers or turn into babysitting. For students, this spontaneous need and the subsequent interaction can spark a life-long interest and even influence career choices.

Level 5—Cursory planning: There is informal and brief planning with teachers and students for LMC facilities or network usage— usually done through casual contact in the LMC, in the hall, in the teacher's lounge, in the lunch room, or by e-mail. (For example: Here's an idea for an activity/web site/new materials to use. Have you seen ...? There's a software upgrade on the network.)

When teachers and students accept the library media specialist as a source of ideas and the specialist blooms in this role, great things can occur. Library media specialists collect bags of tricks—ideas that have worked—from other teachers or other library media specialists, from principals, from conventions attended, from professional journals, and from their own creative minds. The library media specialist knows the sources for help—people, materials, and equipment—and knows where and how to get them. Teachers and students learn to depend on the library media specialist to generate solutions and solve problems.

Roadblocks can develop at this level if the library media specialist is perceived as a pest rather than a source of ideas.

Level 6—Planned gathering: Gathering of materials/access to important digital resources is done in advance of a class project upon teacher or student request.

When there is time to communicate with the teacher of a student project group about the topic of an upcoming unit, the library media specialist can assemble materials from many sources. Materials from the LMC can be gathered before the "eager beaver" students have time to raid the cache, a webography can be created, a neighboring school can lend its materials, public libraries can be put on notice of an impending demand, materials from other libraries can be collected, and free materials from agencies and businesses can be assembled. Given enough lead time, the library media specialist can flood the teacher with materials and information resources.

Gathering the right things at the right time for the right users, and in the right format, is no small task. Problems can develop if the library media specialist collects too much—on the wrong levels—for the wrong objectives. A clear idea of exactly what is needed is essential if success is to be achieved.

Level 7—Evangelistic outreach/advocacy: A concerted effort is made to promote the philosophy of the LMC program.

Here one thinks of a library media specialist who enthusiastically preaches the gospel of media and information technology through promotion, cultivation, stimulation, testimonial, recommendation, and selling, all with the concerted purpose of gaining converts among the students, the teaching staff, and the

administration. This might include teaching in-service workshops to promote multimedia and web production and/or use of information technology, showing teachers the various uses of equipment and materials and explaining how an information source can suit various ability and interest levels, promoting the usefulness of high-interest/low-reading-level books, or encouraging the use of interdisciplinary materials. For students, motivational campaigns are conducted to involve them in media and information technology experiences.

As in all types of evangelistic movements, the inattentive, the antagonistic, and the backsliders will be a problem. Promotional campaigns can backfire or be ineffective.

The Academic Achievement Building Block

Level 8—Implementation of the four major programmatic elements of the LMC program: The four LMC program elements— collaboration, reading literacy, enhancing learning through technology, and information literacy—are operational in the school. The LMC is on its way to achieving its goal of contributing to academic achievement.

At this level, the library media specialist, with the help of various advisory groups, has created a plan, an implementation strategy, and an evaluative process for each of the four major programmatic areas. Consider the following examples:

Collaboration. The library media specialist has a plan to meet with and plan resource-based instruction with teachers, departments, and grade levels. Willing teachers are the first clients, and units of instruction are planned, executed, and evaluated together. The core of willing teachers expands over time as the news of success travels. At some point, whole departments or grade-level teams have mandates/scheduled planning times with the library media staff.

Reading literacy. The library media specialist first creates access to an exciting array of print materials that students and teachers want to read. Access is provided in such a way that both the classroom and the home become print-rich environments as extensions of the store of books in the LMC. Every child or teen has a wide range of materials available at all times. Teachers and reading specialists work with the library media specialist to implement programs such as sustained silent reading, reading motivational programs, reading aloud, and other means of building capable and avid readers.

Enhancing learning through technology. The library media specialist realizes that networks and computers, plus other

technologies such as digital video and digital cameras, only provide potential to enhance learning and that improved learning is not an automatic result of ownership of these items. In-service training of both teachers and students demonstrates and encourages methods to exploit technology to enhance teaching strategies, learning content, and production of projects.

Information literacy. As collaborative projects are planned with teachers, information literacy instruction is inserted into the activities of the unit as appropriate. Attention is given to providing research strategies at the time of need, thus raising effectiveness and efficiency. Over time, learners gain their own command of information literacy strategies.

Level 9—The mature LMC program: The LMC program reaches the needs of every student and teacher who will accept its offerings in each of the four programmatic elements.

Maturity indicates the full implementation of a program element with full confidence that maximum impact is being achieved on a consistent basis. Teachers expect to collaborate; readers know and use the reading resources; both teachers and students expect to learn and be taught effective ways to use new technologies and software as they are developed. (The idea that "you teach me, I teach you, we teach each other, and we all help keep it working" is the rule, not the exception.) Teachers expect information literacy to be a part of their teaching strategies and students can vocalize their own information literacy model.

Level 10—Curriculum development: Along with other educators, the library media specialist contributes to the planning and organization of what will actually be taught in the school or district.

Curriculum development is more than just an invitation to attend curriculum meetings; it means that the library media specialist is recognized as a colleague and contributes meaningfully to planning. The knowledge of materials, sources, technology, present collections, and teaching/learning strategies makes the library media specialist a valuable asset as curricular changes are considered and implemented. The library media specialist will not be able to attend all of the curriculum committee meetings in all the disciplines on a regular basis but can serve as a consultant to the committee. When a textbook is being adopted, the library media specialist can give the committee a clear idea of how the present LMC collection and network access can support the philosophy and the daily requirements of that textbook. Advance planning for collection development can be done before the preferred text is adopted rather than trying to play a game of collection catch up.

THE PERSONAL QUALITIES OF THE LIBRARY MEDIA SPECIALIST

One of the questions most often asked about the emerging role of the school library media specialist is whether the model demands too much for any single person to accomplish. Are we expecting too much of one person to be an expert in books, audiovisual and computer media, resource-based learning, the reference process, and management strategies? If there is not an adequately-sized staff in the LMC, the answer is probably yes. Research indicates that when the staff of any LMC falls below a full-time professional plus a full-time clerical and a full-time technician, the foundation elements of the program suffer.² Professionals tend to take on clerical roles because of the demands of the warehouse; direct services and collaboration suffer. This means that by cutting staff, the services having the greatest impact on education are cut. The same could be said in larger schools, where a single professional and a single clerical are insufficient to run a comprehensive program.

Library media specialists who find themselves in understaffed centers would be wise to find others to perform warehousing services and devote as much attention as possible to the four programmatic elements. Students, teachers, and volunteers should be required to pick up warehousing and technical services to allow the professional to have whatever educational impact is possible under the reduced staffing plan. For example, teachers would have to know how to troubleshoot the computers in their own areas, only rarely needing assistance from a technician who is part time or at the district level. Part-time library media specialists are particularly vulnerable to the demands of the infrastructure and of schedules. The four programmatic elements must always predominate whatever time the library media specialist has in a school.

The job of the library media specialist is a very creative one, full of exciting and varied experiences, but it requires a certain type of person to be successful. Alice Jenkins, Northwood Junior High School Library Media Specialist in Pulaski County, Arkansas,³ addressed this issue in an in-service program on the taxonomy. To be successful at each level, the library media specialist needs to have the following characteristics:

² David V. Loertscher, May Lein Ho, and Melvin M. Bowie, "Exemplary Elementary Schools and Their Library Media Centers: A Research Report," *School Library Media Quarterly* 15, no 3 (Spring 1987): 147-53.

³ Alice Jenkins, Northwood Junior Library Media Specialist, Pulaski County Schools, at a preconference in Dallas, Texas, 1983. A few revisions have been made for this edition.

| | |
|--------------------------------------|-------------------|
| Level 2—The warehouse: | Be organized. |
| Level 3—Individual assistance: | Be visible. |
| Level 4—Spur of the moment requests: | Be flexible. |
| Level 5—Brief planning: | Be positive. |
| Level 6—Planned gathering: | Be knowledgeable. |
| Level 7—Evangelistic outreach: | Be zealous. |
| Level 8—Implementation of program: | Be active. |
| Level 9—The mature LMC program: | Be accountable. |
| Level 10—Curriculum design: | Be resourceful. |

Several research studies have probed the human qualities that characterize successful library media specialists.⁴ Herrin et al. found that the successful school library media specialist is one who:

- Has a positive self-concept
- May be shy/reserved but projects warmth
- Is bright, stable, enthusiastic, experimenting/exploring, trusting
- Is able to be self-sufficient
- Is confident of worth as an individual
- Enjoys people, work, variety/diversity
- Views change as a positive challenge
- Values communication
- Communicates effectively as an individual
- Is caring and especially attentive to others
- Is able and willing to clarify communications
- Is relatively self-disclosing
- Is uncomfortable with conflict
- Is confident of ability to deal with difficult situations in a professional manner

⁴ Barbara Herrin, Louis R. Pointon, and Sara Russell, "Personality and Communications Behaviors of Model School Library Media Specialists," *Drexel Library Quarterly* 21, no 2 (Spring 1985): 69-90. Reprinted in David V. Loertscher, ed., *Measures of Excellence for School Library Media Centers* (Englewood, Colo.: Libraries Unlimited, 1988). See also Jody Beckley Charter, "Case Study Profiles of Six Exemplary Public High School Library Media Programs" (Ph.D. diss., Florida State University, 1982). Charter gave a personality measure to her exemplary library media specialists, with some interesting contrasts to those of the study of Herrin et al.

- Is neither critical nor domineering
- Has no great need for achievement, power, or economic advantage
- Views self as leader in curriculum development
- Is willing to take the risks of being a leader

The portrait created is one that is interactive, dynamic, and changing, radiating vitality and exuding a confidence that says: "Even though I may feel reserved or shy, I am capable of leadership because I believe people are important."

This study points out what administrators in schools with good LMC programs already know: It takes a gutsy, creative, organized, and easy-to-get-along-with person to build an exemplary LMC program. It also requires a person willing to become a leader, not only in print media but also in every form of educational and information technology.

Attracting such people to the profession, particularly capable females, has been increasingly difficult because of the many higher-paying positions in diverse careers that have become available to women. Some principals, having difficulty locating someone, have selected the best teacher in the building and have created incentives for that person to become certified as a library media specialist.

EVALUATING THE SCHOOL LIBRARY MEDIA SPECIALIST

For a quick gauge of whether the three foundation stones of the library media program are in place, the evaluative form in figure 3.2 can be filled out by each of the library media staff members and combined to form a picture of services

Make one photocopy and one transparency of figure 3.2 for each member of the LMC staff. Have each staff member rate himself or herself on the paper copy of the chart and then, using different colors, transfer these ratings to his or her own transparency. Only the head of the LMC should fill in the percent circles of teacher involvement as an indication of how well the entire staff is reaching the teachers.

Each of the completed transparencies is instructive in and of itself. What role is played by each of the staff members? How do professional and clerical roles compare? Now overlay all of the transparencies. Theoretically, the result should be an entire rectangle of color. Professional and clerical roles should

approximate the model shown in figure 2.1. That is, complementary roles create an entire programmatic structure.

The transparency asks for the percentage of faculty reached at each level of the taxonomy. An alternative would be to chart what percentage of subject departments or grade levels is served on each of the levels.

Library Media Staff Roles

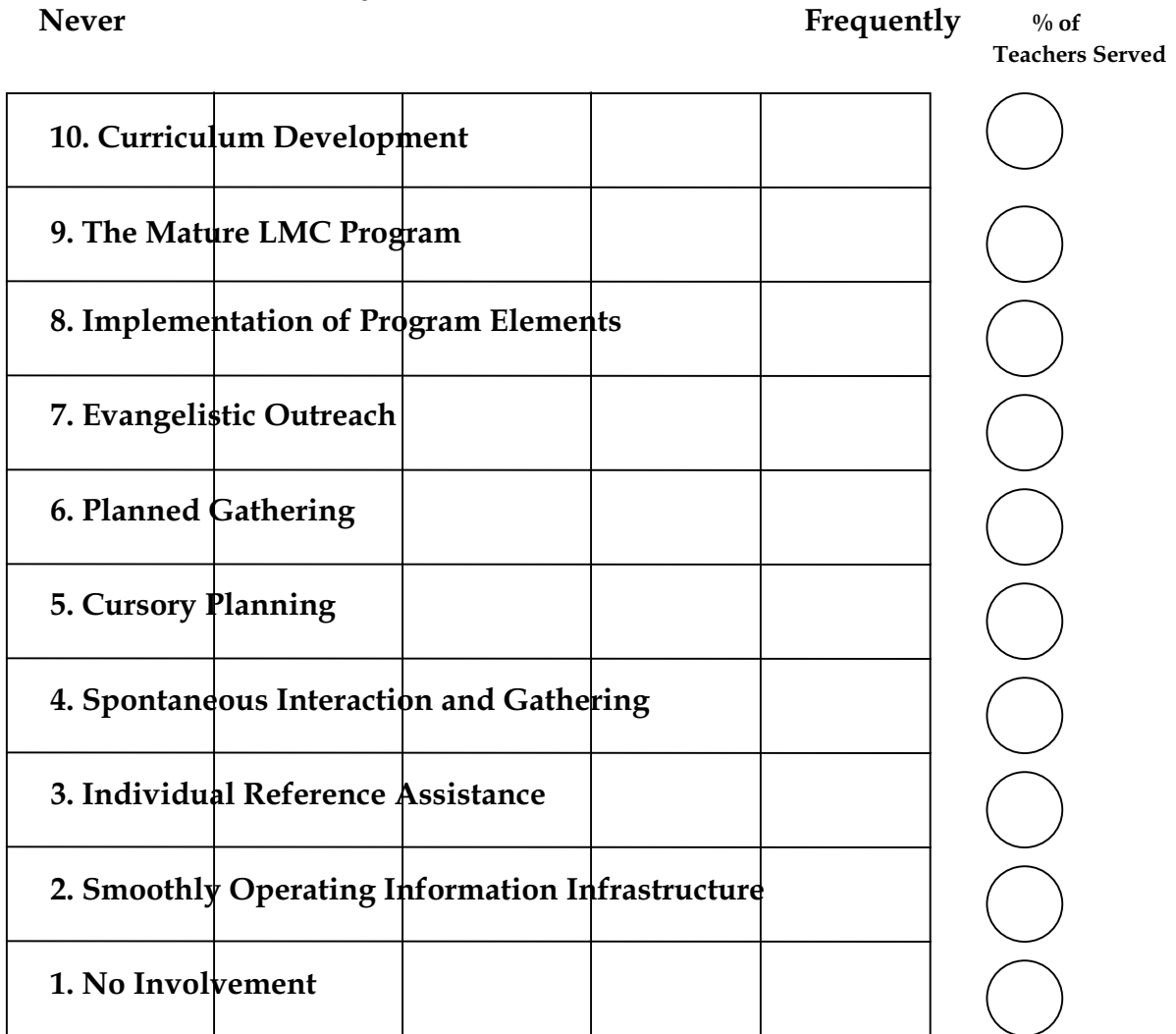


Fig. 3.2. Library media staff roles.

The Teacher Taxonomy

Good teaching meets the needs of every individual student while accomplishing the goals of education. Formerly, a teacher was the conveyor of information. Today, the teacher is as much a manager of learning experiences as the sole source of instruction. Many teachers, for example, have found the management role comfortable in high technology classrooms when they find that students know as much or more about various technologies as they do.

The demand for excellence in recent years has heaped more and more pressure on teachers to perform. The emphasis on high standardized test scores often leaves teachers frustrated and feeling isolated. Examples of mandates to the teacher include:

- Teach more content in less time.
- Teach in such a way that students score high on achievement tests even when they don't speak English.
- Improve student learning by matching resources to their learning styles and abilities.
- Provide opportunities to develop independent learning and problem-solving skills.
- Provide a variety of methods for classroom teaching and learning activities.
- Stimulate creativity and experimentation.

Fortunately, there are people in most schools eager to partner with teachers to achieve such results. Counselors, special reading teachers, special education personnel, and library media specialists all work to assist teachers in creating a successful learning climate.

With regard to the library media program, the wise teacher may learn to capitalize on all the resources that the LMC has to offer. The idea is for a teacher to reach out from self-contained teaching to embrace a partnership with the library media specialist in resource-based learning activities.

TEACHING STYLE

Teachers by training and experience generally adopt a teaching style with which they become comfortable as their experience deepens. They determine what seems to work for them and their students as they settle into a comfort range of teaching techniques. In today's educational community, two major teaching styles are capturing attention. The first is behaviorist teaching, a style that predominates in teacher practice the world over but which is under heavy attack by theorists. The behaviorist teacher generally:

- Relies on lecture and textbooks as staples of teaching and learning.
- Is in control of the learning environment.
- Takes the role of "sage on the stage."
- Understands the ideas of goals and objectives, careful formulation of activities to achieve the objectives, and testing to match the objectives.
- Is concerned with delivering a prescribed amount of content to students and expecting them to master it.
- Uses testing to determine mastery or lack thereof and grades based on expected mastery.

We have all encountered behaviorist teachers, some of whom are extremely competent in helping learners master content. We are also aware of those who abuse this style. As the pressure to make students achieve increases, the behaviorist teacher tends to exert more and more control and may increase expectations, raise the amount of homework expected, and seek to increase the amount of content given per time unit. The teacher may also use drill and practice plus repeatable exercises, seeking to maximize the memorization of material connected to a particular discipline.

Behaviorist teaching is the oldest and most widespread technique and has some definite advantages plus a track record of success. Students who perform well for a behaviorist teacher are "sponges" who consume huge amounts of information and details. They are able to reproduce facts and information precisely on a test. These students do well in mastering factual information and on true/false tests or multiple choice items. They can reproduce the ideas of the teacher in an essay as well as the ideas they have read in texts or other prescribed reading materials. They do well on the SATs and go on to college, where they encounter more of the same teaching style.

Behaviorist teachers often come under attack for concentrating on building "surface learning" of facts rather than building thinkers or problem solvers. They may be accused of having so much interest in the mastery of content that "process" tools of learning ("how to learn" skills) are neglected. Student learning styles may be ignored as the amount to be learned increases.

At the opposite pole to behaviorist teaching is constructivist teaching, a philosophy that began with John Dewey but has become more popular as brain research has developed and theorists such as Howard Garner and his learning styles work have been popularized. The constructivist teacher:

- Uses a wide variety of materials and technologies to present material to appeal to each learner.
- Guides the learning environment; becomes a shadow leader.
- Takes the role of "guide on the side."
- Asks students to take control of their own learning.
- Stresses the "process of learning" over mastery of content.
- Uses rubrics to have students participate in the assessment of both process and content mastery.

Constructivist teachers include students in the formulation of projects or quests. They assist students by creating quality questions to be solved or "engaging problems" inviting investigation. They may vary activities and strategies as the "quest" progresses and take into consideration the feedback received from students. They risk students not being able to master facts, trusting that students who know how to learn will perform satisfactorily on tests and in the long run will be powerful learners. Constructivist teachers take into consideration the variety of learning styles in their classrooms

and create learning activities that appeal to all those styles. They are more concerned with the depth of learning than its breadth.

Constructivist teachers reinvent their schools or restructure teaching and learning. They may apply for membership in the Coalition of Essential Schools, an organization promoting constructivist principles. They do not accept the notion that students must master more and more surface learning as new knowledge in the disciplines is discovered.

These teachers appeal to quite a different kind of student: one who enjoys taking responsibility for learning, who enjoys working collaboratively in group projects, and who enjoys solving problems. Students who are creative and like to solve problems using various strategies do well in constructivist classrooms. But those students who need to be told what to do and how to do it at every turn become frustrated with an apparent lack of guidance.

There are probably few teachers who fit the mold of pure behaviorist or constructivist teaching. Some behaviorist teachers may use constructivist ideas to create variety and a change of pace for the students. At times, the constructivist teacher grabs control to steady the ship and to shorten the time between problem creation and solution.

Whatever the teaching style being used, library media specialists try to reach out to teachers, seeking to build powerful learning experiences. Their message is that no matter the teaching style, two adults armed with a wide variety of materials and technology can make a larger difference with a higher percentage of learners than if the teacher tries to teach alone. They maintain that the odds increase as two adults partner to support the typical group of learners.

Thus the teacher taxonomy in figure 4.1 shows a progressive stance from teaching in isolation to the embracing of the LMC and its staff as a central component of teaching and learning strategy.

The Teacher's Taxonomy of Resource-Based Teaching and Learning

1. SELF-CONTAINED TEACHING

The teacher delivers instruction and creates learning activities with materials and technology in a single classroom environment with no real need for the LMC facilities, materials, or information technology. Materials are either owned by the teacher or accessed via networks from the classroom.

2. TEACHING WITH A BORROWED OR ELECTRONICALLY ACCESSIBLE COLLECTION

When materials or equipment are lacking for a particular instructional sequence, the teacher borrows materials from the LMC, the public library, or other sources for use in the classroom during a unit of instruction.

3. USING THE LIBRARY MEDIA STAFF AS AN IDEA RESOURCE

The teacher relies on the library media staff and the technology resource persons for ideas and suggestions for new materials to use, activities to pursue, training in the use of all forms of media and technology, reference information, what materials are available (when, where, and how), and professional materials and information.

4. USING THE LIBRARY MEDIA STAFF AND RESOURCES FOR ENRICHMENT OF A UNIT

The teacher uses the LMC facilities, materials, activities, and staff to supplement unit content—to provide the "icing on the cake" for a unit. These activities are not considered essential to the central elements of teaching but do enrich the learning experience.

5. USING LIBRARY MEDIA RESOURCES AS A PART OF UNIT CONTENT

Library media center materials/activities are integral to unit content rather than supplementary in nature. Students are required to meet the teacher's objectives while using library media information.

6. THE TEACHER AND LIBRARY MEDIA SPECIALIST EXPERIMENT WITH PARTNERSHIPS IN TEACHING AND LEARNING

The teacher and library media staff experiment by working as teaching partners to construct teaching strategies and learning experiences that will increase student achievement. One or both partners are testing collaborative strategies, new ideas, or changes in learning activities or are experimenting with new technologies.

7. TEACHER/LIBRARY MEDIA SPECIALIST PARTNERSHIPS BECOME A NATURAL PART OF TEACHING AND LEARNING

Teachers and library media specialists enjoy partnerships as they plan, execute, and evaluate learning experiences. Their collaboration is a natural part of the professional experience.

8. CURRICULUM DEVELOPMENT

Teachers consult with library media specialists as curriculum changes are being considered. Advance planning for changes and their impact on LMC materials, facilities, technology, and activities are considered.

Figure 4.1: The teacher's taxonomy of resource-based teaching and learning.

THE TEACHER TAXONOMY EXPLAINED

Level 1 — Self-contained Teaching: The teacher delivers instruction and creates learning activities with materials and technology in a single classroom environment with no real need for the LMC facilities, materials, or information technology. Materials are either owned by the teacher or accessed via networks from the classroom.

For a variety of reasons, many teachers feel compelled to stick strictly to the textbook and other classroom materials as a complete pool of resources for their teaching. Over the years a teacher may have acquired a personally owned classroom collection that is available as needed. Also, a textbook adoption may consist of a total package of materials designed to provide an entire curriculum. The package may include the textbook, workbooks, audiovisual materials, and computer disks or accompanying web sites. The designers of these packages encourage strict adherence to the objectives designed for the package. While textbook/package teaching does have merits, many teachers feel the need to reach beyond the content of the text to make learning come alive for a particular group of students who are not responding well to whatever is happening. Library media specialists concur with this thinking and spend a good deal of time encouraging teachers to experiment on other levels.

Level 2 — Teaching with a Borrowed or Electronically Accessible Collection: When materials or equipment are lacking for a particular instructional sequence, the teacher borrows materials from the LMC, the public library, or other sources for use in the classroom during a unit of instruction.

The need to reach beyond the classroom for materials and equipment causes teachers to seek out libraries and media centers that are both convenient and reliable. At this level, the teacher is an independent borrower, knowing exactly what is needed and when. Problems develop when borrowed materials must be scheduled far in advance of the presentation date, such as scheduling a video six months to a year in advance. Such obstacles and other harassment integral to the borrowing process itself may be terribly discouraging, yet the results are often worth the effort.

Level 3 — Using the library media staff as an idea resource: The teacher relies on the library media staff and the technology resource persons for ideas and suggestions for new materials to use, activities to pursue, training in the use of all forms of media and technology, reference information, what materials are available (when, where, and how), and professional materials and information.

Because the library media specialist deals with materials and information technology much of the school day and watches students and teachers use these materials, a bank of good teaching ideas naturally develops. This resource can be tapped by the teacher if a good communications line with the library media specialist can be established. Idea sharing can occur at brief moments during a coffee break, at lunch, or during a brief encounter in the hall. At other times, the teacher is advised to seek out the library media specialist for specific ideas and suggestions. The specialist might have a tendency to flood a client with ideas and materials in appreciation for being asked, so a teacher is advised to describe carefully and on a regular basis the specific areas of interest.

Level 4 — Using the library media staff and resources for enrichment of a unit: The teacher uses the library media center facilities, materials, activities, and staff to supplement unit content—to provide the "icing on the cake" for a unit. These activities are not considered essential to the central elements of teaching but do enrich the learning experience.

There are numerous LMC activities and projects available that with a little planning will provide richness and extend the activities in the classroom in meaningful ways for students. The activities can be simple or complex, short or of extended length, and can provide an exciting element or a refreshing change of pace to a unit of instruction. Activities can range from research in books or online information resources to creating Internet web sites; from oral dramatic presentations for other classes to visiting with a community resource person. Such activities can, however, be counterproductive and turn into babysitting sessions or a waste of time if adequate planning is neglected.

Level 5 — Using library media resources as a part of unit content: Library media center materials/activities are integral to unit content rather than supplementary in nature. Students are required to meet the teacher's objectives while using library media information.

Many students must be motivated through their assignments to use library media materials to accomplish a learning task. When library media specialists understand the objectives of the unit of

instruction and the type of activity needed to accomplish a task, they can provide the type of activity in the LMC desired by the teacher. At this level, the teacher spends considerable time with the library media specialist explaining unit objectives and planning for LMC activities. Those activities are required rather than considered as supplementary to unit objectives. Advance planning is essential to the success of a level 5 unit, and teacher participation in the LMC activity is vital.

Level 6 — The teacher and library media specialist experiment with partnerships in teaching and learning: The teacher and library media staff experiment by working as teaching partners to construct teaching strategies and learning experiences that will increase student achievement. One or both partners are testing collaborative strategies, new ideas, and changes in learning activities or are experimenting with new technologies.

One of the most exciting teaching experiences can occur when teachers and library media specialists join together as teaching colleagues to create, teach, and evaluate a unit of instruction. This process requires extensive advance planning, mutual concern, and the ability to share ideas in a give and take situation. At this level, both partners are willing to try a new or fresh approach to teaching and learning, working on techniques that may reach a larger percentage of the learners, and to take advantage of having two adults rather than one involved in the teaching process.

Level 7 — teacher/library media specialist partnerships become a natural part of teaching and learning Teachers and library media specialists enjoy partnerships as they plan, execute, and evaluate learning experiences. Their collaboration is a natural part of the professional experience.

By level seven, the library media specialist and the teacher have become partners, trusting each other to be creative enough during the planning and execution stage of a unit activity to enhance student learning. Both partners seek opportunities to work together often and feel comfortable in doing so.

Level 8 — Curriculum development: Teachers consult with library media specialists as curriculum changes are being considered. Advance planning for changes and their impact on LMC materials, facilities, technology, and activities are considered.

Too often, the adoption of a new textbook or curriculum comes as a surprise to the library media specialist. It is only an

accident if a LMC collection can support a curricular change. Most often, it takes several years to gear up the collection of the LMC to the new text. Just as the support becomes effective, it is time to change the text again. One of the best ways to prevent this rollercoaster effect and its subsequent disservice to students is to encourage the library media specialist to report to the curriculum committee how well the present LMC collection can support any of the proposed textbooks or curriculum guides. Bringing the library media specialist into the planning at an early stage allows the committee to make its choice with better information and gives the library media specialist the opportunity to order new materials or request funds to buy new materials before the proposed text is used. In addition to explaining LMC collection support, the library media specialist can serve as a contributing member of the curriculum committee in its dealings, as time permits.

BUILDING PARTNERSHIPS

Teachers pride themselves on having academic freedom, on being experts in their subject areas, on building a sense of autonomy. Why, then, accept a partnership in the educational process? The answer is that no matter how strong or excellent a teacher is, improvement can be achieved by reaching out to others for ideas of merit.

Incorporating good ideas from others presumes a certain openness, a flexibility of approach. It reflects neither weakness nor uncertainty. Teachers who forge partnerships with library media specialists do so because they perceive that a collegial approach to education is superior to an isolated one. Partnerships presume mutual trust, a sense that both persons have something to contribute.

But what can a library media specialist know about differential equations? The latest theories of nuclear physics? The nuances of good writing? Likewise, what can a teacher be expected to know about the latest materials for teaching differential equations? The latest use of computers that will improve student comprehension? The creation of Boolean searches of online databases? To communicate successfully, the library media specialist may have to read the textbook or a summary essay in a subject encyclopedia or may even have to attend a teacher's class presentation. On the other hand, the teacher might have to participate in an in-service training session for online searching or ask for one-on-one assistance in using a computer simulation to best advantage. Whatever it takes to communicate

successfully, both the teacher and the library media specialist make the effort, knowing that the results will be worthwhile.

Library media specialists often complain that teachers will not plan units of study far enough in advance for the LMC program to have any real impact. Likewise, teachers may assume that the library media specialist has no real interest in what is going on in the classroom. Such assumptions are common and lead to empty LMCs, underused resources, misused technology, and feelings of ambivalence.

The school administrator, who is the instructional leader, can often create the atmosphere and the policies to stimulate teacher-library media specialist communication. Administrators can begin by providing common planning time and monitoring the success of jointly planned activities. Teachers might demand quality support from the LMC and encourage the administrator to see that a sound program is in place. Teaching need not be an isolated activity. Students deserve to have the best educational program and the best materials that will stimulate their interest.

Teachers who have experienced difficulties incorporating the LMC into instruction might be included in special professional development sessions for joint unit development or take advantage of summer planning workshops with other teachers and library media specialists. The administrator might also encourage the library media specialist to be a functioning member of department planning meetings or cross-disciplinary planning sessions. Teachers, administrators, and library media specialists cannot assume that good things will happen automatically. All groups need to lobby for planning time and for an opportunity to evaluate the success of every joint project. No matter the obstacles, the teacher, the administrator, and the library media specialist vow to cooperate and do it.

Both the teacher and the library media specialist should study chapter 7 & 8, which details the steps in creating resource-based teaching and learning units. However, a few suggestions here illuminate the process.

- The teacher and the library media specialist cooperate in the creation, the execution, and the evaluation of topical studies and units of instruction.
- The library media specialist is a part of the teaching team. Likewise, the teacher is an integral part of the library media program.

- The library media specialist knows *in advance* the precise requirements of and the deadlines for assignments involving LMC materials and technology.
- The objectives of topical studies or units of instruction are identified so that new skills can be taught and other skills reinforced.
- Appropriate materials from a wide variety of sources and technologies are available for student and teacher use. Easy access is a must.
- Resources are available in sufficient quantities to meet student demands.
- The necessary equipment and appropriate working spaces are available for students when required.
- Students are taught information skills, technology skills, and thinking skills as they interact with the LMC resources to achieve curricular assignments.
- Evaluation techniques are developed to examine not only the learning outcomes but also the effectiveness of the process.
- Opportunities are provided for students to use LMC resources for pleasure and enjoyment.¹

Teachers sometimes will want access to the LMC for a specific time and at other times will want individuals or small groups of students to have access to the center at any time during the school day. The important factor is that the center should be available from the beginning to the end of the school day on a flexible schedule.

THE TEACHER AND THE CENTRAL PROGRAM ELEMENTS OF THE LMC

Library media specialists seek to achieve four programmatic elements that will make a difference in academic achievement if implemented in partnership with teachers. The first, collaboration, has been discussed above as the central element of the teacher taxonomy. The other three are outgrowths of that idea.

Reading. The research is clear that the more young people read, the better they will be at comprehension, spelling, grammar, and

¹ Adapted and updated from *Partners in Action: The Library Resource Centre in the School Curriculum* (Toronto: Ontario Ministry of Education, 1983), 25.

writing style.² Simply stated, amount counts. Collaborating with the library media staff, much can be done to see that every student becomes a capable and avid reader throughout their school experience. A few suggestions might provide an entrée to a planning session:

- Get a rotating collection (from the LMC) of high-interest materials into the classroom.
- As a teacher, read-aloud every day and provide sustained silent reading.
- Let students choose a wide variety of materials to read for assignments rather than everyone reading the same item.
- Include reading in every unit of instruction whether it be science, social studies, or language arts.
- As a teacher, be a reader who recommends good things to students on a regular basis.

Enhancing learning through technology. The challenges for all teachers are just beginning when the computers are set up, the networks are operational, and the systems are loaded with a wide variety of information products. It is one thing to have an information-rich environment and quite another to make that environment have an impact on learning. To get ideas, many teachers try using collaborative planning with the LMC staff or the students themselves and getting great teaching ideas from the Internet or from professional development sessions. For any tired out unit now placed in an information technology environment, the fastest way to see results is to do one of two things: change the beginning question to something relevant and engaging and/or change the nature of the final product. Either or both strategies are quite likely to increase student motivation, particularly when students are encouraged to use technology both as an information source and as a medium of unlimited creative expression.

Building information literacy. *Information literacy* describes a student's ability to master the research process: the wise use of a wide variety of information sources in the solution of a quest or problem. No longer should the teacher expect the library media specialist to teach students the basics of information location.

² Stephen Krashen. *The Power of Reading*. Englewood, CO: Libraries, Unlimited, 1993 and McQuillan, Jeff. *The Literacy Crisis*. Portsmouth, NH: Heinemann, 1998.

Every student should be in command of his or her own learning style and system of doing research. Library media specialists can help teachers integrate these twenty-first-century skills into the normal units of instruction so that students master not only content but also process at the same time. Constructivist teachers who use the research process as the scaffolding for an entire unit or inquiry will find library media specialists anxious to help build process skills at critical times throughout the research.

TAKING THE SELF-TEST

How open is each teacher to the collaborative process with the library media staff and the resources and technology under their direction? A simple self-check form may indicate a position today and change over time. Reproduce the teacher taxonomy (Figure 4.1) and indicate how often each level of the taxonomy would describe a teacher's normal practice.

Summary Chart: Teacher’s Self-Evaluation Checklist

I use materials and technology available in my classroom.

| | | | | |
|-----------------|-----------------|-----------------|-----------------|------------------|
| 20% of the time | 40% of the time | 60% of the time | 80% of the time | 100% of the time |
| 2 units in 10 | 4 units in 10 | 6 units in 10 | 8 units in 10 | 10 units in 10 |

2. I borrow materials or equipment temporarily for a unit of instruction.

| | | | | |
|-----------------|-----------------|-----------------|-----------------|------------------|
| 20% of the time | 40% of the time | 60% of the time | 80% of the time | 100% of the time |
| 2 units in 10 | 4 units in 10 | 6 units in 10 | 8 units in 10 | 10 units in 10 |

3. I use the library media staff as an idea resource in my teaching.

| | | | | |
|-----------------|-----------------|-----------------|-----------------|------------------|
| 20% of the time | 40% of the time | 60% of the time | 80% of the time | 100% of the time |
| 2 units in 10 | 4 units in 10 | 6 units in 10 | 8 units in 10 | 10 units in 10 |

4. I use the library media center for activities that “enrich” my teaching.

| | | | | |
|-----------------|-----------------|-----------------|-----------------|------------------|
| 20% of the time | 40% of the time | 60% of the time | 80% of the time | 100% of the time |
| 2 units in 10 | 4 units in 10 | 6 units in 10 | 8 units in 10 | 10 units in 10 |

5. What my students do in the LMC is an integral part of unit content.

| | | | | |
|-----------------|-----------------|-----------------|-----------------|------------------|
| 20% of the time | 40% of the time | 60% of the time | 80% of the time | 100% of the time |
| 2 units in 10 | 4 units in 10 | 6 units in 10 | 8 units in 10 | 10 units in 10 |

6. I experiment using the library media staff as partners in a unit of instruction.

| | | | | |
|-----------------|-----------------|-----------------|-----------------|------------------|
| 20% of the time | 40% of the time | 60% of the time | 80% of the time | 100% of the time |
| 2 units in 10 | 4 units in 10 | 6 units in 10 | 8 units in 10 | 10 units in 10 |

7. Partnering with the library media staff is a natural part of my instructional routine.

| | | | | |
|-----------------|-----------------|-----------------|-----------------|------------------|
| 20% of the time | 40% of the time | 60% of the time | 80% of the time | 100% of the time |
| 2 units in 10 | 4 units in 10 | 6 units in 10 | 8 units in 10 | 10 units in 10 |

8. Library media staff participate when textbook adoption or major curricular change happens.

| | | |
|-----------------|------------|--------|
| Rarely or Never | Frequently | Always |
| | | |

Figure 4.2: Teacher’s self-evaluation checklist.

The Student Taxonomy

The student is the central figure in the program of the school library media center. However, the chief means by which the LMC affects the student is vicariously through the teacher. Direct services are extremely important, but lack of influence on the teaching process, on the assignments and activities set by teachers, relegates the LMC to a peripheral role in a student's educational career.

An interesting probe of students' perceptions of the role of the LMC in their lives is to perform the lunchroom test. In this test, a stranger to the school interviews groups of students eating lunch in the normally crowded, noisy lunchroom. Students are asked about their school library media center and the LMC staff. Student responses can range from total lack of interest to a very enthusiastic response, with every shade of opinion in between.

Historically, the school library was a place to find recreational reading. That role has now expanded to become a high-tech learning laboratory providing information technology in the LMC, the classroom, and the home. Just a few of the expected benefits for students of the modern school library media center include:

- A place to learn to become a capable and avid reader.
- A laboratory to learn the value of information, materials, and technology.
- A place to learn how to communicate in print, multimedia, or computerized formats.
- A central repository of information for personal needs, such as what to do about acne, what college to attend, or how to deal with the death of a friend.
- A place to enjoy.

- The best source of materials and information to complete assignments.
- A place to learn how to locate, evaluate, and use information.
- The center for the culture of the school and of the world.
- A place to discover, to probe, to find out what is or is not known.
- A repository of the best print, multimedia, and information technology.

Such a place is created by caring library media staff, interested teachers, the determined support of administrators, and parents who expect and demand quality education for their children. A quality program for students begins with easy access to materials, space, and the LMC staff. The quality improves as young people are involved in active programs that demonstrate the value of the center.

INTERACTION OF STUDENTS WITH THE LMC PROGRAM

A model or picture of what happens as students interact with an exciting LMC program shows consistent growth, from a child with great potential to a mature user of information and technology, as illustrated in figure 5.1. The model illustrates the need to build, stimulate, motivate, encourage, cultivate, and nurture a young person in an LMC program from the moment schooling begins until it ends. The imperative is not just to create a place where students may find respite from the demands of the school day but to build, in their minds, a center that is indispensable to their growth and development. Having space, materials, and an adequate staff is no guarantee that the intended result will materialize.

The taxonomy for resource-based learning (figure 5.2) shows the developmental stages of student growth toward competence in the information society. Through a combination of motivation and design, students are taught to become increasingly knowledgeable and self-sufficient.

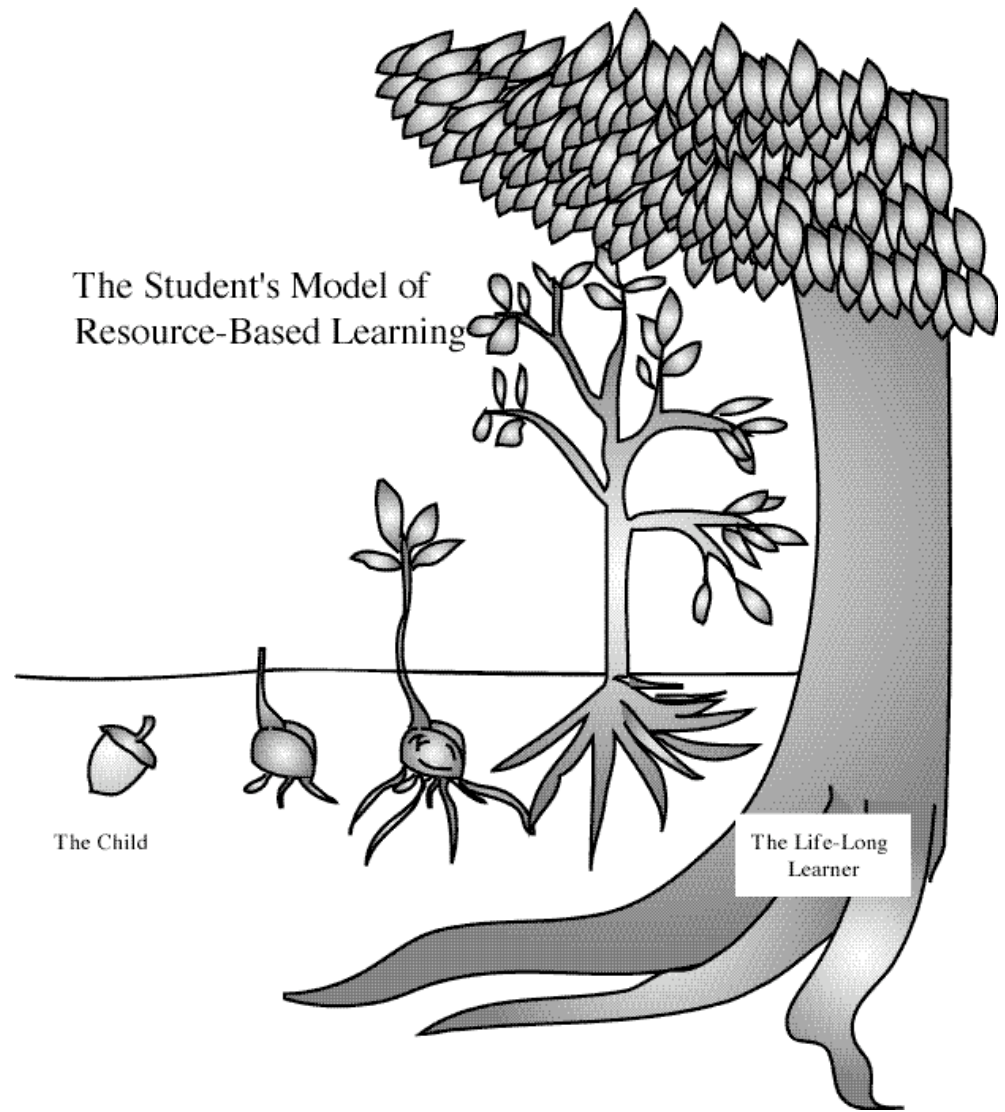


Figure 5.1: The student's model of resource-based learning.

The Student's Taxonomy of Resource-Based Learning

1. NO INVOLVEMENT

The student is prevented from using or has no desire to use the library media center materials, technology, or program.

2. SPONTANEOUS INVOLVEMENT

The student unexpectedly finds materials or activities of interest in the library media center.

3. INFORMATION/MATERIALS/TECHNOLOGY ASSISTANCE

The student requests and obtains specific information, materials, technology, and production assistance for personal, recreational, or curricular use.

4. DIRECTED MOTIVATION/PROGRAM

Students read, view, listen, computer, produce, or perform in response to a motivational campaign of the library media center staff (not necessarily curricular related).

5. UTILIZATION SKILLS

The student learns basic skills needed to use the resources of the library media center, other libraries, computer networks, and community resources.

6. STRUCTURED INTERACTION

The student participates in planned activities designed to carry out a curricular or recreational objective.

7. THE STUDENT BECOMES A POWER READER

The student has developed a reading habit as a capable reader and is an avid reader across a wide variety of genres, information types, and various print technologies.

8. THE STUDENT BECOMES A POWER LEARNER

The student uses the principles of information literacy and their own learning style to build their own personal information literacy model.

9. LIFE-LONG USE

Reliance on libraries and information networks carries over after schooling into intelligent use of media and information for personal, educational, and recreational needs.

Fig. 5.2: The Student Taxonomy of resource-based learning

THE STUDENT TAXONOMY EXPLAINED

Level 1 – No involvement: The student is prevented from using or has no desire to use the LMC materials, technology, or programs.

Often school rules prevent students from getting to the LMC. Bus schedules, hall pass regulations, teacher restrictions, and LMC rules combine to effectively lock a student out of the LMC. At other times, students show a lack of interest in the materials and activities of the center. It is true that the student does not always need the services of the LMC. It is hoped that library media staff, teachers, and administrators work together to ensure that maximum access to the center is the rule rather than the exception and that a concerted effort is made to lift students out of this level if it is a behavior pattern. In many cases, elementary students are assigned 45-minute periods in the LMC so that teachers can have a planning period. Many of these programs may be worse than no involvement at all because the experience can be so negative that the ultimate effect is detrimental to future use.

Level 2—Spontaneous involvement: The student unexpectedly finds materials or activities of interest in the LMC.

Library media specialists often spend a great deal of time and effort to make the LMC both attractive and inviting to the user. Comfortable seating near popular magazines, displays of good books to read, and displays of student work lure the student to probe, examine, enjoy, and discover. In chapter 14 we title this area “Books n’ Stuff.” Such passive but important features of the LMC may be just the stimulation needed to begin a life-long reading interest, a career, or a hobby. At times, however, students might consider the LMC as a recreational center rather than a center of learning.

Level 3—Information/materials/technology assistance: The student requests and obtains specific information, materials, technology, and production assistance for personal, recreational, or curricular use.

There are three important services in this level for the student. The student has the opportunity to be creative by producing print, multimedia, and computer-based products such as web sites. The student can request a good book or get access to a computer software package or information system. Reference questions can be answered or a database queried for help on a research paper. At this level, the student is given the assistance without question and is not necessarily required to gain

independence in any of the skills listed. The focus is on creativity, analysis, and evaluation, not on retrieval skills.

Level 4—Directed motivation/program: Students read, view, listen, use the computer, produce, or perform in response to a motivational campaign of the LMC staff (not necessarily curriculum related).

Library media specialists create many programs and activities designed to entice students to engage in media and information consumption and enjoyment. Booktalks, special library week programs, demonstrations, advertising campaigns, reading challenges, and other activities have the common goal of presenting great quantities of media to students. The advent of movies, television, and the Internet has made it much more difficult for teachers and library media specialists, who must compete with Madison Avenue professionals for students' attention.

Level 5—Utilization skills: The student learns basic skills needed to use the resources of the LMC, other libraries, computer networks, and community resources.

Traditionally, this level has been titled "library skills." The trend is now toward "information literacy." Emphasis is placed on the acquisition, use, and communication of information as part of the research process. The library media staff integrates information literacy skills into the curricular units *at the time of need* rather than teaching a curriculum known as "library science." They include information skills for normal life and living and information skills related to fun and relaxation. Retrieval, evaluation, analysis, and synthesis of information are stressed. This level also includes the necessary skills to operate audiovisual and computer equipment.

Level 6—Structured interaction: The student participates in planned activities designed to carry out a curricular or recreational objective.

Recognizing that many students must be purposefully motivated or even required to seek information in the LMC, library media specialists and teachers design units of instruction in which meaningful activities and skills in the LMC lead the student step by step along the path toward higher levels of the taxonomy.

Level 7—The student becomes a power reader: The student has developed a reading habit as a capable reader and is an avid reader across a wide variety of genres, information types, and various print technologies.

Students become so used to having all they want to read at their fingertips, information technology at hand, and access to a print-rich environment at home that they consider reading a natural and normal part of the activities of the day both for educational and recreational purposes. In short, reading is "cool." When questioned, students identify themselves as "power readers"—people who have a large vocabulary, are good spellers, recognize and use good grammar, and have confidence in their own writing style because they have read enough to know the language well.

Level 8—The student becomes a power learner. The student uses the principles of information literacy and his or her own learning style to build a personal information literacy model.

Students may have used an information literacy model as practice for systematizing the research process, but as they mature, they combine what they know about their own learning styles and the principles of information literacy to build their own personal information literacy models. Questioned, they can identify and discuss their own models and are confident that they can embark on a quest, a problem, or an engaging question with confidence that they know how to proceed.

Level 9—Life-long use: Reliance on libraries and information networks carries over after schooling into intelligent use of media and information for personal, educational, and recreational needs.

School personnel will never observe this level while students are under their direction. They will probably never know how many of their students ever achieve this plateau of self-fulfillment. Many adults never achieve this level. Nevertheless, this goal must be the central focus of all activities, -the *raison d'être* of the library media program.

THE PROGRAM ELEMENTS OF THE LMC AND THE STUDENT

One of the four program features, collaboration, is directed at teachers, who in turn influence students to use the resources of the LMC to advantage. The other three program elements have a direct impact on what students are learning.

Reading. There is no more important life-long tool than becoming a capable and avid reader. When the LMC can provide access at every moment of the day to a wide variety of attractive and enticing reading materials, students are much more likely to build their own reading habit. But the library media staff, in cooperation with teachers, can influence how much and what is read. Reading aloud, sustained silent reading, reading challenges, and promotion of various kinds of genres and

nonfiction are just a few ideas that stimulate the reading habit. Most of all, access to reading material (I can check out an unlimited number of items.) is the best strategy to support and encourage the reading habit.

Enhancing Learning Through Technology. The maze of technology tools and versions of software seems to be increasing exponentially, each having its own idiosyncrasies. There are not only basic features and skills to learn but also ways to use a particular technology to make one a better and more efficient learner. Adults often assume that technology skills come naturally to a young person with little or no intervention. While helpful friends, technology assists, and quicky tutorials might help, "just-in-time" instruction is often needed to make the technology a real tool rather than an obstacle. Searching skills, summarization skills, mind mapping tools, instant lookup, formatting assists, and product creation tools are just a few of the features to learn as the student is confronted with a problem.

Information Literacy. A close second to the value of reading is the understanding of the research process as a life-long learning tool. Understanding and using a systematic process that enhances their own learning style allows students to learn more, more efficiently. It gives them the confidence to be able to attack problems successfully, the attitude that "I am in control." "I am a power learner." "If I don't know, I know how to find out."

SELF-EVALUATION CHECKLIST FOR STUDENTS

Students can and should know that the goal of the library media program is to have them become life-long users of materials, information, and technology. They should be able to measure their own progress in acquiring these skills on some sort of chart. The self-evaluation checklist in figure 5.3 can be modified for the students of a particular school. It can be used for upper elementary grades through high school.

Directions. Revise the questions to meet an individual school situation. Students will answer the questions and then color in their own "My Use of the LMC" thermometer graph (see figure 5.4). For a longitudinal study, file student responses and summary charts and administer the self-evaluation form yearly. Have each student or local researchers evaluate progress over time. Data from many student questionnaires can be compiled on the "Student LMC Taxonomy Summary Chart" (figure 5.5). This chart will indicate what percentage of the students checked each of the items on the questionnaire. For easy analysis, a mark-sense answer sheet could be used. Note: A student who claimed to be a life-long learner would not color in level 1 of the thermometer chart.

Student Self-Evaluation Checklist

Put a check on the line in front of those items that would be TRUE about yourself and how you use the library media center in your school, its networks in your classroom, and its availability through networks from your home.

1. I don't use the LMC because:
 a. I don't go there.
 b. I can't get there when I need to:
 c. Access is blocked from the classroom or from home.
2. When I go to the LMC and walk around, I might find:
 a. books I'd like to read.
 b. magazines to look at.
 c. multimedia to use (videos, CDs, computer software).
 d. displays to look at.
 e. activities to participate in (discussions, cultural events, educational games, etc.)
3. When I go to the LMC, the LMC staff helps me by:
 a. finding answers to questions I have.
 b. helping me find a book/magazine/computer information source I'd like to use.
 c. showing me or helping me to make multimedia materials (videos, computerized presentations, digital photography, or graphics for projects).
 d. helping me find materials for classroom assignments.
4. When I go to the LMC, the LMC staff may:
 a. try to interest me in some books, multimedia materials, or information sources.
 b. give me a book list to encourage me to read.
 c. advertise books or multimedia or information resources to use.
 d. try to involve me in some LMC activities.
5. The LMC staff and/or my teacher try to:
 a. teach me how to locate materials in the LMC.
 b. teach me how to use the catalog or other indexes to materials.
 c. teach me how to do research.
 d. teach me about information available outside the school (other libraries, the Internet, the community).
6. When I go to the LMC with my class or group, there are:
 a. short lessons to introduce me to finding and using information.
 b. classes to sharpen my skills in using computers.
 c. Instruction on how to use equipment I need (such as video cameras, digital cameras, desktop publishing assists).
7. I consider myself a power reader because:
 a. There are plenty of interesting books, magazines, and newspapers for me that attract my attention.
 b. I can take all I want to read home from the LMC/classroom.
 c. I make it a habit to read every day.
 d. Reading is one of the things I like to do in my free time.
8. I consider myself a power learner because:
 a. I can locate materials in the LMC for my needs.
 b. I am very critical about the quality of the information I use from the LMC and the Internet.
 c. I know how to use various types of equipment to create presentations.
 d. I know how to use the steps of the research process to investigate a topic.
 e. I have created my own information literacy model and use it regularly.
9. When I think about library media centers and my future, I
 a. Think I will always want to use libraries for materials and information I need.
 b. Think I will always use libraries for recreational materials.
 c. Will take my children and friends to the library

Fig. 5.3. Student self-evaluation checklist.

My Use of Library Media Centers

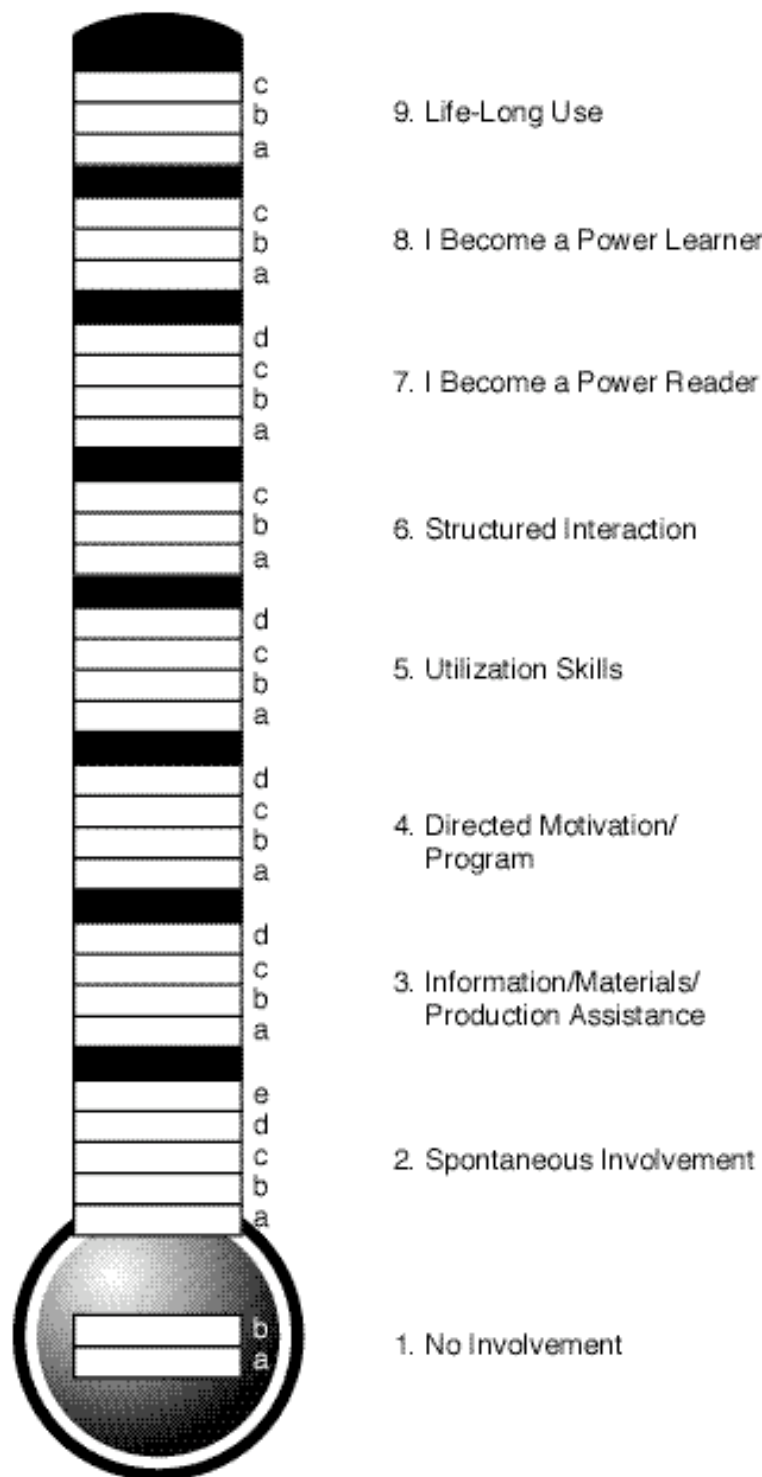


Fig. 5.4. Thermometer graph for student use of the library media center. For each question, count the number of checkmarks you made. Then color in a bar for each check on the thermometer. Example: On question 2, if I check only one item, I color in one block and leave the other four blank.

Summary Chart
Student LMC
Taxonomy

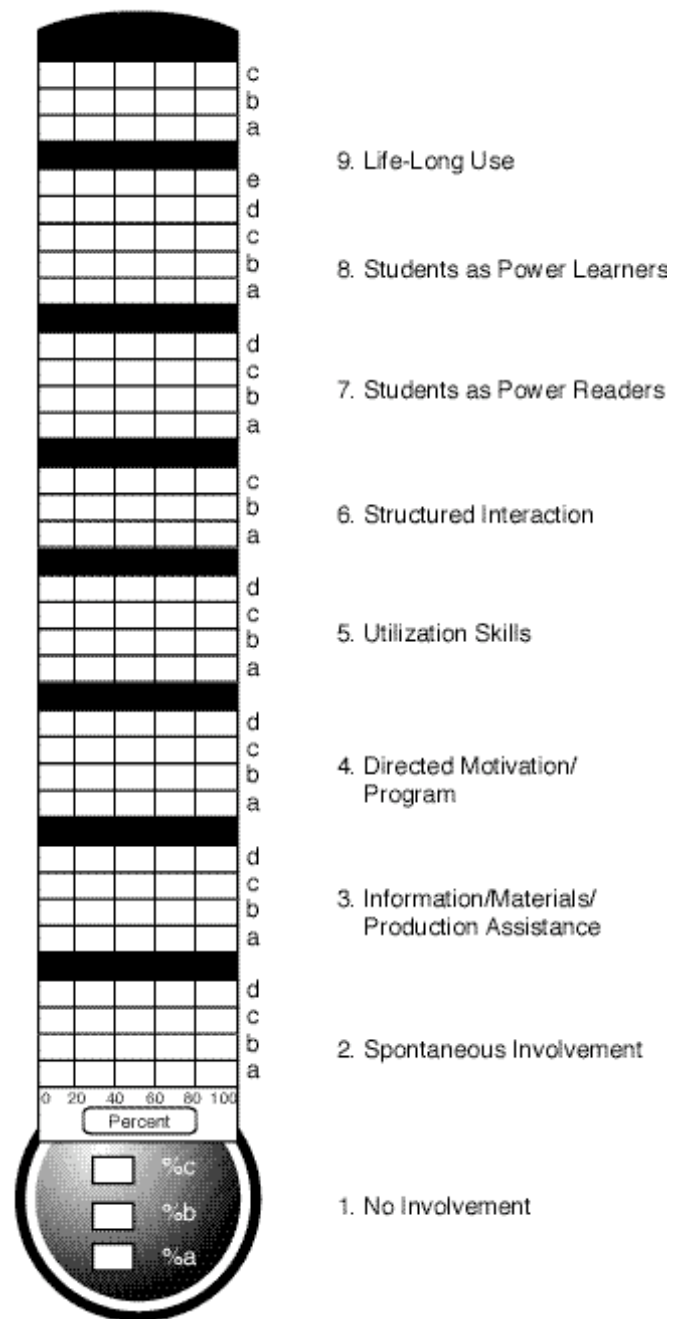


Fig. 5.5. Student LMC taxonomy summary chart.

The Administrator Taxonomy

Thirty years ago, the school library was considered a repository of books for supplementary reading. Today, that role is only one function of a complete library media program. Library media centers are now expected to be a central component in the instructional program. The LMC's resources range from the simplest to the most complex information technologies. It is a node in an international network and provides access to its information resources to every corner of the school and on into the home. Because the dollar investment in a complete information technology program is substantial, it should be held accountable for making a major contribution to excellence in the school as a whole.

The administrator is the key person in the development, not only of the library media program, but also of the environment in which it functions. As instructional leader, the principal first recognizes the potential of a library media program and then uses management and leadership skills to see that the center has an impact on the school. Many have assumed that hiring a qualified library media specialist and providing space and budget for materials and equipment are the major components for success, but this is only one facet. One study in a large urban city revealed that, without exception, the vision of the school principal was the key element in the success of the LMC program. Not even a strong and creative library media specialist could overcome a negative or unsupportive administrator.

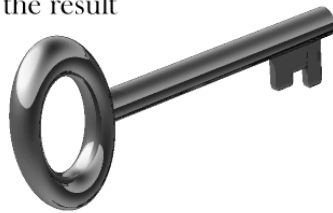
Excellence in education doesn't happen automatically. This is particularly true for the library media program. The more high tech the environment, the more critical it is to have a leadership cadre at the top that builds expectations, builds a system for short- and long-range planning, and understands the difference between owning various technologies and transforming them into tools for learning. Vision, nurturing support, positive monitoring, and persistence are but a few prerequisites for building a quality program.

Figure 6.1 shows the principal to be in possession of the keys to four stages of LMC development.

The principal's taxonomy of library media programs in figure 6.2 shows the evolution of a leader or a leadership group from ambivalence or neglect of an LMC program to the implementation of something that will consistently and reliably make a difference in academic achievement. In schools where management of a school program is a collaborative effort of a leadership team, the word team can replace the word principal in the taxonomy.

The Principal's Organizational Taxonomy of the Library Media Program

Key 4.
Assessing the result
(Level 8)



Key 3.
Exerting Leadership
(Level 6-7)



Key 2.
Building the Organizational
Structure
(Level 5)



Key 1.
Acquiring the basics
(Level 2-4)

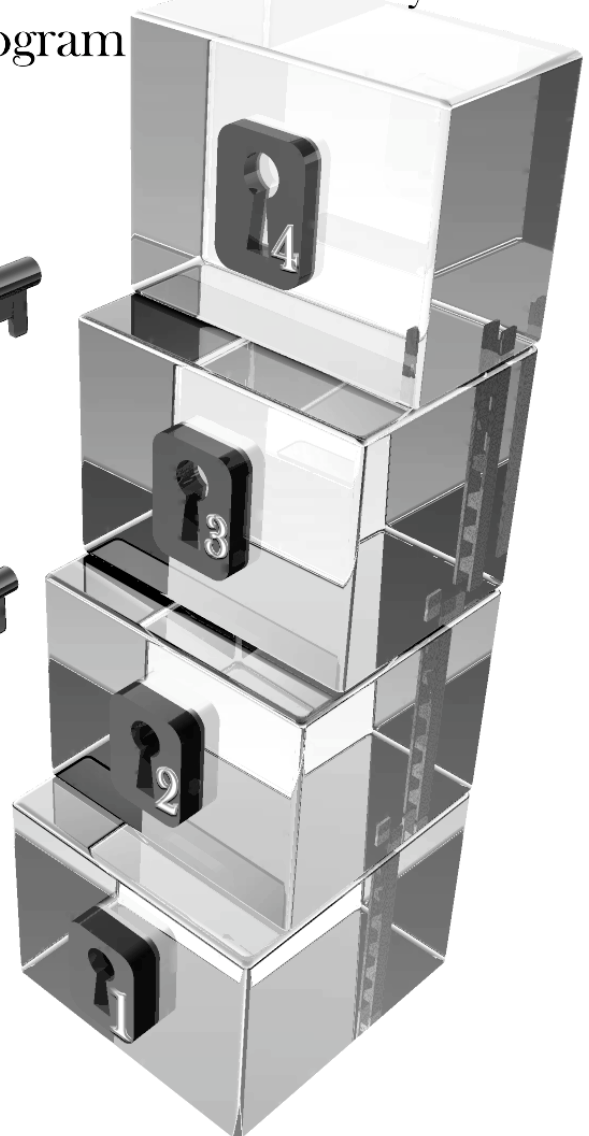
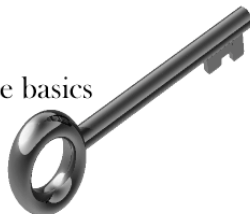


Fig. 6.1. The four keys of the principal's organizational taxonomy.

The Principal's Taxonomy of Library Media Programs

1. AMBIVALENCE TOWARD OR NEGLECT OF THE LIBRARY MEDIA PROGRAM

For some reason, the concept of the LMC program is not supported by the administrator in the school, whether from lack of understanding, personnel problems, different priorities, or financial exigency.

2. ADMINISTRATOR MAKES AN EFFORT TO UNDERSTAND THE ROLE OF THE MODERN LMC IN A WORLD OF INFORMATION TECHNOLOGY

Few programs in the school have undergone as significant a change in role concept as has the program of the LMC in the age of technology. Even neglecting five years of reading the professional literature about this program would be a mistake.

3. ADMINISTRATOR ATTRACTS A LIBRARY MEDIA SPECIALIST TO HEAD THE PROGRAM WHO HAS THE VISION AND ENERGY TO CREATE AND MAINTAIN A SOLID LMC PROGRAM

Much rests on the vision and organizational skill of the person who heads the library media program in a school. The administrator works actively to employ a person who has a shared vision of the impact the LMC program can have.

4. ADMINISTRATOR CREATES A PARTNERSHIP WITH THE HEAD OF THE LMC PROGRAM AND PLACES THAT PERSON ON THE LEADERSHIP TEAM OF THE SCHOOL

Whatever leadership cadres exist in the school—curriculum committees, technology committees, grade level teams, or department chairs—the administrator sees that the library media specialist is a part of the right groups where the impact of information technology will be central to the push for excellence in education.

5. ADMINISTRATOR CREATES AN ORGANIZATIONAL STRUCTURE THAT ALLOWS THE LMC PROGRAM TO SUCCEED

Issues such as flexible access to the LMC, open hours, and security of facilities and technology systems must be handled in such a way that the LMC becomes a learning laboratory capable of contributing significantly to the educational program in every learning space within the school and on into the home.

6. ADMINISTRATOR PROVIDES LEADERSHIP IN BUILDING FINANCIAL SUPPORT OF THE LMC PROGRAM OVER THE LONG TERM

Information technology systems are seen as an essential infrastructure requiring constant financial support if it is to remain viable in the educational program.

7. WHATEVER LEADERSHIP STYLE OR INFLUENCE THE ADMINISTRATOR HAS, EACH OF THE FOUR PROGRAM ELEMENTS OF THE LMC IS EXPECTED TO CONTRIBUTE TO ACADEMIC ACHIEVEMENT

For library media programs to contribute to academic achievement, the leadership team of the school, be it a person, a site council, or a leadership team, expect the LMC to be effective in four major areas: reading, information literacy, collaborative unit planning with teachers, and enhancing learning through technology.

8. ADMINISTRATOR ASSESSES THE IMPACT OF THE LIBRARY MEDIA PROGRAM ON THE ACADEMIC ACHIEVEMENT OF THE STUDENTS IN THE SCHOOL

Enough data are flowing into the decision-making person or group to make a judgment about impact. This evaluative information may result in a continued direction along the same path, fine tuning of the program, or a total restructuring of the LMC program.

Fig. 6.2. The principal's taxonomy of the LMC.

THE PRINCIPAL'S TAXONOMY EXPLAINED

Level 1—Ambivalence toward or neglect of the library media program: For some reason, the concept of the LMC program is not supported by the administrator in the school, whether from lack of understanding, personnel problems, different priorities, or financial exigency.

A common complaint among library media specialists is that administrators have little understanding of the role a LMC program can play in the educational program. Libraries may have been poor when the administrator went to school, or the administrative curriculum at the university may not have included any reference to the role of libraries and information technology of the school. The dream world of computer technology may have received a great deal of attention, but its cost did not become real until the administrator faced a tight budget. The library media specialist might have an antiquated vision of what a library media program should do and that person may be tenured, with ten more years of service before retirement. For these and many other reasons, the administrator might turn attention to other programs in the school that seem to have more potential and at less cost.

Level 2—Administrator makes an effort to understand the role of the modern LMC in a world of information technology: Few programs in the school have undergone as significant a change in role concept as has the program of the LMC in the age of technology. Even neglecting five years of reading the professional literature about this program would be a mistake.

As with every other aspect of the educational community, the principal is expected to have an in-depth understanding of all the pieces and parts of the educational program. The administrator knows the foundation elements of every educational program over time and sorts fads from ideas likely to have a big payoff in quality education. At this level, administrators spend the time needed to investigate the current theory of libraries and technology in education. They may attend conference sessions with their staff, read national standards documents, or visit exemplary library media programs. In short, they make a concerted effort to understand theory but also examine practice. Administrators realize that the vision they hold of the various components of a school's program will drive much of the philosophy of the school, particularly as a leadership style begins to emerge at the school site.

Level 3—Administrator attracts a library media specialist to head the program who has the vision and energy to create and maintain a solid LMC program: Much rests on the vision and organizational skill of the person who heads the library media program in a school. The administrator works actively to employ a person who has a shared vision of the impact the LMC program can have.

Individual personalities always make a difference. Finding a library media specialist who has a like-minded vision of the potential of a library media program and who has the strength and courage to carry it out is not easy. Some administrators are lucky to have such a person already. Others will have the opportunity to fill this critical position during their administrative tenure. Still others are faced with an empty slot in the LMC with no one applying for the job. In the latter case, most administrators "grow their own" by taking the best teacher in the building and assisting that person to become credentialed.

Level 4—Administrator creates a partnership with the head of the LMC program and places that person on the leadership team of the school: Whatever leadership cadres exist in the school—curriculum committees, technology committees, grade level teams, or department chairs—the administrator sees that the library media specialist is a part of the right groups where the impact of information technology will be central to the push for excellence in education.

Library media centers and the technology program of the school are a tremendous investment that seemingly never ends. The realization comes quickly that the payoff on that investment will not happen just because money is spent, the school is wired, and the computers are running. Neither will a difference happen unless the library media professional is in a leadership role. Placing the specialist on the major leadership councils is a first step toward including this program in the circle where major decisions are made.

Level 5—Administrator creates an organizational structure that allows the LMC program to succeed: Issues such as flexible access to the LMC, open hours, and security of facilities and technology systems must be handled in such a way that the LMC becomes a learning laboratory capable of contributing significantly to the educational program in every learning space within the school and on into the home.

Many organizational factors can make or break a library media program. In the elementary school, how children get to the center and how often is always a sticky issue. In the secondary school, the library can easily become a dumping ground for classes that have no teacher for the day. How these and other issues are handled will determine whether the LMC will be a

learning laboratory , a recreational center, or a holding pen. No topic is discussed by librarians more often than these.

Astute administrators work with leadership teams in the school to find solutions to organizational problems. If the schedule of the library is too full of assigned classes it becomes unavailable to other teachers who desperately need its resources to work on projects. The LMC may be full of students wanting to play games on computers, escaping from classes to socialize, or who have been told to go there because there is nowhere else to go. Everyone in the school must cooperate to create a learning laboratory atmosphere in the central LMC and in its extensions in the classroom and the home.

Level 6—Administrator provides leadership in building financial support of the LMC program over the long term: Information technology systems are seen as infrastructures requiring constant financial support if they are to remain viable in the educational program.

Libraries have always been expensive to establish and maintain. Now in the age of information technology their costs have escalated. It may have been thought that a single person might run a library, but as the technology in the school expands and the investment surpasses a million dollars, the reality hits that a larger staff must be employed to make it all work and be accountable to the educational program. Increased staffing is of course expensive. Paraprofessionals and technical personnel cannot build a program without the vision of one or more well-educated professionals. How funds for staffing will be allocated to all the programs of the school and still keep the LMC a central element is a major challenge faced by all administrators.

There are a wide variety of sources for funding for library media programs and technology, but they must be sought, cultivated, and utilized. No administrator can be responsible for acquiring all the needed funding alone; the entire leadership cadre of the school, including the library media specialist, must face the funding issues and be realistic about needs and how they will be filled.

Level 7—Whatever leadership style or influence the administrator has, each of the four program elements of the LMC is expected to contribute to academic achievement: For library media programs to contribute to academic achievement, the leadership team of the school, be it a person, a site council, or a leadership team, expect the LMC to be effective in four major areas: reading, information literacy, collaborative unit planning, and enhancing learning through technology.

Books on shelves, plugged in computers, and wired schools provide only potential tools, not automatic results.

Administrators provide opportunities for each of the four program elements of the LMC to flourish and to blend in with the philosophy and educational program of the school.

Level 8—Administrator assesses the impact of the library media program on the academic achievement of the students in the school: Enough data are flowing into the decision-making person or group to make a judgment about impact. This evaluative information may result in a continued direction along the same path, fine tuning of the program, or a total restructuring of the LMC program.

As an information-rich environment is developed in the school and the students flourish in this atmosphere, both hard and soft data begin to show that there is something different and exciting happening. Students seem to be more in command of their own learning; they feel comfortable using a wide variety of technologies to find and use information. They can communicate the results of their work in a wide variety of media products. In short, the technology glitz fades as its power to help teachers and learners excel comes to the forefront. Answering questions of how many computers the school owns include examples of great learning projects that have become commonplace. The emphasis should be on how much learning has been enhanced with the new tools.

THE SCHOOL ADMINISTRATOR AND THE FOUR CENTRAL PROGRAMS OF THE LMC

The four central program elements—reading, collaboration with teachers to build instructional units, information literacy, and enhancing learning through technology—hold out the most promise for building academic achievement. In the past few years, new ways of developing each program have been developed by creating library media leaders. Each requires the thoughtful guidance, support, and leadership of a visionary school principal if maximum impact is to be achieved. Numerous suggestions for administrators have been developed in an easy-to-read form in a companion volume: David V. Loertscher, *Reinventing Your School's Library Media Program in the Age of Technology: A Handbook for Superintendents and Principals* (San Jose, Calif.: Hi Willow Research & Publishing, revised frequently). (Check for the latest edition at <http://www.lmcsource.com>.)

SELF-EVALUATION CHECKLIST FOR ADMINISTRATORS

Administrators may wish to rate themselves to judge what type of library media program the organizational structure of their school actually supports. Copies of the self-test (figure 6.3) can be created and the results can be rated and transferred to the summary chart (figure 6.4) for a quick overview of the status of the LMC program.

Directions. For each administrator or leadership cadre in the school, make a copy of the self-evaluation checklist. The administrator should check each item on the test that is true about the LMC in the school, then transfer the ratings to the summary chart. If more than one person completes the self-test, discuss differences of opinion before the summary chart is completed.

Principal's Self-Evaluation Checklist

Key #1: Acquiring the basics:

- ❑ The principal understands the role of the modern LMC.
- ❑ The administrator attracts a library media specialist with vision.
- ❑ The administrator creates a partnership with the library media specialist

Key #2: Building the organizational structure:

- ❑ The organizational structure of the LMC and the school allows the LMC program to flourish.

Key #3: Exerting leadership:

- ❑ The administrator exerts the type of leadership that encourages and pushes the LMC program over the long term.
- ❑ The administrator promotes the concepts of the four central LMC components to achieve an impact on academic achievement.

Key #4: Assessing the results:

- ❑ Data are gathered regularly pointing to the impact of the LMC program.
- ❑ Changes are made to maximize the LMC's impact.

Fig. 6.3. Principal's self-evaluation checklist.

Principal's LMC Taxonomy Summary Chart

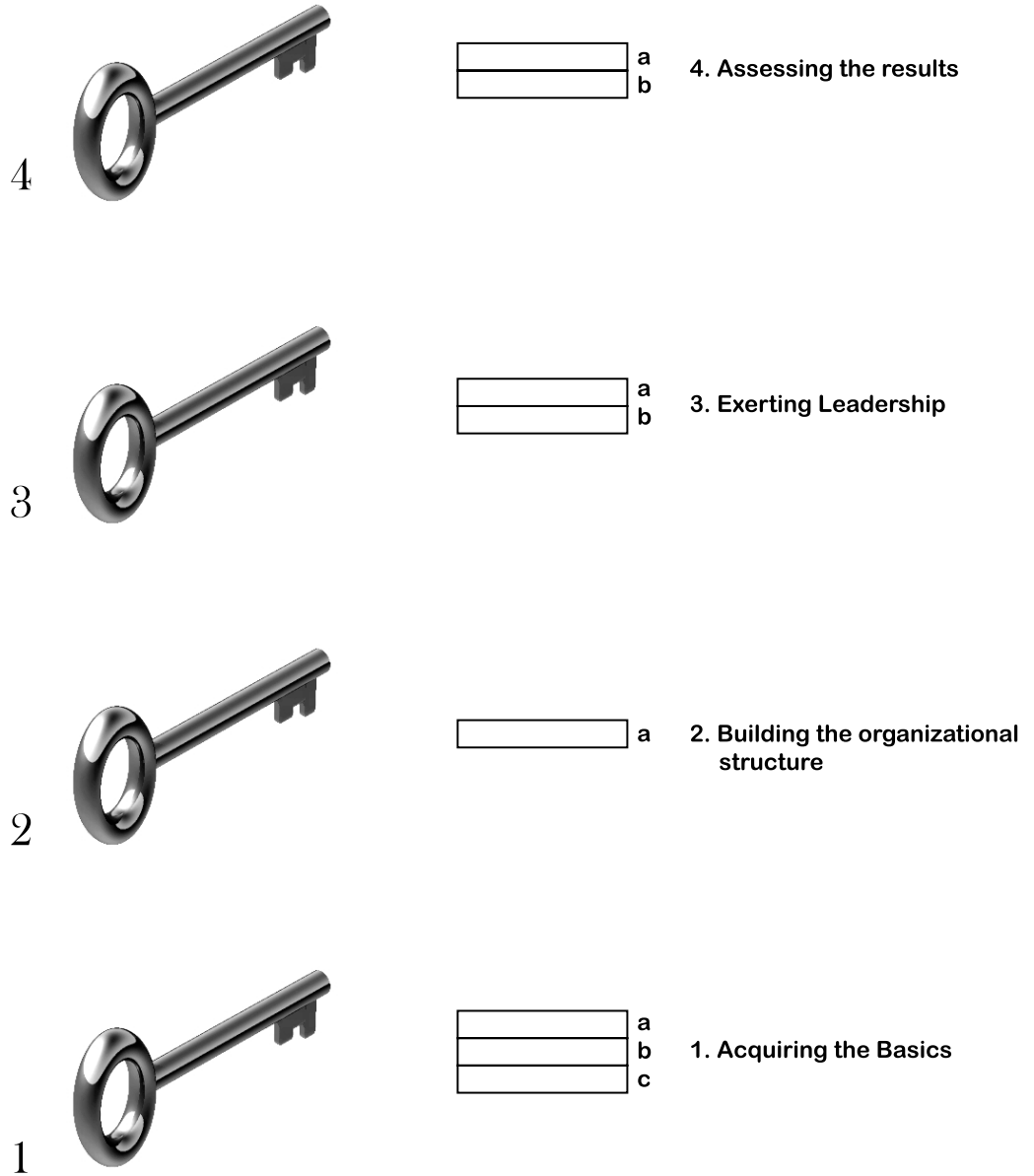


Fig. 6.4. Principal's LMC taxonomy summary chart.

The Four Central Elements of the LMC Program

Chapters 7-11 cover the four central elements or features of the library media program that when in full implementation can be expected to contribute to academic achievement. These program elements drive the organization of the entire LMC program. No other concept is more important than is the program — certainly not the needs of the organization. The first will contribute to learning; the last will consume us in minutiae.

As the reader ponders through each of the four elements, the question must constantly be asked: what organizational structure will guarantee that the goals of this program element will be achieved? The library media specialist must decide that a program element will succeed – no matter what!

Collaborative Planning

Chapter 7 of the previous edition of this book began with a question: "Why would a school board and administrators invest a half million dollars in a library media center?" Just ten years later, with the addition of sophisticated information technology systems, the question has become: Why would a school board and administrators invest a million dollars in a library media center?

It may seem glamorous at first to claim to have a fabulous information infrastructure with hundreds of computers placed throughout a school plant, but sooner or later a questioning voice may want to know what difference it is all making. To a few critics, installing a computer network is like installing a home lighting system. Yes, there is an initial expense, but after that, the system works at the flip of a switch 24 hours a day with little or no maintenance. After all, the Internet is free, and it contains all the information one would ever want. Such idiocy is the ideal of the quick-fix society but has no relationship to the real world.

Building a strong human interface for teachers and learners requires a great deal of collaborative planning. In fact, without collaborative planning, there is no library media "program." Left to themselves some teachers and learners would survive quite well and learn in an information-rich environment, but most ignore tools they neither understand nor have the skill to use.

A library media professional who understands the power of a collaborative partnership is extremely valuable but also requires an expensive, ongoing salary commitment. Some administrators, feeling the pressure of financial burdens, employ paraprofessionals or technicians, hoping that they will provide adequate service. In fact, those who opt for such a solution often brag about how wonderful their paraprofessionals are. What they are really saying is that they appreciate paying the lower wage.

The more sophisticated information technology has become, the more important has become the necessity of having a sophisticated

human interface between teachers and learners on the one hand and the massive potential of technology on the other. And by technology we mean all technologies ever invented or that ever will be invented as devices adopted by educators.

UNDERSTANDING THE COLLABORATIVE PROCESS

Over the past 20 years the collaborative role of the library media specialist has developed in the literature and been interpreted in various ways by practicing professionals. In fact, collaboration among teachers, students, and library media professionals is a continuum, as shown in figure. 7.1

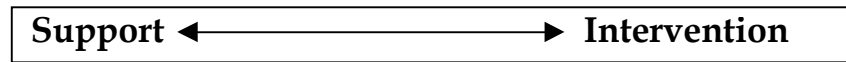


Fig. 7.1. Collaborative continuum.

In the support role, library media specialists are helpful to students and teachers without questioning the needs or reasons for information or materials. They serve, support, and supply as requested. Most people appreciate dedicated service because it cuts individual finding and using time. For the specialist, the expertise of knowing the best information source or information technology for resolving a given problem comes in handy as the service and support role develops.

But library media specialists understand that to have a greater impact on teaching and learning they must begin to move along the continuum toward intervention. They begin by giving advice, providing alternatives, and making suggestions and recommendations. They continue by asking for reconsideration of a request or suggesting more powerful strategies/technologies to meet a problem. At some point along the scale they evolve from servant to trusted advisor and, finally, to partner.

Most theorists agree that true collaboration begins at the point when support becomes partnership. This is the point when "What can I get you?" turns into "What is our best strategy?" Suddenly the "you" becomes "we." The participant's role changes from being helpful to being powerful, from being peripheral to being meaningful, from passive support to direct impact on academic achievement.

Claims that libraries, books, technologies, and networks affect academic achievement are based squarely on the assumption that an intervention, not just support, has taken place. Many

would like to claim that the mere existence of a LMC with mounds of current materials and the latest technology automatically makes a difference. That is the easy and passive role. Yes, a few learners and teachers will be affected automatically as the information pool deepens. But that difference is too slight to justify the enormous investment involved.

No library media professional moves beyond the supportive role toward intervention without developing trust. We all go to doctors or other professionals we trust for advice, diagnostic evaluation, and specific directions toward action. In the same way, library media specialists who expect to be true professionals must step out from behind the desk and move up from servant to partner, from being a wimp to becoming a trusted diagnostician.

UNDERSTANDING TEACHING AND LEARNING

Library media professionals who are trusted diagnosticians develop an in-depth understanding of the foundations of education and teaching. They are "smarter than the average bear" when it comes to educational theory. This is why most states require library media specialists to be certified teachers before they can be certified as library media specialists. The assumption is that library media specialists build a program based on solid educational principles because that is the environment in which they function.

Whatever the requirements of certification, those working as school library media specialists must recognize the framework in which to apply their library and information science principles. Perhaps this is why most library educators recommend to administrators that they should select the best teacher in their schools and encourage that person to become certified as a library media specialist. Such a person comes to the new job with a wealth of experience needed to be credible in the school.

Understanding the principles of effective teaching and learning is a life-long pursuit. Education is not an exact science. While we continue to learn more and more about educational theory by studying the brain, through educational psychology, and by testing numerous theories on actual learners, it is not likely that we will ever discover the one right way to teach or the one right way to learn. There seem to be too many variables to account for actual results. It's like trying to predict the weather. To be sure, Dr. X may present a theory to teach reading that should replace every other inferior notion; however, reason dictates that there are probably a wide variety of techniques that work.

Education seems to be fraught with fad-ism and jargon, two characteristics that have never earned it respect in the public's eye. We could say that the same is true in medicine, but change in that field is often viewed as progress rather than confusion. However, the field of nutrition seems to have become a cousin of educational theory. What is good for us? What is harmful to our health? What should we eat to lessen our susceptibility to heart attacks? The answers seem to change with alarming regularity.

We could say the same thing about education. What current theory or idea is really worth pursuing? Theories have clashed and continue to do so as new voices are heard. Remember the battle between "whole language" and "phonics?" Should we not abandon behaviorism in the light of constructivist ideas?

Library media specialists need to build their practice on a solid foundation. This includes the recognized principles of educational theory and educational psychology. There are ideas on teaching the gifted, those with disabilities, and just average kids. There are a wide variety of ideas about the use of collaborative groups and integration of content from numerous disciplines. Each discipline, such as math, science, or social studies, also has its own body of literature supporting quality methods of teaching and learning. Governments seem to be getting involved more and more in the prescription of methods and assessments requiring accountability for increased funding.

Sometimes it is tempting to just give up because the confusion seems overwhelming. There appear to be too many voices, too many movements pushing this way or that. As we learn more about the functioning of the brain, progress in understanding learning has grown and will continue to grow. But for many with long experience as teachers or library media specialists, educational theory seems to be cyclical. "Been there, done that"—just under a different name.

The best teachers are those who use educational theory upon which to build practice but who rely on results to evaluate success. Others seem to flounder, trying just to hang on and hold onto their jobs.

The best library media specialists are those who have enough knowledge about educational theory to recognize patterns across disciplines and across practice. They can distinguish between fads and solid ideas for achieving success. They appreciate a good idea, are willing to change, and base their practice on what works.

Most library media specialists gain initial teaching expertise from academic coursework combined with some experience in the classroom. They also must keep abreast of the trends in education. They attend conferences, enroll in professional development, and read the professional literature. When they find solid ideas they tend to share these with their colleagues. For example, the likelihood of becoming an effective diagnostician to a math teacher requires knowledge about math education. Keeping up is just one thing successful library media specialists do.

UNDERSTANDING THE BASIC ELEMENTS OF TEACHING STYLE

One of the basic skills of collaborative planning is to understand the teaching style of the client with whom you are partnering. In current educational circles there are two opposite styles under discussion, forming a continuum as shown in figure 7.2.

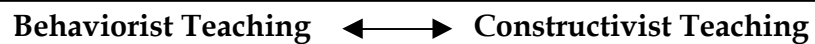


Fig. 7.2. Teaching styles continuum.

While no teacher is either totally behaviorist or totally constructivist, the two positions do indicate an emphasis on teaching content versus teaching the process of learning. That is, should a student spend time mastering facts, ideas, and concepts, or should that student be taught *how to learn*?

The following lists include various characteristics of each type of teacher, perhaps stereotyped, but easily identified. The behaviorist teacher:

- Is a “sage on the stage”
- Uses the textbook/lecture approach
- Is extremely knowledgeable and confident of subject knowledge
- Uses goals and objectives to dictate exactly what knowledge the learner is to master
- Expects mastery of a body of knowledge
- Tends to concentrate on surface learning or survey learning of a broad spectrum of ideas and facts
- Tends to enjoy being in control
- Is confident of teaching style
- Accepts little help from outsiders
- Acts like an expert

We probably all have experience with the behaviorist teacher because this style of teaching has been around for hundreds if

not thousands of years. At their best, these teachers are absolutely memorable. At their worst they prepare once and teach many times, are rigid in their teaching style, and reject any suggestions for improvement. They may look at the objective of teaching as separating the sheep from the goats, praising the good students and flunking the poor ones. They may resist learning new technology just because it is new and see libraries as frills, taking away precious time from the actual substance of teaching. If they do bring students to the library, it is probably not for any task that the students will be tested on. Library time is probably viewed as a respite—a change of pace—but not as actually substantial. When they do bring their classes to the library, poor behaviorist teachers announce to the librarian exactly what is to be done, in what time frame, and with what expectations. Advance planning with the librarian is considered nonessential. However, if the librarian does not respond to the mandated assignment, this teacher would be the first to complain.

Constructivist teachers, on the other hand:

- See themselves as “guides on the side”
- Ask students to participate in formulating instructional goals or projects
- May use textbooks but only as background information and as an introduction into a wide variety of information sources and technologies
- Are confident in their knowledge but consider themselves to be learners along with the students rather than the fountain of all knowledge
- Expect students to master content but, more important, they must learn *how to learn*
- May not try to cover as much content, believing that *less is more*; that is, depth of understanding of fewer topics is preferred to surface learning of many
- Tend to be considered leaders rather than autocrats
- Are flexible in teaching style and invite suggestions from many outsiders and even students
- Act as facilitators
- Concentrate on project-based learning or inquiry as a teaching technique

At their best, constructivist teachers challenge and engage their students and seek to make learning relevant and exciting. Students begin to feel that they are in control of their own learning rather than just repeating back what they have read or heard. At their worst, constructivist teachers are disorganized and vacillating. Their classrooms appear to be in mass confusion. Their teaching (coaching) is inadequate and the students feel lost. The poor constructivist teacher lacks a plan, expects the library media specialist to come to the rescue, and will put the library media specialist in charge at a moment's notice.

Experienced library media specialists can tell many tales about teachers who embrace one philosophy or the other simply because over the years they see a parade of teachers using and/or abusing the LMC.

BUILDING A COLLABORATIVE STANCE

Figure 7.3 draws together the two continuums discussed above and asks a question:

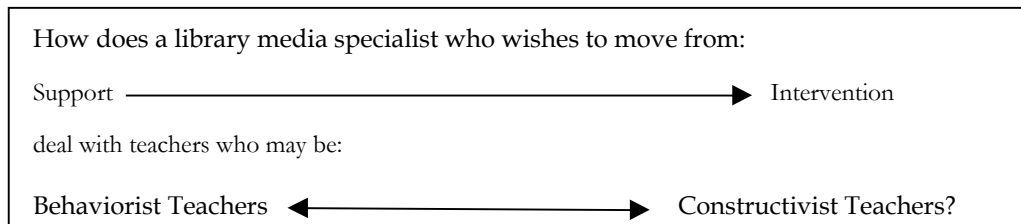


Fig. 7.3. Library media specialist role question.

At first glance the solution seems simple. Give each teacher what he or she wants. Support behaviorist teachers and become partners with constructivist teachers. Constructivist teachers are likely to be more flexible and receptive to suggestions. Their plans are not likely to be set in concrete. They will probably be more open and friendly. If we are starting out, common sense indicates that we start with our friends and work toward our enemies (those "dyed in the wool" behaviorist folks).

The easy solution works for a while until you realize that on a typical faculty there are more behaviorist teachers than constructivist ones. What then? Many library media specialists start feeling as though they are missionaries in an agnostic village. Their encouragement and preaching are accepted politely but ignored.

The realization soon comes that when the specialist acts in a supportive role only the costly information technology will go unused or be misused and contribute little to learning. Some professionals give up because the behaviorist teachers are unlikely or unwilling to change. Should we care?

Library media specialists who take the stance of non-intervention in the teaching and learning process are legendary. They have a reputation of caring more for the library as an organization than for the people who use it. One student referred to a librarian of this stripe as "Madam Hitler!" These are the professionals who hide behind clerical and paraprofessional or technical chores. They feel overworked and totally misunderstood. As a result of their attitude, the library becomes a non-entity in the lives of students and teachers. Everyone is breathlessly awaiting their retirement. What a bleak role they play.

Who are the library media specialists who are voted "teacher of the year?" Who are those honored at graduation ceremonies with a standing ovation? Who have exciting careers from day one right through to their final day? Certainly not those who have taken the easy way out or given up. That is true in any profession, not just in the library media field.

We wish that those who have essentially retired on the job would find another position in the school that is more stimulating. Sadly, a number of these folks give the rest of us a bad name. Recently, this author certified a new school library media specialist anxious to dig in and make a difference. In her words, she was replacing a librarian who had served in the high school for 35 years but retired 20 years ago.

As library media specialists move across the continuum from the support role to one of intervention, they usually count their victories in increments of one. One teacher at a time who is pleased tells another teacher, and another. Or a summer professional development session pairs a teacher and a library media specialist together, giving them an excuse to plan together. There are even faster roads to success, particularly when a whole school either restructures or reinvents itself. Intense professional development points everyone in a new direction, hopefully toward more positive ways to incorporate materials and technology more effectively into the teaching and learning process. One superintendent, after investing several million dollars in technology, put his faculty on notice. He would provide all the professional development they needed to help them learn how to use the new tools to boost their productivity and effectiveness as teachers, but should they feel uncomfortable in the new information-rich and technology-rich environment, they should find a job in an environment they preferred.

A major key to successful collaboration and partnerships is trust. That element of a partnership stems from a wide variety of personal qualities of character. You can probably add other traits to this partial list:

- Flexibility
- Good human relations skills
- Getting things done is more important than the rules of the organization
- —
- —

ONE OTHER DIMENSION OF COLLABORATIVE PLANNING

Most of this chapter has concentrated on working with the teacher, but I have also mentioned students as collaborative partners. In the constructivist environment, when the teacher becomes a coach the emphasis on collaboration shifts from teacher to student. Often collaborative teachers will divide a class into groups that will be doing research projects as teams. In this case, the library media specialist and the teacher become partners in the planning process with student groups or even individuals.

Planning with students is certainly adventuresome. If we think that teachers vary in teaching style, students will amaze us with variety not only in learning style and ability but also in interest and motivation. It takes a person who really enjoys working with children and teens to be a successful coach.

A healthy dose of child psychology and people management skills, plus a knowledge of leadership strategies, is essential for working with this group. We cannot assume, for example, that because kids are interested in a project they will automatically progress through it in an organized and timely fashion. They will need many checkpoints along the way, praise, and encouragement to succeed. Many of them will need help in overcoming barriers adults put in their way. Some adults get a great deal of satisfaction from making the lives of children or teens difficult. While we all want students to learn how to cope with and solve problems, we also must stand ready to assist when the hurdles are just too high.

There are few rewards as great as seeing students take command of their own learning and progressing far beyond what they thought they could do by themselves and certainly what adults think they can do. There are the certain-to-be dropout who becomes an expert on computers, the misfit who discovers a fascination with direction of the morning video news show, the

shy student whose project wins the state science fair, or the kid with a learning disability who goes beyond the seemingly impossible. There are just too many rewards in the collaborative role to let the pressures and dictations of the organization take precedence over this exciting experience.

IS COLLABORATION REALLY POSSIBLE?

New library media specialists often start out with a great deal of fervor because they understand in theory what can be done. They are excited and energetic. Then comes the first year. The organizational responsibilities seem overwhelming. Teachers are used to practices established by someone else. Students seem to want to test the limits of the new "librarian." Library educators hear grumbling from the field: "You folks in your ivory towers don't have a clue about what goes on in the real world." "Yes, I'd like to collaborate, but when?"

A systematic program of collaborative planning takes some time to establish. Five to seven years working with a novice faculty is the norm unless extraordinary measures are taken to shorten that time (a highly recommended strategy). But there are many mature library media programs in which teachers would not think of beginning a major new project without consulting with the library media specialist. They have come to understand that their success as teachers depends not only on the support of the information technology the library provides but also on the extra professional partner who helps ensure that it all works. When the going gets tough in your school, seek out people who understand and do actual collaborative planning as the centerpiece of their program. They may be in the school next door, in a neighboring district, or you may meet them at a professional conference.

MEASURING THE SUCCESS OF COLLABORATION

With so much interest in academic achievement as the bottom line of a school, library media specialists claim broadly that they are one of the factors in a learner's success. No device has been invented to break down learner's success and attribute it to various causes, so making a claim of substantial impact is tough. However, we can begin to measure parts of the LMC program that have a direct impact on both the student and the teacher, and the amount and quality of collaborative planning are two of these important measures.

The most powerful library media programs are those in schools where administrators share the vision of the LMC and enthusiastically support the library media specialist.¹ These individuals, the instructional leaders of the school, must be able to see a wide variety of factors that have an impact on school environment and effectiveness. Building a partnership with an administrator and accepting the challenge of increasing collaborative planning with teachers is the most powerful strategy a library media specialist can employ.

To implement such a strategy, the principal/library media specialist team should start by asking the following questions:

- How often does collaborative planning take place in a normal school day?
- What is the spread of collaborative planning throughout the faculty?
- What type of teachers plan with the library media specialist? What type of teachers don't?
- What subject areas seem to be affected the most and the least by collaborative efforts?
- What organizational factors seem to encourage/discourage collaborative planning?

Each of these questions is examined below.

Question 1. How often does collaborative planning take place in a normal school day? During a typical week, record in your plan book the number of minutes spent planning, executing, and evaluating instructional units as a teacher/library media specialist team. Compute the percentage of a normal day engaged in collaborative activities. Does this percentage reach or exceed 50 percent of the school day? If not, there is a major problem. Chart this percentage over time and discuss with the principal what factors seem to affect these data. There is a caution here, however. Many groups may come to the LMC to work on projects of which the library media specialist has only cursory knowledge and in which there is very little planning invested. Conceivably the LMC could be full from dawn till dark and a collaborative percentage could be quite low. Groups come

¹ A variety of research studies concerning the role of the principal in the successful LMC program support this statement. The author also conducted an unpublished study of principal support in the mid-1990s in a very large urban city. Regional library supervisors were asked to rate the quality of the library media program in their schools, the ability of the library media specialist to deliver a quality program, whether the school as a whole seemed to "have it together," and whether the principal seemed to have a vision of what a LMC program could do for the school. In no school was the library media program successful without strong support from the principal. In fact, even super-star library media specialists could not overcome the negative effects of a principal who was blasé about the LMC.

to the LMC for all kinds of reasons but may not merit being counted when measuring impact on learning. Certainly, collaboratively planned activities always take precedence over any other activity or group using the center and have first choice over any of the facilities/equipment of the center.

Question 2. What is the spread of collaborative planning throughout the faculty? As you record collaborative activities in a plan book for a typical week, include the names of the faculty members with whom you worked. Compare the list of faculty members with the total number of faculty and compute the percentage who are engaged in the process. Another measure is to take the list of faculty and note the number who could be judged as collaborating successfully during a specific term. Discuss with the administrator who seems to be collaborating and possible reasons for lack of impact.

Question 3. What type of teachers plan with the library media specialist? What type of teachers don't? Using the data collected in question 2, use the list of faculty and rate each person's teaching style on a scale of 1-5, with (1) being completely behaviorist and (5) being completely constructivist. Now use a highlighter to color names of faculty who collaborate regularly. Is there a correlation between those who are more constructivist and those with whom you collaborate? Can you determine any other pattern? Discuss the results with your administrator.

Question 4. What subject areas seem to be affected the most and the least by collaborative efforts? Using the data collected in question 2, determine which departments and grade levels are regular customers, occasional customers, and nonusers. Discuss the pattern with the administrator. Is there some curricular change or initiative in the school that seems to be encouraging collaboration as a part of instructional delivery, or on the other hand negating its impact? For example, a physical education program that has a curriculum of mostly field sports and exercise is not likely to be a heavy user of the LMC program. On the other hand, if wellness data from each student were taken and put into spread sheets as a part of an interdisciplinary unit with math, use of the LMC computers might make sense.

Question 5. What organizational factors seem to encourage/dis-courage collaborative planning? In the elementary schools of the United States, rigid scheduling of classes into the LMC is the number one deterrent of collaborative planning. Whatever factors seem important here, administrators will want to see jumps in collaborative planning statistics as organizational problems are solved. Is that happening?

THE BOTTOM LINE: THE COLLABORATION LOG AND REPORT CARD

At the risk of being redundant, I wish to emphasize that collaborative planning with teachers and students (during a constructivist project) is the most powerful link between the library media program and raising academic achievement. An effective human interface between teachers and learners and the vast store of information technology can and should make a tremendous difference as a learning experience proceeds.

If this premise is accepted, then collaborative activities deserve to be reported, analyzed, bragged about, and showcased. They are more important than reporting circulation or the numbers of students who were in the library during a typical week. It is more important than providing a table of how many books or computer databases the library media center has. Reports on collaborative experiences are meant to show the transformation of things and technology into learning tools.

In the business world, nothing is more important than the "bottom line," the profit and loss statement for a given period. Likewise, in a library media program the bottom line or report card is indicative of value and influence in the educational environment. Every library media specialist should be able to say:

Because I successfully do collaborative planning,
I make a difference in academic achievement!

Another way to put this is in the words of Randy Sheets, a library media specialist in Garden Grove, California:

I make a guarantee that any teacher willing to plan with me
will have a more effective learning experience!

It takes courage to make such a guarantee, but the investment in salaries, technology, and materials seems to warrant such a bottom line.

Such a guarantee takes courage to advertise, but the investment in salaries, technology, and materials seems to warrant such a bottom line.

In the book, *Reinvent Your School's Library in the Age of Technology*,² principals are given a description of a recommended technique to track collaborative activities on an ongoing basis and as an annual report card from the library media center. That technique is reprinted here (see figures 7.4 and 7.5)

² David V. Loertscher *Reinvent Your School's Library in the Age of Technology: A Guide for Principals and Superintendents*. San Jose, Calif: Hi Willow Research & Publishing. Revised frequently. Check the latest edition at <http://www.lmcsource.com>.

How Collaborative Activities Can Be Recorded

Idea: Create a Collaboration Log.

Who: The library media specialist and classroom teacher teams.

Activity: Each time there is a major collaborative learning experience jointly planned, executed, and evaluated by the library media specialist and classroom teachers, do the following:

- Ask that collaborative unit planning sheets (pp.12-13) be filed in a three-ring notebook in a convenient place in the library and organized in some sensible fashion. Only fully developed collaborative activities should be recorded — not every interaction between the library media specialist and the teachers.
- As the first page in the notebook, a collaboration log summary page maps the collaborative activities and serves as an index to the whole. See the example on the next page.
- The collaboration log notebook lists the major collaborative experiences throughout the year in all curricular areas and shows patterns of who is collaborating, what curricular areas are benefiting, and holes in the collaborative fabric (what's not on the log).

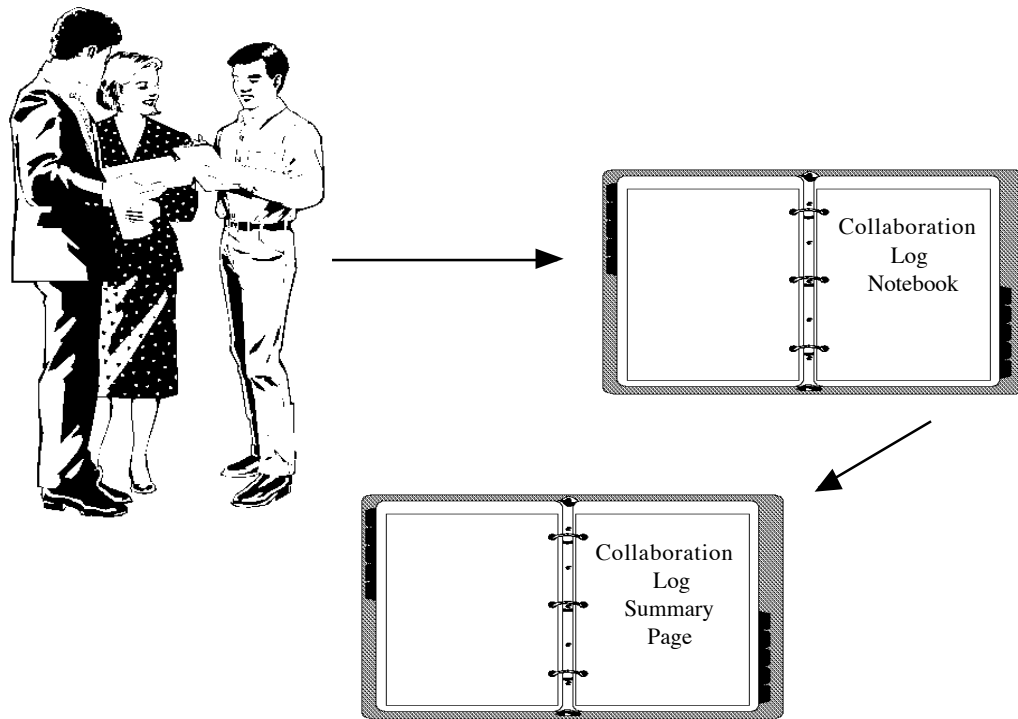


Fig. 7.4. How collaborative activities can be recorded.

Sample Collaboration Log Summary Page

During the 1999–2000 school year, the teachers and the library media specialist agree that the following units were successful collaborations, i.e., the learning was enhanced because the two partners exploited the resources and technology of the library.

| <i>Social Studies</i> | <i>LMS Time</i> | <i>#Students</i> |
|---|--------------------------|-------------------------|
| ➤ <i>Our Local Elections - grade 6 (Smith)</i> | <i>2.6 hours</i> | <i>24</i> |
| ➤ <i>Family Trees - grades 3 and 4 (Albright and Faire)</i> | <i>3.6 hours</i> | <i>45</i> |
| | | |
| <i>Reading</i> | | |
| ➤ <i>Newbery Novel Unit - grades 5 and 6 (Crane and Finch)</i> | <i>1.5 hours</i> | <i>47</i> |
| | | |
| <i>Science</i> | | |
| ➤ <i>Environment of the School Grounds - entire school (Principal, LMS and Dwight, leaders)</i> | <i>15 hours</i> | <i>465</i> |
| ➤ <i>Simple Machines - grade 3 (Truett)</i> | <i>1.4 hours</i> | <i>27</i> |
| ➤ <i>Nutrition - grades 5 and 6 (Handford and Zigler)</i> | <i>2.8 hours</i> | <i>48</i> |
| | | |
| <i>Integrated Units</i> | | |
| ➤ <i>Local Environmental Hazards - ss and sci. gr. 4 (Todd and Lark)</i> | <i>4.5 hours</i> | <i>43</i> |
| ➤ <i>Labor Movements - ss and art grade 6 (Jones and Gregg)</i> | <i>3.7 hours</i> | <i>49</i> |
| | | |
| <i>Totals</i> | <i>35.1 hours</i> | <i>748</i> |

Hints:

- Create a summary chart similar to the one above that details collaborative units taught. Use a single sheet of paper for this summary page.
- Create a graphic that summarizes the above list.
- Enlarge the chart to poster size, use a transparency, or create a Power Point presentation when reporting collaborative efforts to the faculty, administration, and the community.

Note to administrators: How many collaborative activities were there? What is the dispersal of collaboration among the faculty, grade levels, and subjects taught? How could I as the instructional leader encourage more and better collaboration? Which of the collaborative activities deserve recognition from the community? If I were assigning a letter grade to the collaborative activities of the library staff and classroom teachers, what would it be?

Fig. 7.4. Sample collaboration log summary page.

SOME FINAL OBSERVATIONS ON COLLABORATIVE PLANNING

Chapter 8 covers the actual activities done during the collaborative process, while this chapter has concentrated on a few essential ideas that will serve as foundation blocks for an effective library media program.

1. The library media specialist needs to understand educational theory and practice as it evolves over time. This background knowledge is an essential framework upon which to build diagnostic skills.
2. Library media specialists need to understand what collaborative planning is and is not. We help people in a wide variety of ways in the support role, but having an impact on or intervening in a learning experience requires a true partnership. Successful partnerships will develop only if the teacher not only trusts your advice but also has faith that working together will produce better results than if the teacher had stayed in the classroom alone.
3. Library media specialists must recognize a wide variety of teaching styles. Knowing behaviorist and constructivist styles or any combination of the two will help determine how to diagnose a teaching or learning problem and what kind of prescription is likely to make a difference.
4. Partnering with an administrator who is an interested instructional leader is a major key to success. That person will need to inspect collaborative logs and report cards to be able to see progress and challenges yet to be conquered. Given examples of great learning experiences using the library and its information technology, the principal will have stories to tell beyond the bare facts of how many computers are in the building and how much band width there is for Internet access. It never hurts to make the principal look good in the eyes of the public.

RESOURCES

Dorion, Ray and Judy Davies. *Partners in Learning: Students Teachers, and the School Library*. (Englewood, Colo.: Libraries Unlimited, 1998).

Stripling, Barbara K., ed. *Learning and Libraries in an Information Age: Principles and Practice*. (Englewood, Colo.: Libraries Unlimited, 1999).

*See also “Dave’s List of Professional Materials” for updated titles at:
<http://www.lmcsource.com> under freebies.

Tools and Strategies of Collaborative Planning

Skill at collaborative planning grows over time as you begin to learn how to worm your way into a leadership position in the politics of the school. Much will depend on your personal relations ability combined with the strategies you use to create a partnership-friendly atmosphere. You can speed up the process toward success if you are a quick learner, are enthusiastic and persistent, and if you have administrative support. This chapter covers a wide variety of suggested strategies to help you start on the road to success. Modify and adapt them as your experience grows and then share your successes with your colleagues in other schools.

BUILD YOUR SKILL AS A DIAGNOSTICIAN

From reading the previous chapter you should realize that all teachers have their own teaching style, ranging from behaviorist to constructivist, or a mixture of these two distinctive styles. Over time you will understand the teaching styles of almost all the faculty, but when you start out or as new faculty members join the staff you will have to start from scratch finding out.

When teachers want to involve their classes in LMC activities and they describe what they envision happening, they are telling you as much about themselves as they are describing what they want. A teacher will either be quite directive (behaviorist) or describe an inquiry project (constructivist). The description of the teacher's needs will range from being quite specific to vague. At best, the teacher will both have a good idea and welcome your suggestions. At worst, the teacher will not only be vague but it will be obvious that the LMC is being used just as a place for students to pass the time.

In many instances you will have but a brief moment to try to understand what it is a teacher wants the class to do in the LMC. And like a doctor, one glimpse at the rash may instantly indicate that you are looking at a good case of measles. You will understand instantly what the problem or challenge is and know what to prescribe. At other times, what the teacher describes may be so difficult or implausible that you will need time to think before any substantive advice can be given.

Questions such as the following may run through your mind:

- How can the LMC support this idea successfully?
- What is the likelihood that this activity will enhance learning?
- Can the facilities and technology handle the needs of this group?
- Given the time available, are students likely to be successful?
- Do I have a better idea to recommend?
- If I must say no, how can I turn a negative into a positive?

If you are working with a group of students or an individual student on an inquiry or research project, another set of diagnostic skills takes over. If the students are working through an information literacy process model, discerning where they are on the model and their success at each step is a first priority. Good questioning strategies can help you determine exactly where they are and what help or encouragement they need to push forward in their quest. Remember that students:

- May not clearly understand the problem/project/or assignment
- May appear to be unmotivated, bored, or reluctant
- May appear to be lost or confused
- Usually misbehave as a sign that they are resistant to whatever is expected of them
- Will progress when they are interested in the project and when they understand the steps of the research process clearly

The library media specialist should think about and verbalize numerous questions about the student researcher:

- Is the student or group on target, and how can I guide them quickly toward success?
- Is there a need for basic instruction in the research process, and how could it be given?
- What words of encouragement or direction would help get the student back on track?
- Do I need to intervene with the teacher on the student's behalf if the task given is just not feasible?
- How can the LMC organizational rules/facilities/technology/materials respond to this need rather than hinder progress?
- How can I quickly turn a negative experience into a positive one?

Hundreds of times a day, the library media specialist is faced with individuals and groups requiring assistance, counsel, and direction. It's easy to feel like a traffic cop giving short directive motions and doing little of lasting value. Good diagnosticians can see patterns across a day and are able to formulate a plan of action. For example, Mr. Smith's students were disruptive, lost, and confused. The library media specialist and teacher plan to spend 10 minutes before the next LMC time to make sure that students understand their project before they are turned loose in the LMC. For a struggling group, the library media specialist or the teacher spend some solid planning time helping students understand where they are in a project and helping to create some solid plans.

When you begin to notice patterns across teaching and learning problems, and have ideas for solving them, you are on your way to becoming an effective diagnostician.

KNOW THE LIKELY INTERVENTIONS YOU CAN MAKE IN THE FACE OF VARYING TEACHING AND LEARNING STYLES

There is little chance of success in suggesting a radical change to someone resistant to change. The goal is to push along the continuum from support to intervention as far as you can while building trust, acceptance, and enhanced learning. What help or partnering are teachers likely to accept based on their teaching styles? Figure 8.1 is a beginning list. Please add to it as your experience expands.

Differences the Library Media Specialist Might Make with Teachers

Behaviorist Teachers

Stage One: Support

- Yes sir, no sir
- The materials/information they ask for
- Facilities/technology on demand
-
-
-

Stage Two: Acceptance

- Materials that will help the teachers build their own expertise
- Materials or information sources in different formats or media
- Choice for students rather than prescription of what to read, view or hear
- Consideration of suggestions for change in learning activities
-
-
-

Stage Three: Partnership

- Joint planning before a learning experience is set in concrete
- Accept "we" and "us" over "I"
- Accept joint responsibility for library activities
- Seek ideas from the library media specialist and value suggestions
- Have by definition moved into the constructivist column.
-
-
-

Constructivist Teachers

- Yes sir, no sir
- The materials/information their students are likely to need
- Facilities/technology on demand
- Are by definition, really still in the behaviorist column.
-
-
-

- Begin to accept your information literacy model as a research tool
- Want to combine the best of your IL model with their model
- The widest variety of choice in materials and information for their students' projects
- Consideration of suggestions for change in learning activities
-
-
-

- Joint planning before a learning experience is created
- Enjoy the "we" and "us"
- Accept joint coaching role with the library media specialist
- Seek ideas from the library media specialist and value suggestions
-
-
-

Fig. 8.1. Differences the library media specialist might make with teachers.

You can also practice diagnosing differences you might make with individual students and groups of students as they progress from dependent learners to independent learners. Figure 8.2 is a beginning list. Please add to it as your experience expands.

| Differences the Library Media Specialist Might Make with Students | |
|---|---|
| Dependent Learners | Independent Learners (Info Literates) |
| <p>Stage One: Support</p> <ul style="list-style-type: none"> · You're welcome. · Try "collie," not "dogs." · Sure, you can. · · | <ul style="list-style-type: none"> · N/A – (They don't want help) |
| <p>Stage Two: Acceptance</p> <ul style="list-style-type: none"> · Have you tried this or that? · · | <ul style="list-style-type: none"> · Tell me about your plans. · Have you considered? · Have you tried this or that? |
| <p>Stage Three: Partnership</p> <ul style="list-style-type: none"> · N/A – an oxymoron | <ul style="list-style-type: none"> · How are we doing? · What do you think? |

Fig. 8.2. Differences the library media specialist might make with students.

ASSEMBLE YOUR ARSENAL

You bring much to the planning table:

- Your own creative and partnering self
- Your expertise in learning, teaching, libraries, and technology
- Facilities, space, and technology
- Materials and information
- A pleasant and stimulating learning environment
- Time

No matter how well equipped classrooms are, you still are likely to have a better environment and have the staff to provide more help in doing research. If you give high priority to teachers and groups doing important work, the likelihood of success grows exponentially. Teacher X or student group Y doing significant projects need certain things at certain times to push forward. They will get your time and attention plus priority bids on space, materials, and technology. For example, three groups are on the calendar today to use the LMC. One of the three has been collaboratively planned. That group/activity gets first choice of space and technology facilities, with the others being rescheduled if there is a conflict.

One successful library media specialist with a mature program noted that the more she pushed technology out into the classrooms the busier the high tech LMC became with more significant projects.

USE PLANNING FORMS TO YOUR ADVANTAGE

There are many planning forms in the professional literature; two are provided here as figures 8.3 and 8.4.¹ The two pages should be printed front to back so that the planning part of the form is used at the beginning of the unit and the back page is the evaluative summary, completed at the conclusion of the unit by the library media specialist and the teacher together. A detailed form might be more useful if you or the teacher is new to the collaborative process. The form is likely to become simpler as your experience together deepens, but it should always be kept as a record for the collaborative log summary discussed in chapter 7.

¹ The form provided here is useful for more behaviorist-type units of instruction. For more constructivist units, see the work of Kathleen Ferenz and Judy Graves at <http://www.wested.org/basrc/bandl/institute99/design/index/html>

Collaborative Unit Planning Sheet

Teacher: _____ **Library media specialist:** _____
(could be teachers; teams)

Content area: _____ **Unit of Study:** _____
(could be interdisciplinary)

Unit planning began (date): _____ **Unit ended (date):** _____

Goals and objectives of the unit:

Proposed learning activities and products:

Responsibilities: (for each, mark T= Teacher, LMS= Library Media Specialist; SP = Specialist; A = All)

How will we assess learning?

What happened? (list activities as they occur)
Example: mini-lesson on how to judge currency of information (teacher and LMS taught)

Fig. 8.3. Collaborative unit planning sheet.

Teacher/Library Media Specialist Evaluation of a Collaboratively Taught Unit

(TO BE FILLED IN AS A TEAM)

Unit title: _____ Total time spent by LMS: ___ # Students affected: ___

What worked well in the unit?

Suggestions for improvement:

What information skills were integrated into the unit? (Time spent by LMS: ___)
(as a subset of the total time listed above)

From both the teacher's and the library media specialist's points of view, was this unit enhanced through collaboration? Yes No Why?

Was the unit successful enough to warrant doing it again in the future?
 Yes No Why?

How well did the library collection respond to the unit objectives?

Scale: 5 = excellent; 4 = above average; 3 = average; 2 = below average; 1 = poor

- _____ Diversity of formats (books, audiovisual, electronic)?
- _____ Recency (books and other materials up to date?)
- _____ Duplication (enough materials for the number of students taught?)
- _____ Reading/viewing/listening levels meet students' needs?
- _____ Average of above ratings

What materials/technology will we need if we are planning to repeat the unit again?(add a list)

Fig. 8.4. Evaluation of a collaboratively taught unit.

HAVE YOUR BAG OF TRICKS READY (A GROWING REPERTOIRE OF GOOD LEARNING EXPERIENCES)

Library media specialists in mature LMC programs are consulted because teachers trust their tremendous ideas and their willingness to help make new ideas work. Building a personal idea bank comes with experience of seeing what works across teaching styles and how students respond over time. This process can be speeded up by sharpening analytical skills and looking for patterns across learning experiences.

For beginners, or even at periodic intervals throughout your career, a profitable exercise is to force yourself to chart or map instructional activities. This means that you reduce a long narrative description of an instructional activity, an instructional unit, or a major program activity to a pictorial representation or outline. It means the reduction of verbiage or complex ideas into pictorial form so that patterns start to appear across ideas or approaches.

For example, teachers looking for new ideas during a professional development workshop are faced with hundreds of "good idea units" from a major Internet site. Like students in search of ideas on the net, these teachers may take the first idea they happen to see, they may trust to serendipity as they sort through ideas, or they just give up trying to find and analyze other's ideas and create their own.

Figure 8.5 is a tool for quick capture of the central idea and teaching methodology used in an instructional unit description. Its purpose is to reduce verbiage to a picture for comparison across units. Hundreds of sample units are published both commercially and on the Internet annually. They range from a few pages to whole books in length.

Consider the following unit mapping form and technique:

- Read the unit in just enough detail to be able to transform the word plan into a map, picture, or chart.
- Record any special details for the use of materials, technology, or other techniques in the columns.
- When a number of units have been analyzed, look for patterns across ideas and ask important questions: What techniques seem to be common? What unique ideas seem to have promise? Are there really any solid new ideas or directions? How do the ideas encountered compare to present practice? Are there techniques present that we

could adopt for use with particular types of students we have been worried about? Are there good ideas for better technology use?

Figure 8.5 is the blank form. It is followed by some sample maps of units (figures 8.6 and 8.8). The sample units were on the Internet at the time of writing but may not be available any longer. The reader need not consult the original unit plan to understand the mapping process. After a few trials, you may devise a better form to match a particular activity or group of persons doing the analysis.

Figure 8.6 is a literature unit for fourth grade based on the book *Sarah Plain and Tall*, using a web-quest format. After the book is read, students do various activities linking geography, science, and language arts into the creation of a notebook. It is a linear behaviorist unit but does have some student choice built in and can be done with only access to the Internet sites provided. If you were the library media specialist interacting with the teacher in this instance, you might have participated in the creation of the web site, have suggested changes in the unit to raise it higher on Bloom's Taxonomy, have brought it into the LMC where resources other than just the web site could have been used, and have teamed with the teacher to see that every child was successful in the quest.

The Sarah unit is followed by a first-grade bird study (figure 8.7) description by Dianne Oberg, who observed this unit in action at the Lakeside School in Chattanooga, Tennessee, and then by the chart of that unit (figure 8.8).

Fig 8.5. Map of an instructional unit/project/experience.

Map of an Instructional Unit/Project/Experience

This Unit is: Behaviorist 1 2 3 4 5 Constructivist
 Draw a chart/map of the instructional experience here:

Intended level/grade _____

| Technology and Info. Sources Used | Content Knowledge to be Learned | Teaching Techniques Used | Learning and Info. Literacy Skills | Assessment Techniques Used | Likely Affective Impact | Critique/Suggestions for Improvement |
|-----------------------------------|---------------------------------|--------------------------|------------------------------------|----------------------------|-------------------------|--------------------------------------|
| | | | | | | |

Fig 8.6. Sarah Plain and Tall unit.

Map of an Instructional Unit/Project/Experience

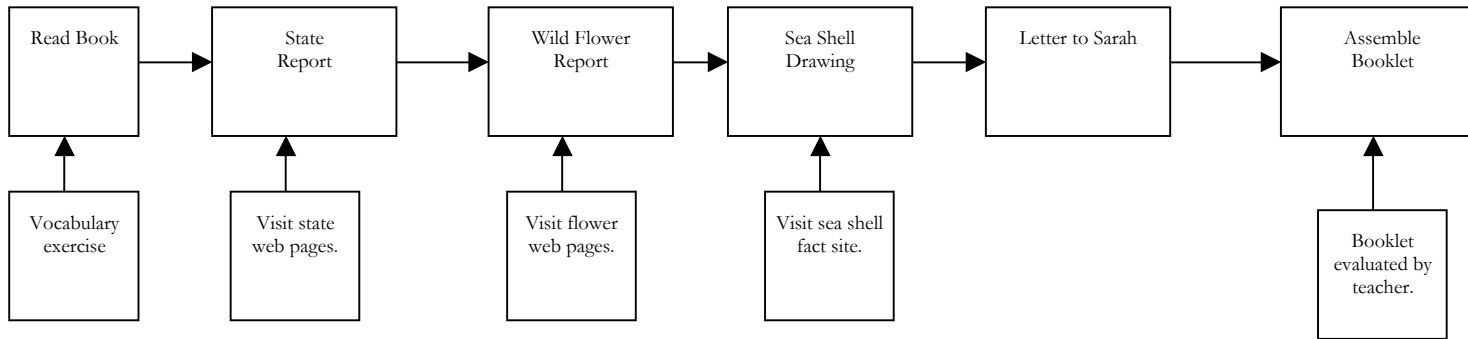
This Unit is: Behaviorist 1 2 3 4 5 Constructivist

Intended level/grade 4th

BACKGROUND

ACTIVITIES

PROJECT



Arledge, Joyce and Kathleen Shahla. *Sarah Plain and Tall: A Web Quest for Grade 4*. At <http://asterix.ednet.lsu.edu/~shahla/quest.html>

| Technology and Info. Sources Used | Content Knowledge to be Learned | Teaching Techniques Used | Learning and Info. Literacy Skills | Assessment Techniques Used | Likely Affective Impact | Critique/Suggestions for Improvement |
|-----------------------------------|--------------------------------------|--|---|--|-------------------------|--|
| <i>Fact resources on the web.</i> | <i>Facts about Maine and Kansas.</i> | <i>Fact gathering; independent search with teacher guidance.</i> | <i>Internet clicking; fact recording.</i> | <i>Evaluation of mini-assignments to make a whole.</i> | <i>Small.</i> | <i>Combine facts together for realistic view of geography; explore blended families—the principal subject of the book.</i> |

The First-Grade Bird Study: Research, Report, Review²

Four first-grade researchers arrived in the library with their clipboard and their questions, ready to learn about feathers. With the guidance of the librarian and using library books and pictures pre-selected by the librarian, they located and talked about feather facts — the different types of feathers and how the feathers help the birds. The librarian had a selection of feathers, which they examined and talked about, noting the different textures of the feathers, the little hooks holding the feathers together, and the hollow quills of the large feathers. They used droppers of water to test the water resistance of the different kinds of feathers. Then the students were asked to tell the most important information they had found, and the librarian recorded the facts on a small whiteboard mounted on an easel next to their table. The facts were then put in order by the group, and they copied the facts in order onto their clipboards. The **RESEARCH** phase of the process had been completed.

Taking their clipboards and the feathers and droppers back to the classroom, the students were then prepared to **REPORT**. The students who had been working with their teacher using a Big Book about birds were divided into four “student” groups, and the four researchers as “teachers” began to report what they had learned about feathers to their group. This was the **REPORT** phase of the process.

The teacher then called the class together in a large group with the “teachers,” the authorities on feathers, seated at the front of the group. She began, “Tell me one thing that you learned about feathers today.” One boy volunteered, “Fly—feathers let birds fly.” The teacher nodded, and asked, “Who taught you that, Josh?” Josh replied, “Courtney taught me that.” The teacher continued with this pattern around the group, until all the “students” had spoken. Then the “teachers” were invited to report on anything that had been missed in the discussion, and they also performed the water resistance demonstration for the class. Next, the group that had been working with the Big Book about birds while the researchers had been in the library shared what they had learned. Then the whole class read the Big Book in unison. The **REVIEW** phase of the process had been completed.

The students are engaged in learning through the Triple R (Research, Report, Review) strategy almost every week of their first-grade year. The Triple R strategy places the children in the center of the learning process and respects their individual voices. There were no cookie-cutter products in this classroom.

Fig. 8.7. The bird unit.

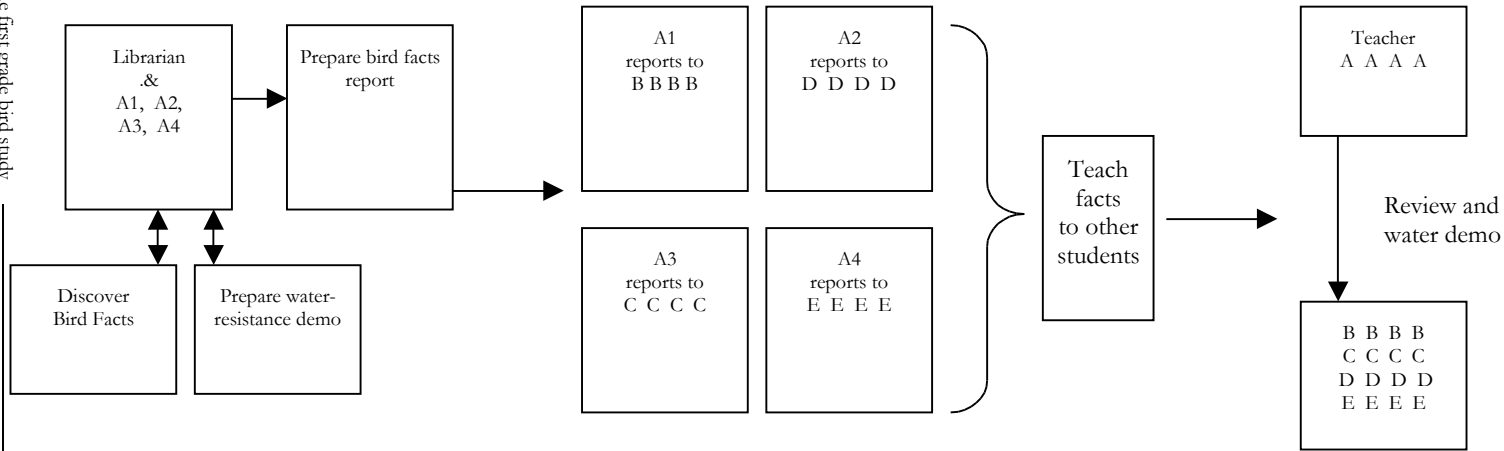
² This bird unit was reported by Dianne Oberg, a case study researcher for Library Power in the Lakeside Elementary School, Chattanooga, TN and reported as: Oberg, Dianne. “A Case Study of Lakeside Elementary School.” *School Libraries Worldwide*, Vol. 5, no. 2, July, 1999, p. 75.

Map of an Instructional Unit/Project/Experience

This Unit is: Behaviorist 1 2 3 4 5 Constructivist
RESEARCH REPORT

REVIEW

Intended level/grade 1st



101

Fig 8.8. Map of the first grade bird study

| Technology and Info. Sources Used | Content Knowledge to be Learned | Teaching Techniques Used | Learning and Info. Literacy Skills | Assessment Techniques Used | Likely Affective Impact | Critique/Suggestions for Improvement |
|--|--|--|--|-----------------------------------|-------------------------|---|
| <i>Feathers: Books: Pictures</i> | <i>How do feathers Help birds?</i> | <i>Discover: explore: demonstrate: students as teachers.</i> | <i>Record facts. prepare demo.</i> | <i>Observation discussion</i> | <i>High!</i> | <i>Include librarian in review stage.</i> |

MORE SAMPLE STRATEGIES FOR CHANGE

Change the Question. The teacher's objective or the engaging problem students are pursuing can be low level (on Bloom's taxonomy, i.e., requiring only factual knowledge), uninteresting, boring to the students, mundane, or difficult for a particular group of students to attack (they don't read English well, they don't have the background, etc.). Redraw the central question in such a way that it avoids the problems already cited and is higher on Bloom's taxonomy. Student engagement at the outset will do wonders to turn a learning project around.³ Compare the following two questions: What does a robin eat? Why do birds have differently-shaped beaks? The potential for increased learning is greater using the second question than the first. The challenge in writing a good question is to ensure that the students cannot copy the answer from a single or even multiple sources without thinking.

Change the Product. A variety of projects or changing the form of the required project will change how students attack, solve, and progress through a learning experience. Variety enhances interest. Whatever the "usual product" may be, a change in format can be a breath of fresh air and motivate students throughout the experience. For example, if students are usually required to fill in a worksheet, have them create a chart, a videotape, a web page, or a database. Students accustomed to making oral presentations need a new challenge, which creating a video may provide. The types of projects that can be constructed are limited only by imagination, time, and resources.

Provide a Variety of Activities Rather Than Forcing Everyone to Do the Same Thing. The activity—the path from beginning to end—is often dictated precisely by the teacher (do this, and do that, in exact order for the highest points). Provide multiple paths to progress through a learning experience. For example, students studying a current community problem and having to make a presentation to a mock city council might work as individuals or groups using a wide variety of information gathering techniques (the web group, the interview group, the print-research group, etc.). The groups then come together and combine their findings into a single presentation.

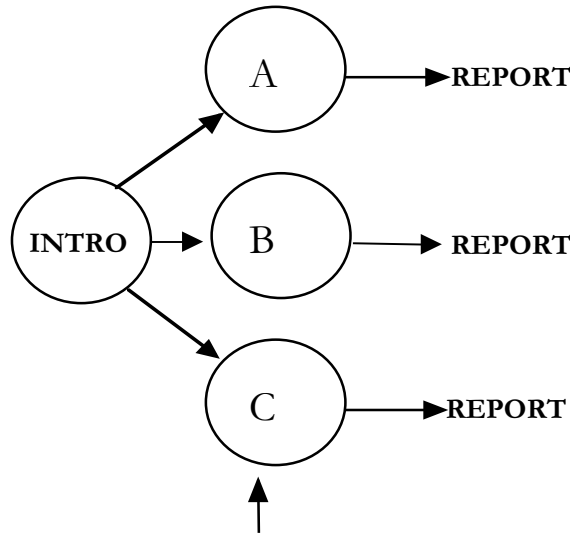
³ The reader should know various types of question formulation strategies, such as creating memory questions, convergent thinking questions, divergent thinking questions, and evaluative thinking questions. Help with building questions is abundant in the critical thinking literature. See also "Questions and Wonders: Formulates and Shapes an Inquiry," in David V. Loertscher and Blanche Woolls, *Information Literacy: A Review of the Research: A Guide for Practitioners and Researchers* (San Jose, Calif.: Hi Willow Research & Publishing, 1999 or latest edition).

Substitute One Information Source for Another or Provide Choice. Instead of having students all read the same textbook chapter, which many of them can't do because of their reading level or language ability, provide several choices or "chapters" covering the same concepts on varying levels or in various formats. If a teacher wishes all students to read the same novel, use the theme of the central novel and provide students with a choice of ten or so novels using the same theme. Providing choice automatically changes other parts of the unit plans.

Add a Level of Complexity (the Jigsaw). Instead of stopping too soon, do a jigsaw activity and raise the level of thinking. Usually, teachers will bring students to the library to research a report and then have students give these reports orally to the class. This activity is very low level because each student becomes a mini-expert in his or her own topic but understands little about other students' expertise. To be sure, students may have suffered through everyone else's oral report, but unless those reports are exceptional, there is very little learning from one student to another.

A more productive method is to abbreviate or cut out entirely the student reports and, at the moment they are ready to make them, reform the groups so that there is a different mini-expert on each team. Then have them confront a new problem or question, forcing them to draw from one another's expertise. The two unit charts in figures 8.9 illustrate this technique.

COMMON BIRD REPORT UNIT

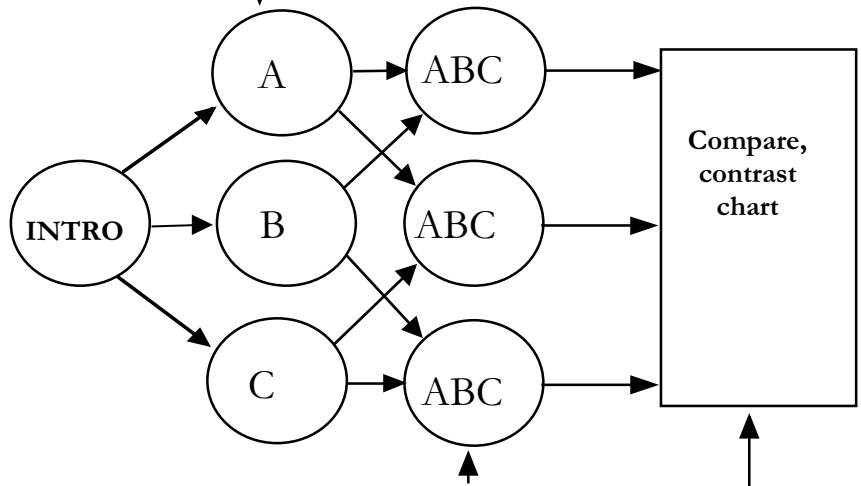


Test based on material in intro or in text, not reports. Credit given for report.

Individual students or groups of students choose

POTENTIAL FOR LEARNING: 1
(on a scale 1-10) (author's judgment)

BETTER BIRD REPORT UNIT - Jigsaw



Regroup students to research single characteristic across birds, such as why shape of beak, migratory patterns, feathers, etc.

Picture requiring higher-level thinking appears.

POTENTIAL FOR LEARNING:
(on a scale 1-10) (you judge)

Fig. 8.9 Simple unit(top)/More complex unit (bottom).

Capitalize on an Allied Strategy. There are many popular project fads in the literature that come and go, such as I-Search, Web Quests, jigsaws, community projects, and reading circles. Many of these techniques have an opening (either visible or invisible) for a LMC impact if it were just fleshed out and pursued. Often these techniques are created and publicized in the literature without a mention of the LMC or with the "assumption" that a good LMC is present. Instead of racking your brain to create a new strategy, discover an intervention for the LMC program that would enhance the goals of that strategy. For example, a library media specialist discovered that the English department was requiring I-Search papers but not bringing the students to the library. The library media specialist discussed the similarities of the information literacy model used in the LMC and the I-Search Model with the department head. The department staff and the LMC staff teamed to present one unified strategy.

Watch the Professional Periodical, Web, and Published Literature for Significant Ideas. Good ideas are everywhere for the person willing to look around. Both the U.S. Department of Education and Pacific Bell have services providing a "site of the week" or an educational experience worth examining. They will drop these into your e-mail box if you sign up for the free service. Web sites such as Kathy Schrock's Home Page provide more ideas than any one person could use. And like every other source, there are good ideas and poor ideas flowing together.

Capitalize on Professional Development Opportunities. Design or participate in professional development opportunities that team teachers and library media specialists in the creation, modification, or implementation of curricular planning. There is nothing like a half day, a day, or a week of working together with no distractions on partnership projects. If none seem to be offered in your area, create these opportunities.

Participate in or Lead Curriculum Planning Sessions. Library media specialists have a great deal to offer when major curricular initiatives are planned, modified, or created. Be sure you get an invitation to participate. For example, a regional center sponsored a major technology initiative that was to incorporate an information literacy component. No library media specialist was invited. This library media specialist wangled an invitation, pulled strings, got on the team, and made a significant contribution.

Participate in or Lead District Professional Development. Most districts have professional development personnel. You should be getting invitations, suggesting topics, offering to carry out a project, or otherwise be participating. For example, one library media specialist found that the district had hired a major technology professional development expert who was going to teach a

district-wide utilization of technology seminar. That library media specialist had a meeting with the expert to explain an initiative by the library media specialists of the district that was designed to do the same thing, and the expert instantly recognized the value of joining forces with 15 key people in the district as site facilitators.

See the Big Picture. As you build your strategy, a process begins to form in your mind and practice. At first, it may seem difficult, but as your experience grows, you build a process that matches both your skill and your talent. You begin to see a model of your practice that might look something like figure 8.10.

Diagnostic Strategy Map

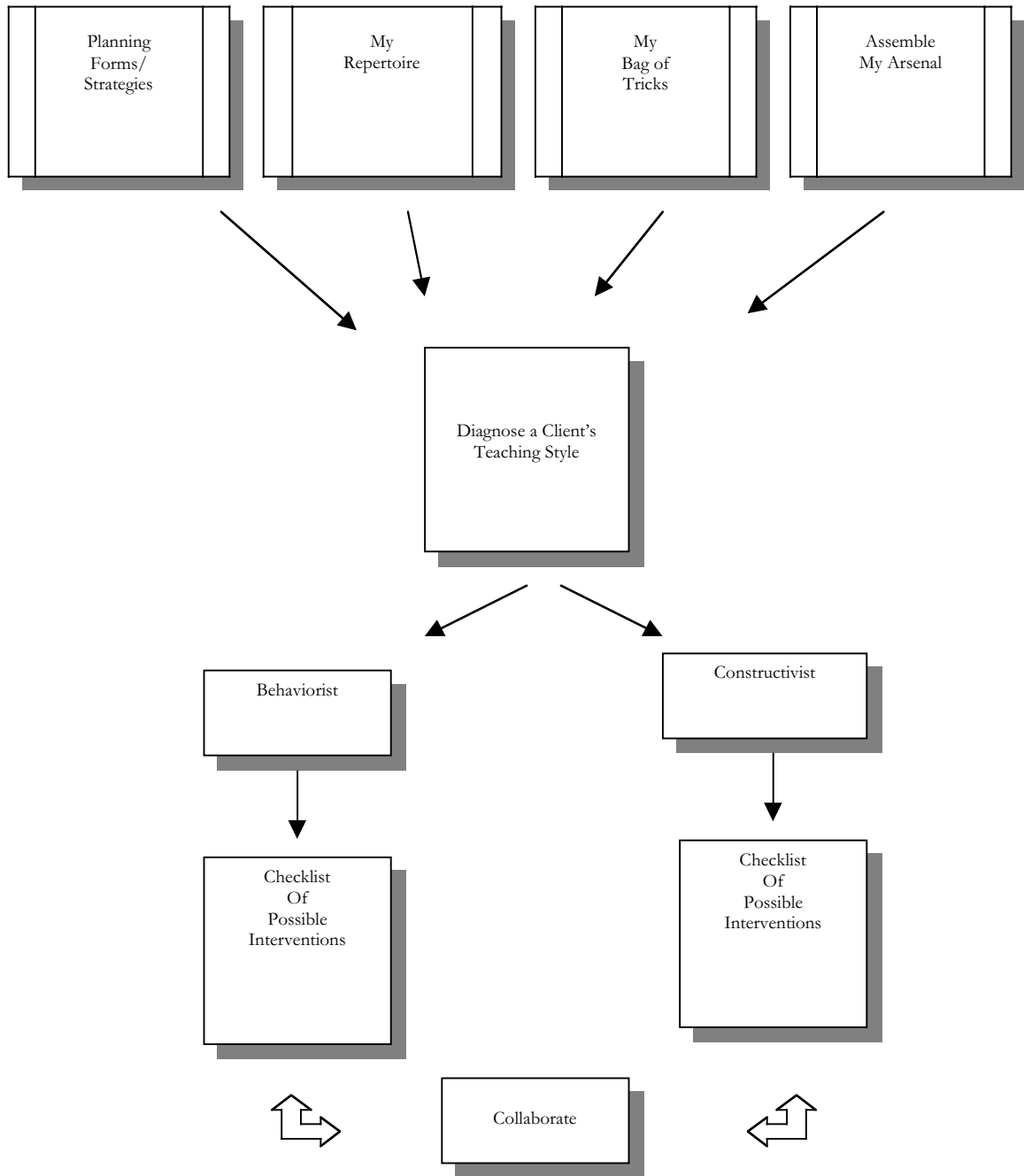


Fig. 8.10. Diagnostic strategy map.

TIPS FOR GETTING STARTED

Many library media specialists have asked how to get started on a program of collaboration in their schools. There are a number of means for doing this. One effective method is to start with a friend and then work toward your "enemies." Build your experience and expertise with a natural partner. Don't try the tough nut until you have a better nutcracker in your experience repertoire. After your first success, move to another friend and let success start speaking for itself. Other teachers will be attracted by a good idea. In fact, the better you are, the harder it will become to manage all the requests for your partnering.

It is beneficial when the "friend" you began working with is also a teacher-leader, either naturally or through a formal position as department chair. These leaders will not only spread the word, they also will often create avenues for you to work with others they influence.

Another technique is to hold a planning session in the summer or on an in-service day at which teachers and library media specialists are forced (encouraged) to work together on unit planning as the activity for the day. Such "excuses" to plan together, unfettered by the pressures of everyday work, often provide the catalyst to get started.

When you have several successes on record, make an appointment with the principal for at least 30 minutes to discuss your experiences and to map a strategy for doing collaborative planning on a more systematic basis. The most successful library media specialists have the solid backing of their administrators. These administrators are instructional leaders in their schools and are interested in systematic plans to make a difference in learning (or at least test scores). They like to tie expenditures on materials and technology to examples of effective use of the tools they have fought to finance. They need stories to tell at principals' meetings and in meetings with parents and boards.

As you begin to see patterns of instruction emerge, create a chart or map of analysis for the leadership team of the school to analyze. It is refreshing to discuss topics other than problems in the lunchroom or on the playground. By doing this, leaders see that you have the capability to see the bigger picture of the school.

Draw attention to the best learning experiences that happen in the school. These might be showcased in the LMC, written up in the local newspaper, presented to the board of education, or

demonstrated at a parents' meeting. Depend on the strategy that success breeds success.

At first, count your successes singly. Analyze what you did right and do it again. During the first semester as a professional library media specialist, you may only do one collaborative unit as a prototype. Resist the temptation during your first semester to concentrate totally on "getting the place in shape." What you do the first year begins to set the pattern of what people expect from you. Start with what you know will make a difference. Mending a hundred books the first month is not a good beginning.

Adopt the rich realtor theory. Rich realtors do three things every day: they pick up new properties, match clients to properties, and close deals. Those who fail at any of the three activities for any length of time suffer paycheck problems. Successful library media specialists do the same thing on a weekly basis. They are in the planning process with teachers, they are carrying out previously planned activities, and they are in the evaluation stage of units just concluded. If you pick up a client per week for in-depth planning, you will be busier than you can imagine and your center will be humming with significant projects. The number of clients you can handle will be based on the size of your staff, the flexibility of your LMC space, and the capacity of your technological systems.

TAKING COMMAND OF THE DAILY SCHEDULE

The most important thing library media specialists can do to enhance the impact of their program is to take control of their time. They are not unique in this quest, but they also seem overwhelmed, perhaps because so many are alone or have little help. Warehousing tasks of organization, discipline, technology run amok, and teachers sending unannounced hordes can make the day seem impossible before it begins.

The hustle and bustle of the warehouse can make the library media specialist run constantly from one crisis to another from dawn to dark, and yet, at day's end, honest reflection may indicate that little of major significance has been achieved. That is why the degree of tiredness at the end of the day is not indicative of impact.

The daily calendar of LMC activities is the key to success. Activities that hold promise of educational impact always have priority for space, time, and LMC staff attention. Both teachers and administrators must realize and support the notion that pre-

planned learning activities deserve the best treatment in the "learning laboratory."

Once this priority is accepted and established as the focus, the LMC becomes a busy, bustling place around the central core. Three major activities happen in the LMC each day and are dependent on flexible space and a cooperative spirit:

- First, individual students must be able to flow in and out of the LMC throughout the school day. Students who can use the center independently should be able to come any time. Many libraries have some sort of pass system for students that encourages rather than discourages visits. Individual students who need intense personal attention by the LMC staff are scheduled in advance so that precious time is not wasted. LMC facilities should allow for individual student study space and leisure activities that will not disturb other people or groups working in the center.
- Second, small groups should flow in and out of the center during the day. These groups are of two types. Those who can work independently may come at any time as space permits. Other groups needing assistance from a member of the LMC staff should be scheduled in advance. Facilities should be arranged so that small groups can study together, produce multimedia, or do research without disturbing others.
- Third, large groups should have the opportunity to use the center. Schedules and facilities permitting, some large groups can come at any time if they can work independently with their teacher. But for the most part large groups will need to be scheduled in advance and arrangements made teacher/librarian-led activities.

It is possible that as all of these groups use the center simultaneously, total chaos might erupt. Generally, however, a skillful arrangement of facilities, cooperation from teachers, plus some firm expectations for students will create a purposeful and busy atmosphere. A library media specialist who can calendar well and can handle ten different activities going on simultaneously in the center will be the most successful.

Imposed Schedules. Many library media specialists suffer from an organizational structure in which the LMC is a part of a rotating system to give teachers a planning period. This is particularly problematic in elementary schools. Few solutions have emerged that try to keep an open learning laboratory utilizing the most expensive space in the school while scheduling "library time" on

a once-a-week basis. This author recommends the following scenario when rigid scheduling is imposed: Turn the scheduled classes into SSR periods with a corner of the LMC devoted to this activity. Students learn to bring a book and read during library time. The library media specialist then uses the scheduled time to plan and work with other groups using the center.

There is no alternative to a flexibly accessed LMC. It must be scheduled like, act like, and be like a high-tech learning laboratory, available for significant learning projects. Period.

Collaborating with School-wide Program Elements. Often there are major curricular programs and activities scheduled year long in the school as certain learning targets are established. Library media specialists are advised to cooperate, collaborate, or even make the LMC the organizing element around which these programs can succeed. The daily schedule will reflect this emphasis. The school may be embarking on an intense literacy effort or may be focused on a year-long science emphasis. It is dangerous for the LMC program to be outside such loops. Dangerous, because the LMC becomes isolated programmatically—not serving the central learning themes of the school.

ASSESSING IMPACT ON TEACHING

Does the LMC program have an impact on teaching? Are teachers better teachers, more effective, and are their students achieving because of the LMC program? While definitive measures are not possible, in mature LMC programs certain elements are common.

In effective LMC programs, the majority of teachers, if asked in interview or via questionnaire, could complete the following statements almost instantly and enthusiastically:

- The library helps me as a teacher by ...
- The most recent unit I planned with the library media staff was a success because ...
- I consider the LMC essential because ...
- I would not think of planning a major instructional activity without consulting the LMC staff because ...

Teachers who stare at the interviewer blankly or make apologetic excuses for the LMC program when asked to respond might be

acknowledging their own failings. The LMC staff may be at fault, or the teacher has just not taken advantage of what is available.

In chapter 7 the collaboration log was discussed as a major tool for analysis of impact upon a faculty as a whole. For the individual teacher, a collaborative log is a normal part of interacting with the LMC. When asked, teachers who feel that the LMC program makes a difference will also be able to cite regular planning times with the LMC staff and be able to point to reflective discussions about the impact of library activities that have had a significant impact on learning.

Teachers should be able to cite specific activities, if asked, that were enhanced because of involvement by the LMC staff, made successful because of the information technology systems, enhanced by a wide variety of materials and multimedia, and made more effective because a LMC staff member partnered with them to help every learner succeed.

ASSESSING IMPACT ON LEARNING

There are a number of quick and easy measures to check the progress of students and impact on their learning.

- *Do students understand that they are in an information-rich environment designed and created for them?* As the information systems develop and grow, students should become aware of how and where they can connect into the system (library, classroom, home) and recognize that they are supported effectively in their work by those systems. Have an outsider discuss this idea with students to ascertain both their knowledge about access and whether they value the system and why. Students are usually quite frank about libraries and the information technology infrastructure. They just have to be asked.
- *Do students consider the library and its information systems important in their schoolwork?* There are really two questions here. First, does the teacher even expect students to use the library to learn? Second, if the expectation is there, then is the library considered an important information source?

For both questions the lunchroom test, done by an outsider, is quite informative. It's called the lunchroom test because an adult not known to the students engages students at random lunchroom tables in a discussion about the impact of the library. It takes about 30 seconds to begin to get an impression

from students about their feelings toward the LMC and its information systems. Comments will range from "Oh, I just get on the Internet at home—never go to the library," to "I get on the school's information system for most of what I need—and they have books too." Such interviews could, of course, be addressed to students in the library, but that group is likely to be a subset of the student population as a whole and would probably give more favorable answers.

A second technique that works well with students is the AAR (the After-Activities Review), popular in the military. At the conclusion of a unit, activity, or other library-based project, the library media specialist and the teacher discuss the project or activity quite frankly. The library media specialist will be interested in knowing the students' feelings about the information system, the research process instruction, and the use of the library as contributor to success or failure. Taking students into your confidence is definitely a constructivist notion, but if their ideas are valued, students will open up not only about the organization but also about their own role in making things better the next time. Much can be gleaned from frank discussions. Who is being helped? Who is frustrated? Why? How could the organization respond better? How can everyone help make this happen?

If the library is not being valued or used by the students effectively, there is no evidence that the LMC program is connected to academic achievement. The student who uses class notes, textbooks, and the Internet from home is growing academically outside the LMC program circle. We need to find out, using the techniques above, what kind of impact we are having: 10 percent, 40 percent, a majority of students?

To further understand the impact of the LMC program, you can perform a simple experimental study. Have a class turn in their projects and have these projects "graded" using whatever criteria have been set up for quality. Before the projects are turned back to the students, ask students to rate how much they used various types of information sources. For example,

Your name: _____
For the project you just completed (project name),
which information sources helped the most? (Please
circle your answer.)

| | | | | | | | |
|----------------------|------|---|---|---|---|---|--------------|
| The school library | none | 1 | 2 | 3 | 4 | 5 | a great deal |
| The public library | none | 1 | 2 | 3 | 4 | 5 | a great deal |
| The college library | none | 1 | 2 | 3 | 4 | 5 | a great deal |
| The Internet at home | none | 1 | 2 | 3 | 4 | 5 | a great deal |
| Family or friends | none | 1 | 2 | 3 | 4 | 5 | a great deal |

Match the questionnaire to the graded project and compare the answer on the questionnaire with the score or grade on the project. Compare the school library score with the project score. Is there any relationship? (You can eyeball results or get fancy with a computer statistics package.) Any relationship with any other source of information? If you add all the library scores together, then do the comparison, is there any relationship? Change the questionnaire to match the information sources you are interested in and the ability or grade level of the students.

Probing More Deeply. There are ways to probe even further the impact of the library media program and its information systems. Following are some suggestions; devise your own as well.

Tell students that they will receive two grades on their projects: one for content and one for how well they used the library information system. Create a rubric that shows how they can achieve a good score on both evaluations. Have the teacher score the projects for content and you score the information system utilization. What is the range of scores? How sophisticated are the students becoming in the use of library information systems? If students do well on content scores, do they do equally as well on library information system scores? Use the results to decide what information literacy skills to teach or re-teach.

Theoretically, over a year the students should progress in complexity of information-seeking techniques and in their handling of more sophisticated content as they do multiple projects. Create a chart showing class growth over time.

If you have been able to replace a single form of media (textbook) with choice (multiple materials in multiple formats) or have been able to change the direction of a unit and its activities, watch carefully the results of student assessment of content knowledge. What percent of the students achieve expectations? Does this percentage approach 100 as your partnership with the teacher improves?

Once you have a track record of successful learning experiences, compare the achievement scores of partner-teacher's classes with the scores of students whose teachers do not partner with you. What is the difference? If there is a difference, you are ready to make a presentation about your impact across time and across disciplines.

COLLABORATION AND OTHER PROGRAM AREAS

The emphasis of this chapter has been on the partnership of the library media specialist with the teacher on instructional units. There are other ways in which the library media program partners with the educational program to make a difference.

One of the major differences to be made is in the reading program of the school, whether elementary or secondary. This collaborative activity is discussed in chapter 9.

A second area for attention is to collaborate with various school-wide projects or emphasis programs. Take your signals from whatever major programs are being developed. Some examples follow:

- The principal is invited to apply for a major technology grant. The library media specialist is on the committee or chairs the committee.
- A major program designed to work with students who do not know English is instituted in the school. The library media specialist becomes the materials specialist for the project and provides rotating classroom collections targeted at these learners.
- The faculty council decide to join a major national consortium for school reform. The library media specialist is not only on the committee to visit other schools but also designs new ways to use the library media center as a pivotal part of the new program.
- The principal asks a key cabinet council including the library media specialist to analyze poor reading and math scores and propose solutions. The library media specialist researches successful programs in the professional literature and creates a webography for the council.

The list could go on, but the point should be clear: Whatever the focus of the school, whatever direction academic programs are taking, whatever corrective mechanisms are being stressed, the library media specialist is not only a part of the leadership team but must adapt the LMC program to accommodate and support the change. You are in the loop, not outside of it.

RESOURCES

Farmer, Lesley S.J. *Partnerships for Lifelong Learning* (Worthington, Ohio: Linworth Publishing, Inc., 1999).

*See also “Dave’s List of Professional Materials” at <http://www.lmcsource.com> under freebies.

Building Power Readers

Some in the library media world are questioning whether reading should remain one of the program features of the school library media program into the next century. Given our new roles in digital technology and information literacy, the notion is that something has to give. As we venture into this chapter, we will consider what our role should be in this our most historic service to individuals. But first a bit of history.¹

The first school libraries, which began in the late nineteenth century, principally provided reading materials for children. In the 1876 report of the status of all libraries in the United States by the U.S. Government, the school library chapter begins:

Although the history of school libraries in the United States is marked by many changes and mishaps, it would be untrue to say that these libraries have entirely failed to accomplish the good expected of them. From first to last, their shelves have held millions of good books, affording amusement and instruction, and cultivating a taste for reading in millions of readers, young and old.²

No evidence supported the 1876 claim of school libraries "cultivating a taste for reading", yet the impact of "millions of books" is becoming very clear. The first significant research about school libraries began after the USSR launched Sputnik in 1958, with the passage of the National Defense Education Act. The schools of the United States suddenly found themselves awash in money. Since the money could be spent on teaching materials, school libraries were the best place to store all these new items.

At first, the National Defense Education Act concentrated on purchasing materials only in science, but school library leaders and reading researchers succeeded in adding reading as a category for

¹ The first part of this chapter is a slight revision of the article: Loertscher, David V. and Blanche Woolls. "Do School Library Media Programs Contribute to Academic Achievement?" *Knowledge Quest*, vol.27, no.3, January/February, 1998, p. 24-26.

² Department of Interior, Bureau of Education, *Public Libraries in the United States of America: Their History, Condition, and Management, Special Report* (Washington, D. C.: Government Printing Office, 1876), p. 38.

expending federal dollars. Mary Virginia Gaver, a professor teaching school library courses at Rutgers University, received a federal grant to study school libraries; in 1963 she published the first major evidence that children with libraries and librarians read more books than those in school libraries with no staff. And, children with no libraries at all read the least.³

Based on the Gaver evidence and other statistics gathered by the U.S. Office of Education, Congress enacted Title IIb of the 1965 Elementary and Secondary Education Act, as a result of which, federal dollars were used to buy large library collections for the nation's schools. These are the materials that are now being weeded from our collections more than 30 years later.

As research studies began to document, these millions and millions of books had their impact. In an early study, Stephen Krashen noted that more books made better readers, particularly with second language learners.⁴ He pointed out the virtue of the library media center having a wide variety of interesting books on many reading levels.

Warwick Elley cited research concerning the value of flooding children with books as useful in raising literacy levels in developing countries.⁵ His "book floods" follow one of several sound literacy models recommending that schools "start young," "use many books," "choose books judiciously," "use shared reading methods," and "encourage children to read often." In his report about nine book-based programs, "all showed a positive impact."

One of the most widely distributed research reports is Krashen's *The Power of Reading*,⁶ which details one hundred years of research. He concluded that young people who read a lot have improved comprehension, vocabulary, spelling, grammar, and writing style. That is, amount counts!

The most recent and powerful evidence of the importance of reading a lot is that of Jeff McQuillan's *The Literacy Crisis*.⁷ Jim Trelease, the author of *The Read Aloud Handbook*, said of McQuillan's book: "Every school board member voting on a library issue should be forced to read this book before casting a

³ Mary Virginia Gaver. *Effectiveness of Centralized Library Service in Elementary Schools* (New Brunswick, N.J.: Rutgers University Press, 1963).

⁴ Stephen D. Krashen. *Principles and Practice in Second Language Acquisition* (New York: Pergamon, 1982).

⁵ Warwick B. Elley, "Using Book Floods to Raise Literacy Levels in Developing Countries," in V. Greaney, ed. *Promoting Reading in Developing Countries* (Newark, Del.: International Reading Association, 1996).

⁶ Stephen Krashen, *The Power of Reading* (Englewood, Colo.: Libraries Unlimited, 1993).

⁷ Jeff McQuillan, *The Literacy Crisis: False Claims, Real Solutions* (Portsmouth, N.H.: Heinemann, 1998).

vote."⁸ McQuillan confirms that print access has a powerful effect on reading achievement. In fact, the amount students read is one of the best predictors of the NAEP reading scores, which are used by the U.S. government in their National Report Card on Reading.

McQuillan reports research showing that low reading scores are not attributable to the method used to teach reading, but the access to reading materials.⁹ He compares today's lack of books to a statement by Holt in 1972 suggesting that there is no point in teaching children how to read if they have nothing to read after they learn to do so.¹⁰ In a 1992 study of two million students in 32 countries, Elley found that:

Acceptable levels of literacy are achieved by most pupils in most systems, despite a diversity of reading methods and traditions. In general, achievement is greatest when the educational systems are well endowed financially, when teachers are well educated, when students have ready access to good books, when they enjoy reading and do it often.¹¹

McQuillan cites several studies that demonstrate the value of "print-rich" classrooms, quoting one in which the researcher found that the primary reason for students' reluctance to read was that they didn't have access at home to materials that interested them.¹²

FACING THE FACT THAT READING IS STILL A CORE ELEMENT OF THE LIBRARY MEDIA PROGRAM

It is abundantly clear that school librarians have been making a difference in reading for a very long time; in fact for more years than we dared to hope. Whether teachers were using phonics-based programs or whole language, or any other method in between, if the school library media specialist and the teacher were pushing the amount read and trying to make reading an enjoyable habit, good things happened. The research results that show how school library media centers "cultivate a taste for reading in millions of readers, young and old" vindicate our hard work over the years.

After all is said and done, the simple and logical conclusion is:

If you want to build readers:
AMOUNT COUNTS!

⁷ See the Jim Trelease quote on the two quotation pages preceding the title page of Jeff McQuillan's book cited in footnote 6.

⁹ McQuillan. *Literary Crisis*, p. 67.

¹⁰ *Ibid.*

¹¹ *Ibid.*

¹² *Ibid.*, 73

We must also answer the question: "Counts for what?"

**AMOUNT COUNTS
IN FIVE DIFFERENT WAYS**

- **COMPREHENSION**
- **SPELLING**
- **VOCABULARY**
- **GRAMMAR**
- **WRITING STYLE**

ORGANIZATIONAL PROBLEMS AND POLICIES THAT IMPEDE THE IMPACT THE LMC CAN MAKE ON READING

It would seem a simple matter to raise reading and language arts competence: See that all young people get all they can and will read. This is easy to say but evidently not quite so easy to do.

Organizations of all types, claiming to be service-oriented, fight a constant battle to emphasize the service and de-emphasize the organization. We all say, "I shop there because I get good service," so it is easy to agree that the library media center should provide all the books needed to maximize reading achievement. However, the needs of the organization raise their ugly head:

- If every child took what he or she wanted, there wouldn't be any books left.
- If circulation quadrupled, who would shelve the books?
- If every child or teen took all the books he or she wanted, half would be lost and the rest damaged.
- Children don't read more than one book at a time anyway.

All of the above are reasons given for restricting access to books; the fewer books that circulate, the less work there is reshelving and less wear and tear on the precious commodity. Admittedly, higher circulation causes more work for the organization, and schools are not usually willing to increase staff size proportionate to circulation rates. LMCs seem to be different than grocery stores, where product sales are directly connected to the numbers of shelf-stockers.

Nevertheless, we must still face the fact: Every child deserves to learn how to read and to enjoy it. If we really believe that, then we must plan our regulations to carry out this mandate. If we think about it, every child or young person comes to us with a varying sense of responsibility. Could our regulations reflect that variability and also encourage responsibility? Suppose we allowed every child to have a library bank card and encouraged each to establish a "credit history." Our credit history would have one major difference from bank credit histories: Library credit cards would be much more liberal. We would make sure that our automated circulation systems would alert us to poor credit risks, but these young people would be referred to the library media specialist, who would work with each student individually to improve responsibility while still stressing accessibility.

Used negatively, automated circulation systems can tighten the noose around the neck of the child who doesn't handle materials well and will cut off access to materials entirely. Who among us wants to be known as a deterrent to reading?

If we are to win the war between television and reading with our young people, we must shovel materials at these budding adults. We can work out ways to allow materials use to vary in direct proportion to demonstrated responsibility, **BUT FOR READERS' SAKE, LET'S NEVER TURN OFF THE FAUCET.**

THINK FLOOD!

**EVEN THE INMATES OF TUCKER
PRISON CAN CHECK OUT
THREE BOOKS EVERY
TIME THEY VISIT THE LIBRARY.**

Many children from poorer homes do not have books at home. They begin school without having enjoyed a print-rich

environment since birth. They are behind. The school library is their only hope to catch up, to bridge the terrible chasm between themselves and those who are already well on the road to literacy. It is a scandal that our society has not effectively helped these children, even when we could well afford to do so.

ADOPTING STRATEGIES THAT MAXIMIZE THE AMOUNT READ

Technology just may come to the rescue. Current efforts to build practical e-book technology with the capability to download virtually unlimited books to a convenient device may just make circulation a dinosaur of the pre-twenty-first-century world. Imagine every kindergartner being able to select any of thousands of titles on his or her own personal e-book. Teachers could have their own textbook in various versions or use the same book. The school would pay for the licensing. One almost shivers in anticipation: free to read—at last! And just imagine a cross between an e-book and a Teddy bear! Bedtime reading will never be the same. To be sure, we will want backlit screens for under-the-covers nocturnal readathons away from mother's prying eyes. Who would care about 500-channel television? Can you see it now? Weekly trips to the library to download 500 new books? Readers who topped out on reading scores?

Enough daydreaming. We need to concentrate our efforts and focus the organization on maximizing what young people read in the here and now. The ideas discussed in this section are only starters. The reader should add more ideas and look for more in the professional literature.

Book Bags (Kindergarten/First Grade). One of the best times to capture readers is during kindergarten and first grade, when the child is the most enthusiastic about reading. The book bag is a simple method to allow children to read a minimum of 300 books each year during these two critical years; it is not only doable but extremely effective. The library media center and the classroom teacher can make this happen with a few simple procedures.

Here is how book bags work in a typical school. Each classroom acquires enough canvas book bags (either from commercial sources or by making them) for each child in the classroom, plus a few extras. Each book bag is numbered and can be decorated by the children themselves or by older children/teens/adults. Once a month, the class goes to the LMC, where the children help select the books for the book bags. The library media specialist plans in advance and pulls many books into two main categories from which the children can select. Into each book bag goes a book that children can "read for themselves" (a wordless picture book, an alphabet book, books with a few words, highly illustrated books, etc.) and one book that can be read to the child by an older sibling, parent, friend, or caregiver (a good

read-aloud picture book, a folktale, a nonfiction animal book, etc.) Back in the classroom, the book bags are hung on hooks or in cubby holes. Each day as the children go home they take a book bag, rotating throughout the month. The teacher keeps a list on a clipboard to record the book bag number next to the child's name. The homework for a kindergartner or first grader is to "read" two books a day. If the child forgets to bring the book bag back, the spares can be used. In no case is a child denied access to a book bag because reading practice is considered essential. The management of this program is considered a success when both the teacher and the library media specialist agree that the system requires very little monitoring. At the end of the month, the class revisits the LMC, where the books are exchanged for new ones. Books in the book bag program are only checked out once through the automation system (to the teacher) and are checked back in at the end of the month. No individual circulation records are kept for these books.

Schools using this system report extremely low loss rates and damage, counting the cost of either as the cost of doing business. In addition to using the book bags, the class comes to the library once a month to choose books for the classroom collection (a minimum of 100 books at a time). And the students make other visits during the month to select their own personal books to take home in addition to the book bags. The typical kindergartner or first grader should have read a minimum of 500 books during the school year and then linked into the public library system for regular reading during vacation periods.

The library media specialist works closely with the teachers to see that the number of books children read is maximized. As the children in first grade advance from reading 50 words, to 100 words, to 200 words, and so on, they will need more and more titles at their disposal if they are to sustain their enthusiasm. And it is also useful to provide books that center on a theme. Perhaps during one month 15 to 20 books in the bags can match a theme being studied in the classroom or can be holiday materials.

The book bag program assumes that the LMC has available thousands of titles appealing to beginning readers. It is not difficult to acquire such numbers and keep them attractive, fresh, and new when the results of such a program are measured in terms of the numbers of children learning to read. Collections of at least 5,000 titles supporting such a program can be amassed through parent groups, grants, business partnerships, etc. When the neighborhood is poor or there is a lack of English skills in the children, the book bag program becomes even more critical. Teachers who previously denied access to books for these children and suddenly see children reading 500 books will

start to see results in improved literacy skills and can document this progress or compare what is happening to classrooms where this experiment is being tried.

The Take-As-Many-As-You-Can-Handle Circulation Rule. For most children and teenagers, letting personal preference for numbers of books depend on individual handling ability and responsibility should increase the numbers of books allowed to circulate. Making a rule of one-book-per-visit or two-books-per-visit is not an effective way to support the reading habits needed to achieve maximum impact from the library. Children and teens need ten books on their nightstands, just as we adults have. Some children do not have a room of their own, a bed of their own, or a bed lamp. We need to work with the parents on this one. Could there be a pasteboard decorated box beside the child's bed? What could be done to see that every young person has a secure place for treasured books? What would happen if a burglary happened and ten books were lost? We have no choice but to work this out, because society has placed in our hands the obligation to make every child and teen literate.

Encouraging More Nonfiction Reading. Children who read tons of fiction get tired of similar plots and themes. They become excellent narrative readers but may still not be good expository readers. Library media specialists should encourage and make available a wide range of nonfiction titles beginning in kindergarten and extending through high school. Try for a 50/50 balance with various groups by supplying attractive titles in both genres. Better and more interesting nonfiction is being published, so watch for signs of interest in the content areas and ability to read expository materials such as textbooks as the amount of free-choice nonfiction reading increases. This is particularly important in the middle school and high school years, where time is precious. A wide variety of enticing nonfiction is essential.

Integrating Reading into the Content Areas. As units on science, social studies, the arts, and literature are planned, include a reading component in each learning adventure. The teacher and the library media specialist should ask a standard question as they plan: "How can we maximize the amount students will and want to read during our unit?" Such questions lead to ideas for books to read aloud to the class, temporary room collections, booktalk topics, book discussion groups, movie-book tie-ins, and a host of other ideas. Schools using computerized reading programs can have theme months during which books on various topics are featured that correlate with what the class is studying.

One alarming trend in the content areas has been to decrease rather than increase the amount of required reading. As texts have become more highly illustrated and web sites have included

more and more illustrations, the amount of reading per page has been decreasing. Some companies have made a fortune with books resembling comic books: highly illustrated and fascinating pictorial tours of a topic, with few words.

Can your seventh graders read a seventh grade reading-level text book? Classes with high numbers of students who are learning English or who are developmentally challenged face a serious problem meeting this goal. Again, the library media staff can solve this problem through variety, choice, and mounds of attractive materials. The amount read can be maximized even when the textbook is difficult to comprehend.

Implement Rotating Classroom Collections. Ever since libraries were centralized from classroom collections in the 1960s, many have wondered if we have done the right thing. There is no need to choose whether or not a classroom should or should not have its own collection. It should. And it should rotate regularly from the central library collection. Once a month, have students from the classroom come to the library (a chosen few or the entire class) and have them return old books and select new ones. Books go through the library checkout system only once and circulate many times from the classroom. Collections matching classroom study topics are encouraged, but a wide variety of individual interests should be included. Students not only are involved in the selection of classroom titles, but also take responsibility for circulation from the classroom. Should teachers have their own private collections in addition to the rotating collection? That is their business. Just make sure new and fresh titles are appearing regularly in every appropriate place in the school.

Keep Sustained Silent Reading and Reading Aloud Programs Working. Both silent reading and reading aloud have long histories of implementation and abandonment in schools. Both are sound strategies and need regular revival and fine tuning to remain effective. We already know that it is critical to provide time during the school day for both personal reading and to listen to books that many young people would not read for themselves. Providing this time for teenagers seems more challenging but is just as critical as in elementary schools. Teachers of calculus, honors English, foreign language, and woodworking are not absolved from this responsibility.

Build in Choice Versus Required Titles. Many teachers persist in the idea that all students should read the same title even when they know half of their class either cannot or will not read what has been prescribed. Libraries to the rescue. Given any theme, the library media specialist can provide wonderful titles that have a wide variety of reading levels, age-appropriate interest levels, cultural orientation, points of view, and potential for enriching

discussion. The amount actually read should increase in direct correlation to interest. If teachers do not know how to conduct discussion sessions where a variety of titles are discussed simultaneously, the library media specialist might suggest a list of generic questions and participate in these discussions until the teacher feels comfortable.

Organize Book Discussion Groups. Book discussion groups are a great way for readers to share their enthusiasm about their latest finds. They can be a part of classroom unit activities, club activities, brown-bag lunches, and special events with celebrity visitors. Single-age or cross-age groups are fertile grounds, as are teacher-led or librarian-led discussions. Learn a few good questions to start the interaction; that's about all it takes to get the group rolling. Make sure that everyone gets to participate and guide the discussion or close it if there is a lull or attention is flagging.

Celebrate Reading Events. National, state, and local groups create all sorts of sponsorships for reading activities and motivation events. The problem is to choose carefully among all the events to help you create traditions of your own. Such events as National Children's Book Week, RIF, America Reads, and MS Readathons are but a few of the possibilities. They can take enormous amounts of time and effort to manage, and their success should be measured not in terms of how much more young people read for the "event" but rather by their long-term impact on creating the reading habit. One event per year will probably not create any lasting effect unless it is a part of a much larger strategy by the faculty.

Utilize Automated Reading Incentive Programs Carefully. Several computerized reading incentive programs have become immensely popular in elementary schools. Students are encouraged to read a book and take a quick comprehension check test to gain points. These points are then tallied and various awards or recognition mementos are given.

Such automation of the recreational reading function has not been popular with leaders in children's literature and those concerned with motivation. They see abuses, lack of variety, scarcity of titles in the system, and the put-down of poor readers as reasons to reject these systems. Yet these systems seem to grow in popularity each year. Parents are amazed at the amount their children read and so approve wholeheartedly.

An unbiased analysis seems to favor the idea that these tools can be used to advantage or abused easily. Library media specialists can do much in schools where these systems exist to minimize

abuses, maximize choice, and maximize the amount read by all students. Turning contests into challenges is one good strategy.

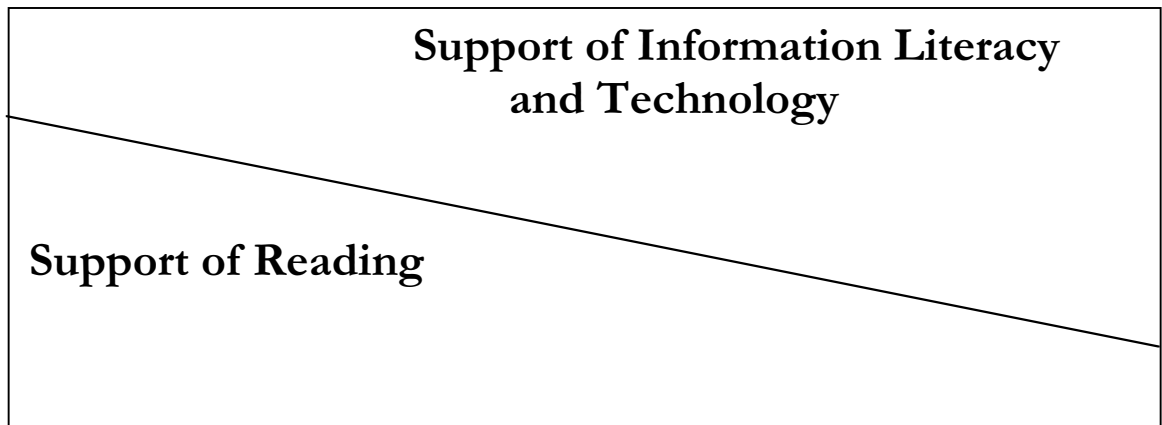
CHOOSING BETWEEN READING AND OTHER PROGRAM AREAS

Many people are attracted to the library media specialist profession because of their own love of books. They see their major role as passing this love on to the young people they serve. But the profession is asking them to see reading as only one of the major program thrusts of the LMC.

The day has passed when the LMC program could be centered almost completely on reading. Some well-known voices in the profession are saying that we should abandon reading in favor of technology and information literacy. This author feels deeply that the choice need not be made. We cannot abandon the programmatic thrust that brought us into the position that LMC programs make a difference in academic achievement. Neither can we be blind to the trends in education.

If we cannot spend all of each day promoting reading, then how will it get done, and by whom? The key is to become a leader rather than the only person in the school trying to do an overwhelming task. We must join forces with others. Everyone in the school must push reading; the library media specialist should not be just a lonely voice in the wilderness. This means we try to organize our program in such a way that it achieves excellent results without having to do it all ourselves. This requires organization and efficiency.

The model in figure 9.1 suggests a role that the library media specialist might play depending on the grade level served. It tries to bring a sense of balance required by the developmental level of the students and the need to develop basic literacy early.



KINDERGARTEN → GRADE 12

Fig. 9.1. Building balance in program emphases.

Those who work with youngsters in the early elementary grades will naturally want to concentrate more on reading because they are not developmentally ready to handle sophisticated concepts of information literacy. But notice that even kindergartners can start thinking about information as they learn to master the reading process. They can build taste as they consume. Likewise, the graduating senior is not ready for the world without a lifetime habit of reading enjoyment.

Another way of viewing the role of the library media specialist in the reading program is to create a list of all the things that might build avid and capable readers in the school. Ideas are everywhere in the literature. Many organizations are clamoring to help build literacy in the school. There is also the list of activities in support of reading from past experience in the school. This brainstorming technique is particularly valuable when it involves the LMC advisory committee and the reading specialists in the school. It is also a valuable activity for a district-wide committee.

After the list is created, categorize the list into categories something like figure 9.2.

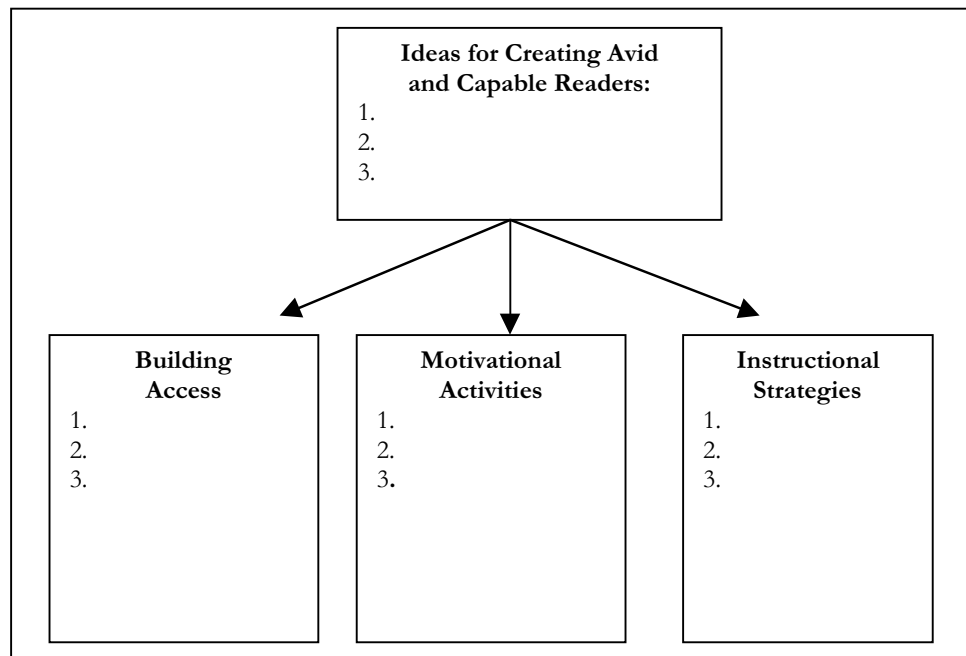


Fig. 9.2 Brainstorming and categorization of reading ideas.

Building access ideas might include such things as acquiring a large collection of exciting and interesting titles students can read, creating rotating classroom collections, providing choice whenever possible, authorizing unlimited checkout, instituting book bags, etc.

Motivational activities might include booktalking, participating in children's choice awards, corporate-sponsored reading motivational activities, national events such as Children's Book Week, reading challenges, etc.

Instructional activities might include sustained silent reading, reading aloud by all teachers, electronic reading programs, storytelling, book clubs and discussion groups, providing choice rather than assign a single title, etc.

The next thing to do is to prioritize the three lists based on the ideas that are likely to be the most powerful in building avid and capable readers. The staff of the school, particularly the library media staff could spend all their time working on these activities and there would be little time for anything else. During this prioritizing activity, the advisory group will want to assign responsibility for each part of what now becomes the reading plan for the school. Since the library media specialist will not be able to take as much time promoting reading as in the past, a leadership role is warranted. A calendar of reading events and activities can be planned for the entire school year so that the entire school staff feel they have part of the literacy effort of the school.

For example, the library media specialist might take the leadership position in the access portion of the list with the advice of the advisory committee. The instructional strategies list might be headed by the reading teacher with the library media specialists and teachers implementing various strategies as their "piece." Finally, a parent group might take the leadership for the motivational reading activities for the year with support from the advisory committee.

How the library media specialist leads out in the reading program is a critical piece of the LMC program. Where previously, we would have embraced the entire (fun part) of the reading program in the school, now we lead in such a way that the entire school is focused on literacy and everyone feels that they are doing their part.

RESOURCES

Ammon, Bette D. and Gale W. Sherman. *More Rip-Roaring Reads for Reluctant Teen Readers*. (Englewood, Colo.: Libraries Unlimited, 1999).

Dresang, Eliza T. *Radical Change: Books for Youth in a Digital Age* (New York: H. W. Wilson, 1999).

Hurst, Carol Otis. *Open Books: Literature in the Curriculum, Kindergarten Through Grade 2*. (Worthington, Ohio: Linworth Publishing, Inc., 1999).

Keene, Elin Oliver and Susan Zimmermann. *Mosaic of Thought: Teaching Comprehension in a Reader's Workshop*. (Heinemann, 1997).

Littlejohn, Carol. *Talk That Book: Booktalks to Promote Reading*. (Worthington, Ohio: Linworth Publishing, 1999).

Pinnell, Ga Su and Irene C. Fountas. *Help America Read: Coordinator's Guide to Help America Read: A Handbook for Volunteers*. (Heinemann, 1997).

Simpson, Martha Seif. *Reading Programs for Young Adults: Complete Plans for 50 Theme-Related Units for Public, Middle School and High School Libraries*. (McFarland, 1997).

* See also "Dave's List of Professional Reading" at <http://www.lmcsource.com> under freebies.

Enhancing Learning Through Technology

Making Sense of the Technology Blitz

Movable type was invented in Europe around 1500 A.D., setting off a revolution that continues to expand even today because there are more books published than ever before. Print dominated the world of information until the twentieth century, when movies, television, and other multimedia were invented. In October 1969 the Internet was invented, and 30 years later we find ourselves in the midst of the biggest revolution in publishing, networking, and commerce in the history of the world.

Schools adopted audiovisual (AV) materials in the 1960s. After an initial separate-but-equal treatment, these new technologies found their way into the library as just another form of information. Prophets of the AV revolution predicted the end of education and teaching as we knew it, simply because we could link kids into teaching machines with razzle-dazzle color, motion, sound, and visuals to do what no teacher had been able to do before. Thirty years after those failed predictions, and remembering a host of dead AV technologies (the single concept loop film, programmed instruction, and 16mm film, among others), we now face the prediction that the Internet will replace libraries.

While predictions of the demise of the LMC are a bit premature, we are currently using the best information, no matter its form or channel, to enhance learning. In fact, this is the most exciting and challenging time in the field of education, at least to those who are dabbling in, adopting, creating, and making changes.

In the current scenario, billions are being spent to transform schools into technology-rich and information-rich environments.

Taxpayers have approved such spending with two general thoughts in mind: that we have to "keep up with the Joneses" and that there should be some educational benefit, although the latter is much more vague in people's minds. Those selling technology to state and national governments promise amazing benefits if only we put computers in every classroom and get them connected to the Internet. At some point the "oversold" public tends to question the rhetoric. This happens particularly in schools, where test scores are not improving but technology is.

Library media specialists have sometimes been early adopters of technology, but they have also been bystanders as others have stepped forward to assume leadership in this arena. Now there are so many voices saying this and that, so many confusing positions, that clarity and common sense are in order. This chapter attempts to clarify the dreams for technology's impact on education and then recommend a realistic approach for using a wide range of technologies to make a difference in learning.

Figure 10.1 divides the claims made about technology into four major categories, giving examples of each major claim and its potential for leading to careers in the information society.

Potential Impact of Technology on Education

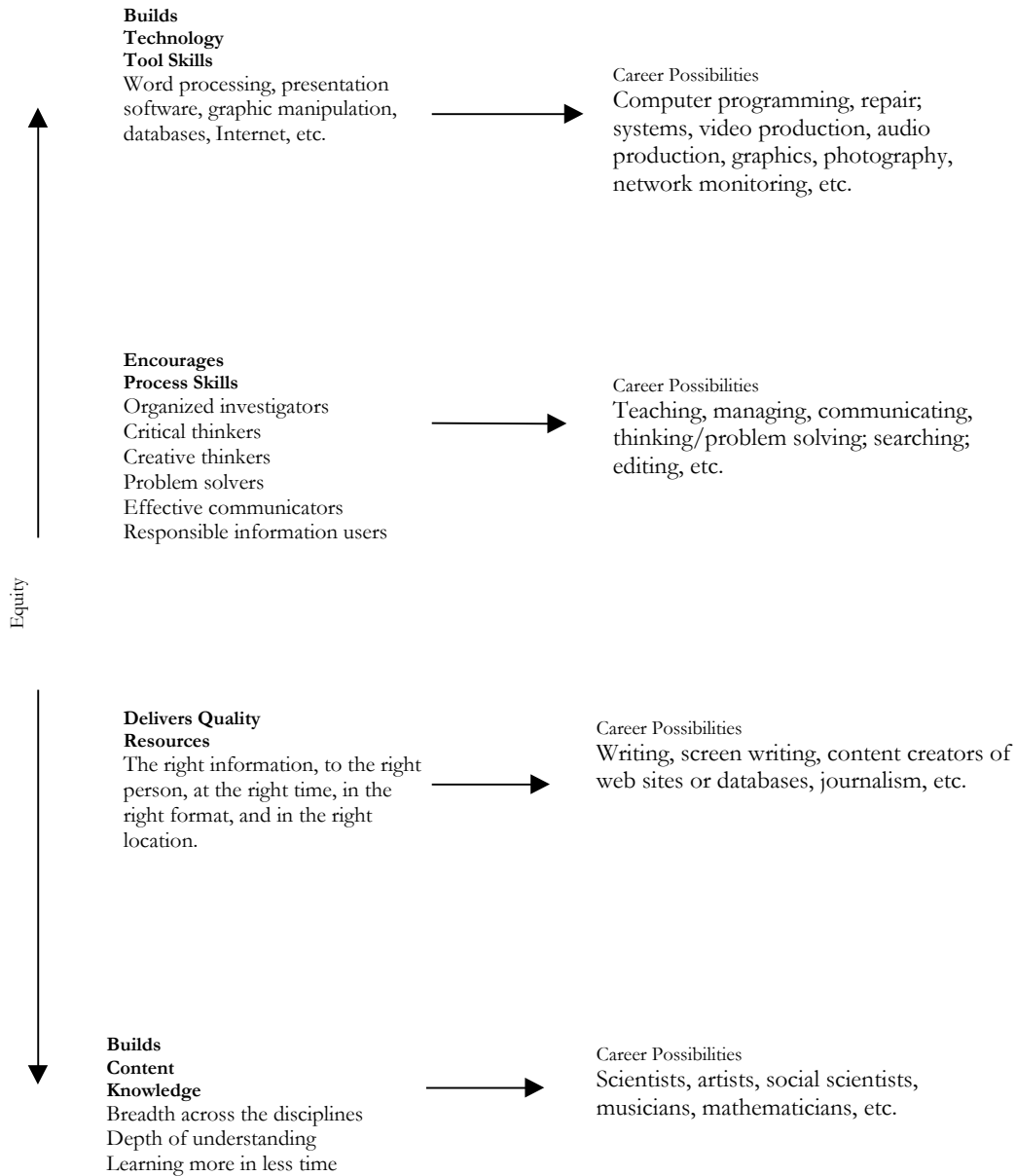


Fig. 10.1. Potential impact of technology on education.

Each of the four central elements in figure 10.1 needs to be fleshed out to capture the essence of the various claims by national organizations, governments, experts, and the popular circuit-rider preachers of the technology gospel.

BUILDING TECHNOLOGY TOOL SKILLS

One of the primary arguments made for equipping each child and teenager with technology skills is that most jobs nowadays require some technology sophistication. Many workers are coming up against the technology barrier: a new gap in the workforce wherein lack of expertise guarantees a future of low-paying jobs. Figure 10.2 illustrates the phenomenon that occurs when a person acquires a new technological skill.

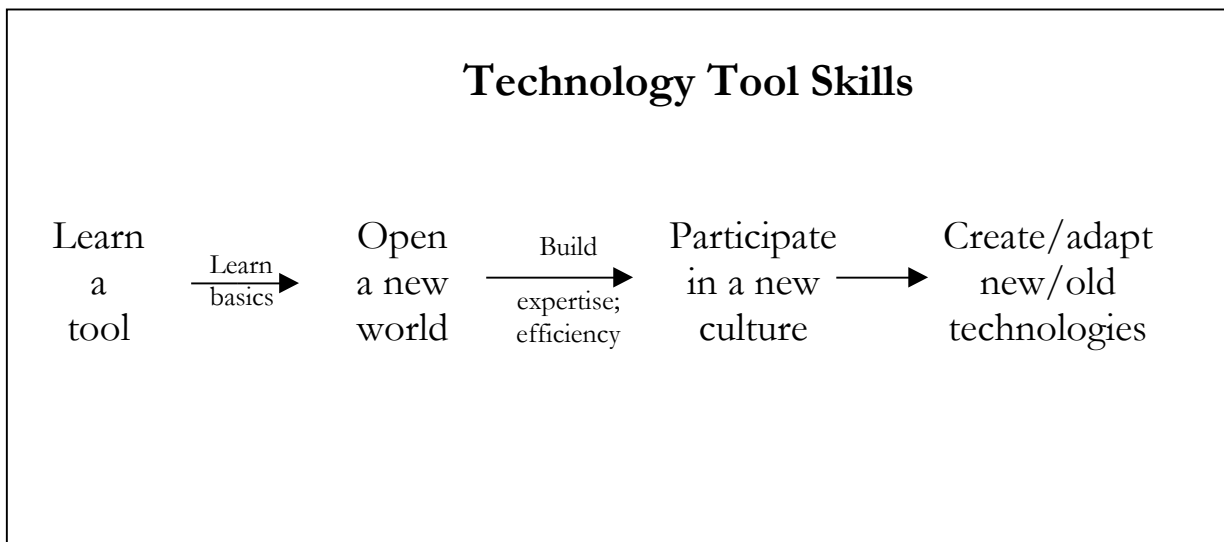


Fig. 10.2. Technology tool skills.

Think of any of a wide variety of technology tools you have discovered and learned to use: word processing, presentation software, graphic manipulation, databases, spreadsheets, e-mail, Internet searching, desktop publishing, and assistive technology for the disabled.

As you develop basic skills in word processing, for example, a new world beyond the typewriter appears, with the wonderful possibilities of easy editing, font choice, layout potential, and spelling correction. As you develop that expertise, those who understand the same potential form a support group that

generates new expertise among the group members. With further experience, some individuals go on to reinvent word processing to perform new and even more efficient tasks or ways of handling text and graphical elements. Compare the features of the first word processing program you learned with the one you are currently using (if you have at least 5 years' experience). There have been significant changes and improvements, and the "word processing culture" has expanded tremendously. Handwriting a manuscript or using a typewriter for anything except typing a label or some other mundane task is unthinkable.

Those left behind in the age of word processing find themselves in another culture. Some are apologetic, others fearful, and a few are quite proud that they have never succumbed to the snare of the machine.

Each of the technologies seems to have its own culture, its groupies, or its techie-tribe mentality. Like smokers meeting outside smoke free buildings, instant friendships arise when knowledge of the same technology is discovered. There is always something to talk about: hints to share, discussion of upgrades, and analysis of how to solve this or that problem. Such a social phenomenon seems to happen across age groups, cultural backgrounds, and economic strata when parties discover a technology in common.

For those who master a technology, major careers open up in computers and networks, technical support, teaching and marketing systems, programming and production, and a wide variety of other careers. Bill Gates and Steve Jobs are just two examples of individuals whose technical knowledge exploded into entrepreneurial empires.

At first, teachers might fear a technology or think that children are automatically ahead in the race to know or understand, but when both parties realize that it is impossible for anyone to know every tool and its applications, how to fix problems, or how to create new "effects," then a new spirit of "I will teach you, you teach me, and we will both teach each other," arises. At this point, fear dissipates and excitement takes center stage.

We could review each of numerous technologies here, but the point should already be apparent. The general public expects children to acquire technology tool skills to be competitive in the current job market.

METHODS OF TEACHING TOOL SKILLS IN THE SCHOOL

There are two methods of teaching technology tool skills to children and young people: formal instruction and just-in-time instruction.

Formal Instruction. Computer centers staffed by computer teachers are the most common means of delivering tool skills in the schools. Some of these centers are either attached to LMCs or are nearby. Others are in some location distant from the LMC. Interactions between computer teachers and library media specialists are generally limited, at least in the early adoption schools. Computer teachers are often discovering the same thing that teachers of library instruction as a "course" have discovered: that students learn little when the instruction is not integrated with school subjects. Voices in the literature are calling for the transformation of computer labs into learning laboratories (suspiciously sounding like libraries) available at the time a class needs a particular skill or introduction to a software package required to do a project. In fact, if the computer center and the library are close together, the staffs of both entities should be combined to create a true learning lab, giving a boost to the size of the library staff and increasing the number of collaborative units done by the LMC staff. Even if the two entities are separate, they could be under the same merged organizational structure and under the direction of the library media specialist.

Advanced instruction is still quite appropriate for those going beyond the basics in any technology: video courses, audio production, web design, computer programming, and other specialties are often popular in industrial technology programs leading to trade schools or other higher education possibilities such as engineering and industry.

Just-in-Time Instruction. Building technical skill at the point of need when students are doing projects is the preferred method of instruction for library media specialists. Just as librarians have abandoned teaching library skills as a "course," both library skills (now information literacy) and technology skills are best when integrated into the instructional activities of the classroom.

Students studying weather, for example, may have the computer teacher help them enter data into spreadsheets to create charts and graphs for entry onto a web page. The library media specialist may have taught searching skills for locating accurate and current weather data on the Internet. By extending the time studying the weather unit a little bit, a host of other skills can be learned. Hopefully, these skills will transfer as students study other topics either in science or in some other discipline. As the

year progresses and the age and maturity of the students increase, so should the technological sophistication of projects grow.

Because of the nature of technology and depending on the amount of equipment available, library media specialists might use a teach-one, train-one method. Using this technique, one or a small group of students are trained and they train others. Scope and sequence charts are used for both technology and information literacy skills to see that students achieve the various levels of expertise as they progress through a school year and across disciplines.

Both technology tool skills and information literacy are at first thought to be linear, but with experience we realize that they are multidimensional. As technical expertise and experience grows in a school, a new culture arises. Students who would have been bored in the print and linear worlds suddenly acquire interest in exploring the multidimensional world with its myriad array of new possibilities. There seems to be enough momentum and evolution of technology to sustain interest over a long period of time.

DEVELOPING PROCESS SKILLS

Technology coordinators previously often spent the bulk of their energies trying to install systems and teach operational skills. As systems have developed, however, the realization that technology is really a tool rather than an end in itself has entered the literature. Most authorities and organizations now agree that one of the most important contributions technology can make is to help children and young adults become better and more efficient learners. That is, they can learn how to learn in new and exciting ways.

Figure 10.3 shows what generally is thought of as process skills. These skills can be titled information literacy, inquiry skills, problem solving skills, or any of a host of other educational jargonistic terms.

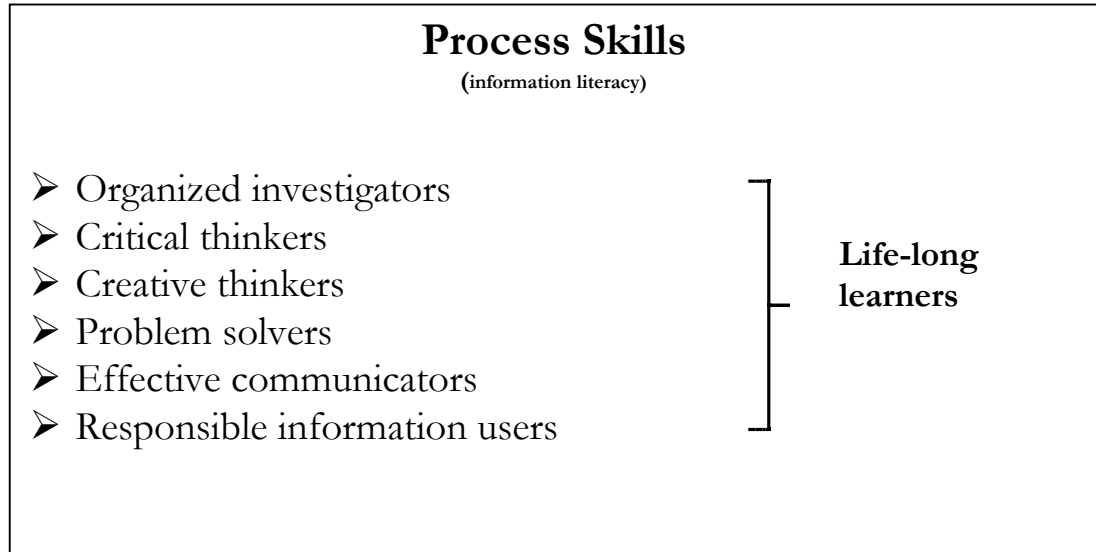


Fig. 10.3. Process skills.

Process skills are covered as a separate program thrust of the library media program, but they are mentioned here because they are entering the national literature as the focus of technology growth in education.

Reading the current literature about technology reveals that the theorists are abandoning the idea of mixing technology into traditional teaching methods. Instead they are insisting that the very act of integration of technology into education pushes practice toward constructivist ideas. This push has been covered in the collaborative chapters 7 and 8 of this book.

DELIVERING QUALITY INFORMATION TO THE USER THROUGH TECHNOLOGIES

Library media specialists have always been concerned with delivering quality information resources to young people: the best fiction and nonfiction, quality reference materials, the best magazines and pamphlets. As the audiovisual revolution dawned, we wanted the best film and video, recordings, art prints, sculpture, and other multimedia items.

Enter the Internet. At no time have we ever had the on/off switch mentality. Turn on the Internet, you get it all or nothing. This has not happened in any other medium largely because we could afford to buy only a subset of items available for our collections.

Fear of pornography and predators has pushed parents and schools to try to filter out the "bad stuff," with only limited results. Many library media specialists are using webquests and bookmarked sites to keep students so busy during the library research time that there is little opportunity to get into troubling waters.

Figure 10.4 extends the traditional role of the library into the technology world of information: the conscious delivery of the best to users. Where we used to require everyone to come to the central storehouse for this information, we are currently engaged in a revolution of delivering this information service into a 24/7 mode, i.e., 24 hours a day, seven days a week in the LMC, the classroom, and the home.

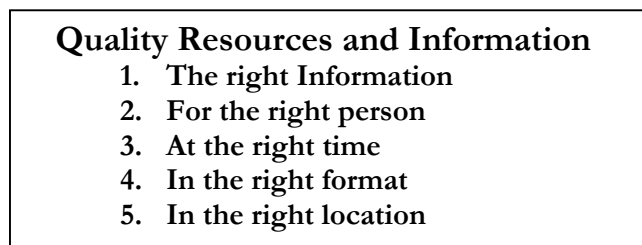


Fig. 10.4. Quality resources and information.

Professional Information for Teachers and Library Media Specialists. Joining the regular publishing sources for printed information, thousands of Internet connections are available to help teachers and library media specialists. But the plethora of resources and the ease of putting up information on the web have brought with them an explosion of mediocre materials. Some of the most popular high-quality sources are:

6. Kathy Schrock's Home page. providing hundreds of units and tips for teaching
7. Blue Web'n from Pacific Bell, providing recommended units of instruction and professional development resources
8. The U.S. Office of Education, encouraging the agenda of the federal government by providing information, grants, and access to good sites
9. The Milliden Exchange for professional materials about technology in education

10. ASCD online, focusing on professional development for the nation's teachers

Other resources ebb and flow as the Internet expands and as support for professional development sites increases or decreases.

Information Resources for Teaching. In the last half century, technology has made possible a wide range of techniques for presentation of concepts and ideas to students. The overhead projector has now been replaced by PowerPoint presentations, the 16mm film now has turned into video, blackboards have been replaced by white boards, slide presentations are now replaced by multimedia disks: All have made the art of presenting more efficient and powerful. A teacher can sit at the computer and enter a few pieces of data and the computer can automatically graph equations for the class in a matter of seconds. Both teacher and students can enter bits of factual data into a computer program and have the computer create an elaborate timeline.

Library media specialists should be on the lookout for software packages, videos, simulations, games, and other materials designed to enhance teaching and learning. A video demonstrating the actual opening and closing of a real heart valve, watching cells divide in real time, seeing a near-authentic re-enactment of the signing of the Declaration of Independence, taking a virtual tour of the Parthenon, exploring the bottom of the Pacific Ocean via an underwater robot craft: All these could not have been done 50 years ago and all provide a richness and efficiency to learning and teaching that students should not miss. Various technologies can transport students from the inner city, the farm country, or the desert to endless other places in real time, from outer space to the depths of the ocean, to places you could never go (the eye of a hurricane forming over the Atlantic or inside an atomic reactor).

The U.S. Office of Education announces each week via e-mail new resources for teaching and learning. One sample message included the following:

- "Map Collections: 1544-1996" has thousands of digitized online maps.
- "Origins of American Animation" offers 21 animated films & 2 fragments, which span the years 1900 to 1921. The films include clay, puppet, & cut-out animation, as well as pen drawings.

- "The Thomas Jefferson Papers at the Library of Congress" contains over 20,000 digitized images of various letters, memoranda, notes, & drafts of documents, books, papers, letters, & manuscripts of the third President, as well as correspondence, commonplace books, financial account books, & manuscripts.

Information Resources for Learners. Providing quality information in a wide variety of formats has been the province of the library media specialist building a collection. We have had selection criteria ever since national standards were published for school libraries in 1920. We see our role as being no different in the world of the Internet from what it was in the world of books only. In fact, as the Internet grows exponentially, our theme song may well be: less is more. Having a few quality information sources with easy access to more if needed is probably a sound policy for the foreseeable future.

We choose materials because they serve learners at different stages of literacy, from various cultural perspectives, and in formats that help learners learn more quickly. We look for accurate and authoritative content but in a form that students can use to fulfill assignments, pursue personal interests, or satisfy recreational needs. And we catalog that information for easy retrieval from automated systems linking materials in every format, including Web sites.

We build selection criteria that apply to all forms of information, hoping to satisfy the needs of every learner working in an information-rich environment. It becomes harder and harder to build a quality collection as web sites for a single topic increase from several, to hundreds, to thousands, to millions. In every medium, we have always relied on reviews and reviewing tools to help us choose the best. It appears this is even more critical in the overwhelming Internet arena.

The alarming rise of commercial support intended not just to provide information but to sell a product makes us all pause to reconsider our time-honored criteria for quality information. This author has already known library media specialists who quit their jobs in protest over free computers for schools in exchange for the penetration of advertising as a steady requirement of student access to information systems.

We are still in the incunabula period of the Internet. As library media specialists, we must let the commercial and information providers know our standards, what we need, and what teachers and students need, and then hold them accountable.

BUILDING CONTENT KNOWLEDGE

One of the early promises of technology was that by using it, by taking advantage of the efficiencies it provides, by enjoying its advantage of presenting concepts in effective ways in addition to lectures and textbooks, content knowledge would be improved. This promise assumes that students who employ technology as an effective learning tool will learn more science, social studies, literature, language, and fine arts in the normal course of events. Academic achievement tests concentrate on measuring content knowledge, although some of them are testing for process knowledge as well.

We now know, and it has always made sense, that there is no automatic rise in subject knowledge just because the school might own one, several, or many technologies. The tools have to be used effectively to produce the desired results.

Figure 10.5 summarizes the best hope for technology: that it would help every learner (even those lacking basic skills, having language problems, or with disabilities) learn the content required to participate in an educated society.

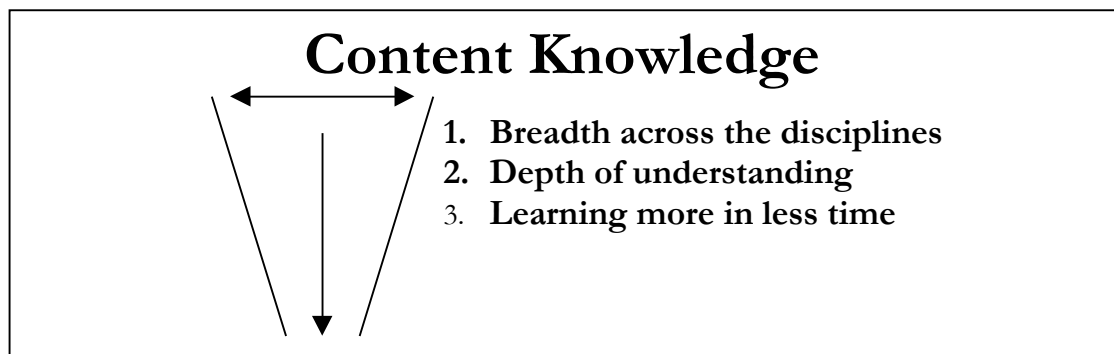


Fig. 10.5 Content knowledge.

The research on student learning styles convinces us that students learn in a wide variety of ways. It would make sense to suppose that providing information in a wide variety of technological channels would increase the chances for every learner to succeed at a higher level and build learning efficiency in the process.

Logic is one thing. Evidence is another. Most would agree that students are more interested in a multimedia environment than in a uni-dimensional one. The hard evidence about the impact of technology in this area is still thin, but it is growing. The author proposes one solution to this problem later in this chapter.

UNDERSTANDING THE VOICES PITCHING TECHNOLOGY

Every library media specialist should learn to sort out and categorize the plethora of voices and claims about technology. In education today, there are so many groups trying to sway opinion one way or another that confusion is rampant. What positions are groups taking and for what reasons? Figure 10.6 compares three powerful voices, those of the International Society for Technology in Education,¹ the American Association of School Librarians,² and the national movement for standardized test results, currently presided over by the Educational Testing Service, publishers of the SAT and the PSAT. States are also creating and mandating various other tests of knowledge and competence.

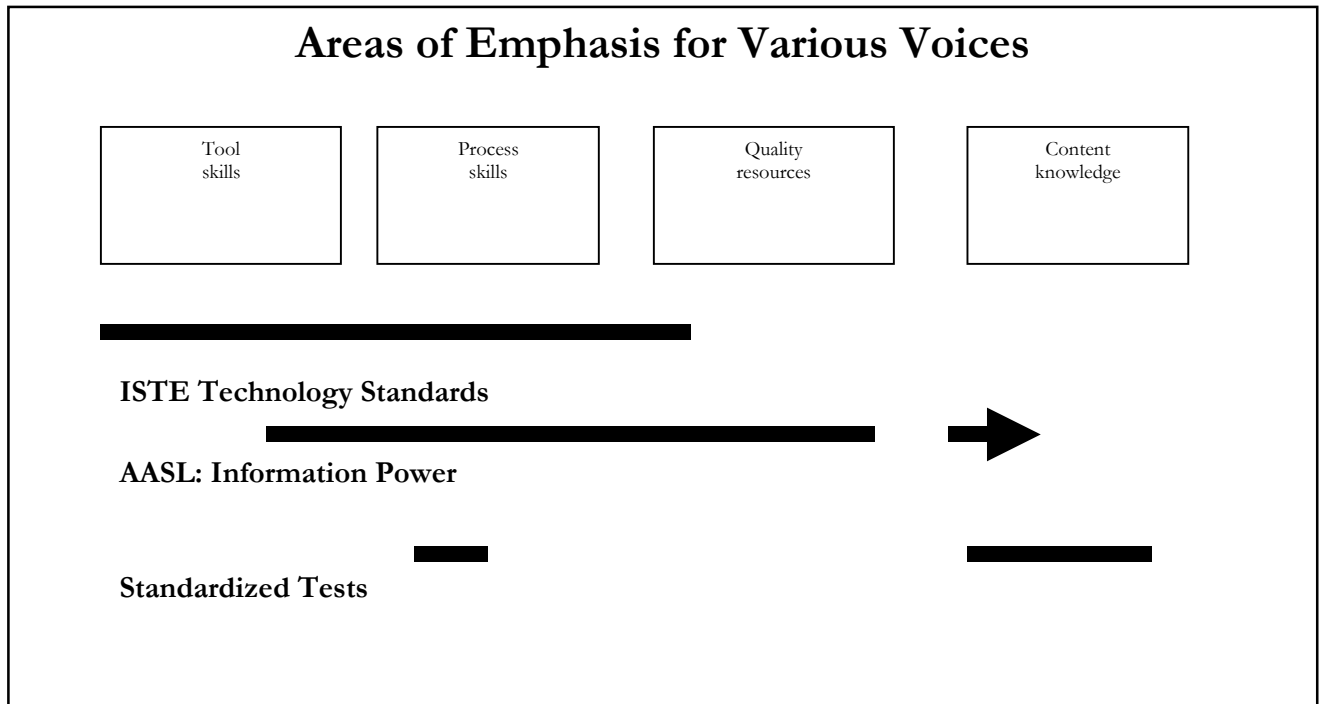


Fig. 10.6. Areas of emphasis for various voices bar graph.

¹ International Society for Technology in Education. *National Educational Technology Standards for Students*. (Eugene, Ore: ISTE, 1998). URL: <http://www.iste.org>

² American Association of School Librarians and Association for Educational Communications and Technology, *Information Power* (Chicago: American Library Association, 1998).

The ISTE standards for technology are as follows:

Technology Foundation Standards for Students

1. Basic operations and concepts

4. *Students demonstrate a sound understanding of the nature and operation of technology systems.*
5. *Students are proficient in the use of technology.*

2. Social, ethical, and human issues

- *Students understand the ethical, cultural, and societal issues related to technology.*
- *Students practice responsible use of technology systems, information, and software.*
- *Students develop positive attitudes toward technology uss that support lifelong learning, collaboration, personal pursuits, and productivity.*

3. Technology productivity tools

- *Students use technology tools to enhance learning, increase productivity, and promote creativity.*
- *Students use productivity tools to collaborate in constructing technology enhanced models, preparing publications, and producing other creative works.*

4. Technology communications tools

- *Students use telecommunications to collaborate, publish, and interact with peers, experts, and other audiences.*
- *Students use a variety of media and formats to communicate information and ideas effectively to multiple audiences.*

5. Technology research tools

- *Students use technology to locate, evaluate, and collect information from a variety of sources.*
- *Students use technology tools to process data and report results.*
- *Students evaluate and select new information resources and technological innovations based on the appropriateness to specific tasks.*

6. Technology problem-solving and decision-making tools

- *Students use technology resources for solving problems and making informed decisions.*
- *Students employ technology in the development of strategies for solving problems in the real world.*

Source: International Society for Technology in Education. *National Educational Technology Standards for Students*. (Eugene, Ore: ISTE, 1998). URL: <http://www.iste.org>. Reprinted with permission.

The AASL Information Literacy standards are as follows:

The Nine Information Literacy Standards for Student Learning

Information Literacy

Standard 1: The student who is information literate accesses information efficiently and effectively.

Standard 2: The student who is information literate evaluates information critically and competently.

Standard 3: The student who is information literate uses information accurately and creatively.

Independent Learning

Standard 4: The student who is an independent learner is information literate and pursues information related to personal interests.

Standard 5: The student who is an independent learner is information literate and appreciates literature and other creative expressions of information.

Standard 6: The student who is an independent learner is information literate and strives for excellence in information seeking and knowledge generation.

Social Responsibility

Standard 7: The student who contributes positively to the learning community and to society is information literate and recognizes the importance of information to a democratic society.

Standard 8: The student who contributes positively to the learning community and to society is information literate and practices ethical behavior in regard to information and information technology.

Standard 9: The student who contributes positively to the learning community and to society is information literate and participates effectively in groups to pursue and generate information.

Reprinted with permission from: American Association of School Librarians and Association for Educational Communications and Technology, *Information Power* (Chicago: American Library Association, 1998), p. 8-9.

WATCHING THE RESEARCH ON THE IMPACT OF TECHNOLOGY

Library media specialists are advised to keep an eye on various research studies probing the impact of technology on teachers and education in general. These studies might provide clues about promising practices or they might point to yardsticks for comparison.

For example, a recent survey³ of 2500 teachers nationwide from grades 4-12 found that Internet access in the classroom nationally had risen to 39% nationally. A majority (59%) have Internet access at home and only one-quarter (27%) have no access either at home or in the classroom. As access has risen, so has use of this tool in instruction. Of those having access, searching for information is the most common use. A few are beginning to use the Internet as a publication tool for their student projects. About half of those with the Internet in their classroom were beginning to gain confidence in the Internet as an essential tool for teaching and learning.

Such benchmark studies can be used to compare the progress of an individual faculty with the nation as a whole. How many teachers have access in my school to a particular technology as compared with the national sample? What is the rate of acceptance by our faculty of a particular technology as an “essential” tool? How could we improve access and effective use of any technology by our teachers and learners?

Education Week, the news magazine of education, commissions a major national survey each year and reports it both on the web and in a separate newspaper edition.⁴ In the 1999 survey, half the teachers reported access to computers in their classrooms and those with at least 6 computers reported regular use of them for instruction. Teachers reported progress when professional development topics zeroed in on the use of technology in teaching and learning. Teachers complain about the lack of engaging software that supports learning (not a new idea to library media specialists), secondary teachers being the most worried since they have the shortest time with their students (an argument for block scheduling).

The *Education Week* survey also provides state-by-state comparisons for all sorts technological topics for the library media specialist to use again as a benchmark against which to compare the local situation.

³ Becker, Henry Jay. “Internet Use by Teachers: Conditions of Professional Use and Teacher-Directed Student Use: Report #1.” Center for Research on Information Technology & Organizations. The University of California, Irvine, The University of Minnesota, Feb., 1999. See at:

<http://www.crito.uci.edu/TLC/findings/Internet-Use/startpage.htm>

⁴ check the URL at: <http://www.edweek.org>. The 1999 survey is at <http://www.edweek.org/sreport/tc99/articles/summary.htm>

PRIORITIZING YOUR IMPACT

This author feels that if you put content knowledge at the top of the priority list and integrate the other three expectations for technology (tool skills, process skills, and quality resources), all four expectations will evolve naturally and normally boosting academic achievement. That is, you begin with the results you expect and then use the tools at your disposal to achieve them. This concept is illustrated in Figure 10.7.

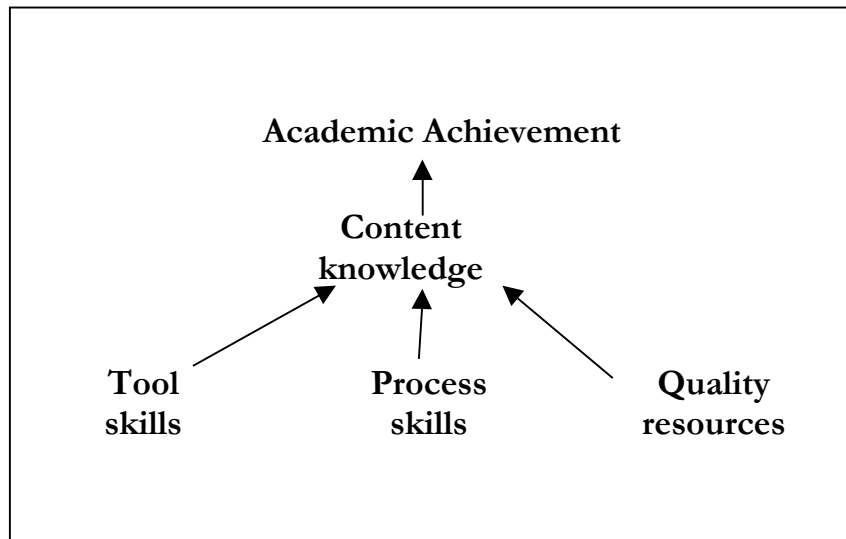


Fig. 10.7. Academic achievement.

Each school should have a technology plan that outlines the vision of the faculty for the role that technology should play in the education of its students. Library media specialists should dig out their current technology plan and compare it to the model given in this chapter. If there is no technology plan, the library media specialist should be in a leadership position for developing one. Your plan should be so clear and simple that the faculty could recite it on the spur of the moment if asked by a parent or school board member. Make it at least as simple as the one above.

BUILDING A REPERTOIRE OF TECHNIQUES THAT WORK

The next step, in the face of thin evidence of impact, is to build your own repertoire of methods used in your school that achieve the desired results. In the book *Reinvent Your School's Library in the Age of Technology*, I provided a "starter" list (see figure 10.8). You might add to it with actual examples from your school.

Building a Repertoire of Successful Strategies Using Information Technology to Enhance Learning

Consider the following strategies as a starter list:

Collaborative Data Collection and Analysis - Various student groups in the same school, in the community, state, nation, or internationally, collect data to solve an engaging problem.

Real Problems - Numerous technologies allow students to handle “real” data to solve real problems. The data can be historical, contemporary, or obtained instantly through sensing devices.

A Transparent Learning Tool - When technology is properly used, it often becomes transparent to the learning task at hand. It becomes a true learning tool, not an end in itself.

The Novelty of Technology - Enduring a steady diet of the same teaching strategies is boring. The use of a new technology or a fresh approach to an older technology can stimulate interest both in the technology itself and also in the subject matter to be mastered.

Capitalizing on Media Characteristics - Each different kind of technology has its own unique characteristics that can contribute to learning. Films have motion and color; books allow easy skimming and scanning; the Internet allows worldwide, almost instantaneous communication; online databases or CD-ROM databases often allow full-text searches; distance education allows participation from afar. When teachers and students use a particular medium for its strengths, concept delivery and understanding are likely to be enhanced.

Multiple Data Sources - The Internet, CD-ROM information sources, books, periodicals, video sources, and connections to other libraries help students experience a wide variety of information on the topic or question they are seeking. There is something for every student at every level.

Simulations – Simulations, including simulation gaming provide a way to come close to reality without encountering the dangers, the impossibilities of traveling in time or space, the “what ifs,” or the risks.

Communication Beyond the School - The Internet, the amplified telephone, and e-mail allow students to communicate around the world, with other schools, experts, governments, agencies, libraries, museums, businesses and a host of other sources.

Background Building - Before students can deal intelligently with an engaging problem, they can build the needed background knowledge from a wide variety of media and technology sources in a relatively short period of time.

Efficient learners - Because of technology assists, students write more, produce better products, edit their work more carefully, use more information resources, and integrate them into their work

Fig. 10.8. Building a repertoire of successful strategies.

DEVELOPING TECHNIQUES THAT WORK

Having a repertoire of techniques and strategies you can use to maximize your impact on learning will help you be a catalyst in the teaching in the school.

Make software do its job. Computer software programs or online information systems are expensive. Each has been designed to do a certain task. You generally have three choices:

- Encourage teachers to use the package the way it was intended to achieve maximum impact.
- Re-purpose the software. This is a fancy term for using software in a way that the creators did not intend. This may mean that you use parts of the package, redesign the activities, or combine parts of several packages for a particular unit.
- Abandon the package or information system. This is painful sometimes when a heavy investment has been made, but you realize that learners are just not making the progress you need at the rate you need it.

Provide choice. Whatever central materials are being used by the class (a textbook chapter, for example) provide alternatives for those who are struggling. A student having difficulty with a novel because of poor English language skills might be given a *Classics Illustrated* comic book to help understand the gist of the plot through pictures, or a video might be viewed. If the goal is to have everyone understand a central concept, you can provide several technologies to explain or reinforce that concept.

Provide a variety of technologies. Students are likely to get bored always doing their projects in web format or as a PowerPoint presentation. Change the technology, introduce an upgrade, or provide a new technology to spark new interest. Newness and fresh approaches are usually very well received.

Use "edutainment" judiciously. Providing a computer game/simulation at a critical time during a unit may be like reading aloud a historical fiction book. Both might rekindle interest or provide needed background for more difficult tasks lying ahead.

Recognize the abuses of technology and substitute something productive. Students often want to use computers and other technologies only for recreation. They need guidance to know when it is appropriate to "play" and when to direct that effort toward an educational purpose. A positive substitution is always better than a restrictive policy that causes constant battles. Students who

have time to play don't have enough to do. You might have a technology-based project that needs to be done to help you or others. These students might be some of your best volunteer help.

Use techniques such as webquest construction with teachers to infuse technology into an experience. Often, teachers just don't have time to figure out how to integrate technology into a lesson they have done many times. Building a webquest (a learning adventure done in a web page format) is a joint activity many teachers might appreciate doing with the library media specialist. Several well-placed planning sessions with the teacher can often build new excitement into the collaborative process.

Lead the entire faculty and student body into a high-tech, information-rich environment and culture. A new and quite different culture arises when technology and high-quality information are infused into the learning environment. Both students and teachers behave differently, have different expectations, and use quite different learning strategies than they do in technology-poor and information-poor environments.

However, there must be a commitment by everyone to take responsibility to see that this culture flourishes, because a single techno-savvy person can destroy the entire system in a matter of moments (at least the way current systems operate). Thus, the leader must build and maintain the nurturing attitude that:

**You teach me,
I teach you,
We teach each other,
And, we all keep it working!**

Separate what students know and understand from what they can do with technology.

English teachers were some of the first to grapple with the word-processed report versus the handwritten one. Does the student who understands how to create an excellent layout for the report get higher grades than the student who struggles to scribble with the pencil on paper? One research study reported that teachers were tougher graders on word processed reports than on handwritten ones.

Whatever a teacher's inclination or attitude about technology and its use to enhance the "look" of the final product, library media specialists should encourage the splitting of the "grade" into component parts: a grade for the content/understanding

evident, a grade on the use of technology, and a grade for the research process used to develop the project or solve the problem. Rubrics are easy ways to communicate to the students that all three expectations are present.

Separating content from "glitz" is perhaps one of the best lessons you can teach students, who may have the tendency just to cut and paste what they find on the Internet into their reports without thinking or learning anything.

Examine the rubrics given by teachers or examine their point systems for projects. Is the student rewarded if he or she can say:

- I chose an appropriate technology for a project.
- I have demonstrated my skill using the technology.
- The technology is used to make the message come across.
- The content of the product is more important than the technology.
- The content is well organized.
- The content is presented well.

It is very easy to allow technology to fool us all:

- I have the photocopy of the article, therefore I know the content.
- The PowerPoint slide is extremely attractive, therefore it must be communicating more effectively.
- A video that took three weeks to create is automatically better than a written report.

REFLECT ON THE IMPACT TECHNOLOGY IS HAVING IN YOUR SCHOOL

In *Reinvent Your School Library in the Age of Technology* I gave a number of suggestions for administrators to gauge the impact technology was having in the school and on the learning environment. The following quick checklists or reflection activities might elicit evidence that something is happening or not happening.

Observe how technology is being integrated into the school environment. Figure 10.9 should be used by various persons in the school environment and then ratings compared and discussed.

| |
|--|
| <p style="text-align: center;">Integration of Information Technology into the School as a Whole Checklist</p> <p>Student behaviors:</p> <ul style="list-style-type: none"><input type="checkbox"/> Students are interested/engaged in learning projects using technological devices and print resources.<input type="checkbox"/> Students are using technology purposefully rather than as recreation.<input type="checkbox"/> Students who are usually uninterested in schooling are engaged.<input type="checkbox"/> Students are pursuing their own interests as a part of learning activities as opposed to pursuing only topics teachers demand.<input type="checkbox"/> Because students are handling multiple data sources, they seem naturally headed in the direction of a problem-solving mode of learning.<input type="checkbox"/> Students seem to be at ease using a variety of presentation technologies.<input type="checkbox"/> Other: <p>Facilities:</p> <ul style="list-style-type: none"><input type="checkbox"/> Students can find the technologies they need in a variety of locations throughout the school and are able to get their work accomplished without long waits in line.<input type="checkbox"/> Configurations of technology allow for simultaneous use of technology by individual students, small groups, and large groups.<input type="checkbox"/> Students report that, for the most part, the technologies they need are working almost all of the time.<input type="checkbox"/> Print and computer technologies are integrated into libraries and classrooms.<input type="checkbox"/> Technology is available to students before and after school, and at noon, in addition to the regular school hours.<input type="checkbox"/> Other: <p>Adults:</p> <ul style="list-style-type: none"><input type="checkbox"/> Teachers and library media specialists obviously have buy-in to a technology-rich environment and feel comfortable teaching in that environment.<input type="checkbox"/> Teachers and library media specialists are in the coaching stance rather than being the principal mechanism for information delivery.<input type="checkbox"/> Other: |
|--|

Fig. 10.9. Integration of information technology.

Monitor danger signs in the school environment that suggest that change is needed. Figure 10.10 presents a few of the problems that an observer might notice in a school.

| |
|---|
| <p style="text-align: center;">Checklist of Danger Signs When Technology Is Not Supported Well by the Library Program</p> <p>Students:</p> <ul style="list-style-type: none"><input type="checkbox"/> Students regularly use technology for playing games/hacking/surfing.<input type="checkbox"/> Student use technology to glamorize projects, but there is little substance.<input type="checkbox"/> Students merely cut and paste information together for projects—learning very little.<input type="checkbox"/> Time spent working on a project is so technology-dominated, there is almost no time to learn content.<input type="checkbox"/> Students are careless and destructive with equipment and software and lack respect for other students' work.<input type="checkbox"/> Other: <p>Teachers:</p> <ul style="list-style-type: none"><input type="checkbox"/> Teachers seem afraid and helpless in the face of technology.<input type="checkbox"/> Teachers know how to use technology but don't.<input type="checkbox"/> Technology is so outdated that students' equipment at home is superior to what's at school. Software upgrades won't work on existing equipment.<input type="checkbox"/> Other: <p>Technology:</p> <ul style="list-style-type: none"><input type="checkbox"/> The failure rate (equipment, software, and the Internet) is so high that teachers and students will not risk the time investment.<input type="checkbox"/> No one person is responsible to see that the equipment, networks, and software are in good repair and operational.<input type="checkbox"/> There is no technology plan in actual operation, or, it is ignored.<input type="checkbox"/> Other: |
|---|

Fig. 10.10. Checklist of danger signs.

Note whether you are making progress in a positive direction. As you build a repertoire of successful learning experiences with technology, you should be making progress rather than just being bothered by the horror stories that are happening. Figure 10.11 is a progress chart for observers. Over time, the ratings should progress down the list.

| |
|--|
| <p style="text-align: center;">How Would You Rate Your Repertoire of Successful Learning Experiences in the School Using Technology?</p> <ul style="list-style-type: none"><input type="checkbox"/> A small repertoire and of insignificant quality<input type="checkbox"/> A small repertoire but of high quality<input type="checkbox"/> A steadily growing repertoire—the quality could improve<input type="checkbox"/> A steadily growing repertoire—the quality is excellent<input type="checkbox"/> A rich repertoire—the quality could improve<input type="checkbox"/> A rich repertoire—the quality is excellent |
|--|

Fig. 10.11. Rating successful learning experiences.

A FINAL OBSERVATION

Making progress in the use of technology is not a one-time project. It continues every day of the school year and across school years as teachers change and new students enter the school and older ones leave. Technologies change constantly, and with that change the possibilities of an evolving culture grow. We used to think that when we set a program for the LMC in place it would take care of itself using the organizational structure, the policies, and the procedures we established, and there would be continuity of the staff monitoring those policies. That is no longer the case in rapidly changing technological environments. Change is a constant. Thus, our response to that change, the organization, the policies, the procedures, and the monitoring system must evolve along with the technology. That stance should be a given reality for the entire school community.

RESOURCES

Bucher, Katherine Toth. *Information Technology for Schools*. 2nd ed. (Worthington, Ohio: Linwood Publishing, 1998).

International Society for Technology in Education. *National Education Technology Standards for Students* (Eugene: Ore: ISTE, 1998)

McKenzie, Jamie. *How Teachers Learn Technology Best*. Bellingham, Wash.: FNO Press, 1999).

Miller, Elizabeth. *The Internet Resource Directory for K-12 Teachers and Librarians*. (Englewood, Colo.: Libraries Unlimited, Annual).

* See also "Dave's List of Professional Materials" at <http://www.lmcsource.com> under freebies.

Information Literacy

Building the Power Learner

Information Power defines information literacy as "the ability to find and use information" calling this skill the keystone to lifelong learning.¹ In further clarification, "The goal is to assist all students in becoming active and creative locators, evaluators, and users of information to solve problems and to satisfy their own curiosity. With these abilities, students can become independent, ethical, lifelong learners who achieve personal satisfaction and who contribute responsibly and productively to the learning community and to society as a whole."²

Having made these opening remarks, *Information Power* then presents a list of information literacy standards which, carefully read, place all that the library media specialist does under the umbrella of information literacy. They not only include the research process, as one would expect, but also reading and enjoyment of literature. In this book, the author separates these two ideas, and this chapter concentrates on the research process within the domain of information literacy.

THREE MODELS OF THE RESEARCH PROCESS

The easiest way to understand the composition of information literacy skills is to examine various information literacy models that have appeared over the past 20 years. Three models are presented here for comparison and contrast. The first is the British model (figure 11.1), which appeared in 1981. Next is the most popular of the information literacy models, the Big Six Model by Eisenberg and Berkowitz (figure 11.2). Figure 11.3 is the author's own model.

¹ American Association of School Librarians and Association for Educational Communications and Technology, *Information Power: Building Partnerships for Learning* Chicago: American Library Association, 1998), 1.

² *Ibid.*, 2-3.

British Library Research Model

1. WHAT DO I NEED TO DO?
(formulate and analyze need)
2. WHERE COULD I GO?
(identify and appraise likely sources)
3. HOW DO I GET TO THE INFORMATION?
(trace and locate individual resources)
4. WHICH RESOURCES SHALL I USE?
(examine, select, and reject individual resources)
5. HOW SHALL I USE THE RESOURCES?
(interrogate resources)
6. WHAT SHOULD I MAKE A RECORD OF?
(recording and sorting information)
7. HAVE I GOT THE INFORMATION I NEED?
(interpreting, analyzing, synthesizing, evaluating)
8. HOW SHOULD I PRESENT IT?
(presenting, communicating)
9. WHAT HAVE I ACHIEVED?
(evaluation)

Fig. 11.1. The British library research model.

The Big Six™ Skills

1. Task Definition: (determining the purpose and need for information)
 - 1.1 Define the problem.
 - 1.2 Define the information requirements of the problem.
2. Information Seeking Strategies: (examining alternative approaches to acquiring the appropriate information to meet defined needs)
 - 2.1 Determine the range of possible resources.
 - 2.2 Evaluate the different possible resources to determine priorities.
3. Location and Access: (locating information sources and information within sources)
 - 3.1 Locate sources (intellectually and physically).
 - 3.2 Find information within resources.
4. Use of Information: (using a source to gain information)
 - 4.1 Engage (e.g., read, hear, view) the information in a source.
 - 4.2 Extract information from a source.
5. Synthesis: (integrating information drawn from a range of sources)
 - 5.1 Organize information from multiple sources.
 - 5.2 Present information.
6. Evaluation: (making judgments based on a set of criteria)
 - 6.1 Judge the product (effectiveness).
 - 6.2 Judge the information problem-solving process (efficiency).

Source: Eisenberg, Michael .B., and Robert .E. Berkowitz. *Information Problem Solving: The Big Six Skills Approach to Library & Information Skills Instruction*. Norwood, N.J.: Ablex, 1988.

Fig 11.2. The Big Six Model.

Loertscher's Information Literacy Model

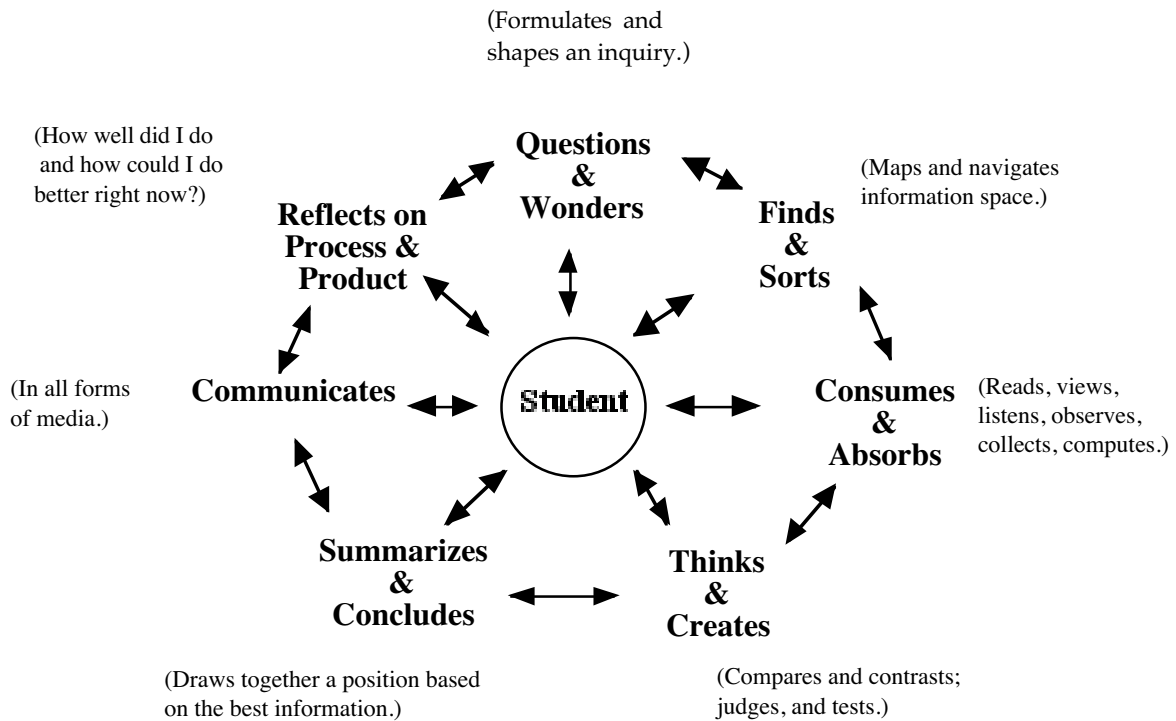


Fig. 11.3. Loertscher's information literacy model.

Each of the three models is based on the scientific method of developing knowledge that can be trusted and replicated. Each has a slightly different perspective, providing a scaffolding of steps or stages that the investigator should go through to build a solid investigative strategy.

A common interpretation of the information literacy models in the field is to teach one of the published models to the students as they are sent to the library to do research. Library media specialists in many schools have adopted an information literacy model as the foundation of their instructional program, and numerous library skill lessons and books of ideas for teaching information literacy are based on teaching these models.

In the past, library media specialists taught "library skills" that concentrated on the teaching of library orientation, the card catalog, the classification system, and the finding of information. While lessons still abound in the literature for targeting these skills, it should be apparent to even the most casual reader that

the concept of information literacy has developed far beyond information location.

Library skills instruction presumed that the most elusive part of doing research was to find a few key information sources for use in writing a research paper or report. Twenty years ago, the researcher was indeed fortunate to copy 20 citations from The Reader's Guide and hope to find one article from the periodical stacks in the back room. Today, finding information through electronic information services or on the Internet is usually the least of the researcher's worries. The problem is what to do with the pile of information that comes spewing forth from the search engines.

Some theorists in the field would say that developing information literacy is the single most important role library media specialists can carve out for themselves in the school. This author considers the collaborative process as central to the program and the teaching of information literacy as a central component of the collaborative process.

In practical terms, teachers come to the planning table wishing to teach students to master content. The library media specialist hopes that during the learning experience students can master the process of learning (the research process or information literacy model) so that learning content becomes easier and more efficient. That is why library media specialists claim to have an impact on learning: They claim that adding process to content increases competence.

OPPORTUNITIES TO INTEGRATE INFORMATION LITERACY

During the process of collaborating with teachers, the library media specialist looks for an opening through which to integrate the skills of information literacy. This is done in the present educational environment by recognizing two "doors" through which to enter. Figure 11.4 illustrates the two strategies as either grabbing a piece of the pie (during traditional teaching) or using the information literacy model as the scaffold of the entire inquiry. (How's that for taking the whole pie?)

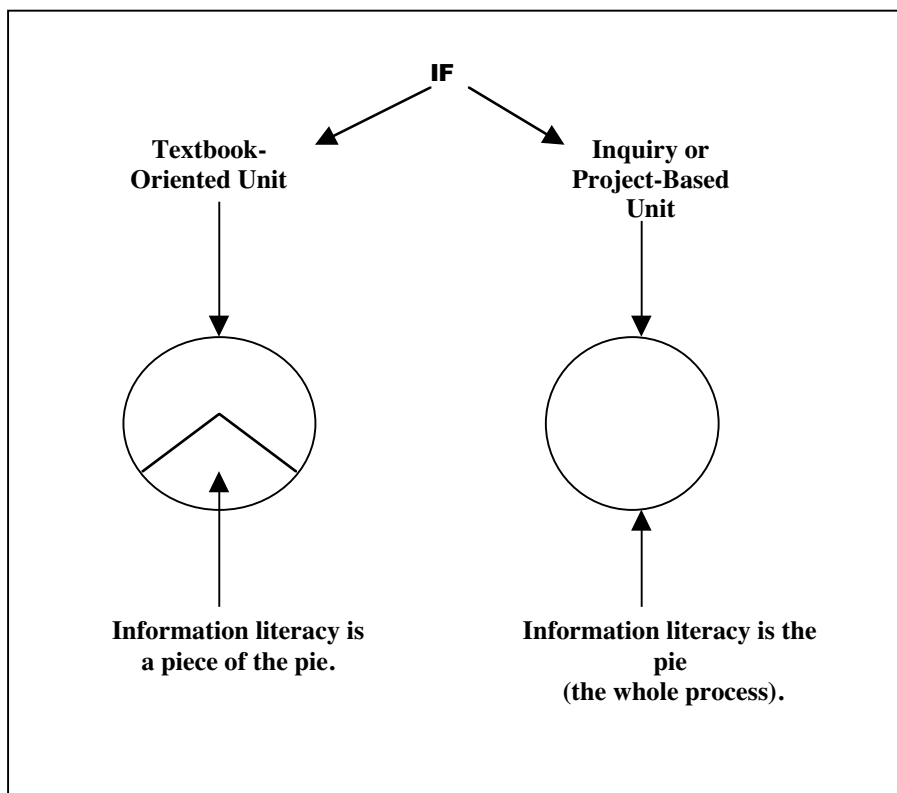


Fig. 11.4. Two information literacy strategies.

The piece-of-the-pie strategy assumes that teachers will allow an intervention during a learning project. We hope teachers will give us a few moments to make our student's research road a little less bumpy. Often, teachers are glad to give up some time because that is time when they are not in the driver's seat. So in a sense they may not care what you do as long as you do it. Some teachers are more than happy to relinquish responsibility for teaching information technology skills because they are frightened of what goes on in mysterious electronic contraptions. Of course, we hope that attitude is not common, but still, library media specialists can be quite effective if teachers begin to trust the skills we are imparting to their students.

Library media specialists who learn to draw the teacher into these mini-lessons or demonstrations craftily educate the teacher at the same time as the student. After several such "turn teaching" experiences, the teachers should begin incorporating the skills we have taught their students into their own teaching methods. Because we cannot be with every teacher for every

unit, we hope teachers will learn information literacy skills well enough to teach them without us. Meanwhile, we are moving on to more sophisticated strategies as teachers learn to impart the simpler ones.

This training of teachers might at first seem as though we are trying to get rid of our role in the educational experience. Far from it. As information technology becomes commonplace in the classroom, a great deal of simple research will take place there. Teachers will bring their students to the LMC for significant projects and more complex tasks that require two professionals if every student is to be successful.

Teachers who already accept the inquiry method, the problem-solving approach, or the constructivist model should instantly recognize the information literacy model as the scaffolding upon which to structure student investigations. These teachers should already be convinced that process is as important as mastering content in the learning experience. When the constructivist teacher trusts the library media professional, a comfortable merger of method takes place. It will be difficult to decide which person on the team is pushing which agenda because both will be coaching students toward the same objective: learn content more efficiently by knowing how to learn.

During an inquiry, the library media specialist and the teacher learn to recognize critical points in the learning process where mini-research lessons fit. These are times when students are confused, lack motivation, have hit stumbling blocks, or are performing below expectations. The research process lessons are taught "just in time" to catch the faltering and propel them into the next stage. Here, information literacy strategies are the safety nets—the guideposts along the learning route.

Something else happens, however, when process and content merge. The students begin to take control of their own learning rather than just doing assignments to teacher specification. They begin to be reflective, to be more independent. They start realizing that the library media specialist and the teacher are taking on a coaching or advisory role rather than a dictatorial one. They begin to ask for advice rather than trying to clarify orders.

SCOPE AND SEQUENCE AS A CURRICULUM

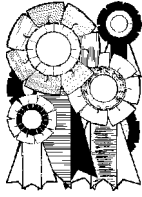
Many states and districts have converted the Information Power list of information literacy skills into a scope and sequence chart showing what each student should know and be able to do at a given grade level. Such lists are valuable if they are adjusted for the maturity levels of younger students. They also give a good idea of various sophistication levels as a student moves through time but sticks to an adopted information literacy model. After all, once the students have memorized the Big Six, what else is there to do?

There is a grave danger in creating scope and sequence charts for a district or a state. These lists tend to turn into a curriculum to be taught. They encourage the adoption of an information literacy textbook as if a course in "library" were being taught.

It is easy to turn information literacy into the fourth "R" by considering it as a course of study for every student to master. This works particularly well in elementary schools where the library media specialist must teach students library lessons once a week. It supplies a curriculum for you to teach. It brings order out of seeming chaos. It provides a sense of equity: everyone gets a dose of information literacy. It is easily reported to administrators. It is not connected to what a teacher is or is not doing in the classroom. It is independent of content knowledge. And hopefully, like the skill of typing, once learned the skills work in almost every quest or subject area a student is trying to research.

To counter the library curriculum idea, the author wrote a fictional story for the previous edition of this book titled "The Golden Library Chills Award." It is presented again here (see figure 11.5).

Golden Library Chills Award



The following is a true report to the author. Only the names and locations have been changed to protect the guilty.

Rhonda Harvey was hired as an elementary school library media specialist in Goldmine, Kansas. She had learned one role for school library media specialists in her library education but in the interview for the job with the principal, she learned that he had something else in mind. Needing the job badly, Rhonda agreed.

"In this school," the principal said, "Our teachers need a 45 minute break each day for their planning period. To accomplish this, we have hired music, physical education, and now library teachers. We would like you to teach library skills to each of the classes in the school for 45 minutes once a week. We certainly hope that by doing this, the scores on the reference section of our basic skills tests will improve. Here is your schedule."

Rhonda noted that 90% of her day was taken up with library skills classes so that there was little time to be devoted to the myriad other duties that she knew needed to do..

The first two weeks of her schedule were difficult for Rhonda because she was preparing her curriculum. She wondered why her professors at the local university had been so little help for this practical challenge. One of the biggest problems was the constant interruption of her library skills classes by students from other classes coming into the library. Since the library was small, any student coming in distracted her class and teachers had a bad habit of sending notes with students requesting materials. Rhonda decided that something had to give.

Rhonda scheduled an appoint with the principal. "You have hired me to teach library skills classes, but students from other classes keep coming in and disturbing us. I feel that I need uninterrupted time to teach. Therefore, I'd like to ask that we set a policy that no one may come to the library when skills classes are in session."

The principal agreed.

The policy statement was distributed to the faculty. Some grumbling was heard in the teacher's lounge, but since planning periods were sacred, no solution was suggested openly. Thus, 90% of the time, no one except scheduled groups may go to the Goldmine Elementary School Library – neither teachers nor students.

The GOLDEN LIBRARY CHILLS AWARD is presented to Rhonda for completely missing the point of the function of a library and to her principal, who was gullible enough to write an extraordinarily foolish policy on library usage.

P.S. If you find yourself as a library media specialist in a similar situation, do the children of America a favor. Quit. If you are a principal and your library media specialist favors the closing of the library to use, fire that person.

Fig. 11.5 Golden library chills award.

Teaching library skills, and now information literacy skills, as a course of instruction in a systematic fashion to every learner is alive and well in the school libraries of this country. If there were any indication that our efforts over a generation have produced excellent researchers when students went to college, we might be bragging about our investment in time and energy. Alas, academic librarians almost without exception decry the lack of research knowledge of the undergraduates entering their institutions.

Every theorist in the field has been begging this profession to integrate library skills and information literacy into what is going on in the curriculum. These pleas have been heeded only dimly by the profession as a whole. It has been as if the profession has said to the theorist, "That is what you teach, but my teachers and principal want it the way I do it" (meaning that systematic instruction once a week is the preferred method).

HOW TO USE A SCOPE AND SEQUENCE AS A CHECKLIST.

If there is a scope and sequence checklist in your school or district, it is fairly easy to integrate that list into your planning. The following addition to the planning form (figure 11.6) illustrates one idea to keep track of where you are with a particular teacher along the continuum for that teacher's grade level or subject area.

Planning Form with Scope & Sequence Checklist

| | |
|---|---|
| <p>Scope & Sequence</p> <p>Building Questions</p> <p>Finding Information</p> <p>Absorbing Information</p> <p>Thinking</p> <p>Concluding</p> <p>Communicating</p> <p>Reflecting</p> | <p>Unit Planning Form</p> <p>Goals and Objectives:</p> <p>...</p> <p>...</p> |
|---|---|

List the skills here for a certain grade level. Use as a checklist for integration. Over the year, all should be checked off.

Print your favorite planning form here. It can be filed in a notebook under a teacher's name to chart progress.

Fig. 11.6. Planning form with scope and sequence checklist,

Figure 11.7 shows a different technique to track information literacy skills as unit plans develop.³

³The matrix in Figure 11.7 was created by Susan Jimenez-Anderson.

UNIT TITLE: _____

| Information Literacy Competencies Matrix | Activities/Lessons | | | | | | |
|---|--------------------|--|--|--|--|--|--|
| | | | | | | | |
| Source: California School Library Association. <i>From Library Skills to Information Literacy</i> , 2 nd Edition. Hi Willow Research & Publishing, 1998. | | | | | | | |
| 1. Explore/Identify the need for information. | | | | | | | |
| 2. Formulate the central search question. | | | | | | | |
| 3. Relate question to previous knowledge; identify key words, concepts, and names. | | | | | | | |
| 4. Identify potential resources. | | | | | | | |
| 5. Develop general search strategies to organize the search. | | | | | | | |
| 6. Locate and explore previously identified resources. | | | | | | | |
| 7. Select the most useful resources for further exploration and formulate specific strategies for using them. | | | | | | | |
| 8. Search for relevant information. | | | | | | | |
| 9. Evaluate, select, and organize information. | | | | | | | |
| 10. Analyze information retrieved: interpret, infer, and integrate. | | | | | | | |
| 11. Determine how to use/present/communicate information: organize information for intended use; use information. | | | | | | | |
| 12. Evaluate results; evaluate process. | | | | | | | |

Fig. 11.7. Information literacy skills/subject understanding grid.

STRIKING A BALANCE BETWEEN INFORMATION LITERACY AND CONTENT

Shall we teach students how to learn or require them to soak up the knowledge? That question is at the heart of the debate

between traditionalists and constructivists, and numerous state governments are trying to link their own brand of methodologies to state monies flowing into the schools. The argument centers on which methodologies will produce the highest level of achievement based on what the standardized tests measure. Information Power tilts the balance in favor of the constructivists, and library media specialists following the national standard's lead should realize that there are risks in doing so. Figure 11.8 demonstrates the recommendations of this author in the controversy:

| | | Content Understanding | |
|------------------------------------|-------------|--|---|
| | | Poor | Good |
| Information Literacy Skills | Good | Students know how to learn but are shallow in their content knowledge. | Students are in the best position to learn. |
| | Poor | Students are in trouble. | Students soak up content but lack investigative skills. |

Fig. 11.8. Information literacy skills and content understanding.

The message here is that both process and content knowledge are important and that a balance between the two provides an optimum guide for practice. What does this mean as library media specialists work each day? It means that during unit planning the library media specialist purposely tries to teach the information literacy skills needed to master content knowledge of the unit being taught.

Worrying about content knowledge is an easily-adopted frame of mind. For example, you would ask, “What information literacy skill would help this group of students understand the causes of the Cold War?” Or, “What is the fastest way to help students understand the arguments both for and against a controversial issue?” Another good question is “How can we get every learner in this class to understand the arguments both for and against a controversial issue?”—not just the majority, not just those who speak English well, not just the able learners.

Linking content concerns to information literacy strategies brings to mind numerous ideas if both the teacher and library media specialist think about it. The key may be in:

- A type of media or information structured a certain way
- A learning strategy that helps everyone
- A fun activity that demonstrates a point
- A technology skill that so motivates kids, they learn the content
- A change in the question posed to students at the outset of the unit

In your mind, just ask:

What information skill would help these learners accomplish what they are trying to learn more efficiently, right now?

If you worry about this question rather than which skill is next on the scope and sequence chart, you are more likely to place learners in the upper right-hand box of the grid presented earlier.

BUILDING INTEGRATION STRATEGIES

Integrating Content. Library and information skills lessons are everywhere. They are printed in magazines, published in books, and available on the web. One common example is to teach students something about the library catalog, whether in card form, on the computer, or on the Internet. A low-level fact-gathering worksheet is supposed to teach students that the catalog is the place to look up authors, titles, or subjects. The example on the left below shows the usual method of teaching

using items that would be in almost any catalog. The second example on the right shows how easily the same exercise could be transformed and integrated into what students are learning (the class is studying birds).

| P O O R |
|--|
| <ol style="list-style-type: none">1. Who wrote <i>Charlotte's Web</i>?2. What books do we have in our library written by Avi?3. What is the call number for books about the Civil War? |

| B E T T E R |
|---|
| (assumes the class is studying birds) ➤ Who wrote <i>Birds of America</i> ? ➤ What books do we have in our library written by John James Audubon? ➤ What is the call number for books about birds? |

True, both examples require only fact gathering and thus are termed low level for their contribution, but students are much more likely to use their searching time more efficiently if they are directed to the task at hand rather than scattering buckshot across a vast terrain. Certainly changing the questions to suit whatever a teacher is teaching requires a bit of time on the part of the library media specialist, but think of the efficiency created for 30 learners.

Avoiding Parallel Teaching. One popular method of supposed "integration," is practiced by many library media specialists because they have been unable to create a collaborative program with teachers. In these schools, the librarian finds out what topics teachers are covering at the moment and then create a parallel but separate activity in the library. This strategy assures some level of correlation between the classroom and the library, but it also is a dangerous practice in the long term. Teachers might appreciate the correlated effort, but few of them will consider what happens in the library as an essential part of the curriculum. Instead, the library activity is considered as enrichment—butter on the bread or icing on the cake—all of which is nice, but when financial hardship comes this makes the library program a target for elimination.

There are exceptions, however. Sometimes getting to a teacher is impossible. The choice, then, is whether to teach information literacy in the parallel mode or not at all. Even this author would grudgingly admit that sometimes you have to do what must be done. But—and this is a major caveat—parallel teaching should always be a temporary solution, not a constant practice.

IDEAS TO TRY AT EACH LEVEL OF THE INFORMATION LITERACY MODEL

There are hundreds of ideas for helping students and teachers as they progress through the various stages of the research process. Following is a partial list of “idea starters”; supply others as you discover them.⁴

Building Questions

- Help teachers reframe questions from low-level fact gathering to higher level questions that cause students to think.
- Encourage teachers to allow students to build their own questions that they are interested in answering.
- Be aware that students are likely to face questions or inquiry problems with uncertainty, so they will need support.

Finding Information

- Remember that search engines are not always created for children, so they will need you to help.
- Before students can be good searchers, they will need some basic vocabulary of the topic.
- You might well confine students to a core of information you have pulled, identified, bookmarked on the Internet, or otherwise gathered until you feel they are sophisticated enough to handle a journey into "Information Deep Space 9." Using this theory, less is considered more. A few quality information sites are made available, as opposed to the confusion of hundreds and hundreds of sources fighting for the student's attention. The sophistication of the students and time pressures will dictate the method adopted here. Figure 11.9 demonstrates this idea.

⁴ Many of these ideas are taken from: David V. Loertscher and Blanche Woolls, *Information Literacy: A Review of the Research for Practitioners and Researchers* (San Jose, Calif.: Hi Willow Research & Publishing, 1999).

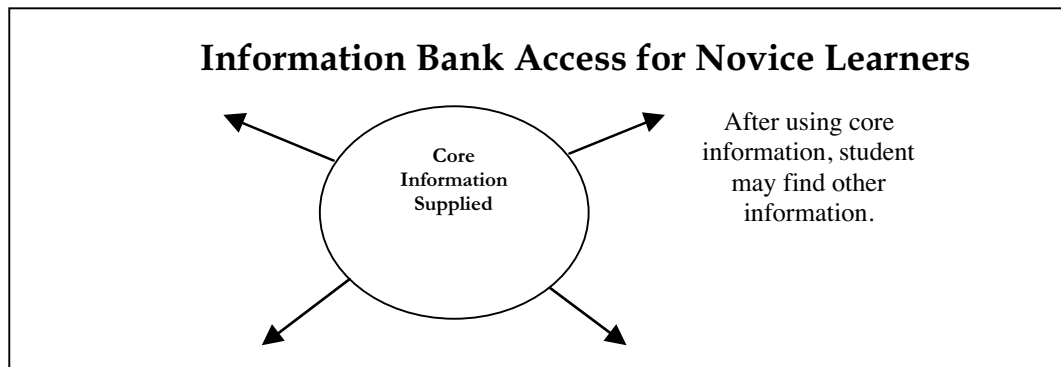


Fig. 11.9. Information bank access for novice learners.

Consuming Information

- Make sure that students have the time to actually read, view, or hear the materials they have found. Too much hurrying at this point will cut quality interaction time with information sources.
- A few quality sources are to be preferred to many poor ones.
- Various forms of media will appeal to various types of learners, so choice is essential.
- Students will need to be taught how to navigate through information such as teaching text structure, reading graphics, understanding summaries, etc. This includes techniques such as skimming, scanning, and main idea identification.
- Help students with outlining or mind-mapping techniques as they study. Most love underlining or highlighting. Teach them better ways than just making colored lines on pages.
- Help students know when to skim, absorb, study, enjoy, or slow down and think their way through information.

Thinking and Creating

- Allow students to be creative. They are born with a streak of creativity, but it is easy to squash it with "do what I say exactly as I tell you to do it" assignments.
- Questioning by students should not always be interpreted as challenging authority.

- Help students define parameters around which creative expression is not only allowed but expected.
- Learn how to reward creativity and out-of-the-box thinking.

Summarizing and Concluding

Learn how to teach the following skills:

- Summarization
- Synthesis
- Taking a side based on evidence
- Forming a supportable position
- Taking a stand
- Arguing a point logically
- Building transitions between ideas
- Comparing and contrasting

Presentation

- Teach just-in-time production techniques in a wide variety of formats.
- Use teach-one, train-one models for teaching a few students, who will then teach others.
- Teach effective communication strategies for getting a message across.

Reflection

- Try various assessment techniques to look at student work and show them how they will be evaluated using each strategy.
- Use rubrics to help students evaluate their own work.
- Give two grades for a project: one for content and the other for the research process.
- Do AARs (after activities reviews) with the students, teachers, and library media specialist to pinpoint as a group what went right, what went wrong, and how to correct the research process the next time.

WEANING LEARNERS FROM SOMEONE ELSE'S MODEL

It is always easier to use someone else's list of research steps for doing a project. And if very much of this happens, the students will go through the motions without much thinking because they go into autopilot. A better strategy is to have them use a particular information literacy model a few times as they develop the concept of the research process, all the while encouraging them to create their own list of methods, procedures, and finally their own model. We are trying to build students who are life-long learners, not mimics or regurgitators of others' thinking.

There is no age at which a student suddenly will change from a dependent learner into an independent one. Some learners will think they are more sophisticated than they really are. Projects that challenge both the dependent- and the independent-seeking learner will test their skills and provide opportunities for reflection on where they really are on an independence or sophistication scale. The goal of creating an independent learner is illustrated in figure 11.10:

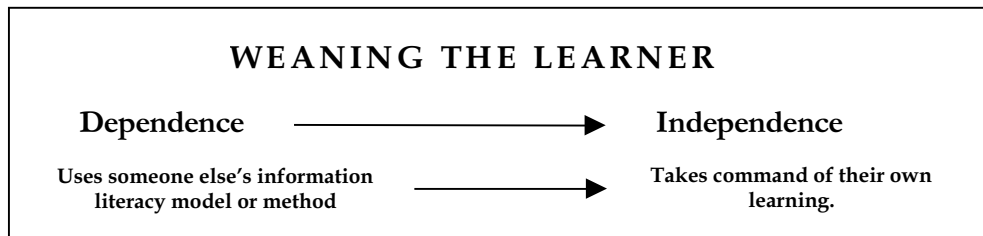


Fig. 11.9. Weaning learners.

Most library skills guides in the literature do not advocate the creation of a personalized information literacy model. However, such a project by students as well as adults is extremely instructive. In several classes and workshops, the author has presented a task of having adults compare and contrast a variety of information literacy models and then drawing their own. It is always fascinating to look at the resultant models, many of which are more insightful than the originals. Figures 11.10 – 11.12⁵ show several models created by adults trying to design their own personalized models. One wonders what high school seniors might come up with.

⁵ Thanks to Melissa Cobian for her Discovery Model, Judy Klos for her model created in Inspiration, and a group of Southern California library media teachers who claim they were hungry when they created the cheeseburger model. The group included Sandy Richards, David Bogardus, Linda Overman, and Carol Forbes.

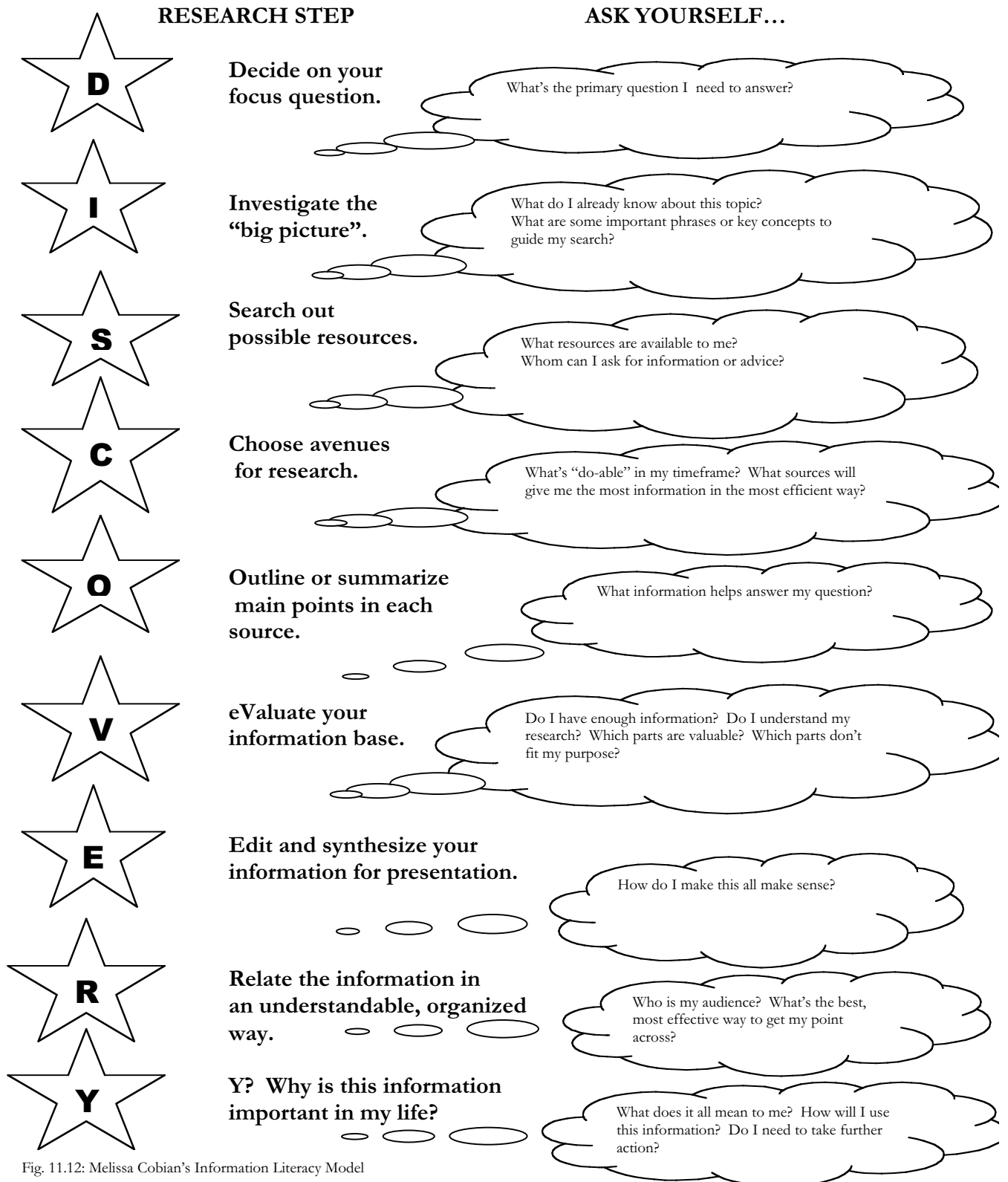


Fig. 11.12: Melissa Cobian's Information Literacy Model

Information Literacy Model
 Developed through research, discussion, and reflection
 Judy Klos

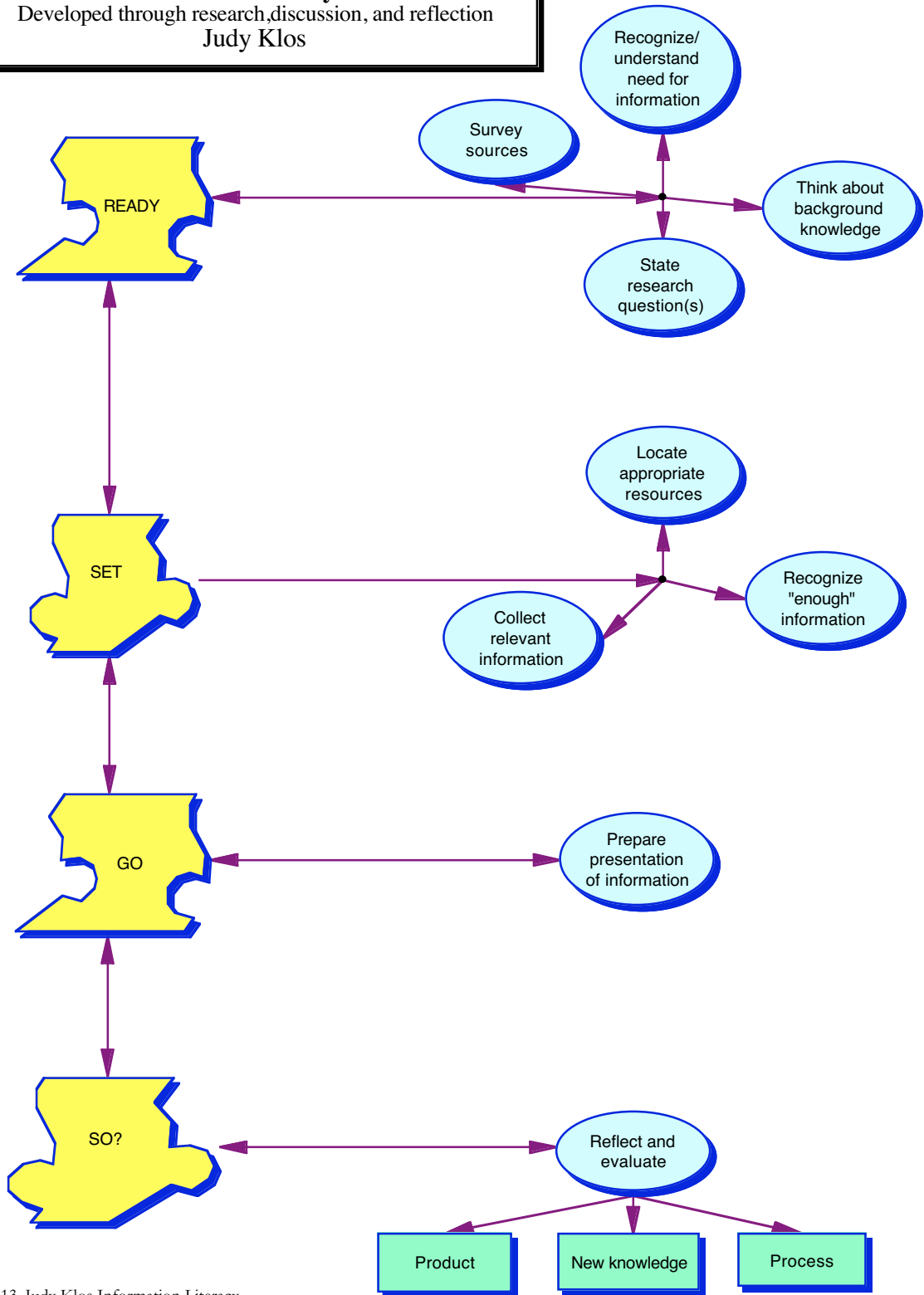


Fig. 11.13. Judy Klos Information Literacy Model.

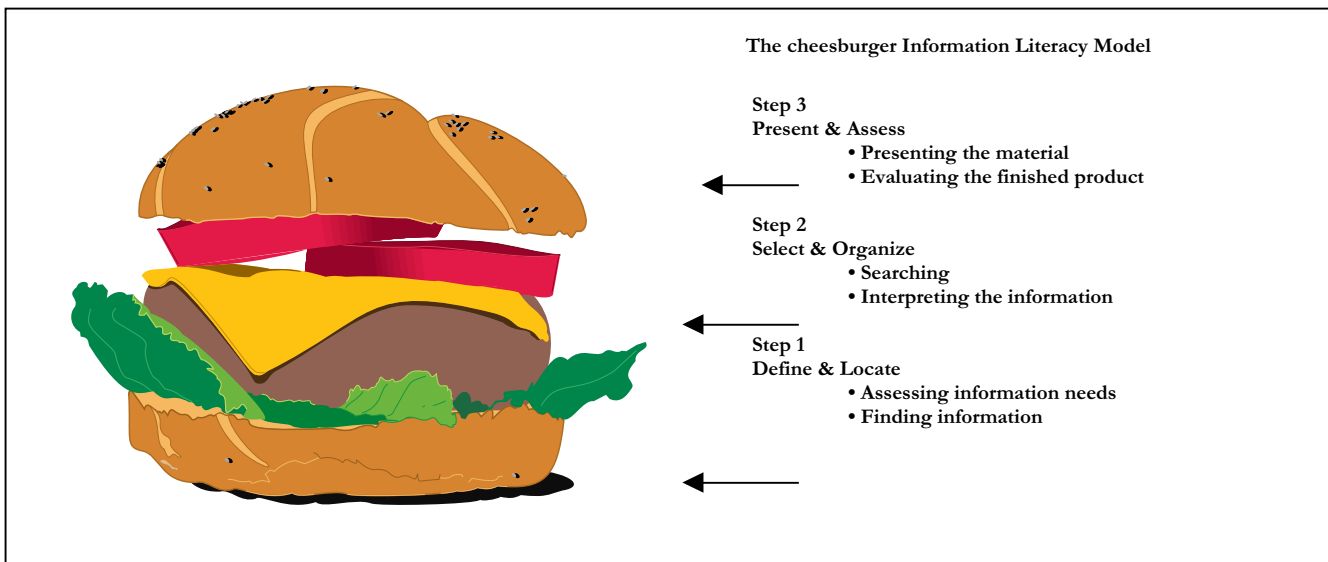


Fig. 11. 14. The cheesburger information literacy model.

ARE YOUNG PEOPLE TOO YOUNG AND TOO IMMATURE TO DEVELOP THEIR OWN INFORMATION LITERACY MODELS?

Perhaps development of "my own learning model" is a college-level or adult activity. Perhaps only folks getting their doctorates should be allowed this wonderful and exciting activity. After all, like the old advice to slave owners, "Teach them to read and they will revolt" could be applied to the research process. Let's keep them ignorant and dependent on those who should be shaping opinion. Teaching students to think and become life-long learners is a dangerous thing for the status quo of any organization or society. Perhaps this subversive chapter should be burned.

What would happen if students at some point in their education could be conscious enough of their own learning style to verbalize it without guidance? These students might recite something like:



- I am a Power Learner.
- I know my own learning style.
- I am a problem solver.
- In the world of information technology, I _____
- (their own model).

For an experience with 8-10 year-olds about their own progress in information literacy, see Appendix B written by Sharon Coatney, a Past President of the American Association of School Librarians.

DEVELOPING SOPHISTICATION DURING THE YEAR AND ACROSS THE GRADE LEVELS.

Teaching information literacy is not just a one-time event—it is a life-long developmental activity. Even the great thinkers of all time have exhibited plainly their struggle to create new ideas or master techniques or solve problems. How did Michelangelo learn how to paint on plaster over his head? How did Edison invent the movie camera? Such learning experiences are hard work and develop only with the highest concentration.

Students who begin to experience research in the first grade will not immediately understand and develop expertise. Over the course of the school year, however, all learners should develop their expertise, some in spits and spurts, others very gradually.

In another publication this author recommended that we all see learners in three distinct categories—beginner, intermediate, and advanced—as illustrated in figure 11.15:



Beginners

- Frazzled
- Lost
- Can't pick a topic for research
- Can't find information
- Desperately needs help
- Needs help constantly
- Distracted
- Uninterested



Intermediate

- Self-starting
- Still a roller-coaster experience
- Needs support
- Has moments of insight
- Interested
- Somewhat systematic
- Will take advice



Advanced

- Independent learner
- Knows where to go and how to get there
- Asks advice to monitor progress

Fig. 11.15. Three categories of learners.

The library media specialist and the teacher must have on their agenda the development of information literacy in addition to building content knowledge. This is something to discuss on a regular basis as development of content knowledge grows. Are both agendas (development of information literacy and acquisition of content knowledge) being addressed throughout the school year? Many teachers have one focus: get students ready to take tests. It will take some attention-getting strategies to focus minds on more than one goal.

We have already mentioned the wise use of scope and sequence charts. The use of rubrics is another good strategy. The use of AARs is a third one, which includes students in reflection on their own progress.

LOOKING FOR AN OPENING TO INSERT YOUR AGENDA.

While your first responsibility is to help learners build understanding of science, social studies, and other disciplines, the theory is that knowing how to learn will increase the student's efficiency in studying the discipline. As teachers understand the importance of your agenda, they will be expecting you to either incorporate your agenda into their units or, in the case of inquiry, invite you to be on the "coaching" staff of the unit as it progresses.

Look for both planned and spontaneous activities through which to teach information literacy.

Planned Activities. Using planning forms and checklists with the unit objectives in mind, design an information literacy mini-lesson likely to enhance student success. For example:

- Students will be designing a web page for their projects, so beginner, intermediate, or advanced instruction is planned at the point where their design will need to begin.
- Because students will be preparing arguments for and against a position, a lesson on recognizing the various shades of opinion is prepared.
- Primary sources the students will be using include many difficult terms and period ideas. Information literacy lessons may include that cover finding period definitions, using materials to build background understanding, or learning to read period handwriting.
- The library media specialist and teacher build a web quest of various Internet and CD-ROM information resources on various difficulty levels, anticipating students with learning problems.
- Knowing that half the class has difficulty with English, the library media specialist and teacher assemble visual resources, materials with easier reading levels, and primary language materials that will help students understand the concepts at hand and at the same time learn English.

- A new information system has just been installed in the school that is available in both the LMC and the classrooms. The library media specialist plans a professional development seminar for the teachers, and a system of teach-one, train-one is instituted, with a student leader in each classroom receiving training. The whole school is trained in less than 30 days.

Spontaneous Activities. Spur-of-the-moment activities are a good way to build competency without a great deal of disruption. The teacher and the library media specialist agree to insert mini-lessons at appropriate times when students seem to be having difficulties. For example:

- Students spent a half an hour in the library and came back to the classroom with very little or the wrong information. The library media specialist gives a mini-lesson in searching at the beginning of the next library time.
- The videotaping of student projects is not going well. Both the teacher and the library media specialist stop everyone for a quick analysis of what is going wrong and why—giving hints on how to correct problems and disorganization.
- Students are floundering with materials and information that are extremely difficult for them. The teacher and library media specialist teach a mini-lesson on text structure and group students so that those who are more successful can help those less successful.
- Students seem to be foundering in a sea of facts. The library media specialist teaches mind mapping as a technique of building connections and beginning to see patterns just before students leave to go back to their classroom to organize what they have found.

TAKING CUES FROM RESEARCH

Because there is enormous interest in the information literacy process right now in the profession, many researchers are working on the problem of teaching it. This author has published (and frequently updates) a summary of the research that is worth reading in depth for ideas to implement.⁶

There are, however, too few researchers working on a giant problem. Some of the best thinkers of the field are the practitioners who daily observe young people grappling with information. For you, the practitioner, doing research in your own school with your own learners can be a wonderfully exciting project, to be solved as you are instructing students to solve their own problems (see the Sharon Coatney experience in Appendix B). You can use your own information literacy model to research information literacy itself. This is your way of learning how to assist every learner to become an independent learner.

EVALUATING YOUR PROGRESS

As you make an impact in student learning, you should begin to realize that students are progressing from dependent learners to independent learners. Documenting this could be done as a case study in several classrooms over time. For example, at the conclusion of a research project at the beginning of the year, both you and the teacher might rate each student on a scale of dependence/independence (for example: Dependence 1 2 3 4 5 Independence). Compare your ratings and come to consensus. At the end of the year, repeat the ratings. Discuss what has happened over time. If there has been no improvement, make some plans for next year.

Another revealing measure would be to make a chart of the information literacy model you use with students and record how often in the last month your information literacy skill lessons had covered each of the steps in the model. What steps seem to predominate? Why? What steps are being neglected? Why?

There is only one way to measure progress with learners and that is to attempt to measure progress. No library media specialist can make progress as a learner without this critical reflection.

⁶ Ibid.

RESOURCES

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Direct Services

Part three, chapters 12-13 cover the direct services block of the library media program. Chapter 12 covers the one-on-one services to children and teenagers demonstrating the personalized guidance that library media specialists can give in a nurturing environment. Chapter 13 extends the same spirit of service to the various groups who partner with the library media program to give service to the school. These groups range from parents and businesses in the local community to groups of national and international importance. It also covers the professional development offered to individual faculty members and departments in a single school.

Direct Services of the LMC to Individuals

Building the second foundation stone of the LMC program is a very satisfying experience for a library media specialist who enjoys communication and serving others. There are so many occasions during the school day when positive and productive individual assistance can be given. Many people choose librarianship as a career based totally on their perception that a service-oriented profession is a very attractive job. Like other levels of the model, however, it is easy to spend an inordinate amount of time on direct services and ignore the information infrastructure and the four central program elements. In schools with large LMC staffs, some personnel can be assigned for certain periods of the day to staff the reference desk and concentrate on direct services. Where the library media specialist is alone, direct services must be juggled as one of many daily tasks.

Direct services concentrate on the individual or the small group. A student may have a reference question, a teacher may need some ideas on discipline, several students may need to do online searches for science research papers, other students may be clamoring for a good book to read, and a teacher may send a request to the LMC to pull all the Civil War biographies. A myriad of requests come hourly, providing variety and challenge to the service-oriented library media specialist. If the success ratio is high, a great deal of satisfaction is felt. If resources are meager, dismay sets in and requests for assistance can diminish to almost nothing. If the library media specialist is not service-oriented or does not enjoy working with teachers and students, barriers are often erected to discourage requests for service. Administrators are wise to hire a library media specialist who is an effective communicator and who enjoys working with people.

This chapter explores various direct services, provides suggestions for defining their scope, and describes their impact on students and teachers.

PERSONAL GUIDANCE

Working in the LMC on a daily basis requires that we interact with young people of various ages, all whom come to us with important personal needs. Certainly one of the most valuable background skills we can acquire is some formal coursework in child and/or adolescent psychology.

We deal with children who may come from dysfunctional families, may have been sexually abused, may have learning or physical disabilities, are habitual troublemakers, are social misfits, or who mistrust any adult. On the other end of the spectrum are the socially adjusted, the self-confident, and those who come from nurturing families. Add to this the numerous cultural backgrounds, wonderfully talented, or English learners, and the new professional finds a rich spectrum of children and teens to serve.

Those who don't enjoy working closely with children or teenagers, with all their idiosyncrasies, should really find another profession. If you dread going to work because you really dislike young people, an adversarial relationship will quickly develop and your career will be a dismal experience.

On the other hand, the good you can do for the young people in the school is tremendous. Their needs are great and the rewards are incredible. Success stories abound in our profession. We have colleagues who have prevented suicide by taking quick action, helped a young person select a lifetime profession, rescued a failing student from becoming a dropout, helped a student on drugs get professional help, found a homeless child/teen an agency to help, gave lasting and personal encouragement, helped teens find a job with a local computer firm, helped a student get a scholarship for college. Many of our colleagues have been named teacher of the year or received a standing ovation at graduation. The list could go on.

Among children and teens, the word gets around quickly. You can be trusted. You care. You give good advice. Or, you are to be avoided at all costs. You are a witch starting with the letter B.

Those prepared to serve understand:

- Physical development,
- Emotional development,
- Social development, and
- Spiritual development.

They build a network of contacts who can help young people. Counselors, school psychologists, nurses, and spiritual advisors are on call when you need to make a referral. And you have a well-stocked collection that helps young people understand the most personal and private of problems. Your best weapons in dealing with personal problems are solid and accurate sources of information. You provide the real facts, solid alternatives, and sound advice, in a caring environment.

You learn to respect every child/teen as a worthwhile individual. You help these budding adults fight impossible barriers put in their way by adults, organizations, stigmas, or just plain discouragement. You will have thousands of opportunities to help build multicultural understanding, to do something about the digital divide, and to recognize and deal with social injustice.

You are a social worker's best friend. The security and safety personnel of the school will want your help to make the school environment conducive to basic personal safety and to being a place to learn without fear.

Certainly the tragedy of Columbine High School in Littleton, Colorado (1999), where so many teenagers died in the library, makes us all wonder, "What can we do to help?" We can do a great deal! And we must do it every day. We understand. We care. We lift. We build.

Among our ranks, however, are a few who use their position to play out their own insecurities or even prey sexually upon young people. You must realize that you can do irreparable harm to a young person, and you need to be wise enough to get out if you have these tendencies.

If you have a personality that exudes caring, you can hardly begin as a school library media specialist without encountering those crying out for your help. Some of us take time to learn techniques of "library counseling" or personal advocacy. All of us can become better and better as our experience grows. We are always wise enough to recognize when we can help or when we must punt to another professional who has expertise we lack. Luckily, many school districts provide extensive in-service or professional development activities to help us develop skills and to know our legal responsibilities.

WORKING WITH STUDENTS WITH SPECIAL NEEDS¹

A number of students with both physical and mental disabilities are being integrated into regular schools; they will require our attention and help. Often there are special education teachers and teacher aides assigned to help these young people who are anxious to work with us to create a positive and nurturing experience with the LMC.

Many of these young people need adaptive technology both in the library and the classroom to be able to work with our information sources. You will need to provide such things as specialized keyboards, voice output devices, programmable mouses, screen magnification, speech recognition devices, or touch screens among others. You will also need a wide variety of materials in special formats for use by these patrons: audiotapes, pictorial works, and large-print materials, to name a few. These materials and equipment are often available through special funds and grants so that our regular budgets need not suffer.

While we can and will get great advice from special education teachers, counselors, aides, and parents of these young people, one good way to find out how to serve this population is to ask the kids themselves. Sometimes a buddy system—pairing a disabled student with another student—can help. In this case, help may go in both directions. A disabled student may be a master at computer software and be designated as teacher of other students for a particular package. Buddy systems often work well with those who are physically disabled, but emotionally disabled children present greater challenges. Discovering what a particular student can do well and what he or she needs is the first step for both giving assistance and allowing that person to serve others. Just think of a "Stephen Hawkings-type teen" who would be able to tutor/teach even the best and brightest in the school.

The library media specialist can also help build understanding within the school by stocking good fiction and nonfiction in which disabilities are a positive part of the story. Such books as *Freak the Mighty* can help all of us understand what it is like to be trapped in a physical body that just won't work the way it was designed. Such materials are not, however, just for the disabled. They will read as widely as others. Parents will often appreciate lists of good materials that help raise the spirits and determination of their children to cope with the difficulties of life on a daily basis.

¹ Thanks to Jan Murray, a doctoral student in Australia and her paper: "Enhancing the Skills of School Library Staff to Cater to Individual Student Needs" presented at the 65th IFLA General Conference, Aug. 22, 1999 in Bangkok, Thailand Email: murrayan@gsat.edu.qu

The problem, of course with serving these young people is the time investment, which can be huge. You will need staff and resources to provide the kind of services required by legislation as well as fulfill your aim to serve all equitably. Look for opportunities to get money and staffing to create the kind of program you want.

REFERENCE SERVICES

One of the most wonderful developments in the information world is the capacity to deliver the old print reference collection to the point of need rather than locking it up in a single location within the library. Reference collections have been and continue to be the most expensive resources the LMC stocks. Now, through networks connecting the LMC to the classroom and to the home, many information sources are available at the point of need. For example, a networked encyclopedia can be accessed anywhere there is a terminal. Gone are the days when we had only one recent edition of the *World Book* in the library and the classrooms had access to 20-year-old cast-off sets from the library.

The library media specialist should build a system of core reference information being delivered to the point of need and more specialized information in any format being available in the "data den" or reference area of the library media center. Using these resources, the library media specialist can perform spectacular fetes of magic by providing incredibly rich answers to personal and educational questions.

The choice of which reference works are "core" and where they will be delivered electronically is a critical one. You will not be at the elbow of the student or the teacher in the classroom or at home. Therefore, whatever you select to be closest to the student is probably the source that many students will use exclusively. It seems that every information database, including online library catalogs, reference databases, and full-text periodical systems, has its own unique search engines. These search engines are getting better and better all the time as they try to mimic how a human would provide personalized reference service. Yet their uniqueness is a problem and many are adaptations of adult search engines rather than designed to really serve the child or teenager. You will want to think long and hard and consult your network of friends in other libraries before settling on what information sources including quality Internet sources you will distribute.

Back in the LMC, you will try to stock more sophisticated resources, particularly ones that are judged high in quality but

are either too expensive to distribute over the networks or require your reference skill for the students or teachers to use them effectively.

Have at hand a good criteria selection list as you make your decisions about what to include in the reference section. There are some good overall criteria. The first group deals with precision:

- *Documents*: The retrieval system should be able to retrieve relevant documents using fairly simple search terminology.
- *Search terminology*: The common language used by students should retrieve relevant documents.
- *Quality of information*: The accuracy, authority, and currency of the information should be sufficient to trust the search results.
- *Usefulness*: Over time, the information in the system should match the precise information that most students can use in the types of assignments or inquiry they are attempting. This includes such concerns as format, text structure, reading level, and attractiveness, which invites the student to use and explore further.

More and more, the reference service you provide matches the needs of the student or teacher with a particular source, and personal guidance in retrieval strategies is given. At some point, you may want to shout: "Read the screen!!!!" after the hundredth coaching tip on the same database is given. Certainly student assistants and selected students and teachers can be taught searching strategies on various tools and then provide assistance to their class or group.

The secret of reference service, whether in traditional print or newer technologies, continues to be the reference interview: finding out the real question being asked and providing relevant and useful information matching the query. The reference process in any LMC can be one of your most satisfying experiences because it brings you into contact with young people and teachers on a one-to-one basis.

INDIVIDUALIZED HELP WITH THE INFORMATION LITERACY PROCESS

Closely connected to the reference process is the opportunity during personal reference assistance to develop the individual student's or teacher's inquiry skills. Rather than just helping people retrieve a bit of information and sending them on their

way, try to ascertain the student's or teacher's skill level and try to increase it. For example, in information location, instead of saying: "Look that up under ADOLESCENT PSYCHOLOGY," remind the student that it is necessary to match the request with the language used by the database and help the student develop flexibility if something like TEEN PSYCHOLOGY doesn't seem to work.

But other questions might well stimulate thinking beyond mere location skills. For example: "Why would this source give one fact and another a different fact?" "Which of those two sources would you be likely to trust and for what reason?" "Why do you think this argument is being put forward by that person?" It is amazing how much teaching can be done by asking the students or teachers to think. And even better, the personal encouragement that you give will help smooth out the many bumps likely to be encountered as students do research in depth. As you develop your skills, you will be able to ascertain whether to just get the information, make a simple guiding suggestion, or go through an inquiry process. Your aim is always to nudge the student or teacher from being a dependent learner to becoming an independent one.

Individual assistance sessions are a good opportunity to help a young person think beyond one source to other good sources in the library, other libraries, community resources, and Internet sites. Much can be done one-on-one to link a student into the vast worldwide information network as it develops and becomes more sophisticated.

TECHNOLOGY SKILL ASSISTANCE

A third dimension of the reference process is to help young people develop skill at using the various technological devices that you have on a one-to-one basis. Using the video camera, desktop publishing software, and web design are just three of a whole host of skills that come to mind. You will see students or teachers struggling trying to produce a product; a 5-second tip or a 30-second demo can expand their horizons and technical skill for the long term. Having tip sheets available, pointing out quickie online tutorials, or having another student or teacher give a demo can be time savers for you and equally valuable for the person giving the help. An array of tip sheets on bookmark-sized paper near an application or at an equipment station can be invaluable to everyone. Students can make up such helps as they learn a software package or use a piece of equipment. It is all part of the "you help me, I help you, we all help each other, and we all keep it running" philosophy discussed in chapter 10.

READING, VIEWING, AND LISTENING ADVISORY SERVICES

Readers' advisory services are some of the oldest services performed by library media specialists. In the most simple form, a library media specialist helps a patron find "a good book to read." But as the technology has expanded this service has extended across all the media. Such a service assumes that you are a reader, viewer, listener, and Internet surfer yourself—that you know the good stuff and you know how to match the best with just the right person.

Excited students or teachers will stop you everywhere asking if you have heard of a great new title; you respond in the affirmative and suggest an equally good item to consider. The best school libraries have lists of great stuff conveniently located all over the LMC. Many library media specialists make this advisory service everyone's task. It becomes a part of the philosophy that everyone should enjoy and recommend books, movies, cultural events, Internet sites, or a host of other fine multimedia experiences.

GATHERING MATERIALS

Given enough lead time, library media specialists and/or their assistants generally can gather sufficient materials on any topic requested by a student or teacher. These materials may come from the local collection or be supplied through various networks. Because no library can hope to contain everything patrons need or request, the emphasis for the past 20 years has been not only on building networks but also on cooperative collection agreements.

But with today's information glut, often less is more. A few well-selected materials that match learners' or teachers' needs may be better than adding to the confusion of too much, too fast. A list of web sites, for example, may begin with a few basic ones and then add concentric circles of more in-depth materials.

BUILDING AMBIENCE

We cannot leave this chapter without discussing how important a central LMC's ambience is to the comfort of its users and a sense of well-being. Making the LMC an inviting place has always made the difference between just a place and an exciting learning center. Where is the student work displayed? Good art? Inviting color schemes? Comfortable seating? These features are discussed in more detail in chapter 14.

Many library media specialists display awards received by students, teachers, teams, and the school as a whole in the library first before they go home or to the various departments. The LMC becomes the cultural center of the school, not just a place to get stuff.

Direct Services to Groups and Program Elements

While there are ample opportunities to serve individual students and teachers, there is a second dimension to direct services targeted at groups and special program elements of the school. Serving groups is one of the best ways in which to develop advocacy for the LMC program over a long period of time and build a power base within the school organizational structure.

This chapter outlines a wide variety of possible groups or program elements that could benefit by partnering with the LMC staff and upon which you might shower attention. The more limited your time, the more you need to serve because more individuals can be served in the same amount of time.

PARTNERING WITH COMMUNITY GROUPS

In every school community there are numerous groups interested in helping to improve the educational program. Many of these groups have altruistic motives. Some are trying to promote their own agendas. You sometimes face critical choices as you decide which will receive your attention and time.

Parent Groups. Most schools have some type of parent group whose activities and financial support are related directly to the affluence of the community. In an area where both parents or single parents work long hours to afford the basics, few will be able to devote time to contribute to parent group activities. Much depends on the few people who have the time to devote to the school.

Parents who gain power in support groups may do so with political, social, or religious agendas in mind. Often these groups concentrate the bulk of their activities in fund raising. Knowing

this, library media specialists often extend their hands, hoping to be beneficiaries of the pots of gold.

Parent groups can be of enormous help to the library media program. They often provide a steady stream of volunteers, albeit not always a reliable one, to help in the operation of the center. They may shelve and repair materials, assist with circulation, or do other warehousing tasks. But there is a different and more important contribution parents can make when their expertise matches the needs of the LMC program. Hundreds of thousands of parents have set up computers, networks, and software installations or trouble shoot problems. Others might work as volunteer tutors in the LMC, read stories, or serve as a mentor to the individual student needing special expertise.

Volunteers are always a mixed blessing. Because they are volunteers, their focus will be elsewhere and so the library media specialist ends up sometimes spending more time coordinating the volunteers than if the tasks were just done by staff. Sometimes there is feast or famine—too many or too few hands, causing mini-crises for your program.

Most library media specialists learn techniques of encouraging help or pulling back depending on who is volunteering, for what reasons, and with what expertise. Parent groups are a lot of help sometimes and not so helpful at others.

Business Partners. Many corporate firms or local business leaders are quite willing to help out in the schools, through either grants, in-kind donations of materials/equipment, or even people support. The myriad of types of partnerships range from incredibly helpful to bordering on damaging. For example, in one elementary school where a new LMC was constructed, a major corporation donated wonderful computer station desks for the computer alcove, fit for any high-level executive. And they delivered them and set them up, sticking with the project until it was operational. Other companies might want to donate old computer equipment, which you would find useless, as a tax write-off for them.

Some corporate entities smell a multibillion dollar child/teen market for their products and try to design irresistible offers of equipment/technology or services in exchange for time to advertise their products during the school day. Administrators desperate for funds often enter into agreements many would consider despicable. This author has known library media specialists to quit their jobs rather than have a computer that is clearly an advertising ploy. The corporate takeover of so many Internet sites exhibits the same troubling trend. Can a student find information on the web without being sold something? At

times one wonders if information systems are any different than if we visited the aggressive public market in the busy town square.

Choosing carefully and seeking business partners who are likely to advance your program is worth the constant vigilance. You will want to link up with the best. For example, in a number of school districts there are public education funds. These non-school entities help businesses contribute money targeted at specific programs, bypassing district organizational gridlock or union control. Their idea is usually to get money targeted at kids directly. The partnership between AASL and the Dewitt-Wallace Readers Digest Fund, known as Library Power, used such a scheme in the late 1990s. Millions of dollars were funneled directly to library media programs through the education funds. These monies were spent on materials, professional development, and for minor remodeling.

One library media specialist told the author about his "bottom feeding" grant-writing program. Instead of looking for the large grants, he looked for the \$300–\$500 grants from businesses and professional organizations. In a single year, he added upwards of \$20,000 to his budget by writing many one-page ideas. Most of the grants came with few strings attached, and those that did were rejected.

NATIONAL PARTNERSHIPS

Many national organizations and federally sponsored initiatives provide opportunities to link up in large-scale efforts to improve some aspect of the school program. Library media specialists should keep watch for such initiatives that support the local school objectives or provide a desired new direction. Organizations such as AASL, ISTE, CUE, IRA, ASCD, and the National Geographic Society all have wonderful initiatives. AASL (the American Association of School Librarians), for example, has sponsored Count on Reading (a reading motivational program) and ICONNECT (a technology initiative). Hundreds of schools have participated in one or both, using the key ideas or even mini-grants to enhance visibility in their local school and to draw their communities into a larger effort of school improvement.

Government agencies such as the U.S. Office of Education or NASA provide many opportunities to participate in school-improvement programs, ranging from information resources to in-service opportunities to space camps for kids. NASA, in particular, has a plethora of incredibly useful web sites for both teachers and students.

Many of these organizations have found that they reach more schools and provide more services by making their initiatives web-based. Links to participative and real science projects where kids are involved in experiments or exploration are great ways to reach out beyond the school.

Occasionally, national programs such as AmeriCorps can be used to provide adults to help out in the school. In the case of AmeriCorps, college-age students have been used as individual reading tutors.

Library media specialists not only can discover such opportunities they also can work with others to investigate their potential for the school, help write grants, create needed planning documents, and help implement the programs. Many of these programs require a considerable effort and time commitment. Ask the basic question, "What's in it for our kids?" before you proceed.

RESOURCES

Flowers, Helen F. *Public Relations for School Library Media Programs: 500 Ways to Influence People and Win Friends for Your school Library Media Center*. (New York: Neal-Schuman, 1998).

* See also "Dave's List of Professional Materials" at <http://www.lmcsource.com> under freebies.

The Information Infrastructure

Chapters 14-15 deal with the information infrastructure supporting the entire library media program. Covered here are such items as facilities, networks, collections, staff size, budgeting and a host of other structural elements that bring the dream of a strong library media program into reality. The final chapter covers the evaluation of the various elements of the library media program seeking to discover whether each element is contributing its intended strength to the overall effectiveness of the program.

The Information Infrastructure

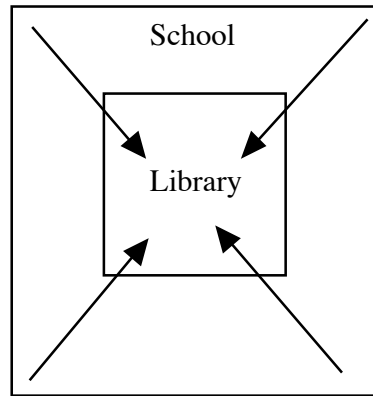
Infrastucture suggests the concept of foundation or the undergirding of something. In the United States, infrastructure is considered to be such things as the roads, electrical systems, air conditioning systems, and water supply together with the people, machines, networks, and other organizational systems that keep our society running. The more invisible and reliable these systems are, the happier we all are, at least until we get the bill at the end of the month.

The information infrastructure of the school consists of the elements required to store, retrieve, and transport information in all formats—print, multimedia, and digital—to the elbow of the user. It includes the tables and chairs, lighting, and shelving for print materials; the equipment systems for multimedia technologies; and the channels, networks, and equipment for computer systems. Much to-do has been made in recent years as schools have been wired for computers, sometimes even while roofs leaked and paint peeled. Retrofitting old buildings has been problematic enough to make us all hope for a new generation of wireless technology.

Treatment of the infrastructure of the LMC has been left until almost the last chapter because the vision of the program precedes creating the organizational structure to achieve that vision. In the first edition of this book, this chapter was titled, "The Warehouse," indicating a busy, centralized LMC. But times have changed. In the past ten years, technology has developed to such a point that a total rethinking of the realm of the possible is required.

At the risk of being redundant, technology has made it possible both to maintain the concept of the centralized LMC or network central and at the same time push the information resources in the opposite direction toward the classroom and beyond into the home, as illustrated in figure 14.1.

OLDER LIBRARY CONCEPT



NEWER LIBRARY CONCEPT

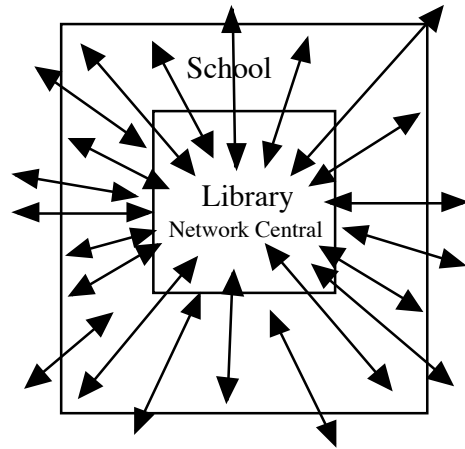


Fig. 14.1. The older and newer concepts of the LMC.

This chapter considers and reconsiders how each traditional organizational part of the new LMC must respond to new possibilities. We can see what must happen with the current tools, many of which were non-existent when the first edition of this book was written, but we will be hard-pressed to project very far into the future. If the author's desire to keep this book under constant revision and available in both print and electronic formats comes about, perhaps we can grow along with the new tools and systems as they develop.

ORGANIZATIONAL IMPLICATIONS OF TECHNOLOGY CHANGE

Twice in this century, libraries have been under pressure to transform themselves. Book libraries became multimedia centers in the 1960s and are now under pressure to enter the digital transformation currently under way. In both cases the demise of libraries has been predicted. The audiovisual revolution caused libraries and audiovisual centers to split and finally merge again over a 20-year time span. We are seeing the same pattern emerge as the digital technology hits schools. We will probably see the same re-merger over time.

During the audiovisual revolution, (1960s–late 1970s) we not only experienced an organizational splits (libraries and audiovisual departments) but also a split by gender. In the 1960s, women were not considered capable of handling projectors, cameras, audio equipment, and graphic systems. They were to be content handling their precious books. Somewhere during that time period, our society discovered that the gender divide was not only meaningless but demeaning. In the computer age, a similar split along gender lines has occurred, but not quite so deeply. If you attend any librarian conference, as opposed to a technology conference, the bathroom problems at technology conferences are more evenly divided nowadays.

It is interesting to note that in both revolutions, the library did not automatically claim an immediate and visionary role in the new order.

It seems that we have had to do battle to reclaim the commonsense idea that libraries store, retrieve, and disseminate information regardless of form and through whatever technology required.

The old AV "guys" have been replaced with technology coordinators (the "techies") in such rapid numbers that in some places they outnumber library media specialists. Early technology coordinators were selected because they were the first to own a microcomputer or express even faint interest in the technology.

In the print world, once you built the first infrastructure (chairs, tables, shelving, and lighting), these features required almost no attention. Such is the hope of administrators and boards who underwrite one-time investments in technology. It is not that simple.

ORGANIZATIONAL PATTERNS AND STAFFING

Information-rich environments currently require an ongoing investment in equipment, networking, and software upgrades with ever-increasing sophistication. To date, these systems require constant attention and no one single person can manage 300–500–1,000 computers and perform the program tasks discussed in this book. Library media specialists who have ventured into the all-consuming technology jungle have discovered that one muddle has just been replaced by another, except that it is now a pool of quicksand.

Those who build computer networks don't always understand the needs of the school. They may be familiar with industry or business systems but lack understanding about the types of data and communication needs of students and teachers.

Library media specialists need to advise these people lest these expensive systems be designed for one thing and used for another. There are already technology dinosaurs in our schools and it is likely there will be many more, either because of poor planning or simply because the technology has changed overnight.

The author knows many library media specialists who lead their site technology teams or are trusted members of those committees. These professionals see a clear difference between the professional and technical roles in technology. They cling to the role of educating, not fixing. Technology coordinators who have risen with the "techie toys" image now are realizing that networks and computers don't teach. They are moving toward the view library media specialists have always had: that tools must be used, and used properly, to make progress.

Like the old library/AV split, many schools may have an organizational structure for their "library," as illustrated in figure 14.2.

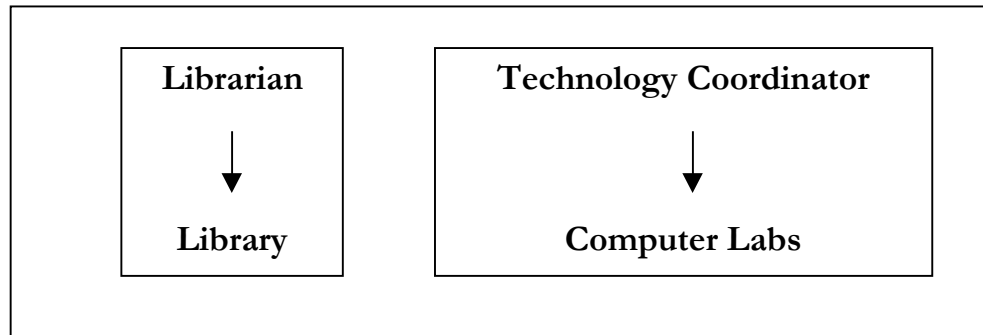


Fig. 14.2 Librarian/technology coordinator split.

A better organizational structure would be as illustrated in figure 14.3.

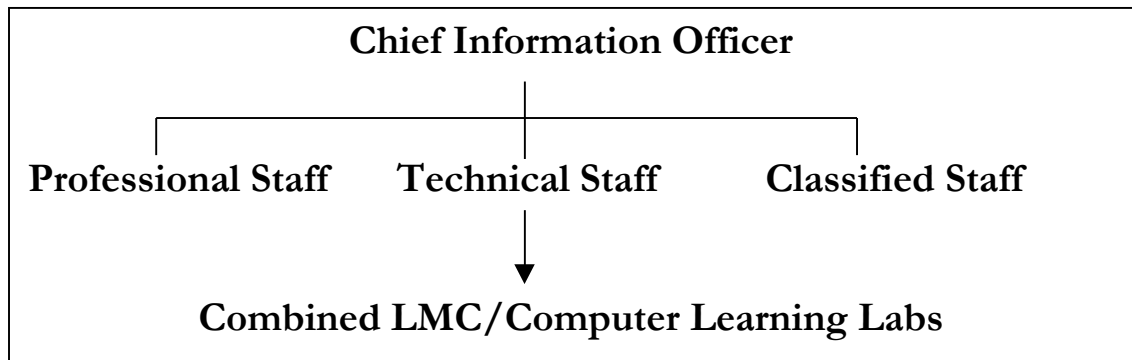


Fig. 14.3. Improved organizational structure.

Many schools are reorganizing their computer laboratories and combing the staff of that facility with the library media staff to create a comprehensive learning laboratory containing all forms of technology from print to computer.

Historically, we have envisioned a single person who would govern the information infrastructure and provide service. We then discovered that a single person could not provide the kinds of services children needed because the warehousing tasks were so onerous that results did not match expectations. National standards required every school to have at least two people: a professional and a classified person. Now, as the information infrastructure expands to link the LMC to every classroom and beyond into the home, two people cannot manage this expanded organization and remain sane.

We now consider a minimum of three people (a single professional, a technician, and a classified person) necessary in the smaller school to make the systems work and to transform the tools into an exciting learning environment. Schools that currently have a library media specialist, a technology coordinator (professional salary), a technician, and a classified person could be thought to have four people on the LMC staff.

If a three- to four-person staff seems impossible to some readers, the author has visited a high school of 2,000 students where 13 full-time adults are providing library and technology services (half professionals, half technical/classified). The impact of this human-rich, technology-rich, and information-rich environment on student learning is very easy for the visitor to observe. The sophisticated young learners from this school are going to be competing for higher education and jobs with the students from your school. It is not difficult to imagine who will be successful.

We are saying that education in the information world is more expensive than education in the information-poor world. That is the fact. Whether the general public is willing to fund the organizations needed to achieve the best levels of education is the question. Those who are willing usually want some sort of guarantee about results. That is, if I am going to buy a more expensive car, what will I be getting for the extra money?

When financial exigency hit the state of California 20 years ago under the infamous "Proposition 13," most of the library media specialists lost their jobs, along with music, art, and physical education teachers. Twenty years later, as the economy improved, some opportunities to rebuild became possible, but not without the convincing the taxpayers that something good would happen to test scores if new personnel were added to the schools. (See figure 14.4)

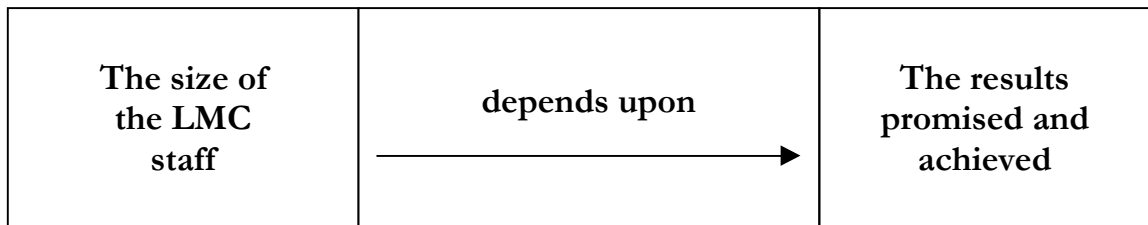


Fig. 14.4. The size of the LMC staff.

In the past, the elementary librarian might have had to demonstrate the fact that while giving teachers in the building released time for planning, the library media specialist was giving the children a pleasant and instructive weekly experience in the library. There was little need for a larger staff simply because it only took one person to provide such babysitting services. The library was simply unavailable for meaningful learning activities when tied up with such nonsense. In some states, administrators figured out that paraprofessionals could provide what they perceived as pleasant library experiences at half the price. Why pay more?

With the expansion of technology, the trend toward inquiry learning (constructivism), and the need to prepare young people to handle information, the old babysitting model fades rapidly. There is little justification to tie up the most expensive facility in the school with nonsensical and unproductive activities. Thus, those who have restructured or reinvented the concept of the library have also been able to justify the "reality staffing" concept. That is, if we expect X we staff with Y. And, we guarantee X if Y happens.

There are those, however, who demand that the babysitting function still occur because of union demands and master contracts. In fact, many admit freely that were it not for the babysitting need, there would be no librarian in the first place. To this, the author has responded that for all students who are scheduled into the library by mandate, the required time should be LSSR time (library sustained silent reading time) without the need for the library media specialist to perform for that group. The emancipated LMC calendar is then reclaimed for collaborative learning laboratory experiences.¹ Library media specialists who find themselves acting as baby sitters and cannot get such schedules changed should find another job. It is senseless to spend a career wasting children's time.

Library media specialists who find themselves with realistic and large staffs have other challenges. How will the work be divided? How do we write job descriptions that capitalize on the native abilities as well as the educational level of each person? How do we organize to maximize our impact on achievement? Such division of labor should not automatically be by technology specializations (for example, print persons and computer persons).

The head of the library media program will also have to worry about how the entire staff will try to keep up as technological sophistication increases. What kinds of professional development and training will each staff member need and how will that happen? How can students

¹ LSSR time requires a space in the LMC where students can sit on the floor or in a comfortable area and just sit down and read. The justification is that students are raising their reading scores while the library media specialist is available to raise academic achievement collaboratively with the faculty in the learning laboratory portion of the LMC facility.

and teachers enter the crush of dealing with increased sophistication? How can we institute the policy that you teach me, I teach you, we all teach each other, and we all help keep it operating?

The most successful teams of library media staffs build a collaborative and congenial working relationship with a shared vision that is constantly renewed and refreshed. Each member sees the challenge not only of serving young people but of developing the talents of the library media staff as a whole. For example, the professional will be concerned that the classified staff have the tools to do their work in a streamlined fashion because their time is every bit as precious as the professional's time. Our best professionals are systems analysts who never accept procedures and policies because "that is the way we have always done it."

THE COLLECTION

It is a simple matter to spend money using publishers' catalogs or responding to the latest computer software and hardware upgrades. It is quite another matter to build a collection of materials and the channels through which it will flow in support of teachers and students.

We have seen already the impact of anarchy of information in the world of the Internet where, it seems, one either turns on an information blizzard or turns it off. Time-honored principles of collection building reject this chaotic glut.

School library media collection-building plans have always had focus in mind. We have been concerned with quality over quantity. We have built information banks considering the needs of both individuals and groups in our school. One could say that we are trying to perform the functions show in figure 14.5.

**Deliver the Right Information,
To the Right Person,
At the Right Time,
In the Right Format,
And, in the Right Location.**

Fig. 14.5 Delivering the right information.

Building a quality information system is much more than connecting the computer to the Internet. It is the conscious effort to build a core of information that will assist the learners and teachers under our umbrella to accomplish their goals. When doing this, six main principles should be taken into account:

- *Principle 1: The collection of the library media center must be appropriate for the community a school draws from.* We need to know the types of young people who come to our school, their background, their socioeconomic levels, what their parents do for a living, and the cultural mix we have. Using this information, we will serve their needs rather than just buying the best of what is published in diverse topical areas.
- *Principle 2: A plan to build a curricular-oriented collection with the accompanying policies, staff expertise, and realistic budgeting practices is in place.* Principals, teachers, and library media specialists should plan what areas of the collection need to be strong, who will select the materials, how the best materials will be selected to meet curricular targets, and how collection building will be financed. This group generally begins the task by creating a collection map and a selection policy, which then guides the growth of the collection.
- *Principle 3: An acquisition system that matches curricular priorities is in place.* Library media specialists should be able to show that the selection system for new materials is accountable to the collection building plan as opposed to spending money from catalogs. Several questions should be readily answered by the LMC staff, including: How do you select materials? How do you prioritize your purchases? How do you keep track of spending in terms of curricular support?
- *Principle 4: Each type of media included in the library media center is considered a system consisting of the materials, the accompanying equipment, the support staff, and facilities, among other concerns.* In the past, a school may have acquired a computer but no software, a computer with no one who knew how to operate it, or even video projection systems but no classrooms with darkening drapes. Such practices show lack of planning and management skills. Experimentation with new technologies is a must, but it should be done with forethought and with a determination to test the value of each technology properly.
- *Principle 5: Collections in single schools are constantly changing to meet current needs.* Collections are supplemented from local, regional, and national networks. The curriculum of the school, the

needs of teachers, and the needs of students are moving targets, not stationary ones. This means that a school cannot invest once in a group of materials and expect them to last indefinitely. No school can own everything it needs. Schools can supplement their collections by reaching out to other collections and information sources through networks.

- *Principle 6: Collections reflect democratic ideas, intellectual freedom, and cultural diversity.* In spite of pressures from certain individuals and groups, the library media specialist recognizes the principles upon which a democratic society is built and purposely builds diversity into the collection.

Building a focused collection as called for in the stated principles requires a carefully constructed plan and an organized procedure of acquisition and evaluation. One technique to accomplish this task is to map the collection: ascertain its strengths and weaknesses, create targets for growth, and track the impact of expenditures. Such careful tracking is now possible because computer systems have been made available to libraries.

Based on these principles, the author built a collection mapping technique a number of years ago. This technique has been treated in more depth elsewhere, but its sense can be given here.² Figure 14.6 shows what constitutes a collection mapping plan for a LMC.

² David V. Loertscher, *Collection Mapping in the School Library Media Center* (San Jose, Calif: Hi Willow Research & Publishing, 1993); and David V. Loertscher and Blanche Woolls, *Building School Library Collections*. (San Jose, Calif: Hi Willow Research & Publishing, 1999)

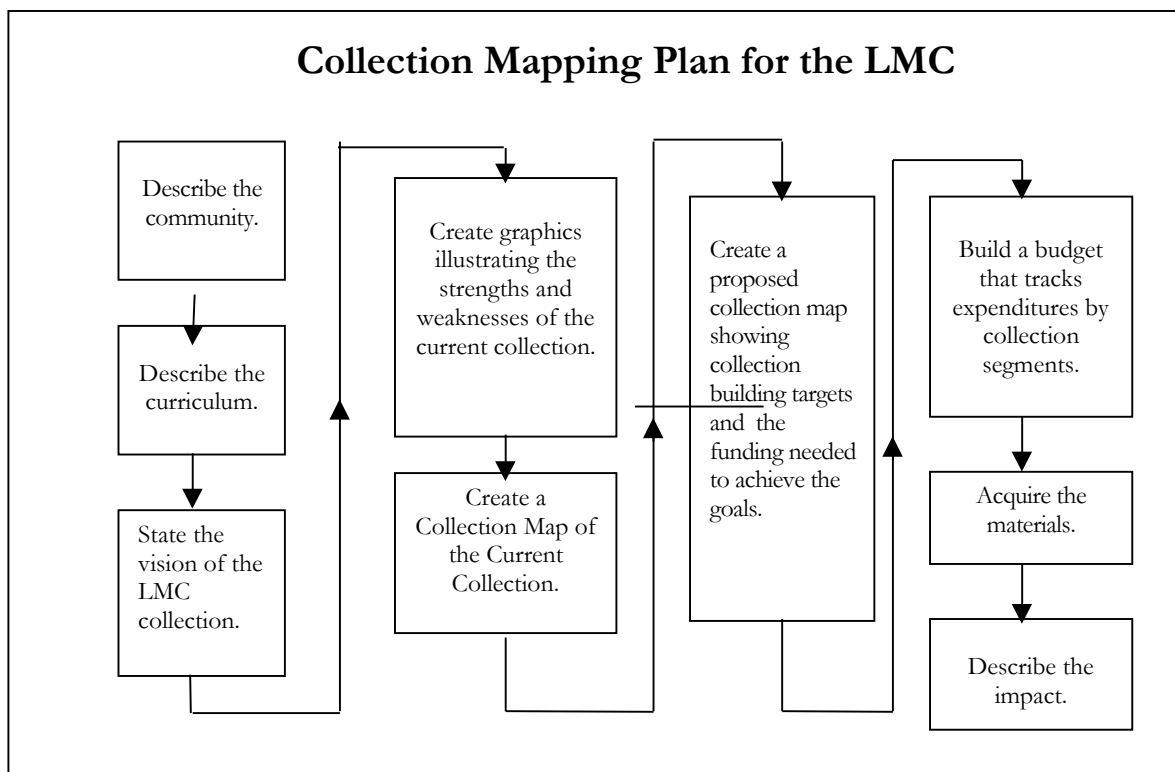


Fig. 14.6. Collection mapping plan for a LMC.

The author has become aware over the years since collection mapping technique was created that a simple plan as described above, written clearly and with convincing graphics, has been an extremely effective method of receiving funding from principals, site councils, parent groups, business partners, and governments, ranging from several hundreds of dollars to \$1.2 million.³ It was also used as the principal collection development tool in the Library Power School Grants of 1995–1998.

Funding agencies are impressed with easy-to-understand plans attacking problems in the school. They also expect the library media specialist to produce results with the funding given. No one is interested in just giving the library money to spend. Like a wise parent, those who give expect an accounting.

Library media specialists who are seeking funding from their school site councils, principals, parent groups, or granting agencies would be advised to create a plan that would contain the elements illustrated in figure 14.6.

³ Reported to the author by Gloria Miller, Charlotte-Mecklenburg Schools, North Carolina, September 1999.

1. *Describe the community.* Write several paragraphs describing the school, the neighborhood it draws from, the socioeconomic background of the students, and the various cultural backgrounds they represent.

2. *Describe the curriculum of the school.* A curriculum study could be a very extensive and complete study, but with limited time you might concentrate on a few high-priority areas that might benefit if the collection were to contain extensive information sources, such as:

- Curricular initiatives of the school (textbook adoptions, literacy initiatives, renewal of a science fair program, or other special program thrust).
- Lists of five major topics, collected from each teacher, to be covered during the year that would benefit from in-depth information sources.

From such a list, the advisory committee could help the library media specialist identify some priority areas that would be candidates for collection building.

3. *Provide a statement of the vision of the LMC program.* Knowing the community and the curriculum needs, the library media specialist could now state how the library media collection could support the needs of the school. Several paragraphs, including the visuals pictured earlier in this book (see figure 2.1 for example) might help the reader understand clearly the role you are playing in the school.

4. *Draw a collection map showing the strengths and weaknesses of the current collection.* Collection maps (visual representations of collection strengths or weaknesses) divide the collection into pieces and parts, each of which has a function related to raising academic achievement. Examples might illustrate the need for:

- A beginning-to-read collection of 5,000 volumes to help kindergartners and first graders read 500 books each year.
- A graphic novel collection for teens designed to stimulate reading by starting with student interest.
- An extensive collection of science fair project support materials to support renewed interest by the faculty in fairs that include as many females as males.

- A major rejuvenation of the careers collection that reflects the careers of today rather than 20 years ago.
- An in-depth collection of information on social issues for senior-year portfolio projects.
- A project to catalog a core collection of 5,000 of the best web sites usable by the students in this school, supporting 300 identified curricular topics.
- A project to purchase a site license for a full-text periodicals database that will be available in the library, in every classroom, and in every student's home.

Figure 14.7 shows a simple collection map of the LMC's current collection.

Wilson Elementary School Collection Map

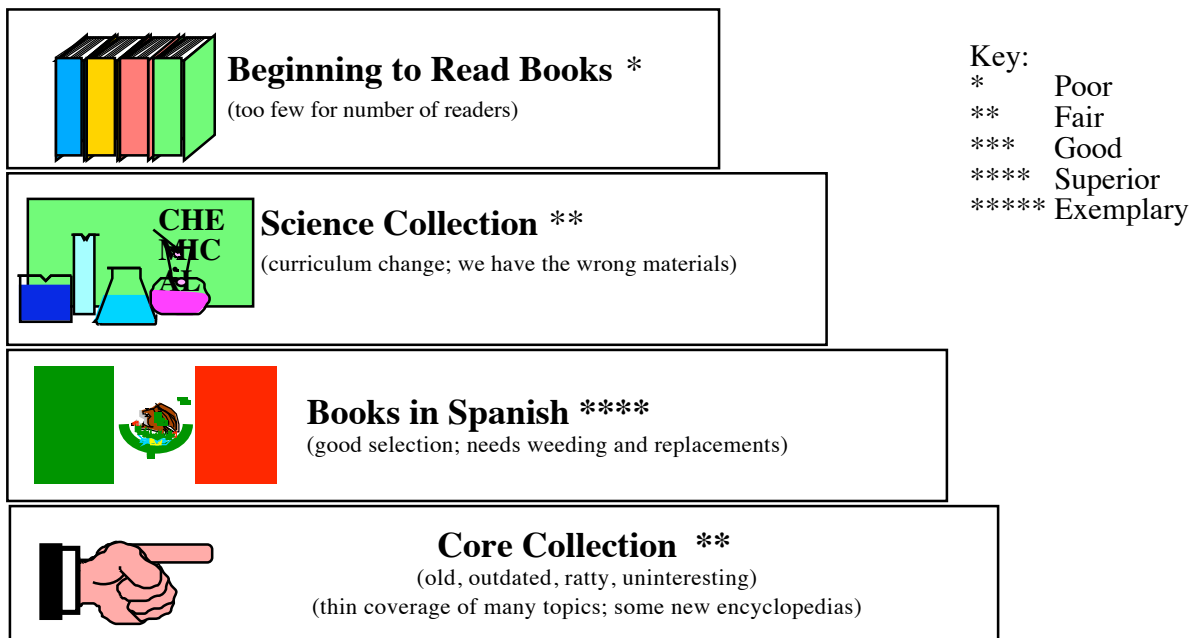


Fig. 14.7. Wilson Elementary School collection map.

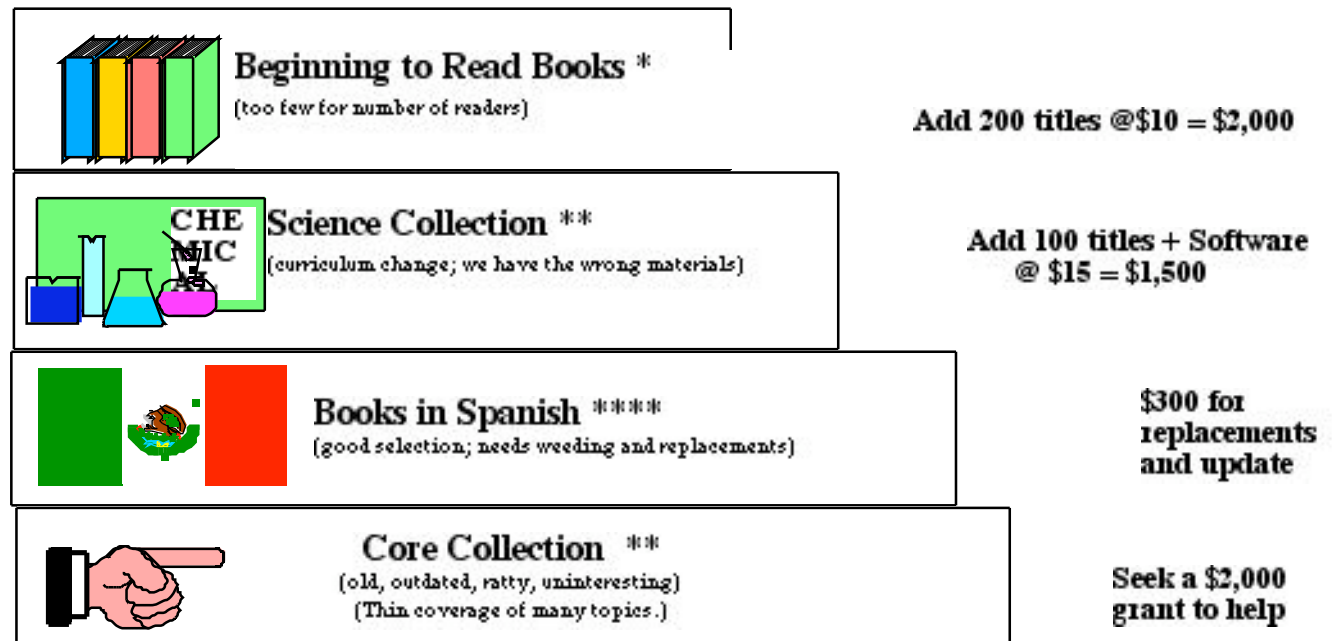
Notice that the collection map shows both the size and the quality of various collection segments. In pictorial form, the administrator can see in five seconds what it might take 10 pages to describe in words. You need to create the type of picture that will deliver the type of message decision makers need to understand, but don't have time to research.

One can view any library collection as being divided into two parts:

- The core collection containing basic quality information on a wide variety of topics, giving the collection breadth.
- Emphasis collections, carefully chosen to support certain vital topics of the curriculum in depth.

5. *Draw a proposed collection map.* Working with the advisory committee, the current collection map can then be transformed into a proposed collection map showing what should happen to the collection over a one- to three-year period. Figure 14.8 shows not only what should be acquired but how much it is likely to cost.

Wilson Elementary School Proposed Collection Map



Other Proposed Collection segments:

- Paperback collection for SSR time \$800
- Mini grants for teachers doing special projects with the library staff \$500 (five \$100 grants)
- Materials with an African American focus \$500
- Basic Internet-based periodicals package \$1700

Fig. 4.8. Wilson Elementary proposed collection map.

6. *Describe the impact.* As an addendum to the plan, library media specialists are wise to report back to the funding agency the results of funded projects. Start by describing "so-what" in three paragraphs and then expand if needed:

- What it was like before the money.
- What I did with the money.
- What difference it made.

For example, the library media specialist might describe the deplorable collection of beginning-to-read books that existed in the previous year. Using the grant money, 500 new volumes were purchased so that each child could read two books per night. After the new reading homework program, in which every first grader read 350+ books, the program and the reading skill initiative resulted in 90 percent of the first graders being on grade level at the end of the school year.

Such reports convince funders that investing in the LMC program produces results. They will be likely to fund other such promising initiatives.

7. *Create a budget that tracks expenditures by collection segment.* Those who give you money will want an accounting of the money you have spent on each proposed project or collection segment. While official budgets usually just account for all spending against an amount of money, you will need an additional spreadsheet to track the various collection segments and the various pots of money you have allocated. When the parent group asks how you are progressing on spending their \$500 for beginning-to-read books, you had better be ready to report.

8. *Acquire materials.* A description of developing the skills of knowing what to select, how to purchase, and how to store and retrieve materials and information is beyond the scope of this book. Generally, those who have lots of shopping and organizational sense will find that getting the most for the money in libraries is the same as in the consumer market.

COLLECTIONS IN THE AGE OF TECHNOLOGY

Early in the twentieth century school libraries contained almost exclusively books and periodicals. During the 1960s, these collections expanded to embrace many forms of audiovisual materials. And in the 1990s and into the millennium these

collections began to be transformed into digital collections. In school libraries, the reference collections were the first to be transformed as electronic encyclopedias and databases could be sent into the classrooms over networks. Then came the transformation of periodicals to digital collections. Few have shed tears over the dismantling of magazine rooms and replacing them with electronic files and a few printed popular subscriptions. We seem to be in a transition period for the foreseeable future. The school libraries of the future will probably contain a wide variety of formats to support the needs of an amazing array of individual differences and needs. One does not need to be very old to remember the forecast that when video came in, movie theaters would go out. Users tend to demand a wide variety of formats with which they are comfortable and which they can use to advantage.

In the age of technology, we are building connections and networks from our school outward to the district, the state, the nation, and the world. But we are not interested in billions of web sites, databases, or even books for that matter. We live in an age of information glut. So while theoretically we can and will have the potential to connect to those billions, we are better off to adopt a less-is-more policy, building an information-rich but not an overwhelming information system.

We are in an age when search engines are being improved to search not just a book collection but also a wide variety of information products simultaneously. At some point, we hope to have systems governed by the user, who will shape the information system to deliver the right information at the right time and in the right format. At present we seem to be in a contest with machines struggling to survive what they spit out at us.

If we trust the potential of information technology, we may yet arrive at a time when textbooks are replaced by web quests. Given any topic at any grade level, computer information systems would provide individualized materials for each learner based on ability, language, interest level, or learning style. Such guidance would point young people to materials in a wide variety of formats designed to sustain interest, inform, and lead to either cursory examination or in-depth exploration at the command of the learner. We are just beginning our journeys into this new world and we must mold it to our needs, not succumb to the tyranny of the machine.

SPACE/FACILITIES

Explaining how to design and redesign facilities and networks, including satellite learning spaces in classrooms and other learning spaces, is beyond the scope of this book. However, much can and must be done with existing space to reconfigure what goes on in a LMC during the school day and beyond.

Good information access requires 24/7 services (24 hours a day, seven days a week). So even though the space of an LMC may not be available around the clock, its information resources are. And those same information services are available in every learning space throughout the school. Thus, in a school of a thousand students, you need not have a thousand computers in the LMC. The same is true of print materials. You may have 30,000 current, exciting, and interesting books for students to read, but you don't need storage space in the LMC for all of them.

In the booklet *Reinvent Your School's Library*, the author proposed a concept of functional spaces that would be present in every LMC but which also would spill out into the classrooms and on into the homes of the school.⁴ In this sense, you build the concept that the entire school and certain spaces within every home are part of your LMC. Figure 14.9 shows the five functional corners of the LMC as they permeate the learning environment of the school.

⁴ David V. Loertscher *Reinvent Your School's Library in the Age of Technology*. 1999 ed. (San Jose, Calif.: Hi Willow Research & Publishing, 1999)

The Five Functional Corners of an LMC Facility

The following diagram shows five major functional areas of the library and the concept that services radiate from each functional area out into the total school environment.

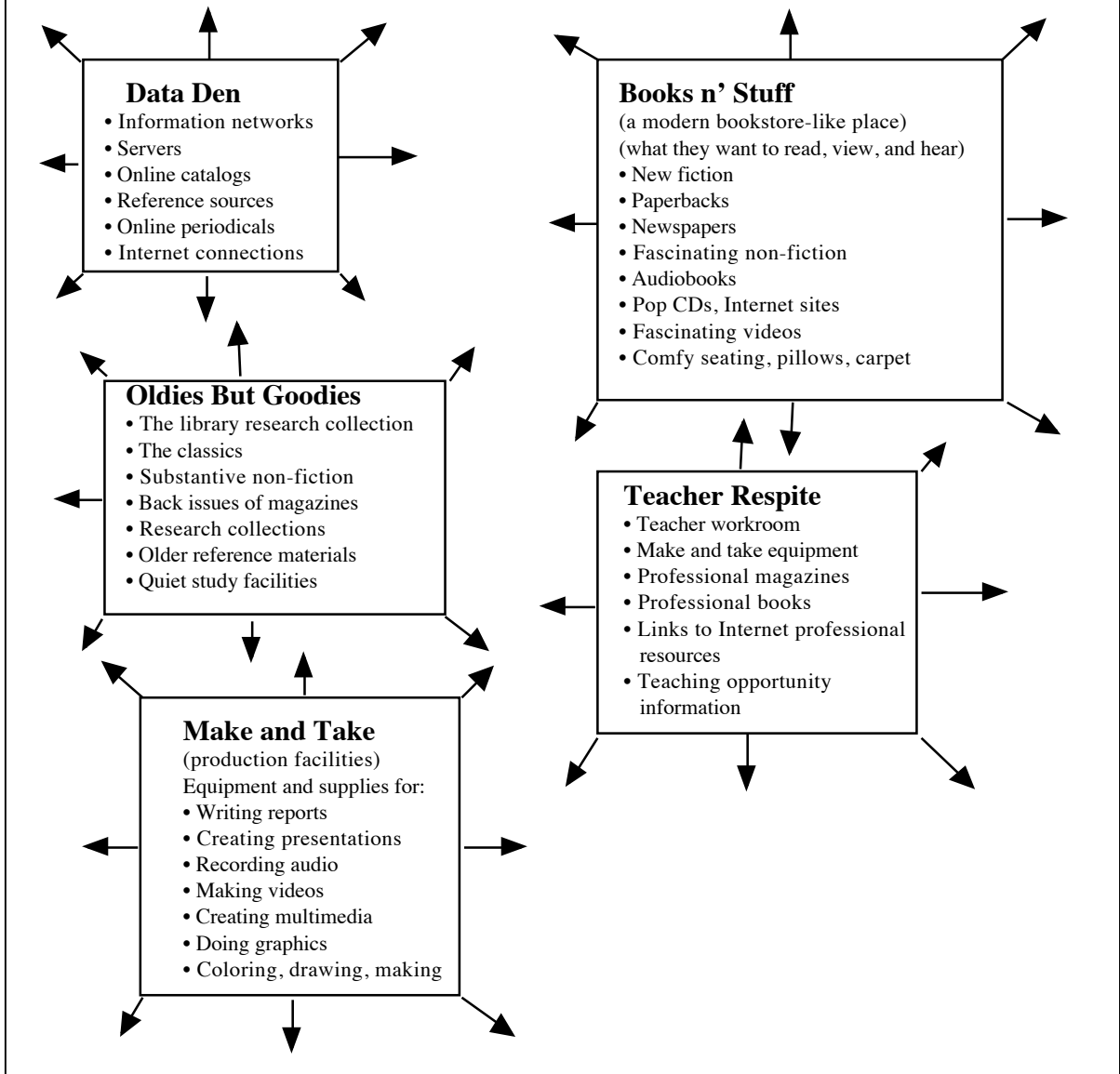


Fig. 14.9. The five functional corners of an LMC facility.

Each of the five spaces or functional areas/corners deserve some elaboration:

1. *Data den*. As we move into the digital age, data den is the 24/7 service mentioned earlier. As an area in the central facility, it may have both print and digital reference information. It might also be designed in such a way that concentric circles of sophistication of information sources radiate out from the LMC, with the most sophisticated and least restrictive connectivity being at the core location (the LMC) and less sophisticated core available in the classroom, and a still simpler core set available from home. If the Internet continues to be both an enlightening and a dangerous place at the same time, then successively more simple systems are increasingly more controlled with mechanisms available to individuals who demonstrate more sophisticated information handling skills. The system would be built to allow greater access and depth as individual needs dictate. Such an environment might be known as the "knowledge management system" of information technology. Four engineers would help each learner design their personal information space and connectivity: the student, the teacher, the parent, and the library media specialist.

Technology systems are not quite at the point the author envisions with a true data den environment that can be individually tailored to the student's needs. But they are getting there quickly. As library media specialists experiment with their automated systems, they are finding out that more sophisticated use of MARC record fields allows connection to multiple sources both print and digital, and across various information packages. By adding sophistication levels, languages, and usefulness ratings as "subject headings," Boolean searching will begin to push in this direction. Many commercial databases are starting to allow users to first define the types of information and sophistication desired as a prelude to the actual search. The author predicts that knowledge management systems will be available shortly under learner and coach control. The current hotbed of controversy surrounding intellectual freedom and filtering will likely become a non-issue. Various governmental entities, local, state, and national, will fund various pieces of the total information system, ranging from simple core information products such as digital encyclopedias and core full-text periodical products to sophisticated and expensive data products requiring various levels of authority and money to search.

Library media specialists will vote with their money for the kinds of systems that are designed for the data den. Your voices will be heard and your money will ultimately encourage the appropriate design elements that succeed in the marketplace.

2. *Oldies but goodies.* Archiving information in all forms is still the province of the LMC now and in the foreseeable future. Until digital systems become more reliable and comprehensive, a large archive of printed materials will be preferred by users. Library media specialists know the consequences of mixing small quantities of new print material into large collections of older materials. The new materials are masked by the older stuff. In the digital world, the same thing happens if the search engine is not powerful enough to arrange information and information sources in chronological order. Often currency is not a desirable characteristic of an information search. Older materials are invaluable to provide perspective, to compare/contrast, and for an archival trail or history of idea development. As in the plant world, we preserve native seed banks that predate all the genetic manipulation that is so common. We want accessibility to the past, lest information architects design out what they don't want us to know. We already know that Communist Russia, Nazi Germany, and the Cultural Revolution in China are examples to avoid. While space in a LMC is at a premium, older materials stored separately can be invaluable when a historical perspective is needed or when the networks are down. Of course, any of the materials from oldies but goodies are made available to any space in the school or home where they are needed.

3. *Make and take.* Students and teachers have always had the need to produce reports, write and print out papers, and create graphics and other products. In today's high-tech world, the variety of communication forms is incredible. Every LMC should have space, equipment, supplies, and instruction for those who are building projects ranging from multimedia to web sites, in addition to the print and graphic-based projects. Such areas may be run on a cost-recovery basis or, in the case of students from poorer backgrounds, for free. Numerous production tools are also made available through networks into classrooms and the home from the LMC. Word processors, graphical programs, and spreadsheets are just three examples.

4. *Books 'n' stuff.* This bookstore-like area attracts readers and browsers, listeners and viewers to fresh, current, and exciting materials in many formats and genres. It's the place we all like to start looking in a bookstore and it has comfortable seating so we want to sit down and enjoy. Library media specialists should try to compete for students' attention in many of the same ways bookstores do. We can learn our marketing and layout, arrangement, and stocking patterns from them. Books 'n' stuff extends into the classroom and the home by encouraging comfortable areas and mini-libraries in both locations. Even in the poorest of homes, kids can have a special box they have decorated as their place for materials.

5. *Teacher respite.* Teachers need a hideout in the school, apart from the lunchroom or teacher's lounge, to plan, create, find, and prepare materials. Here they might use the Internet, prepare handouts, learn a new software package, read a magazine, or do other professional planning and preparing. Collaborative planning takes place in this space close to the major warehouse of information and technology. Teacher respite can also be thought of in the virtual sense as professional information is made available to each teacher's desk and opportunities for personal growth through distance education. Teachers may also want to create their own information system (described above in the data den section) where through push technology they are made aware automatically of, for example, research studies in their field. These studies would appear on their desktop whenever they logged onto their computers.

Much can be done in any LMC, no matter the confines of the space, to make the LMC a pleasant and functional place. Each LMC must be arranged in such a way as to accommodate three types of activities simultaneously, to be labeled a learning laboratory:

- Space for individual students coming and going throughout the school day.
- Space for small group work. Some groups arrive unannounced and know where to go to find space. Other groups schedule an area where they can work with the library media specialist or other adult.
- Space for large groups scheduled for research, either supervised by the teacher alone, the library media specialist alone, or in a collaborative mode with various adults working with the group.

Many times a simple rearrangement of furniture can create the spaces discussed above. Library media specialists should analyze traffic patterns to help all the groups working side-by-side do so with the least disruption. Don't hesitate to change the layout frequently, looking for ways to solve discipline and noise problems without having to say anything.

We cannot leave the facilities discussion without a second plea to make the LMC an attractive place to be through use of color, good signage, and interesting displays. The LMC needs to be the cultural center of the school. The best art, computer projects, science fair projects, recorded performances, and units are shared in the LMC. Create an ambiance that attracts not just your regulars, but the reluctant. You might think of the LMC as a living yearbook.

TECHNOLOGY SYSTEMS

For the last half century, we have been experimenting with various technologies to support the learning process. Our experiments have been expensive, and every school seems cluttered with not just the current iteration but also the castoffs of previous experiments. As library media specialists, we understand the function and mission these systems should play. They are to be designed in such a way as to deliver the right information to the right learner, in the right format, and in the right location. Our concept of information is broad, consisting of text, audio, and visual. We also think of delivering tools to manipulate information in its many forms. And we want not just one-way channels, but multi-directional flow. We want to connect in ways that strengthen access to information, people, experiences, tools, and data. We envision a rich learning environment that will respond to the needs of every individual learner and teacher.

Sadly, we have been observers of so many false starts and wasted efforts, requiring so many precious resources, that we often become cynical about yet another promise from yet another vendor shouting possibilities of “if only ...”

As educators, we see what ought to be available but must settle for what is offered, since few really knowledgeable minds are designers of systems. Most technologies have been developed for business or governmental applications and come to education through an adaptive modification. The latest gizmos are not subjected to extensive trials to establish their effectiveness. Rather, they are sold as “potential” and we are expected to “re-purpose” the design or re-fashion a system to fit learners’ needs.

In the current fast-paced and addictive obsolescence race, the temptation is to reject all that is new in the hopes that others who have “money to burn” will suffer the pangs of the bleeding edge to give us simple and reliable solutions. But we also know that the waiting stance can be used as an excuse for ignorance and lack of action.

Experimentation takes courage and requires risk. If we already were reaching all learners and elevating them to the height of their potential, we would not need to pay attention to technology. If the world were unchanging or requirements of job entry skills were static, we could ignore the seeming madness of technological development. We might even long for a simpler society unfettered by such anxiety.

Not long ago, high-tech industry leaders were making the argument to the national government that since the schools were failing to prepare the kinds of workers needed to work in high-tech industries, we should open our borders to import the best and brightest from other nations to fill the top spots and get the top salaries. If we are unwilling to fund our schools sufficiently to produce a deep talent pool, one wonders what the future has in store for our own children.

Experimentation with technology is like stepping into a jungle with a guide who hasn't been there before: We no sooner develop a few guideposts than the terrain changes, plunging us again into unfamiliar territory. But even awash in a sea of uncertainty, library media specialists can bring reason and sense into the technology adoption process because we have "been there, done that" so many times in 30 years.

We have learned to view each technology as a system rather than as just a piece of equipment to purchase. In the popular world of technology plan creation, library media specialists want to have a leadership role to broaden plans and to add a healthy dose of reality to dreams and visions as they develop. We might be viewed as the enthusiastic yet cautious crowd. We are the people who see both possibilities and problems. We adopt technology with our eyes wide open. We see the horizon and the trail to get there. We are visionary but practical.

BUILDING A TECHNOLOGY PLAN

There are hundreds of technology plans available on the Internet that have been developed recently as grants and technology projects have hit the schools. There are also numerous guides available to help in the development of these plans. Library media specialists are in a good position in the school to either be on planning committees or serve as chair of the planning committee. The products or plans developed, once thought static, are now "living" documents under continuous revision.

Each technology under consideration for adoption or improvement must pass a systems analysis connected to long-term thinking (even though long-term thinking tends to get shorter as the speed of change in technology continues to gain momentum). Any new technology should meet certain criteria, such as:

- What is the philosophical foundation of the technology? What characteristics of the technology have the potential to make a contribution to education? How is this contribution supposed to be realized? Is there any evidence that promises are being realized in real schools with "normal" teachers and students? Are claims of value available from independent sources?
- What components constitute the complete requirements for this technology to become a reliable learning tool, and at what cost? Does it consist of a single piece of hardware, fully operational, with a track record of reliability? Or is it a machine requiring an extensive and expensive infrastructure to make it work? What is the obsolescence rate in the industry producing this hardware?
- What software will be needed for this technology, and at what cost? Is there already enough quality software on the market for a fair test? What is the track record of the software, and in what types of learning environments has it proven successful?
- What facilities will be needed for this technology? Will it integrate easily into regular LMC and classroom environments, or will it require a retrofitting? How expensive will modifications be to make the technology perform optimally?
- What kinds of expertise and personnel will be required to keep this technology operational over an extended period of time? If we commit to a machine, are we also committing to a long-term and expensive human support system?
- What trouble-shooting maintenance and repair systems will have to be in place to support this technology? What is the track record of the company in honoring warranties? Are repair sources available nearby or designed for quick turnaround?
- How will teachers and students learn to use this technology to actually enhance learning?
- How often will this technology system need to be upgraded? What sorts of long-term costs are we facing?

When the plan for a single technology can be seen in graphic form with associated opportunity costs and risks clearly delineated, then the technology plan can be a useful and powerful document. Otherwise, it becomes useless rhetoric.

The technology plan might also set forth methods of experimentation that will take place in a building to develop experience before large-scale adoption is attempted. In one school, high school juniors and seniors in an accelerated English class were designated as the official

testing committee of most proposed software packages for the school as a whole. These students took software packages through a shakedown “cruise” and put their approval or disapproval stamp on each new generation of wizardry. Their advice was trusted as graphics programs, word processing, and other tools were under consideration. They also looked at teaching and simulation software for the kinds of elements that would be useful and instructive to student users. A software package had to be good to get their endorsement. It was fun for the author to interview these super-critics about their important role.

Perhaps the best role a library media specialist serves on such planning committees is to keep asking all the “so-what” questions until the group tackles the important issues of technology adoption without prompting.

However, getting the system operational at an acceptable reliability level should be only one piece of a good technology plan. We do not breathe a sigh of relief when the system has been installed and the on-button has been pushed. We have only mounted the first step of a staircase. We have just begun. Our celebrations are preliminary to the launch of step two, the implementation phase.

Implementation. The most time, effort, and certainly considerable money will be consumed as teachers and students learn to use any new system to advantage. Actually, chapter 10 of this book “Enhancing Learning Through Technology,” is phase two of the implementation plan. In this section we are looking at ways of building tool skills, building process skills to build efficient learners, having the needed quality resources to exploit the features of the technology, and finally seeing that content learning is actually enhanced.

The author has suggested that in the face of thin evidence that technology enhances learning every teacher, every student, and every library media specialist should learn to build a repertoire in this new environment of strategies that work. It's the building of a scrapbook of the best ideas. It's also building an environment in which success is treasured and sharing is an accepted practice. And because no one can know it all, we build the spirit:.

| |
|--|
| <p>You teach me, I teach you, We all teach each other, And we all keep it working!</p> |
|--|

Many library media specialists empower students as teachers of tool skills. They give special driver's licenses or designations to those who are mini-experts on a particular software package or

technology. They use the "teach a few—train many" strategy. Age, cultural background, native ability, language ability, or social status in the school are not considered important to be honored as a mini-expert.

During the implementation stage, library media specialists will want to encourage the focus of every technology conversation on learning first, then on infrastructure griping. You are always looking for that new page in the scrapbook entitled "Enhanced Learning Through Technology at _____ School" rather than just to add another item to the litany of complaints.

Reflection and renewal are important tools technology leaders build, not only into system setup but also into long-term operation. Some of the best ideas for change will come from the students themselves. It is unwise to ignore their expertise.

As we look at and review our technology plan, we might consider figure 14.10, which shows its major elements of its contents.

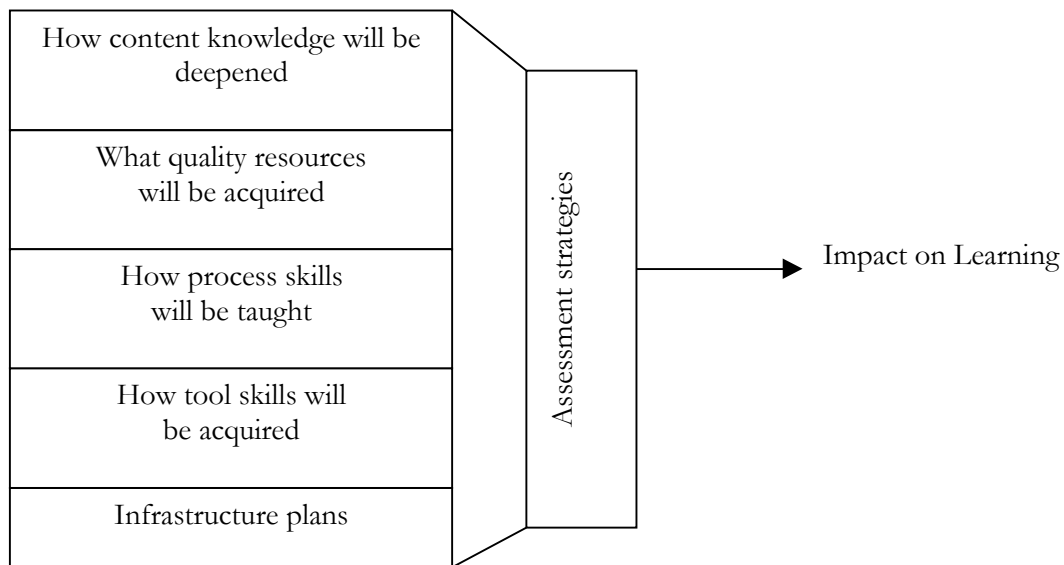


Fig. 14.10. Elements of the technology

THE BUDGET

Library media programs are expensive. Salaries, physical plant, and sports probably head the list in the school budget, but a million-dollar investment in an LMC is not uncommon. Yet many schools lack the investment needed to support the children and teachers in any meaningful way.

Not long ago, the Los Angeles Public School District spent 78 cents per student to connect them into the world of books and libraries. As this book went to print, that same district was spending \$30 per student from district and state funding sources. What does a good information system cost? This author has maintained that we can hook kids into a quality information system at school as cheaply as it can be done in the home.

What is the cost in your home of your information connection, including telephone, Internet, and cable? Whatever that figure, we can hook any child up for the same price per month. Do the math and you will be amazed at how much your LMC budget would be for a typical year. ($\$50/\text{month} \times 500 \text{ students} \times 12 \text{ months}$ would be $\$300,000$ per year). In fact, if you added all salaries, physical plant costs for the LMC, utilities, equipment, supplies, and materials together, you would see that it does take a substantial investment. We continually understate our needs.

So many administrators have planned to spend once for technology and then coast along with minimal budgets. Like school busses, such will never be the case. There is the initial investment, constant maintenance and replacement of worn out equipment, and upgrading to new models in busses as well as technology. Both involve a constant and very large investment.

Most schools have a number of pots of money from which they fund the LMC. First, they will have salary money for the personnel, which may come from regular funds or from grants. Second, there is usually capital outlay money to build infrastructure (buildings, plumbing, wiring, remodeling, etc.). Finally, there will be money for materials for the library. Somewhere there might also be a supply budget for such things as paper clips and computer disks.

Library media specialists may discover quickly that the "official" budget for library materials has been traditionally very small, in fact, impossible to work with. Thus, most library media specialists turn into entrepreneurs. There are usually two games to learn how to play. First, find out about all the various pots of

money that exist within the school and learn how to tap them. Second, play the grantsmanship game. Those are the normal sources. There is another: the political arena. Library media specialists have discovered that district, state, and national agendas have to be influenced if any significant investment in children is to be realized.

Local Funds. First things first. Learn all you can about the local school budget, including how it is created and divided and who makes the decisions. This can vary, from the principal getting all the money and dispersing it through some system of benevolent "ask me, and I'll see what I can do" to a site council that has the power over the entire school budget. Whoever controls the purse strings will control how much the LMC gets. It is wise to learn how to play the political games well enough to extract what you need. You cannot assume that everyone will have the kids' interest at heart and be very generous. Quite the opposite. When there are hard choices to be made, you can expect to have to fight for a top spot, or any spot, for that matter.

For school funds, you can expect to have to prepare a budget complete with justifications. As at home, this document should begin with needs and extend to wants. Start with three categories: equipment, supplies, and materials. Find previous budget documents and discover how they were formatted. Then follow those templates to start with. But as your experience grows, different types of budget documents will need to be created if extensive funding is to be secured.

Many decision makers and decision-making groups are impressed with several procedures. The first is how well you can justify what you are asking for. It helps to know how to present your case in a few words accompanied by a picture. But behind those few words should appear a sense that solid research has been done to back up what you are saying. The second factor is trust. Over time, you will want to develop a reputation that if you are given money, you spend it wisely and there will be a reportable result. Third, it is not usually wise to submit your requests alone. Budget proposals that have the endorsement of many teachers, parents, and key opinion leaders have an infinitely better chance of being funded than just from your say-so. And it is wise to have those endorsing the proposed budget at the meeting where decisions are made. Key success rule: "Don't go alone."

Jealousy often arises among library media specialists who are well funded and those who are less well funded. The author has

known many entrepreneurial spirits who are well connected politically and over time have built incredible financial support. Just across the street might be another school with an impoverished library media program. The have-nots are usually quite vocal about their lack of resources and instead of being congratulatory are critical. We would all like to be well funded. Realistically, money and politics are bedfellows. Those that know how and who, have.

Grants. Another major source of funding will be the grants you initiate from the LMC. This requires some expertise in knowing who has money to give, what they are interested in funding, how they wish to be asked, and what strings they will attach to the money if granted. The first rule of thumb is just to keep your eyes open and ready to respond at a moment's notice. Often you will have less than 24 hours to come up with an idea and a written proposal. Knowing this, you should have numerous ideas already waiting in the wings just needing a quick rewrite or fine tuning to be ready to submit.

One librarian told the author that he had found great success in being a "bottom feeder." This meant that he found a source of many granting agencies who were giving \$300-\$500 or \$1,000 grants. They usually required a single-page justification. This person wrote many such mini-grant proposals and received over \$20,000 in one year.

Grant opportunities abound from local, district, state, and federal sources. While you might be wildly successful at times, you can also expect major disappointments even after sending in applications that have required a great deal of time and energy to prepare. Such is the nature of the game. There are many good "tips and tricks" books and other resources to help you learn how to write grants. Find and use them to your advantage. Read winning proposals to see how they were constructed. And finally, know when to play the politics needed before the grant is even written. That is, you can have the inside track on money and have already gotten the promise of success before you even begin to write the proposal.

Working with Governments. Acquiring funding over time, however, takes political clout. This is particularly true of school districts and state and national legislators. If you are not in line and clamoring for money, no one else will be there for you. You will need friends in high places. Legislators who have had bad experiences in school libraries during their childhood and teen years won't be very sympathetic.

Making personal visits, not sending e-mail or letters, to legislators is the best plan. During your visit you will have time to do three things: say thanks and describe what you are doing with money already received, present one idea about what needs to be done (a picture supported by evidence on a half-sheet of paper would be great), and then ask for support. Remember to take supporters to the meeting with you.

In addition to personal visits, the state library media organization will need to hire a lobbyist to see that sensible bills or proposals are in the legislative pot. Friends from other organizations and groups will be needed if success is to be expected.

Such a stance assumes that equity in the information world will not occur unless efforts at the local, state, and national levels combine to create an environment of opportunity. We are presuming that such opportunity will not happen exclusively at any level of educational interest. For example, some states are licensing information products for all the students in the states so that any citizen of the state, whether in a public school, being home schooled, or in a private school, has access to quality information in the library, in the classroom, or at home. Thus, one level of government is taking responsibility to provide one piece of the information environment.

In Conclusion. It would appear that as you develop the budget for an individual library media program you should recognize that you are working on a single piece of a larger picture. You will need to understand that picture first and then help construct it so that not only your own students can participate but others as well.

TECHNICAL SERVICES

Technical services is the behind-the-scenes operation that consists of selecting and acquiring materials and information systems; cataloging, indexing, and linking; inventory control; circulating; and maintenance of information products. It is quite possible for these operations to require the complete time of a library media specialist, particularly when there is no classified staff available. In the ten years since this book was in its first edition, great strides have been made in the development and acquisition of automated catalogs that help manage this task. These systems continue to become more sophisticated all the

time but require ever more powerful computers and networks to use.

Every library media specialist should spend time comparing available systems and thinking long and hard before the check is cut. Almost all systems are now Internet based so that the connection to classrooms and the home plus other libraries in the district and beyond is guaranteed. In the next few years, comprehensive interfaces will be developed to link multiple systems and information sources into a single interface controlled by the users and their coaches (teachers, parents, and library media specialists).

Technical services constitute the library media specialist's largest mud puddle. Some relief is given as information resources transfer from print to digital, such as full-text periodicals, reference collections, and vertical files. Yet other mud puddles of larger dimensions seem to crop up regularly. The management, updating, and troubleshooting of electronic resources is an immense concern.

Good systems analysts (library media specialists) are continually looking for good ideas to streamline the information system, looking for ways to manage in less time with higher reliability rates. We utilize listservs of other professionals locally, around the state, and nationally to help give us ideas for staying afloat in a difficult environment.

To be sure, the best systems allow us, the professionals, to be in command. The worst enslave us. An experience might illuminate my meaning here. A number of years ago, I was in a very large public library in the children's room doing research and a young girl came to the circulation desk to check out a book. The clerk told her that the computer said she could not check out a book because she owed a 25 cent fine. One look at the girl revealed the fact that this girl did not have 25 cents and would never have it. Thus, the machine was locking her out of literacy. I became incensed! Happily, a professional librarian happened to emerge from her office and took care of the problem. The idea, however, of machines dictating such idiocy is unthinkable. Yet I wonder how many other machines in the library world are in control when a professional is not close by. Machines give us power. They are also our slaves and can remain as such, thank you.

Many library media specialists have wondered about cataloging in the new world. Because we now have power, can we make our indexing and retrieval better than ever? Of course, but there are major

differences. In the digital world classification is rarely an issue but subject headings are everything. To build good knowledge management systems we will not only have to have detailed subject headings (and many, versus the old rule of three headings per item we used to have), but we also will need to be able to locate materials easily on grade and interest levels, languages, and through links to specific needs and curricular targets. Because each new information system you buy has its own retrieval engines and terminology, smart programs will have to be constructed to jump from one data bank to another seamlessly and invisibly to the user. We aren't there yet, but as the number of icons on the desktop grows, something will have to give.

The goal of technical services, of course, is to make the total collection and its tentacles through networks available to students at any time and in any location. We have all appreciated the vendors who make books shelf-ready, complete with cataloging data ready to plug into our systems. The nice thing is they can do it cheaper than we can. The time that we spent on those technical tasks can be used in collaborative activities that pay real dividends.

RESOURCES

Bard, Therese Bissen. *Student Assistants in the School Library Media Center*. (Englewood, Colo: Libraries Unlimited, 1999).

Baule, Steven M. *Facilities Planning for School Library Media and Technology Centers*. (Warrington, Ohio: Linworth, 1999).

Clyde, Laurel A. *Managing Infotech in School Libraries*. (Englewood, Colo: Libraries Unlimited, 1999).

Loertscher, David V. and Blanche Woolls. *Building a School Library Collection Plan: A Beginning Handbook with Internet Assist*. (San Jose, Calif.: Hi Willow Research & Publishing, 1999).

National Center for Education Statistics. *School Library Media Centers: 1993-* (Washington, D.C.: U.S. Department of Education, 1998).

Valenza, Joyce Kasman. *Power Tools: 100+ Essential Forms and Presentations for Your School Library Information Program*. (Chicago: American Library Association, 1998).

Woolls, Blanche *The School Library Media Manager*. 2nd ed. (Englewood, Colo.: Libraries Unlimited, 1999).

*See also "Dave's List of Professional Materials" at <http://www.lmcsource.com> under freebies.

Evaluating the Success of the Library Media Program

If you were charged with contributing to the education of a minor, would there be enough evidence to convict?

In the white expanse of blowing snow on a typical winter morning, the school bus driver from Bone, Idaho, has only one hope of delivering the children safely and on time to Idaho Falls Schools: steer between the lodgepole pine poles at 300-yard intervals, for that is where the road lies. One misjudgment and it's in the ditch. Time to call for help on the CB radio.

Library media specialists need some lodgepole pine poles to stand as markers along the road to success, indicators that will mark progress or regression along the way. The purpose of this chapter, which could be a book in and of itself, is to provide a glimpse at measures that will supply information for decision making to the library media specialist, the principal, and the board of education.

The author has met a few library media specialists who had little need for evaluative instruments and techniques. These were people who not only knew where they were going with their program but whose minds were always analyzing every situation, picking up constant clues of failure and success and translating negative signals into positive steps for action. The rest of us need more direct guidance. In fact, good analytic library media specialists need it too, perhaps not for themselves but for others

who are charged with making administrative and budgetary decisions.

Library media centers are service organizations, and like all service organizations, the perceptions that people have of them, true or not, have far-reaching consequences. Old and outdated perceptions die hard. Many principals and teachers only remember what the library did for them as a child, and that may be exactly opposite of what the profession intends for the students of today. Library media specialists have battled an image problem for many years, bemoaning the fact that administrators and teachers really do not understand the function of the library media program. How could they understand? Did they have a great library media center as a child? Did they learn the functions of a library media program in their college preparation courses? Do they have any models locally that they can visit to see exemplary programs in operation? When they read national, regional, or state standards for school libraries, do they believe what they read and do what the standards recommend? The answer to all these questions might well be no.

The premise of this chapter is that informed decision making is preferable to decisions made on personal perceptions or political whims. The impossible dream? Perhaps. This chapter is not for persons who make judgments without consulting evidence or data. The author remembers a library media specialist who documented everything he did for the principal. Every meeting attended, every consultation, every hour of the day was accounted for. The administrator was not convinced of worth. Certain decisions about the destiny of the library media program and staff had been made in the political arena and no amount of data was going to change the outcome. In another tragic situation, the author collected data about a certain library media program and the library media specialist lost her job because the data confirmed the suspicions of the administrator.

Collecting data about a library media program can be a very negative or a very positive experience, a nurturing or a threatening situation. The best that any of us can hope is that the data we collect will be interpreted fairly and used in a positive manner. We trust that most people, given the facts, will act in a rational manner; that the goal of quality education and the interests of the children will be paramount as program directions are decided upon. Such will not always be the case.

Another assumption of the profession is that quality programs have a future and mediocre ones do not. That is, if you demonstrate your value to a student body, a faculty, and a principal, you will have a job tomorrow, next year, and for another decade. Generally, that is true, but often overriding political conditions and situations dictate policies, cuts in budget and staff, and other negative effects that have little to do with a quality LMC program. A whole host of political and economic factors have devastated many school districts over the past ten years. Library media specialists who have built programs over a period of 20 years have watched that progress melt away almost overnight and have given up rather than watch all they have worked for die.

Trying to reach out and build a quality library media program is taking a chance. It is taking a chance because it often involves making people change. It's tough. It requires knowing where you want to go, documenting where you are, making decisions, and documenting both the progress and the problems.

Over the years, a number of evaluative systems have been tried by library media specialists to show worth, to demonstrate where we'd like to go, to show gaps, and to illustrate problems. Library media specialists should realize that some evaluative data will convey an impressive message over and over again. Other data will be effective only once or just a few times. We must all be astute enough to select measures and report data that will accurately reflect what is really happening, but do so within the political climate of the local community.

To ask for major collection renewal efforts in a time of district financial exigency would be unwise, but more than one library media specialist has been courageous enough to sell major program improvement when other programs in the organization are being cut. One state library media supervisor had the vision and the political clout to get her legislature to appropriate \$3 million for direct grants to school libraries. The program became so popular with the many small school districts that when a huge state budget crunch faced the state legislature, one legislator said, "We probably won't touch the library grants—it would make too many people mad." And they didn't.

What is the point of all this? Simply that it would be wise for all library media specialists to document what they do—to be prepared not only to defend what they are doing but also to advance the cause of the LMC program. Manna from heaven is not all that common.

Few persons would dispute the fact that library media specialists are busy all day. All should realize that the degree of tiredness at the end of the day is no measure of the effectiveness of the LMC program. The documentation of a day's activities may indicate that the library media specialist rarely poked a nose up out of the warehouse all day long. It is not enough.

WHAT SHOULD BE EVALUATED?

Most of the evaluative measures of school libraries over the last 20 years have concentrated on measuring things, people, and space. Figures have been compared to what standards or accreditation documents have recommended. If a gap was evident, the library media specialist would request additional funding to "bring us up to the standard." Comparing library media programs against standards documents will always be important if they are what decision makers want and use. An example is the New England Educational Media Association evaluative instrument reprinted in Appendix A. But a wide variety of other measures that are effective.

There are four general areas of a library media program that can be measured. The wise library media specialist collects data in each of the areas for decision makers. These four areas form an acronym for easy recall (GROW) and are illustrated in figure 15.1.

Area 1: Goals and objectives. Measure where you think you are in relation to where you think you ought to be, or evaluate whether the goals you have are worthy ones.

Area 2: Resources. Do you have the materials, space, facilities, budget, and staff to operate an effective program?

Area 3: Operations. Do the many warehousing routines of the LMC run smoothly and efficiently?

Area 4: Worth/results/impact. Does the LMC program make a difference in the way teachers teach and how much students learn?



Fig. 15.1. GROW. ¹

¹ Adapted from Daniel J. Stufflebeam and Anthony J. Shinkfield, *Systematic Evaluation: A Self-Instructional Guide to Theory and Practice* (Boston: Kluwer-Nijhoff, 1985).

Table 15.1 provides examples of each of the four areas when carried out in an actual LMC program.

| Program element being evaluated | Question | Technique |
|---------------------------------|--|--|
| GOALS | Does our technology plan address any concerns other than infrastructure? | At the next technology committee meeting, the current plan is analyzed looking for concerns about process, resources, and content learning. |
| RESOURCES | The library media specialist wants to institute a program of book bags with Kindergartners and first graders but is not sure if there are enough books. | Using the catalog and examination, a parent volunteer and the LMS count appropriate titles. They find that they will need at least 200 more volumes to make the program work well. The volunteer assists in writing a one-page grant request to the parent organization. |
| OPERATIONS | The LMS wants to change from a fixed to a flexible schedule but feels she will need accurate data about the amount of collaboration happening <u>before</u> the new idea is begun. | The LMS does a collaborative log for a month showing collaborative activities with teachers not a part of scheduled visits. Baseline data are in place for the experimental phase. |
| WORTH/RESULTS/IMPACT | The school has invested heavily in an electronic reading motivational software system. Everyone is wondering if it is making any difference in the reading scores. | Because the software takes reading levels from each student using it, baseline data are collected on every student. Each semester additional tests are taken and then finally the regular reading test is given. Data from the previous year are compared with this year's data. |

Table 15.1. Examples of Evaluation Criteria

CRITERIA FOR SELECTING AN EVALUATION MEASURE

Before one begins to use any evaluative measure, some important questions need to be asked and answered. No evaluation effort should be taken lightly.

- *What will the evaluation instrument really measure?*
 People's perceptions or opinions? Hard data? Generally, hard data will be preferable to an opinion if such hard evidence can actually be collected. For example, an actual circulation count is preferable to people's opinions about whether the library circulates many, some, or few items. But is a circulation count a measure of use? No, it merely indicates how many items were checked in and out through the official circulation system. If I want a true measure of use, then I must check on in-house use, multiple use of items circulated once, and items circulated

but not actually used. By analyzing carefully what each measure would actually tell me, I would know whether or not to collect the data in the first place and what conclusions I could draw from the data.

- *How easy will it be to collect and analyze the data?* Any measure must fit in the routine of the day and it must not take an inordinate amount to implement. It would be easy to end up spending the majority of the day measuring but not actually doing. For example, tallies are easy to keep if tally sheets are in the location of the activity being measured. In some cases, machines take tallies. For example, the automated catalog system might automatically record the number of items in the collection, the circulation, and other statistics on a regular basis.
- *Is the measure accurate?* If the staff forgets to record data or fudges on tallies, the measure may not only be inaccurate but counterproductive. Even when a machine is supposedly counting an operation, a few random checks on accuracy are in order.
- *If you were an outsider who knew little about the internal operations of a library, would you be able to understand the data that would result from an evaluation instrument?* Some measures should be taken within the organization for the staff's use only. Other measures need to be taken with an outsider in mind, particularly as the data are interpreted and displayed in tables, graphs, or charts.
- *Is the measure within ethical guidelines?* There are many concerns about rights of privacy and the use of evaluative data to take into consideration. Some of them include withholding the true nature of the study from participants; exposing participants to stress, anguish, or harm; invading participants' privacy; and withholding benefits from persons in the control groups. Many school districts have committees that must approve research or evaluation instruments to ensure that the measures will not endanger the physical, mental, or emotional health of students. For example, an experiment that would deprive some students of library books to test how much library book shoveling contributes to the reading scores of an experimental group would be unacceptable.

- *Is the measure cost effective?* Taking into consideration the amount of staff time to collection, analyze, and interpret the data, how much will it cost? Is it worth the effort and cost?

- *Do all the measures being taken provide a cross-section view of the library media program?* It is easy to concentrate on resource measures but ignore those for worth. As stated previously, the best evaluation plan is to include a variety of measures that look at various parts of the program and provide the basis for demonstrating progress as well as charting the needs of the program for the future.

HOW SHOULD A MEASURE BE TAKEN?

Conducting an evaluative program is much like launching a program of formal research. In fact, evaluation is a branch of research, since many research techniques are used in the evaluation design. Does one need a course in research and statistics to conduct evaluation? A course would help, but with some general guidelines and a pot full of common sense, some excellent measures can be taken, analyzed, and interpreted. There are five steps to consider in conducting an evaluation:

1. Decide on an evaluative plan. This will include deciding what to measure, who will do the measuring, when the evaluation will be done, how it will be done, and how and to whom the data will be reported.

2. Design the evaluation measure. There are many evaluation measures that can be used or adapted easily to local needs and situations. Care should be taken to assure that the instrument will really measure what the school needs.

3. Collect the data. Collect the data according to the guidelines given by those who designed the instrument, but temper those instructions with common sense. Practicalities of collecting the data, coupled with concern for accuracy, are important considerations. Remember that random samples are often as measuring every occurrence or person.

4. *Analyze and interpret the data.* Generally, instructions for analysis and interpretation will be given by the creator of the instruments. If not, simple totals, averages, and percentages are a good place to start. Persons with a statistical background can often suggest some interesting comparisons and provide a simple microcomputer package that will analyze the data.

5. *Communicate the information.* It will do no good to collect data that are not communicated to decision makers clearly, accurately, and succinctly.

The reader should already have noticed that the formal research and evaluation process is strikingly similar to the information literacy process we are trying to teach learners. It is turning that model back onto ourselves and our operation to solve a question dealing with any of the GROW model aspects.

Practitioners often shy away from doing their own evaluation study because they lack formal research training; however, the whole notion of action research—studies done in local situations—is quite appropriate.

WHAT KINDS OF DATA ARE USUALLY COLLECTED?

Most evaluative instruments call for the collection of similar types of data in various subject areas. Each type of data has its own advantages and disadvantages as interpretations are made.

1. *Direct data.* This type of data measures a service or objects exactly. The number of books in a collection, the number of items circulated, a list of copyright dates, the amount of money spent on computer equipment, and the number of square feet in the LMC are all examples of direct measures. Direct numbers are always the best if they can be obtained; however, no one can directly measure the amount of enjoyment a child experiences listening to a storyteller or the attitude teachers have toward library media services.

2. *Opinion data.* Most of the answers to questionnaires measure opinion on rating scales. The most popular data of this type are collected using the Likkert Scale, which measures perceptions on a sliding scale (Disagree 1 2 3 4 5 Agree). Measuring attitudes, feelings, and perceptions and making judgments and ranking items are all examples of

opinion data. This type of data is commonly collected because there is no way to measure opinion directly; there is no thermometer we can stick in someone's mouth and say, "she agrees at the 76.359 level." Sometimes we convert opinion data into more direct data by constructing the scales so that only two options are possible. For example, we make a statement such as, "I like the library media specialist." Respondents either must agree or disagree. Then we report the number and percentage of the respondents: 80 percent like the library media specialist and 10 percent don't. Ten percent have never met her, so they have no opinion.

3. *Observational or interview data.* If a trained person looks for the occurrence of certain things and keeps track on a tally sheet, or if an interviewer asks questions of teachers or students, either direct or opinion data can be collected. Both methods are expensive because they require a great deal of time to collect compared to a questionnaire or taking a few moments to tally the circulation for the day. Generally, these data are superior to questionnaire opinion data because the person being questioned can clarify what is wanted before answering.

Scientists often scoff at the data that social scientists and educators collect as lacking precision. No one has learned how to accurately measure the number of facts memorized, the attitude toward a teacher, the amount of learning, or whether a life-long reading habit is developing at a constant rate. We have not planted computerized data-sensing devices in students' brains or fed them "reading pills," or planted hidden television cameras to record the effects of reading pornography on the Internet. Progress has been made in the last 30 years in measuring what people believe and feel (predicting winners in national elections is frightfully quick and even controversial), but we are likely to live with a margin of error for some time to come.

The challenge for library media specialists is to select the most appropriate and best measuring devices they can to ascertain the worth of their programs. Such a skill is developed with experience, by trial and error, by looking at what others do and borrowing their successes and avoiding their failures. Probably the best advice is to start simple and collect a wide variety of measures. Some measures will emerge as good thermometers of the program, others will seem irrelevant. The best measures are

those that make sense to decision makers as they weigh both evidence and political or policy information. This means that data that have the potential for the most use and which are likely to make the biggest difference should be collected.

If decision makers are tired of seeing data on collection size or comparing one district's budget against the national standards, collect and use different data. Principals might be much more interested in the number of collaboratively planned teaching units that were conducted between teachers and library media specialists than they would be in circulation data. The former gives them some feeling for progress in the instructional program as a whole—something they may have to report to a school board interested in educational excellence. Circulation data may be uninteresting.

TYPES OF INSTRUMENTS TO CONSTRUCT AND USE IN COLLECTING DATA

A number of valuable tools can help in the collection of reliable data about the library media program. Most library media specialists have participated so many times in data collection efforts for other organizations or in the school that adapting techniques already familiar is not a difficult task. Tips on a few common techniques are included here. Other help can be easily obtained by finding a book about doing research or action research that is clearly aimed at a desirable sophistication level (researchers often write in some other language but claim it's in English).

- *Questionnaires.* Short questionnaires are to be preferred to long ones. The best technique is to ask a few “so-what” questions about your questionnaire. How will I tally these data? What will I be able to report when I have these data? When the study is over, what data would I really report? Often, if you think ahead, there will be no need to ask a lot of the questions you thought were important at the outset. Make sure that just the essential questions are asked. Test out the questionnaire and the type of data you are getting before you have everyone fill it out. This is particularly critical when creating questionnaires for students.
- *Interviews.* Formulate interview questions as carefully as you would written questionnaires. How will the interviewer record the important elements of the interview? What kinds of judgments will the interviewer have to make about

what is heard? (plan those in advance). Formulate questions that do not tell the person being interviewed what you want to hear. Pilot test the interview questions before the real study. Select a person to do the interviews who knows how to do interviewing and will be as objective as possible.

- *Focus groups.* Build questions for groups that elicit conversation. Get directly to the issue and allow for everyone to feel they can participate. Have several people record the various major points of the discussion and then compare the results for accuracy of interpretation. Learn techniques for getting groups to come to consensus if the outcome will dictate how policy is written.
- *Observation.* Ask an outsider to do the observation. Describe to the observer exactly the behavior or element that should be observed. This would include recognition of the actual behavior versus a non-behavior element. Prepare some kind of tally mechanism to count and interpret what is observed.
- *Computer-developed statistics.* Many automated systems and databases have built-in tally procedures. Examine those available to determine whether the numbers will really help you know what you'd like to find out. If not, the software or machine can often be tricked in some manner into collecting what you do want to know. For example, some automation systems have blank fields you can use for any purpose you design. Make sure that what is being counted is a measure of what you really want to know. Is it accurate? What is it measuring? What isn't it measuring?

CREATING AN EVALUATION PLAN

Knowing that it is impossible to measure every component part of the LMC program, the library media specialist should establish priorities. Which measures will you take on a regular basis and which on a rotational basis? Part of this decision should be based on the initiatives going on in the school. For example, if the entire school is trying to concentrate on literacy, then your measures should focus on this area. Thinking ahead about reporting whatever you are evaluating, the final report could be designed before the actual methodology was created.

For example, the final report might be four paragraphs of text with an accompanying graphic, covering:

- What it was like before
- What we did
- The result
- What's next

Measures for each of the four program areas of the LMC might be selected, discussed with the LMC advisory committee, designed, and carried out. Examples might be:

- What's happening in collaborative planning?
- What progress is being made in building avid and capable readers?
- Is technology enhancing learning?
- What progress is being made towards building information literacy?

It is always good to begin evaluation presentations with an administrator and other groups, starting with the above four topics before getting to the inevitable infrastructure gripes. If you begin the session with infrastructure problems, it is unlikely that the program analysis will get the needed attention.

Major national studies have demonstrated that the school library does make a difference in academic achievement. But those research studies were not conducted in your school with your students, and in your situation. Only you can develop a system to monitor your progress along the snowy road. Hopefully the measures you select will help you peer ahead and see the next marker. There are lots of learners and teachers counting on you.

RESOURCES

Everhart, Nancy. *Evaluating the School Library Media Center: Analysis Techniques and Research Practices*. (Englewood, Colo.: Libraries Unlimited, 1999).

Merriam, Sharan B. *Qualitative Research and Case Study Applications in Education*. (San Francisco: Jossey-Bass Publishers, 1998).

Zweizig, Douglas L. and Dianne McAfee Hopkins. *Share the Power: Lessons from Library Power*. (Englewood, Colo.: Libraries Unlimited, 1999).

* See also “Dave’s List of Professional Materials” at <http://www.lmcsource.com> under freebies.



Appendix A

The following document was created by the New England Education Media Association (NEEMA) to help library media specialists evaluate their effectiveness in following regional and national standards for performance. This document was published in October, 1999 and is reprinted with permission.

NEEMA Task Force to Develop Competencies, Questions for Evaluators and Indicators of Quality

A Profile and Alignment Document

The NEEMA Task Force to Develop Competencies, Questions for Evaluators and Indicators of Quality for the School Library Media Program reviewed a number of documents in seeking to:

- Develop a Competencies for School Library Media Specialists document similar to the AASL Competencies for Teachers and Administrators;
- Develop a series of questions for NEASC (New England Association of Schools and Colleges) evaluation team members related to Teaching and Learning and Support Standards;
- Develop a statement of Indicators of Quality Integrated Programs.

Competencies (Crosswalk and Alignment) As a result of input and feedback received from the NEEMA Governing Board and membership, the Task Force utilized the AASL Model of Beginning Competencies for Teachers and Administrators and made additions/modifications thereto from a variety of documents developed in New England. These included: *Connecticut State Department of Education: BEST (Beginning Educator Support and Training) Program Certification Endorsement Areas in Elementary Education, Secondary English, School Leaders, Math, Science, Social Studies, Visual Arts, Music, Physical Education and Special Education; and Learning Resources and Information Technology Framework; State of Maine: Learning Results; and also Information Skills Guide for Maine Educators; Massachusetts Department of Education: Massachusetts Common Core of Learning, Massachusetts*

Curriculum Frameworks; and Principles of Effective Teaching; New Hampshire Department of Education: Assessment of Candidate's Strengths (Library/Media); and New Hampshire Curriculum Frameworks; Rhode Island Department of Education: Rhode Island Common Core of Learning; and Rhode Island Frameworks; Vermont Department of Education: Vermont's Framework of Standards and Learning Opportunities; and Library/Media Evaluation Indicators; Vermont Educational Media Association: Professional Development Document - Vermont Library Media Professionals in the 21st Century.

Although there were other appropriate source documents and the like from throughout the country, it was agreed that the flavor of this report should be based on regional perspectives. However, it was also determined that, as the crosswalk should be considered a work in progress as additional documents are developed within each state, publication of the crosswalk will be ongoing in electronic format at the NEEMA web site www.neema.org. It was also agreed that based on draft information available to the Task Force on the development of the new national *Information Literacy Standards for Student Learning* (ALA/AECT, 1998) that, we would also use the nine standards and the Common Goals for Student Learning (National Study for School Evaluation and the Alliance for Curriculum Reform, 1996) as our own accepted definition of and goals for information literacy and student learning. These are therefore included as Appendices.

Criteria and Indicators - Using a variety of regional resources, a suggested format (which matches the competencies crosswalk) is provided.

Questions - Sample questions related to NEASC Teaching and Learning and Support Standards/School Library Media Program are provided.

NEEMA TASK FORCE

Susan Ballard, (NH, Chair), Tamara Blesh (ME), Susan Bryan (RI), Kim Carter (NH), Pat Cuttitta (VT), John Crowley (CT), Dorothy Grazier (NH), Margaret Hallisey (MA), Harriet Lapointe (RI), Jeanette Lizotte (NH), Carolyn Marcato (CT), Carolyn Markuson (MA), Susan Snider (NH), Brenda White (CT)

Criteria and Indicators

1. Information Literacy is an integral part of the curriculum (evidence that the library technology and media program plays a critical role in teaching and learning activities)

- ✦ Information literacy skills are embedded within the curriculum of most disciplines.
- ✦ Teachers and students use the resources of the library media center for teaching and learning.
- ✦ Administration, teachers, students, and community understand and support the learning goals and objectives of the library media program.

2. Collaborative planning and teaching (evidence of coordination with classroom teachers and the promotion of information literacy skills)

- ✦ Library media specialists participate in building, district, and department or grade level curriculum development/assessment on a regular basis.
- ✦ Library media specialists work with teachers as instructional partners in unit development and implementation.

3. Resource based learning experiences and environments

- ✦ The resource collection is selected and developed cooperatively by the library media specialist and faculty to support the school's curriculum and to contribute to the learning goals of teachers and students.
- ✦ A collection development plan is in place in order to ensure that resources reflect both current and in-depth knowledge.
- ✦ The collection is of sufficient breadth and currency to be pertinent to the school's program of studies.
- ✦ The library media center provides adequate, appropriate space for program resources, services and activities.

4. Use of resources in all formats as a valid, valuable base for learning in all subject areas

- ✦ Learning needs of all students are met through access to information and ideas located in a multi-formatted resource collection that is supported by reliable equipment, and that is also adequate or in sufficient quantity for the student population to utilize resources.
- ✦ Students are able to demonstrate knowledge in the use of a wide variety of resources and equipment.

5. Use of technology as a tool or resource to facilitate student learning

- ✦ The program provides electronic resources and focuses on the utilization of these resources in the information literacy curriculum of various content areas.
- ✦ Students use technology to foster inquiry and master skills necessary for an information literate, life-long learner.
- ✦ There is evidence, through student ability to use technology to solve information problems, that information literacy and technology skills have been linked in content curricula to promote the transfer of information problem solving strategies across all disciplines.

6. Professional growth and development

- ✦ School Library Media Specialists participate in effective professional development to consistently update skills and knowledge - especially as they relate to information literacy issues and related technologies.
- ✦ There is evidence that the library media specialist is aware of effective practices and current research in the area of student learning and information literacy.

7. Management of resources and access

- ✦ The materials of the resource collection are included in a bibliographic control system, which uses standardized formats for classification and cataloging.
- ✦ Resources are circulated according to procedures that ensure confidentiality of borrower records and promote free and easy access for students and staff.
- ✦ There is evidence that resources are readily accessible to students and staff because of effective acquisition and circulation policies and procedures, resource sharing, and access to electronic resources outside of the school.
 - The collection is organized for maximum and effective use.
 - A flexible schedule is maintained to ensure access by students and teachers at point of need.

8. Advocacy

- ✦ The program is promoted by school library media personnel who model the importance of information literacy in education, publicize available services and resources to students, staff and the community, serve on school and district-wide committees and participate in community projects.
- ✦ There is evidence that the value of the library program to students and staff is well articulated and clearly understood by administration and faculty.

9. Ethical uses of ideas and information

- ✦ The program promotes the responsible use of ideas and information through collaboration with teachers, administrators, and others in the development of policies and procedures that comply with current copyright and other law that pertain to intellectual property.
- ✦ The program actively models the ethical use of information and information technologies in the provision of services relating to the use and/or duplication of resources in any and all formats, as well as confidentiality of records, and equitable access.

Questions/Evidences Of Student Learning And Library Program Interaction

1. What evidence exists that teachers understand the interdependence and fundamental relationship between the classroom and the library program to ensure that students are information literate? (1 and 3)
2. In what ways are students able to demonstrate their proficiency in the use of a variety of print, media and electronic resources to solve information problems and make connections across the curriculum? (4)
3. In what ways are students able to use technology to acquire information, organize information, evaluate information and present information? (5)
4. What impact/effect has the library staff's professional development had on how students are able to access, evaluate and present information? (6)
5. Give examples of student, faculty and community value for the library media and technology program (i.e. financial support, staffing pattern, facilities, utilization of facility, resources and collection data). (8)
6. What evidence exists to support that students and others in the school (administration, faculty, staff) are ethical users of ideas and information as it relates to the library program? (i.e. copyright, appropriate citation of resources, etc.) (9)
7. What evidence exists to show that the policies, operation, and organization of the library program support student and faculty needs? (Examples: Is the circulation policy fair? Can users locate what they need, when they need it? Are the hours of operation sufficient?). (7)
8. Is there evidence that the library program uses information about student learning to direct its goals, collection development, priorities and long range plans?
9. What evidence exists that teachers and library media specialists plan in collaboration to benefit student learning? (2)

Level of Collaboration Rubric:

1. No collaboration beyond scheduling the library
2. Schedule the library and pull resources for teachers for use in the library or the classroom
3. Provide introduction to resources at the beginning of unit as well as pull resources and schedule
4. Plan with teachers, offering suggestions and strategies, as well as pull resources and schedule
5. Provide instruction in information literacy skill or concept as a result of planning with teachers as well as pull resources and schedule
6. The library media specialist is involved with curriculum development and revision at the school level.

Criteria upon which questions/evidences are based

1. **Information Literacy is an integral part of the curriculum**
2. **Collaborative planning and teaching**
3. **Resource-based learning experiences and environments**
4. **Use of resources in all formats as a valid, valuable base for learning in all subject areas**
5. **Use of technology as a tool or resource to facilitate student learning**
6. **Professional growth and development**
7. **Management of resources and access**
8. **Advocacy**
9. **Ethical use of ideas and information**

APPENDIX A

Common Goals for Student Learning

National Study of School Evaluation and the Alliance for Curriculum Reform 1996

Learning to Learn

- Gather and use information effectively
- Reflect on and assess their learning
- Demonstrate adaptability and flexibility
- Effectively use goal setting and planning skills (e.g., self-management skills; time management)
- Demonstrate perseverance and self-discipline

Expanding and Integrating Knowledge

- Make explicit connections within and across areas of learning based upon an understanding of the disciplines
- Use existing knowledge to expand understanding or develop new knowledge
- Gain disciplinary knowledge and use multi-disciplinary connections in the course of solving authentic problems

Communication Skills

- Communicate with clarity, purpose, and understanding of audience
- Use a wide range of communication forms effectively and appropriately (e.g., oral, written, artistic, graphic)
- Recognize, analyze, and evaluate various forms of communication

Thinking and Reasoning

- Critical thinking, problem solving and creative thinking
- Analyze, synthesize, and draw inferences from observations and other data to define and solve problems
- Construct and justify arguments using logic and evidence appropriate to the context and audience
- Assess, critique, and refine their multiple problem solving strategies
- Explore various paths, use multiple strategies, and take considered risks in solving problems and in creative expression
- Reflect on their own patterns of perception and learning

Interpersonal Skills

- Work with others in a variety of situations to set and achieve goals
- Manage and evaluate their behavior as individuals and as group members
- Deal effectively and tolerantly with diverse opinions and beliefs
- Negotiate effectively to achieve goals

Personal and Social Responsibility

- Take responsibility for personal actions and act ethically (e.g. demonstrate honesty, fairness, integrity)
- Respect self and others, and understand and appreciate the diversity and interdependence of all people
- Demonstrate an understanding of and responsibility for global and environmental issues
- Act as responsible citizens in the community, state, and nation.

APPENDIX B

Information Literacy Standards for Student Learning

American Library Association and Association for Educational Communications and Technology

Information Literacy:

- Standard 1: The student who is information literate accesses information efficiently and effectively.
- Standard 2: The student who is information literate evaluates information critically and competently.
- Standard 3: The student who is information literate uses information accurately and creatively.

Independent Learning:

- Standard 4: The student who is an independent learner is information literate and pursues information related to personal interests.
- Standard 5: The student who is an independent learner is information literate and appreciates literature and other creative expressions of information.
- Standard 6: The student who is an independent learner is information literate and strives for excellence in information seeking and knowledge generation.

Social Responsibility:

- Standard 7: The student who contributes positively to the learning community and to society is information literate and recognizes the importance of information to a democratic society.
- Standard 8: The student who contributes positively to the learning community and to society is information literate and practices ethical behavior in regard to information and information technology.
- Standard 9: The student who contributes positively to the learning community and to society is information literate and participates effectively in groups to pursue and generate information



Appendix B

The following experience by Sharon Coatney, a Past President of the American Association of School Librarians exhibits what begins to happen with children who are asked to reflect on the information literacy process. Many experiences like these need to be documented, studied, and reported in the literature.

Late last winter, after returning from a frigid weekend in Chicago during which an AASL committee worked on the instruments to be used to gather data to support the implementation of the new standards and guidelines as part of the World Book Goal Grant given to AASL for that purpose, I administered one of the surveys, “The Power Learner” survey which asked the students to assess how information literate they were.

The class, which I chose for this pilot study, was a 4/5 Multiage classroom (46 kids-2 teachers,) which had just finished a lengthy project in which they had researched the life and work of a children’s author of their choice and presented an oral presentation structured in any way they wished. The performance ran the gamut from quiz shows to puppet shows to live portrayals and were guided only by a rubric which they, their teachers and I had collaboratively developed. The project was entirely open-ended. Students performed their final presentations for their classmates, other classes in the school and I chose several to be presented at the local Barnes and Noble Store on the Winnie the Pooh stage! Many parents, other children and community members attended the evening performances.

It was quite a successful project. By administering the “Power Learner Survey”, I wanted to find out if the kids really understood the processes they had gone through to create their obviously successful projects. As a teacher/librarian I am particularly interested in the kid’s ability to reflect on and understand what they have done, knowing that that will enhance their ability to transfer their learning. However, I really wasn’t prepared for the way the children responded to the survey. First I had them fill it out without allowing any questions. I just wanted to know if a typical fourth or fifth grader could read and understand it. Then we had a classroom discussion and I collected and read their comments. I did go back and talk to some of the students privately about their written comments. And just to clarify, these are typical kids, everything from learning disabled kids to gifted kids is in this classroom. It is not a handpicked group.

Actually, the kids were appalled by the survey, they couldn’t understand why I would ask such questions because they had already asked themselves the questions as part of the information process they had been taught and in reviewing the rubric we had jointly constructed. They could not imagine not going through this process anytime they wanted to find information!

I should say that these kids were then 8 to 10 years old. All of them had been in our school for at least 3 years. We begin teaching the research process in kindergarten. These students had done several projects already that year and were experienced researchers. Still I was not prepared for their honest amazement that everyone did not know and understand what they knew and understood and that it might be necessary to develop this survey to see if other students were understanding! It was heartening!

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