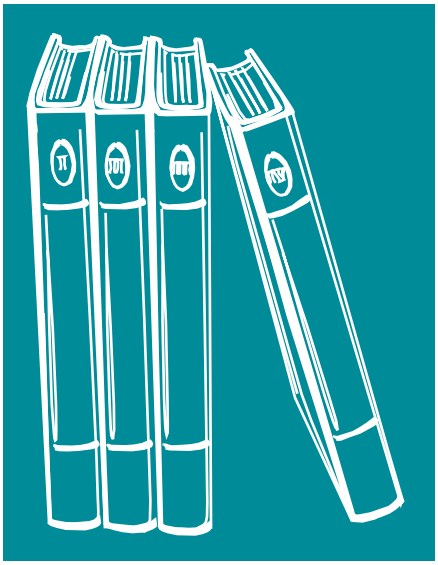
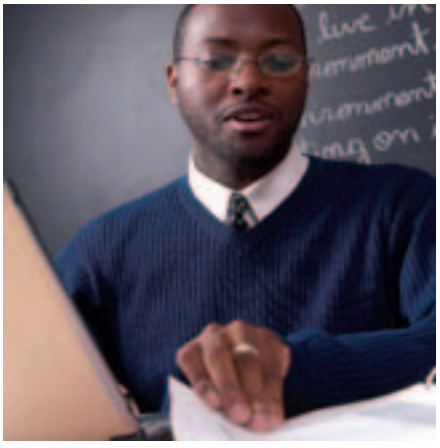


IMPACT:

Guidelines for North Carolina Media and Technology Programs



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May 25, 2005

NORTH CAROLINA MEDIA AND TECHNOLOGY PROFESSIONALS:

It is with great pleasure that I commend to you the revised *IMPACT: Guidelines for North Carolina Media and Technology Programs.* The acknowledgement of the equal importance of both the school library media and the instructional technology programs in teaching and learning is the premise of these guidelines.

We know that school library media and instructional technology programs are the foundation of a 21st Century education. The access to information that these programs afford makes the difference between the textbook-bound classroom of the past and the far-reaching, resource-based curriculum of today and tomorrow. Research tells us that instructional technology, used appropriately, results in higher test scores. It is remarkably effective in sparking student interest, increasing motivation, and raising self-esteem, thus positively impacting student achievement. Research also tells us that a school library media center that provides up-to-date, accurate, and attractive resources managed by a professional school library media coordinator who collaborates with teachers to augment and enhance classroom instruction also results in increased test scores, especially in reading. *IMPACT* reflects both the reality of this research and the commitment to assuring that every teacher and student has the academic and personal advantage of access to these high quality programs.

No North Carolina citizen can be left behind! Implementing the *IMPACT* Guidelines in your school assures that our youngest citizens, their parents, and their teachers will have the skills necessary to enter the 21st Century world of work and civic responsibility.

The school library media and instructional technology program and the resources it promotes are central to the success of North Carolina's ABCs of Public Education and to Governor Easley's 21st Century Learning Skills priority--in fact, to all school reform initiatives throughout the state. *IMPACT* and the excellence it fosters are a part of the vision and accountability necessary to produce schools that are First in America.

Howard N. Lee,
Chairman, Start Board of Education

ACKNOWLEDGMENTS

We welcome the opportunity to express appreciation to the following workgroup participants who contributed their time, enthusiasm, and expertise in the development of this document.

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FOREWORD

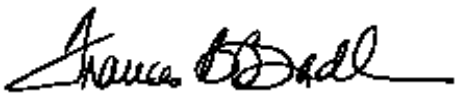
Welcome to the revised edition of *IMPACT: Guidelines for North Carolina Media and Technology Programs!*

IMPACT continues to be a part of the overall vision of the North Carolina Department of Public Instruction. It recognizes that an effective school library media and technology program is the infrastructure that supports both teaching and learning. This program is the key to making education relevant to a knowledge-based society and its economy. *IMPACT* is aligned to *Information Power: Building Partnerships for Learning,* the national standards for media and technology programs, the ISTE National Educational Technology Standards, and a growing body of school library media and instructional technology research. Also reflecting the recommendations of the 2005-2009 North Carolina Educational Technology Plan, *IMPACT* acknowledges the importance of staffing each school in North Carolina with both a school library media coordinator and a technology facilitator. It also reflects a commitment to provide a roadmap for an integrated media and technology program once these positions are in place. It offers assessment instruments to assist in the evaluation of the media and technology program designed to move us toward the State Board of Education goals of rigor, relevance, and relationships, the foundation of a 21st Century educational and economic environment.

The revision of *IMPACT* reflects the reality that the media and technology program and its resources are not static. In fact, they are constantly evolving, mandating on-going update and revision. Thus, while there is a one-time print edition of this document, it is also a Web-based publication <www.ncwiseowl.org/impact.htm>. The online version of *IMPACT* will be updated regularly, new resources created, further links added. It will always be a work in progress.

IMPACT is also a publication for many audiences. Media and technology personnel can no longer publish a document simply for themselves. *IMPACT* for Administrators and <http://www.ncwiseowl.org/Impact/Admin/AdminImpact.htm> *IMPACT* for Classroom Teachers <http://www.ncwiseowl.org/kscope/impact/> are targeted at those whom our program directly affects: students, teachers, administrators, parents, and the community. Also available are videos that allow everyone to see and expand their understanding of how an *IMPACT* Model School functions on a day-to-day basis. <http://video.dpi.state.nc.us/eforums/impact_videos/> Only when everyone concerned with the education of our children understands the integral part that the media and technology program plays in high student achievement will the commitment to fund these resources be made. Thus, it is imperative that we use *IMPACT* to inform all citizens in North Carolina of the importance of our role in education.

Media and technology professionals live in exciting times. The public is beginning to understand the link between our programs and services and a high quality education. We dare not squander this opportunity. *IMPACT* is a tool that will help media and technology personnel at both the state and local levels work together to plan and build effective, comprehensive teaching and learning environments for the 21st Century. We look forward to the challenge!



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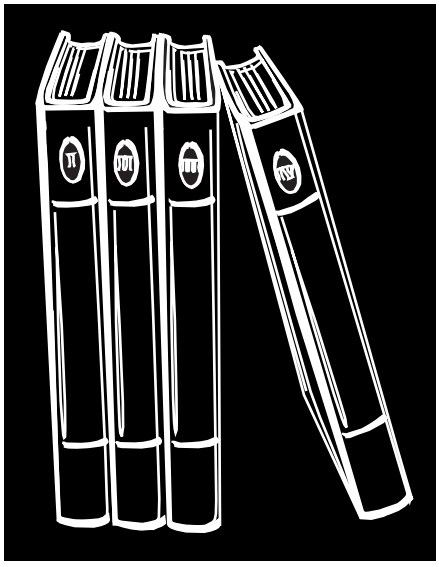

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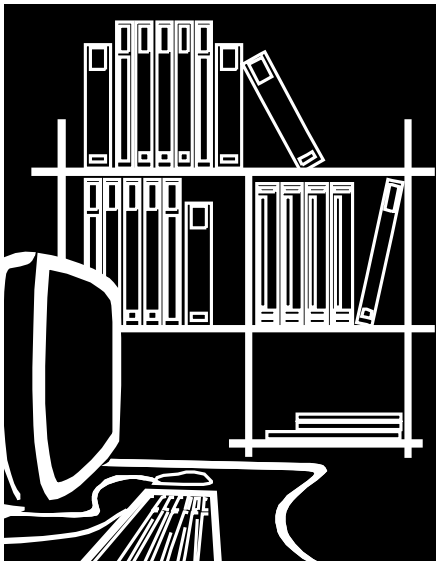

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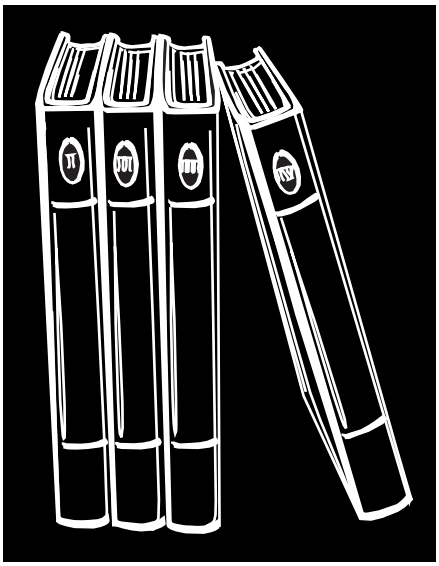
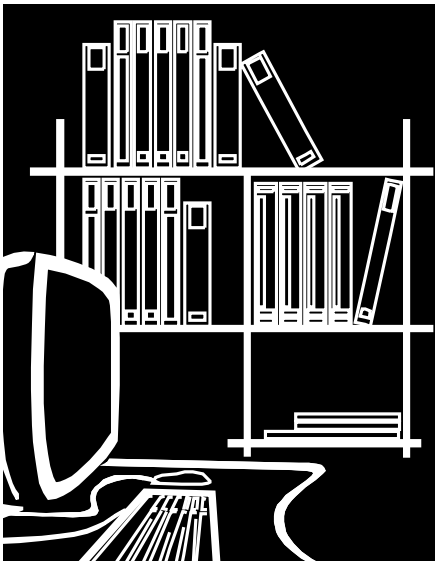


INTRODUCTION



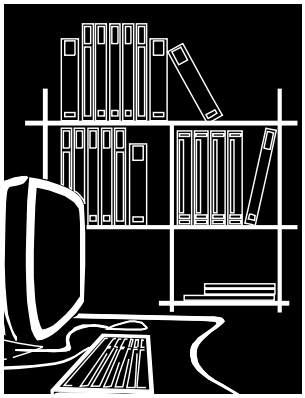
INTRODUCTION

"TECHNOLOGY IGNITES OPPORTUNITIES FOR LEARNING, ENGAGES TODAY'S STUDENTS AS ACTIVE LEARNERS AND PARTICIPANTS IN DECISION-MAKING ON THEIR OWN EDUCATIONAL FUTURES AND PREPARES OUR NATION FOR THE DEMANDS OF A GLOBAL SOCIETY IN THE 21ST CENTURY."

Toward A New Golden Age In American Education: How the Internet, the Law, and Today's Students are Revolutionizing Expectation, National Education Technology Plan 2004, U.S. Department of Education, <http://www.nationaledtechplan.org/default.asp>

"THE CHALLENGE FACING AMERICA'S SCHOOLS IS THE EMPOWERMENT OF ALL CHILDREN TO FUNCTION EFFECTIVELY IN THEIR FUTURE, A FUTURE MARKED INCREASINGLY WITH CHANGE, INFORMATION GROWTH, AND EVOLVING TECHNOLOGIES. TECHNOLOGY IS A POWERFUL TOOL WITH ENORMOUS POTENTIAL FOR PAVING HIGH-SPEED HIGHWAYS, [MOVING THEM] FROM OUTDATED EDUCATIONAL SYSTEMS TO SYSTEMS CAPABLE OF PROVIDING LEARNING OPPORTUNITIES FOR ALL, TO BETTER SERVE THE NEEDS OF 21ST CENTURY WORK COMMUNICATIONS, LEARNING, AND LIFE."

National Educational Technology Standards for Students, Connecting Curriculum and Technology, International Society for Technology in Education, 2000.



"INFORMATION LITERACY--THE ABILITY TO FIND AND USE INFORMATION--IS THE KEYSTONE OF LIFELONG LEARNING. CREATING A FOUNDATION FOR LIFELONG LEARNING IS AT THE HEART OF THE SCHOOL LIBRARY MEDIA PROGRAM. JUST AS THE SCHOOL LIBRARY MEDIA CENTER HAS MOVED FAR BEYOND A ROOM WITH BOOKS TO BECOME AN ACTIVE, TECHNOLOGY-RICH LEARNING ENVIRONMENT WITH AN ARRAY OF INFORMATION RESOURCES, THE SCHOOL LIBRARY MEDIA SPECIALIST TODAY FOCUSES ON THE PROCESS OF LEARNING RATHER THAN DISSEMINATION OF INFORMATION. THE LIBRARY MEDIA PROGRAM COMBINES EFFECTIVE LEARNING AND TEACHING STRATEGIES AND ACTIVITIES WITH INFORMATION ACCESS SKILLS. INFORMATION AVAILABILITY WILL UNDOUBTEDLY CONTINUE TO MUSHROOM INTO THE NEXT CENTURY, WHICH WILL MAKE A STRONG SCHOOL LIBRARY MEDIA PROGRAM EVEN MORE ESSENTIAL TO HELP ITS USERS ACQUIRE THE SKILLS THEY WILL NEED TO HARNESS AND USE INFORMATION FOR A PRODUCTIVE AND FULFILLING LIFE."

Information Power: Building Partnerships for Learning, American Library Association, Chicago, 1998.

Through the State Board of Education's Strategic Plan for Excellent Schools, every child has the opportunity to achieve at his or her highest potential in the fast-paced, ever-changing environment of the 21st century. The rapid advance of technology requires that all educators continually upgrade their skills, knowledge bases, and perspectives.

Media and technology programs are an integral part of education. Collaboration is the key. Teachers and media and technology personnel collaborate to create a 21st century learning environment in which student learning is the focus. Students simultaneously collaborate with each other and their teachers to learn how to solve problems, complete real world tasks, and take charge of their own progress. The added value of this collaborative, media and technology-enhanced environment is thoughtful planning, differentiated instruction, and smaller class size.

IMPACT: Guidelines for North Carolina Media and Technology Programs, released in 2000, provided guidelines for school library media coordinators and technology facilitators in North Carolina. The 2005 revision of the document updates information in the original, continues to reflect national, state, and professional standards, and adds a step-by-step guide to becoming an *IMPACT* school. It also provides recommendations for programs, personnel, budgets, policies, resources, and facilities that will guide media and technology programs as they support a resource-rich, technology-rich learning environment.

IMPACT will help meet the information and technology challenge facing North Carolina schools in the new millennium. As a result, media and technology programs will:

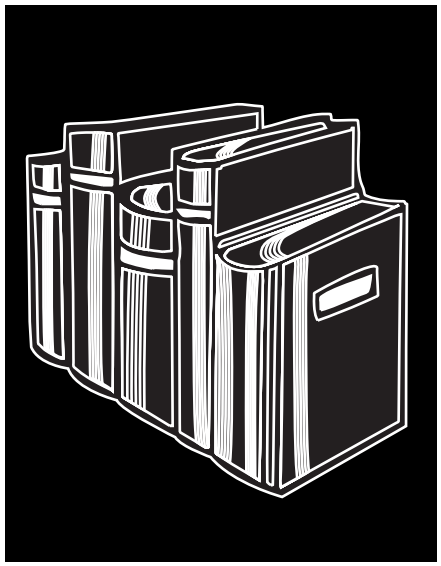
IMPACT TEACHING,

IMPACT LEARNING,

IMPACT MOTIVATION, AND

IMPACT STUDENT ACHIEVEMENT.

IMPLEMENTING THE *IMPACT* MODEL



A How-to Guide

Dealing with the Change that the *IMPACT* Model Will Bring

The Technology Facilitator Scenario

School Library Media Coordinator Scenario

Works Cited

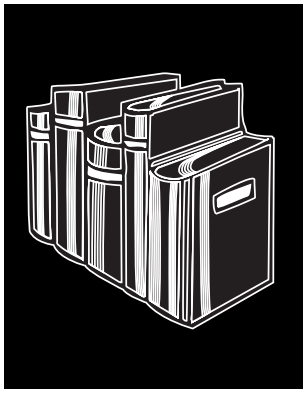
IMPLEMENTING THE *IMPACT* MODEL: A HOW-TO GUIDE

Educators in schools interested in implementing the *IMPACT* Model always ask, "What is the best way to begin?" While one school might decide to implement all portions of the model simultaneously--hiring all the staff, implementing flexible access, and initiating monthly grade-level collaborative planning sessions, others prefer a phased-in model to help staff prepare for the change in school culture that will ensue. The following guide offers strategies for implementing the *IMPACT* Model regardless of the timeline that a school adopts. Please be aware, however, that all change is difficult. Moving quickly and resolutely toward a new program may be less painful than a drawn-out implementation.

PHASE 1: Building Support

The first step in implementing the *IMPACT* Model is creating an awareness of the benefits of the model to students and teachers.

- Administrative support is critical to implementing the model. The principal should be an instructional leader who participates fully in the Media and Technology Advisory Committee (MTAC).
- Teachers and all stakeholders should be represented on the MTAC. Research on the benefits of flexible scheduling can be shared with the MTAC whose members will serve as advocates for the *IMPACT* Model within the school and community.
- Parents and community members should be represented on the MTAC.
- The school library media coordinator and technology facilitator should be active participants in the School Improvement Team, ensuring that information and technology skills are addressed within the school improvement plan.
- A school wide planning retreat focusing on change, flexibility, and collaboration provides the opportunity to share research on the *IMPACT* Model and address initial concerns among the total staff.
- The MTAC should communicate with educators in other schools in North Carolina that have successfully implemented the *IMPACT* Model and learn from their experiences.



PHASE 2: Readiness Assessment

The second step in implementing the *IMPACT* Model is determining the readiness of your school for successful implementation. Consider the following needs as you design this assessment:

- The school library media coordinator and technology facilitator, in collaboration with the system-level technology director and system-level media director, should review *IMPACT* guidelines and North Carolina Educational Technology Plan recommendations for determining additional personnel.
- The media coordinator and technology facilitator should conduct a needs assessment for staff to determine their readiness to utilize technology and information in a collaborative environment. This assessment may include technology application skills, technology integration skills, flexible scheduling utilization, understanding of collaborative teaching and learning, and how to ask open-ended questions.
- Content area curriculum mapping/pacing guides should be reviewed and updated for alignment to the *Standard Course Of Study,* relevance to current classroom practice, and consistency across grade levels and subject areas.
- The infrastructure should be evaluated for adequacy according to the standards described in the North Carolina Educational Technology Plan.
- Hardware access and software resources should be evaluated for adequacy and age appropriateness according to North Carolina Educational Technology Plan standards.
- The media collection should be evaluated through a collection analysis that maps resources to the curriculum.
- A long-term collection development plan should be created based on the collection analysis. The collection should balance print and nonprint resources.
- The media center schedule should be evaluated for its capacity to provide point-of- need resources and services to students and staff. The master schedule should be reviewed for options to create flexible access to media and technology facilities and personnel.
- The existing budget should be evaluated for the capacity to fund needs identified in the readiness assessment. All potential external and internal sources of funding should be identified in consultation with the system-level technology director, the system-level media director, and the principal.
- The MTAC should conduct a benchmark assessment of the media and technology program using *IMPACT* rubrics.

PHASE 3: Setting the Stage for Successful Collaboration

The next step in implementing the *IMPACT* Model is to create a foundation for collaborative planning that addresses needs identified in the readiness assessment.

- The principal will attempt to meet personnel needs through re-assignment of existing staff and recommendations to the superintendent for hiring additional staff.
- With the support of the MTAC, the principal should articulate school-wide expectations for collaboration. This may include a master planning calendar based on curriculum mapping/pacing guides.
- The principal will develop a schedule to provide flexible access to the school library media coordinator and technology facilitator and facilities.
- The media coordinator and technology facilitator will acquire print and non-print resources based on the collection development plan.

- The media coordinator and technology facilitator will acquire adequate hardware/software according to the recommendations of the North Carolina Educational Technology Plan and the MTAC committee. These acquisitions should include adaptive technologies for students with special needs.
- The media coordinator and technology facilitator will offer professional development on best practices in using technology and media resources to support student achievement.
- The system-level technology director will upgrade building infrastructure to meet North Carolina Educational Technology Plan standards.
- The media coordinator and technology facilitator, with the principal and teachers, will analyze student data to identify school-wide student needs.
- As members of the School Improvement Team, the media coordinator and technology facilitator will identify goals for technology/information skills integration in the School Improvement Plan.
- The media coordinator and technology facilitator, with input from the MTAC, will redesign the media center and classrooms to accommodate differentiation of instructional activities with technology and flexible grouping.

PHASE 4: Formal Collaboration

The ultimate step in implementing the *IMPACT* model is creating collaborative planning times. Using this time, the school library media coordinator, technology facilitator, and classroom teachers collaboratively will:

- Plan together to create and evaluate multidisciplinary units of instruction integrating technology/information skills across the curriculum;
- Design differentiated instructional activities to meet individual student needs;
- Identify regular common planning time for team collaboration by grade level and subject;
- Assess student products emerging from collaboratively planned units of instruction (New assessment tools and rubrics should be created as needed.);
- Celebrate student achievement and recognize teachers for their successes;
- Evaluate the outcomes of common planning times using a variety of methods such as surveys, reflections, and plus/delta charts.

PHASE 5: Beyond the Classroom

Collaborative planning will expand the opportunities for integrating resources beyond the classroom. The increased use of media and technology resources in instruction makes it important to expand access to these resources beyond the traditional school day and the traditional school community.

- The school library media coordinator and technology facilitator will identify and integrate outside resources into collaborative units of instruction. These resources may include local, state, and national educational resources including print, digital, and human resources.
- The media coordinator and technology facilitator will work with partners to provide after school programs for children, parents, and community members. (For example, Computer Camps, Computer Clubs, Book Clubs, technology training for adults, family technology and reading nights.) The media center and technology facilities may be opened extended hours and staffed by educators who have negotiated flexible hours with the administration, by separately hired staff, and/or by volunteers.

ON-GOING: Evaluation

Implementation of the *IMPACT* Model may be evaluated by the MTAC using the following guided reflection questions.

- What impact does a supportive environment have on media and technology access and use?
- What impact do media, technology, and collaboration have on the total school program?
- What impact does communication have on the total school program?
- What impact do research-based practices in technology, literacy, and information skills have on student learning?
- Does integration of technology/information skills throughout the curriculum enhance student learning?
- What areas of the curriculum can most effectively be enhanced with technology/ information skills?
- Does the use of technology as a learning tool improve student achievement?
- To what extent is data used in making decisions about hardware/software allocations and selection of media resources?
- To what extent are technology and media resources accessible to all students?
- To what extent are technical support personnel provided and technical support procedures implemented?
- To what extent are technology and media resources accessible during and beyond the school day?
- To what extent has the school established and maintained an effective communications system?
- To what extent does the school support and promote collaboration?
- To what extent are procedures used to monitor, evaluate, and review progress of technology initiatives?
- To what extent is effective professional development provided?
- To what extent are student/curricular needs being fulfilled by identified media and technology resources?

ORIENTATION FOR NEW STAFF AND ADMINISTRATORS:

- The school must recruit and hire teachers who are receptive to the *IMPACT* Model.
- The MTAC will provide orientation for new staff and administrators to the *IMPACT* Model.

DEALING WITH THE CHANGE THAT THE *IMPACT* MODEL WILL BRING

"THE CONVICTION THAT LEARNING GOALS SHOULD BE FIXED AND TIME A FLEXIBLE RESOURCE OPENS UP PROFOUND OPPORTUNITIES FOR CHANGE."
(United States. Department of Education. "Prisoners of Time.")

USING THE CONCERNS-BASED ADOPTION MODEL (CBAM) TO MOVE TEACHERS FORWARD IN THE *IMPACT* MODEL

In order for the *IMPACT* Model to work in a school, it must have the support and understanding of classroom teachers. Teachers must understand the changes that will occur in their classrooms and in their teaching as a result of this model. The administrative and media and technology staff must support and nurture teachers through this change.

Supporting and nurturing means addressing teachers as individuals and understanding their concerns about the changes they are or will be experiencing. According to the CBAM model of change, individuals involved in change can be identified as one of the following:

- INNOVATOR: Approximately 8% or any group can be considered innovators. These individuals are eager to try new ideas, are open to change, and are willing to take risks.
- LEADER: Approximately 17% of any group can be considered leaders. These individuals are open to change, but more thoughtful about getting involved.
- EARLY MAJORITY: Approximately 29% of any group can be considered as the early majority. These individuals are cautious and deliberate about deciding to adopt an innovation.
- LATE MAJORITY: Approximately 29% of any group can be considered as the late majority. These individuals can skeptical of adopting new ideas and are "set in their ways."
- RESISTER: Approximately 17% of any group can be considered resisters. These individuals are suspicious and generally opposed to new ideas. (Hord, S., et al, 1998.)

It is important to recognize that these identifiers are not meant to be negative or positive, but rather they allow a change facilitator to recognize what is needed to move an individual through the change process. For the *IMPACT* Model, this means being able to recognize how a teacher approaches a change to classroom practice and working with each individual to better utilize the model.

Once the school library media coordinator, technology facilitator, and/or administrator have identified each teacher's adopter level, they should identify Stages of Concern. The Stages of Concern help to identify how a person feels and thinks about a given initiative. In the implementation of the *IMPACT* Model, teachers will move through the stages as they become more comfortable with the collaborative process and the *IMPACT* culture.

CHANGE:

- is a PROCESS, not an event
- is made by INDIVIDUALS first, then institutions
- is a highly PERSONAL experience
- entails DEVELOPMENTAL growth in feelings and skills

(Hord, S., et al, 1998.)

STAGES OF CONCERN

0. AWARENESS: The individual either isn't aware of the change being proposed or doesn't want to learn it.
1. INFORMATIONAL: The individual has heard of the program, but needs more information.
2. PERSONAL: The individual's main concern is how this program will affect them on a personal level.
3. MANAGEMENT: The individual's main concern is about the management, scheduling, etc., of a specific program.
4. CONSEQUENCE: The individual's primary concern is how the program will affect students or how they can make the program work for their students.
5. COLLABORATION: The individual's primary concern is how to make the program work better by actively working on it with colleagues.
6. REFOCUSING: The individual's primary concern is seeking out a new and better change to implement.

When the media coordinator, technology facilitator, and/or administrator have identified each teacher's Stage of Concern, they can more easily communicate the needs of both the teacher and the program. Teachers in the early stages of concern will need more one-on-one assistance and encouragement than those in the later stages.

WHAT TEACHERS MUST BE WILLING TO DO

When teachers understand that a change will take place, they will need to be completely aware of what implementing the *IMPACT* Model will mean to their classroom and their teaching practice.

TEACHERS MUST BE WILLING TO:

BE FLEXIBLE

- Take risks
- Try new things
- Step out of the box

ASSESS STUDENT NEEDS

- Analyze test scores
- Understand individual learning styles
- Survey individual interests

INITIATE COLLABORATION

- Brainstorm ways the collaboration process can work for them and their students
- Share ideas with school library media coordinator/technology facilitator and other teachers
- Begin the collaboration process
- Evaluate project successes

FAIL

- Technology doesn't always work
- Students don't always work well collaboratively
- The "best" lesson plan doesn't always work out the way you planned

ASK FOR HELP

- Students
- Teachers
- School library media coordinator
- Technology facilitator

CELEBRATE SUCCESSES

- Tell other teachers what is working well
- Share with school library media coordinator and technology facilitator
- Share with other schools
- Share at conferences
- USE: Web sites, bulletin boards, newsletters, displays, sharing lessons, press releases, system-level collaboration fairs, school-wide activities (Poetry Day, Technology Night), etc.

CHANGE ROLES

- Move from being the "sage on the stage" or "guide on the side" to the "mentor in the center"
- Facilitate the learning process
- Allow students to begin taking responsibility for their own learning
- Become a team member
- Become a life-long learner

THE TECHNOLOGY FACILITATOR SCENARIO

"THE IMPORTANT ISSUE IN EFFECTIVENESS FOR LEARNING IS NOT THE SOPHISTICATION OF THE TECHNOLOGIES, BUT THE WAYS IN WHICH THEIR CAPABILITIES AID AND MOTIVATE USERS"
(Dede, C., 2001).

Innovation Middle School is wired. Every classroom has three multimedia, Internet accessible computers, an LCD projector, a Digital Interactive Whiteboard, a DVD player, and curriculum appropriate hardware and software. Networked printers are located on every hall, and each grade, 6th, 7th, and 8th, has a mobile computer lab. For Mrs. Ray, the technology facilitator, a wired school means a very busy schedule. Mrs. Ray has worked at Innovation Middle School for many years. Through her experience and education, she has gained and applied many insights about technology and the job of teaching.

Mrs. Ray knows that technology brings new resources into the classroom (Bajcsy, 2002). For instance, this is the first year that Mr. Price has participated in the Global Lab project with his eighth grade 1st period science class. Global Lab students around the world create environmental profiles of their school. Students measure parameters such as light intensity, carbon dioxide concentrations, air and soil temperature, and soil moisture, then compile their data and exchange it with other schools across the globe. Through the global lab project, Mr. Price's students have information that has not been available to his students in previous years. With observations available from other students in diverse environments, his students make comparisons of their environmental profile with profiles of other environments to make hypotheses and observations. This morning Mrs. Ray works with Mr. Price and his students organizing the data from the various environments in a database. While Mrs. Ray works with students on creating a database, Mr. Price will work with students on organizing and synthesizing the information in appropriate searchable fields and records.

Mrs. Ray also knows that with technology, teachers are able to develop new forms of instruction (Means, 2000). Last summer, the Innovation Middle School Social Studies team, developed lessons and an accompanying selection of online resources and software, of texts, photographs, audio and video content. This morning in Mrs. Foust's second period social studies class, students are using the resources to create multimedia reports instead of the traditional written reports on Asian history and culture. The group assigned to explore the economy of China, uniquely explore the ties between the American economy and China's economy and working conditions in their multimedia report titled *Made in China*. Students use photographs and voiceovers to explain the implications of importing products from China to the United States. This morning Mrs. Ray and Mrs. Powder, the school library media coordinator, are working with the students on their projects. Mrs. Powder is instructing students on how to correctly cite sources for multimedia and online resources. Mrs. Ray is helping students incorporate multimedia sources into their presentations correctly. Mrs. Foust comments that using the multimedia resources gives greater content and depth to instruction and student assignments.

Discussions with many teachers confirm something else Mrs. Ray already knows. Technology motivates student learning. Teachers suggest that technology motivates students, because it creates an environment that involves students more directly than traditional teaching tools (Schacter, 1999). Before Mrs. Ray heads to the sixth grade team weekly planning meeting, she stops by Mrs. Brown's 8th grade language arts class.

Since Mrs. Brown replaced journal writing on required reading assignments with Weblogs, her students' writing has increased dramatically. Students are so involved in writing and reading Weblog entries that they all scramble to get on the computers before lunch. Because students are posting their responses online where every other student can read the entry, students are reading the young adult literature thoroughly and are posting more in-depth observations about what they are reading. Mrs. Brown is ecstatic. Not only are students more engaged in the literature, but they are also taking responsibility for their own learning.

After lunch Mrs. Ray heads for Mr. Mulroney's room. Technology has been extremely helpful in individualizing instruction for students, many of whom are served in exceptional classrooms (Lou, 2001). While Mr. Mulroney believes that technology helps adapt instruction to student learning styles, he does not believe in isolated learning. In Mr. Mulroney's class, students are learning about volcanoes together through a variety of activities. Mark and Adam are building a model volcano from everyday kitchen products. Mary is using simulation software to simulate a volcanic eruption by combining different gases with magma and rock. Linda and James are creating a Hyperstudio stack on Mount St. Helen's in Washington. Mr. Mulroney asked Mrs. Ray to join the class this afternoon as students' work on their different projects.

As students are leaving school, Mrs. Ray is setting up for professional development. Mrs. Ray knows that effective use of instructional technology is dependent on the teacher (Grove, Strudler, and Odell, 2004). Teachers must be confident in applying technology when and where appropriate. To maintain their technology competency in a fast-paced environment, professional development has becomes a high priority for teachers. Today, Mrs. Ray is teaching sixth grade teachers about handhelds.

Before Mrs. Ray leaves for the day, she checks the next day's schedule. She notes that tomorrow Mrs. Caison, the music teacher, is using midi software in music appreciation class . . .

For online video examples of technology facilitator scenarios visit the following Web site: <http://www.ncwiseowl.org/IT/TFPAI/TFPAI.htm>

SCHOOL LIBRARY MEDIA COORDINATOR SCENARIO

INFORMATION LITERACY IS A TRANSFORMATIONAL PROCESS IN WHICH THE LEARNER EVALUATES AND USES INFORMATION IN ITS VARIOUS FORMS FOR PERSONAL, SOCIAL, AND PROFESSIONAL PURSUITS

(paraphrased from Abilock, 2004).

It is 7:00 a.m. – just another day in the Innovation school media center. Students cluster in the foyer waiting for the library doors to open. The library is always used heavily before the school day begins. Some students will come to the media center to work on class assignments. Others will check out books. Teachers stop by to schedule a class in the media center for a project. At 8:00 a.m., the first bell rings and the media center empties while students flock to homeroom class.

Mr. Reynold's seventh grade math class is the first class of the day for Mrs. Wright, the school library media coordinator. Geometry is always a favorite part of the math curriculum in seventh grade because students never tire of constructing shapes and figures. Today, students are exploring an engineering geometric wonder of the world, domes. Mrs. Wright is excited today to share some of the books in the media center on the design and construction of structures. Some of Mrs. Wright's favorites are *Building Big* by David Macaulay, *Experiment! Spiderwebs to Skyscrapers: The Science of Structures* by David Darling, and *Eyewitness Books: Force & Motion* by Peter Lafferty.

After Mr. Reynold's class leaves, Mrs. Wright checks on a couple of eighth grade boys who are investigating the various estuaries in North Carolina. Their assignment is to locate an estuary to visit on a field trip. Mrs. Rowland, the media assistant, helps the boys do a search on the Internet on estuaries in North Carolina. So far the boys have information on the Neuse River, the Albemarle, and the Pamlico River Estuary. Mrs. Wright directs the eighth grade boys to resources in the reference collection. Several books on North Carolina can aid their decision. Notably, *The Nature of North Carolina's Southern Coast: Barrier Islands, Coastal Waters and Wetlands* by Dirk Frankenberg describes several estuaries of interest.

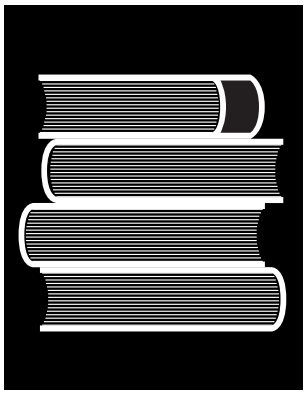
The Lunchtime Book Club meets today. Students who join the club bring their lunch to the library and discuss a book that they are reading. Currently, they are reading *The DoubleLife of Zoe Flynn* by Janet Lee Carey about a girl who hides the fact from her classmates that her family lives in a van. Mrs. Wright has several book clubs to meet the varied interests of students. Her personal favorite is the sports heroes book club she jointly coordinates with Mr. Reynolds. When reading is connected to real-world contexts and personal interest students are more motivated to read (Ivey and Broaddus, 2001).

After lunch Mrs. Wright meets with the sixth grade collaborative planning team for the afternoon. Each year the sixth grade teachers focus the instructional program around a central theme. This year the theme is cities. The team has already decided the theme for next year will be detectives. Today, they want to pinpoint resources and plan ideas for integrating the theme with the SCOS. Mrs. Wright is excited. The detective/mystery genre of young adult literature is always a favorite with middle grade students. Today she suggests to Mrs. Johnson, the language arts teacher, *Wolf Rider* by Avi and *Getting Lincoln's Goat* by E. M. Goldman as literature for next year.

Mrs. Wright also thinks the history detectives Web site (http://www.pbs.org/opb/history detectives/index.html) will be the perfect fit for the social studies curriculum. During the planning meeting she shows this Web site to Mr. Carter, the sixth grade social studies teacher while Mr. Grady, the science teacher and Mr. Brown, the math teacher discuss some ideas for integrating math and science with a detective theme. Mrs. Wright has appreciated the insight that a theme-based approach has brought to the sixth grade teachers. The sixth grade teachers recognize that their role as the content specialist combined with the media specialist's role as resource specialist has helped build a stronger, more dynamic instructional program (Russell, 2002).

Theoretically, every unit of instruction in any subject curriculum has an opportunity for a problem- or inquiry-based learning component that requires data, information, and knowledge (Georges, 2004, p. 34). For Mrs. Wright, her role within the educational institution is clear. It is her responsibility to seize every opportunity, to provide her colleagues with instructional activities, and to create a collaborative atmosphere that fosters information literacy.

For online video examples of school library media coordinator scenarios visit the following Web site: <http://www.ncwiseowl.org/IT/MCPAI/MCPAI.htm>



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TEACHING AND LEARNING

Vision

Collaboration

Integration of Information and Technology Skills

Access to Information Resources and Services

Collaboration for Assessment, Research, and Student Achievement

Professional Development

Collaboration through Flexible Access

Flexible Access Looks Like This

Collaborating to Achieve Instructional Goals

Leadership and the Change Process

Making Flexible Access and Collaboration Work

Roles and Responsibilities of Collaborative Partners

Implementing Effective Collaborative Planning Sessions

Advocacy: Communicating Flexible Access and Collaboration

Reading and Literacy

Collaboration: Media and Technology, Reading, and Literacy

Reading Programs or Reading?

TEACHING AND LEARNING

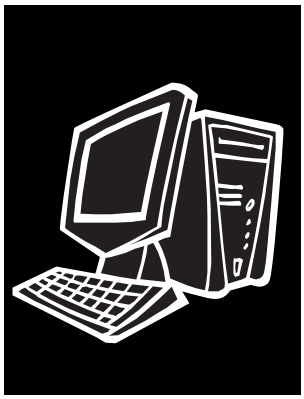
VISION

School library media and technology programs should focus on student achievement and involve the entire staff in collaboratively planning instructional programs that are authentic and engaging, enriched by high-quality resources, current technologies, and effective models of integration. A learner-centered approach to instruction focuses attention on media and technology programs as vital instructional forces that complement, support, and expand classroom learning. The ongoing assessment of media and technology programs is the responsibility of teachers and administrators working together with media and technology professionals. An effective media and technology program supports the teaching and learning community through data-driven collaboration, literacy, integration of technology and information skills with the total curriculum, resources, staff development, and assessment.

COLLABORATION

"CREATING THE CONTEXT OF A COLLABORATIVE CULTURE REQUIRES MORE THAN ENCOURAGING EDUCATORS TO WORK TOGETHER. THE TRADITION OF TEACHER ISOLATION IS TOO DEEP TO BE UPROOTED SIMPLY BY OFFERING OPPORTUNITIES FOR COLLEGIAL ENDEAVORS. COLLABORATION BY INVITATION NEVER WORKS. LEADERS WHO FUNCTION AS STAFF DEVELOPMENT LEADERS EMBED COLLABORATION IN THE STRUCTURE AND CULTURE OF THEIR SCHOOLS. TEACHERS' WORK IS SPECIFICALLY DESIGNED TO ENSURE THAT EVERY STAFF MEMBER IS A CONTRIBUTING MEMBER OF A COLLABORATIVE TEAM. CREATING AN APPROPRIATE STRUCTURE FOR TEACHER COLLABORATION IS VITALLY IMPORTANT, BUT ALSO INSUFFICIENT. LEADERS MUST DO MORE THAN ORGANIZE TEACHER TEAMS AND HOPE FOR THE BEST. THEY MUST PROVIDE THE FOCUS, PARAMETERS, AND SUPPORT TO HELP TEAMS FUNCTION EFFECTIVELY"

("Designing Powerful Professional Development," 2005).



Collaboration should be evident in all areas of the school environment as well as at the system, regional, and state levels. Within the school, the school library media coordinator and the technology facilitator work closely with teachers, administrators, students, and support personnel. All of these people must be involved in the planning, implementation, and evaluation of an instructional program integrated with media and technology.

For more information refer to the section on **Collaboration Through Flexible Access.**

INTEGRATION OF INFORMATION AND TECHNOLOGY SKILLS

"TODAY'S STUDENT LIVES AND LEARNS IN A WORLD THAT HAS BEEN RADICALLY ALTERED BY THE READY AVAILABILITY OF VAST STORES OF INFORMATION IN A VARIETY OF FORMATS. THE LEARNING PROCESS AND THE INFORMATION SEARCH PROCESS MIRROR EACH OTHER: STUDENTS ACTIVELY SEEK TO CONSTRUCT MEANING FROM THE SOURCES THEY ENCOUNTER AND TO CREATE PRODUCTS THAT SHAPE AND COMMUNICATE THAT MEANING EFFECTIVELY. DEVELOPING EXPERTISE IN ACCESSING, EVALUATING, AND USING INFORMATION IS IN FACT THE AUTHENTIC LEARNING THAT MODERN EDUCATION SEEKS TO PROMOTE"
(NC Information Skills Curriculum Philosophy, 1999).

The school library media coordinator and technology facilitator play an integral role in teaching students how to access, evaluate, and use information. They also support students in being able to choose the most appropriate tool for collecting information in multiple formats and then organizing, linking, evaluating, and through synthesis, discovering how to present the information. "An array of tools for acquiring information and for thinking and expression allows more students more ways to enter the learning enterprise successfully and to live productive lives in the global, digital, and information-based future they all face" (Philosophy: North Carolina Standard Course of Study, 2004). These skills are embedded throughout the Information and Computer/Technology Skills curricula and are essential to teaching and learning. It is vital that these skills are fully integrated across the curriculum.

To integrate these skills seamlessly across the curriculum, the media coordinator and technology facilitator need to "provide strong and creative leadership in building and nurturing the culture of learning, both as a teacher and as an instructional partner" (AASL and AECT, 1998). As teachers, the school library media coordinator and technology facilitator will need to "use both traditional materials and innovative resources" (AASL and AECT, 1998) to provide meaningful instruction. This can be achieved through instruction in a full range of information concepts and strategies, so that students will have the skills needed to interact effectively with all information resources.

A research process is one of the types of innovative resources that can be used whenever students are in a situation, academic or personal, that requires information to solve a problem, make a decision, or complete a task. A systematic research model such as the Big Six provides an information problem-solving process, and a set of skills that provide a strategy for effectively and efficiently meeting information needs.

It is important to remember that the integration of information and computer/technology skills across the curriculum does not take place in isolation, but occurs through collaborative planning. The involvement of media and technology professionals in all aspects of curriculum implementation is fundamental to collaboration.

BEING INVOLVED WITH THE CURRICULUM TO ACHIEVE INSTRUCTIONAL GOALS MEANS:

- Developing a thorough knowledge of the *North Carolina Standard Course of Study* for all subject areas and grade levels within the school <http://www.ncpublicschools.org/curriculum>;
- Working with teachers to integrate media and technology into instruction across all subject areas and grade levels (See scenarios for school library media coordinator and technology facilitator in Implementing the *IMPACT* Model);
- Serving on the School Improvement Team;
- Working on subject area and grade level teams and committees at the building, system, and state level;
- Taking leadership roles on the Media and Technology Advisory Committee;
- Analyzing the School Improvement Plan for areas of instructional focus;
- Reflecting the School Improvement Plan in instruction and in the acquisition of resources;
- Analyzing test data with teachers to improve instructional focus;
- Participating in grade level/departmental meetings;
- Recommending appropriate information and technology resources to support information and computer/technology skills, and critical thinking throughout the curriculum;
- Collaborating with teachers, staff, and other members of the learning community to integrate information literacy competencies throughout the teaching and learning process;
- Developing a deep understanding of the information and computer/technology skills for student learning and of the specific relationship between the skill and the curricular goals of the school and system (AASL and AECT, 1998);
- Developing and promoting specific plans for incorporating the information literacy standards for student learning into day-to-day curricular and instructional activities (AASL and AECT, 1998);
- Collaborating regularly with teachers and other members of the learning community to encourage students to become information literate, independent in their learning, and socially responsible in their use of information and information technology (AASL and AECT, 1998).

RESEARCH MODEL RESOURCES

THE BIG SIX OR THE SUPER THREE
<www.big6.com>

FLIP-IT
<www.aliceinfo.org/FLIPit.html>

FOLLETT'S INFORMATION SKILLS MODEL
<www.sparkfactor.com/clients/follett/home.html>

JAMIE MCKENZIE'S RESEARCH CYCLE
<http://questioning.org/rcycle.html>

ACCESS TO INFORMATION RESOURCES AND SERVICES IN THE TEACHING/LEARNING PROCESS

The media and technology program provides intellectual and physical access to a full range of information and services for a community of learners and serves as a model for responsible and creative information use. The school library media coordinator and the technology facilitator collaborate with the school community to play an even more important role as the quantity of information continues to grow. They guide and promote a student-centered program; provide flexible and equitable access to information for learning; and use the North Carolina Standard Course of Study to help all students "construct meaning from the sources they encounter and to create products that shape and communicate that meaning effectively" (NC Information Skills Curriculum Philosophy, 1999).

It is critical for students to have the ability to process and create understanding from all types of media in our exploding world of information. Real research and questioning can become lifelong tools to encourage independent thinking and to guide classroom inquiry at any time students are engaged in reading, viewing, or listening activities.

ENSURING EQUITABLE ACCESS TO INFORMATION MEANS:

- Providing accurate, up-to-date, and developmentally appropriate print, non-print, and technology resources that meet the curriculum-related and data-driven needs of students and teachers;
- Providing meaningful instruction in the full range of information concepts and strategies that students need to interact effectively with all information resources;
- Supporting intellectual freedom and students' right to read.
- Providing flexible access to media and technology resources, staff, and facilities throughout the day;
- Providing adequate staffing for the media center and computer labs before, during, and after school for use by students, teachers, and members of the community;
- Providing technologies (such as laptops, portable text devices, and digital cameras) for individual, small group, classroom, and offsite use;
- Purchasing software and assistive/adaptive hardware (such as speech synthesis software, voice input technologies, and touch screens) that provide access to all media and technology for students and teachers with special needs;
- Providing large screen monitors or data/video projection devices for whole class instruction.

> **"FLEXIBLE, EQUITABLE, AND FAR-REACHING ACCESS . . . IS ESSENTIAL TO THE DEVELOPMENT OF A VIBRANT, ACTIVE LEARNING COMMUNITY"**
> (AASL and AECT, 1998).

COLLABORATION FOR ASSESSMENT, RESEARCH, AND STUDENT ACHIEVEMENT

Effective collaboration, clear instructional goals, the use of data, and continual feedback impact achievement in a powerful way. The school library media coordinator and the technology facilitator collaborate with teachers in the assessment of student performance in many ways. Grade-level or subject area teams of teachers, along with the school library media coordinator and the technology facilitator, meet routinely to identify instructional strengths and weaknesses, analyze scores and other assessments, and develop strategies to address the instructional needs of students. This process is ongoing and involves continual examination of teaching practices and learning opportunities as a means of becoming more effective. In this context, assessment can be seen as part of the teaching and learning process as opposed to being a separate task.

Collaboration to assess student learning should be evident in all areas of the school environment, with the school library media coordinator and the technology facilitator working closely with teachers, administrators, students, and support personnel. All must be involved in the planning, implementation, and evaluation of an instructional program integrated with media and technology.

School library media coordinators and technology facilitators are knowledgeable about research and best practices and skilled in applying the findings to a variety of situations. Media and technology programs can have a tremendous impact on student achievement if they follow the direction provided by research and best practice, and then apply it to ongoing assessment. In short, effective media and technology programs routinely consult the research, see where it fits and how it applies, and then study the effects so that necessary adjustments to the teaching and learning process can be made.

REFLECTION

Reflection is an important part of the educational process. Taking time to revisit daily practice by asking the following questions allows educators the opportunity to collaboratively and systematically assess teaching and learning practices, extract the best strategies, and make refinements that ultimately lead to higher student achievement.

- How did the use of technology influence student achievement and increase motivation?
- How many opportunities were offered for critical thinking and problem solving?
- Did students use technology to solve real-life problems?
- Did students engage in meaningful, relevant conversation?
- Did students learn *with* one another through collaborative work and group problem solving?
- Did students have time to form opinions, debate, persuade, discover new concepts, and make decisions?
- Did students exercise *choice* at any point in the activity?
- Did students engage in reflective debriefing and answer questions such as, "What happened?" "What made you think that?" "What would you change?"

PROFESSIONAL DEVELOPMENT

Quality professional development provides educators with the knowledge and skills to build powerful collaborative teams and provide the interpersonal support and synergy necessary for creatively addressing complex teaching and learning issues.

According to the North Carolina Office of Professional Development, professional development leaders "must:

1. Provide time for collaboration in the school day and school year.
2. Identify critical questions to guide the work of collaborative teams.
3. Ask teams to create products as a result of their collaboration.
4. Insist that teams identify and pursue specific student achievement goals.
5. Provide teams with relevant data and information" ("Designing Powerful Professional Development," 2005).

The school library media coordinator and technology facilitator play an important role in the planning and implementation of professional development that helps define and achieve standards of excellence to ensure the success of every student. Teachers need the skills, knowledge, time, and autonomy to decide what professional development they need. The media coordinator and technology facilitator must work with building- and system-level administrators to ensure that the professional development provided in their school is based on needs assessment and data collection.

Media and technology personnel need to have an understanding of the school culture to build a learning community within the school that encourages continuous learning. Teachers should be rewarded for and encouraged to take risks, and be given the opportunity to learn and share together. Effective professional development experiences provide opportunities for teachers to build their knowledge and skills and broaden their teaching approaches, so they can create better learning opportunities for students. Media coordinators and technology facilitators acquire a school-wide perspective of professional development needs as they plan collaboratively with teachers. This school-wide perspective enables them to make decisions about appropriate data-driven professional development and to acquire the resources to design it.

Media and technology professionals must encourage a data-driven process to determine what professional development to provide, implement their process, and evaluate its impact on student learning. This will ensure that teachers receive the quality professional development they need so that all students can be successful.

In order to be effective, professional development must be assessed on a regular basis so that improvements can be made. This will help to guarantee a positive impact on teacher effectiveness and student learning. Evaluation to determine the overall effectiveness of a professional development program must be built in during the initial planning stage. The collection of formative and summative assessment data should occur across the professional development program. Formative assessments are conducted throughout the professional development program, and summative evaluation occurs at the conclusion of the program. Summative evaluation "should be collected at three levels: educator practices, organizational changes, and student outcomes" ("Designing Powerful Professional Development," 2005).

PROFESSIONAL DEVELOPMENT FOR MEDIA AND TECHNOLOGY PROFESSIONALS

The school library media coordinator and the technology facilitator are aware of the need for appropriate professional development. They expect to continue learning throughout their teaching career and to be able to improve their practice significantly through a variety of learning opportunities. Professional development must be provided for media and technology personnel through local, state, and national opportunities. Professional development not only benefits the individual in shaping his or her profession, but also helps to ensure that best practice is everyday practice and that the most effective approaches are used.

ASSESSING PROFESSIONAL DEVELOPMENT NEEDS MEANS:

- Using formal assessment tools to determine professional development needs.
- Prioritizing professional development opportunities based on needs assessment.
- Evaluating the effectiveness of professional development efforts at regular intervals.
- Using student test data in determining professional development.

Effective professional development is based on theory, research, and proven practice. *No Child Left Behind* calls for professional development that:

- is sustained, intensive, and classroom-focused,
- is grounded on scientifically-based research,
- is aligned with state content standards and assessments,
- gives teachers of limited English proficient (LEP) students the knowledge and skills necessary to teach them,
- provides preparation in the appropriate use of curricula and assessments,
- instructs in methods of teaching children with special needs,
- is developed with extensive participation of teachers and principals, and
- is regularly evaluated for impact on increased teacher effectiveness and improved student academic achievement (NSDC Standards for Staff Development, 2001).

PLANNING HIGH QUALITY PROFESSIONAL DEVELOPMENT MEANS:

- Participating in regularly scheduled system-level, regional, and state meetings, and sharing information with school staff;
- Attending state, regional, and national conferences to report back on professional development initiatives and trends;
- Serving on professional development committees at the school and system levels.
- Involving principals, teachers, and paraprofessionals in the planning of professional development;
- Assessing needs of administrators, teachers, and paraprofessionals for targeted professional development;
- Reflecting licensure requirements, ABC goals and objectives, and school improvement goals in the school professional development plan - <http://abcs.ncpublicschools.org/abcs/>;

- Providing a variety of professional development including online opportunities that integrate media and technology into all curriculum areas;
- Aligning professional development to the North Carolina Professional Development Standards - <http://www.ncpublicschools.org/profdev/>;
- Aligning professional development to the National Educational Technology Standards for Teachers - <http://cnets.iste.org/teachers/t_stands.html>;
- Using research-based models for professional development.

ENSURING HIGH QUALITY PROFESSIONAL DEVELOPMENT MEANS:

- Planning professional development that is aligned with building- and system-level goals and promotes evaluation and follow-up.
- Reflecting current research on teaching and learning.
- Respecting and drawing from the knowledge and experience of teachers, administrators, and paraprofessionals.
- Providing a variety of professional development opportunities (such as just-in-time, small-group, large-group, North Carolina Information Highway (NCIH), and online).
- Providing that professional development is relevant to the classroom setting and reflective of test data.
- Providing professional development that gives teachers the knowledge and skills necessary to work with all students.
- Providing time for professional development design, and implementation.
- Providing professional development for instructional leaders in data analysis, collective inquiry, and collaborative planning.
- Providing professional development that includes processes for formative and summative assessment.
- Creating an ongoing calendar of professional development opportunities tailored to meet assessed professional development needs.
- Providing time to learn, practice, and incorporate new skills into instruction.
- Providing resources to support teachers as they implement new strategies in their classrooms.
- Providing follow-up through re-teaching, one-on-one tutoring, troubleshooting, modeling, and other forms of support.
- Evaluating professional development efforts on a continuing basis to ensure they are meeting the needs of teachers and staff.
- Providing the opportunity for self-assessment of needs and interests by teachers prior to setting goals for professional growth.

THE NATIONAL STAFF DEVELOPMENT COUNCIL STANDARDS

The National Staff Development Council (NSDC) issued standards for high quality professional development which state that professional development:

- should organize adults into learning communities whose goals are aligned with those of the school and district;
- requires skillful school and district leaders who guide continuous instructional improvement;
- requires resources, including time, to support adult learning and collaboration;
- should use disaggregated student data to determine adult learning priorities, monitor progress, and help sustain continuous improvement;
- should use multiple sources of information to evaluate effectiveness; and
- should prepare educators to understand and teach all students. (NSDC Standards for Staff Development, 2001)

NORTH CAROLINA PROFESSIONAL DEVELOPMENT STANDARDS

Based on research by the National Staff Development Council (NSDC), the North Carolina Professional Development Standards provide the vision and framework for making professional development more responsive to the learning needs of both educators and students. The standards propose that professional development "should contribute to measurable improvement in student achievement" and that higher student achievement is the goal. "Professional development that does not produce changes in practice, [the standards emphasize] does not support improved student performance; [furthermore] professional development must be powerful enough to result in changes in schools and practice that lead to higher student achievement and higher teacher performance" ("Designing Powerful Professional Development," 2005).

"No Child Left Behind (NCLB) solidifies the presence of high-stakes accountability systems in our schools, and as we raise the expectations for students and teachers, we must provide high quality professional development [as it is essential for excellence in teaching and learning]" (Professional Development, 2005). The National Staff Development Council (NSDC) believes that one of the primary purposes of professional development is school improvement as measured by the success of every student. Success is evident through overall high student achievement (NSDC Standards for Staff Development, 2001).

The North Carolina Professional Development Standards recommend that professional development efforts must closely align with school improvement plans and thrive within existing school operations and structures. This systems-thinking approach to planning can be guided by the following questions:

- What are our goals for our students?
- What must we (the adults) learn in order to help our students learn?
- What is the best design for the adult learning?
- What is in place in our school that we would need to change or strengthen in order to meet our learning goals and our student goals?
- How would we know if we were achieving our goals? ("Designing Powerful Professional Development," 2005)

The North Carolina Professional Standards recommend that a well-designed professional development program will include "a clear and specific presentation of the theory supporting the new practices: modeling, demonstration, coaching, feedback, and practice. Questions to guide evaluation of program quality include:

- Is this model appropriate for the intended outcomes?
- Does the program design include inquiry into how learning can be improved?
- Which model of professional development was used to design this program?"

("Designing Powerful Professional Development," 2005)

The North Carolina Professional Development Standards are organized according to the context/process/content schema:

- CONTEXT STANDARDS: address the organization, system, and culture in which the new learning will be implemented
- PROCESS STANDARDS: refer to the "how" of professional development describing the learning processes used in the acquisition of new knowledge and skills and addressing the use of data, evaluation and research.
- CONTENT STANDARDS: refer to the "what" of professional development.

NORTH CAROLINA PROFESSIONAL DEVELOPMENT STANDARDS

CONTEXT STANDARDS

LEARNING COMMUNITIES:	Professional development that improves the learning of all students organizes adults into learning communities whose goals are aligned with those of the school and district.
LEADERSHIP:	Professional development that improves the learning of all students requires skillful school and district leaders who guide continuous instructional improvement.
RESOURCES:	Professional development that improves the learning of all students requires resources to support adult learning and collaboration.

PROCESS STANDARDS

DATA-DRIVEN:	Professional development that improves the learning of all students uses disaggregated student data to determine adult learning priorities, monitor progress, and help sustain continuous improvement.
EVALUATION:	Professional development that improves the learning of all students uses multiple sources of information to guide improvement and demonstrate its impact.
RESEARCH-BASED:	Professional development that improves the learning of all students prepares educators to apply research to decision making.
DESIGN:	Professional development that improves the learning of all students uses learning strategies appropriate to the intended goal.
LEARNING:	Professional development that improves the learning of all students applies knowledge about human learning and change.
COLLABORATION:	Professional development that improves the learning of all students provides educators with the knowledge and skills to collaborate.

CONTENT STANDARDS

EQUITY:	Professional development that improves the learning of all students prepares educators to understand and appreciate all students, create safe, orderly and supportive learning environments, and hold high expectations for their academic achievement.
QUALITY TEACHING:	Professional development that improves the learning of all students deepens educators' content knowledge, provides them with research-based instructional strategies to assist students in meeting rigorous academic standards, and prepares them to use various types of classroom assessments appropriately.
FAMILY INVOLVEMENT:	Professional development that improves the learning of all students provides educators with knowledge and skills to involve families and other stakeholders appropriately.

("Designing Powerful Professional Development," 2005)

RESOURCES TO SUPPORT PROFESSIONAL DEVELOPMENT PLANNING

Data and Research
<http://www.nsdc.org/library/research.cfm#tools>

Designing Powerful Professional Development for Teachers, Administrators, and School Leaders
<http://www.ncpublicschools.org/docs/profdev/guidelines/ncguidelines/guidetodesigning.pdf>

How Teachers Learn Best
<http://www.fno.org/mar01/howlearn.html>

Is This School a Learning Organization – 10 Ways to Tell
<http://www.nsdc.org/library/publications/jsd/brandt241.cfm>

Learning by the Numbers
<http://www.edutopia.org/php/article.php?id=Art_924>

Professional Development Articles
<http://www.fsc.follett.com/resources/professional_development.cfm>

Professional Development IQ Test
<http://www.nsdc.org/library/basics/profdevIQ.cfm>

The Toolbelt: A Collection of Data-Driven Decision-Making Tools for Educators
<http://www.ncrel.org/toolbelt/index.html>

What Works in the Elementary School: Results-Based Staff Development
<http://www.nsdc.org/connect/projects/resultsbased.cfm>

What Works in the Middle: Results-Based Staff Development
<http://www.nsdc.org/midbook/index.cfm>

What Works in the High School: Results-Based Staff Development
<http://www.nsdc.org/connect/projects/hswhatworks.pdf>

COLLABORATION THROUGH FLEXIBLE ACCESS

"WHAT SETS COLLABORATION APART . . . IS THAT THE OUTCOME IS GREATER THAN THE SUM OF THE PARTS."
(Bush, 2003)

DEFINITION OF TERMS

Flexible access enables students and teachers to use and circulate the resources of the media center and computer lab throughout the day and to have the services of the school library media coordinator and technology facilitator at point, time, and location of need.

Collaboration is a process facilitated by flexible access. Collaboration within the *IMPACT* Model means that the school library media coordinator and technology facilitator work closely with teachers to plan, implement, and evaluate classroom lessons, units, and the overall instructional program.

Preparing students to succeed in the 21st century is an enormous challenge that requires the combined efforts of all educators. Teachers need ongoing support for their instructional programs to meet the challenges of addressing individual student needs and learning styles. A key component of the research-based *IMPACT* Model is that the media and technology program plays a vital role in today's schools by providing flexible access to relevant resources and flexible instruction based on collaborative planning. Flexible access and collaboration impact student achievement by using student data to design focused instructional strategies, allowing for differentiation of student learning, addressing multiple learning styles, allowing for timely individual intervention, and reducing class size.

No Child Left Behind emphasizes the importance of implementing educational programs and practices proven effective in improving student learning and achievement through rigorous scientific research. A substantive body of scientifically-based research has documented the positive impact of flexible access and collaboration on student achievement (<http://www.lrs.org/impact.asp>).

"A SUBSTANTIAL BODY OF RESEARCH SINCE 1990 SHOWS A POSITIVE RELATIONSHIP BETWEEN SCHOOL LIBRARIES AND STUDENT ACHIEVEMENT. THE RESEARCH STUDIES SHOW THAT SCHOOL LIBRARIES CAN HAVE A POSITIVE IMPACT ON STUDENT ACHIEVEMENT—WHETHER SUCH ACHIEVEMENT IS MEASURED IN TERMS OF READING SCORES, LITERACY, OR LEARNING MORE GENERALLY. A SCHOOL LIBRARY PROGRAM THAT IS ADEQUATELY STAFFED, RESOURCED, AND FUNDED CAN LEAD TO HIGHER STUDENT ACHIEVEMENT REGARDLESS OF THE SOCIO-ECONOMIC OR EDUCATIONAL LEVELS OF THE COMMUNITY"
(School Libraries Work!, 2004).

Collaboration is sharing new ideas, strategies and resources to create dynamic and well-planned lessons that foster active learning. The involvement of media and technology professionals in all aspects of curriculum implementation is fundamental to the collaborative process. This is facilitated by flexible access to both the media center and the computer lab and to all their resources, as well as to the services of these professionals during common planning periods.

"HIGH-ACHIEVING SCHOOLS TEND TO HAVE MORE TECHNOLOGICAL RESOURCES. BAULE (1997) FOUND THAT SCHOOLS WITH EXEMPLARY TECHNOLOGY WERE ALSO MORE LIKELY TO HAVE HIGH-QUALITY SCHOOL LIBRARY MEDIA PROGRAMS. YETTER (1994) OBSERVED THAT THE LIBRARY MEDIA CENTERS IN SUCCESSFUL RESOURCE-BASED LEARNING SCHOOLS HAD MODERN, SPACIOUS FACILITIES DESIGNED FOR FLEXIBLE USE AND ACCESS TO TECHNOLOGY. GEHLKEN (1994) NOTED THAT ALL THREE BLUE RIBBON SCHOOLS STUDIED HAD LIBRARY MEDIA CENTERS WHICH WERE COMMITTED TO INCREASING STUDENT ACCESS TO TECHNOLOGY, AND WHICH HAD THE FLEXIBILITY AND ELECTRONIC CAPABILITIES TO ACCOMMODATE THE CHANGING NEEDS CREATED BY NEW TECHNOLOGIES"
(Michigan State Government, 2003).

The collaborative process begins with an integration phase, develops into cooperatively planned activities, and culminates with full collaborative units.

- Integration is the alignment of media and technology resources to support classroom topics and the instructional needs of students.
- Cooperative activities result when media and technology personnel design lessons independently in support of classroom objectives and instruction.
- Collaboration requires co-planning between teachers and media and technology personnel to create cross-curricular lessons and units that are jointly delivered and evaluated.

Initially, media and technology professionals meet occasionally with classroom teachers to plan cooperatively. There may be a combination of fixed classes, as well as times for open access. At the next stage, media and technology professionals meet with teachers on a regular basis to plan learning experiences, and there are no fixed times for instruction in the media center or computer lab. At the highest level of implementation, formal units of instruction are collaboratively planned, implemented, and evaluated. Teachers and media and technology professionals meet routinely to analyze and use data and to determine instructional strategies and resources to improve teaching and learning. At this stage, media and technology professionals may also co-teach with classroom teachers.

Once a collaborative environment is established, the school library media coordinator and technology facilitator will continue to work at the various levels to support classroom instruction as needs arise. With in-depth collaborative planning, teachers and media and technology professionals meet routinely to analyze and use data and to determine instructional strategies and resources to improve teaching and learning.

"THE NATIONAL LIBRARY POWER PROJECT, INVOLVING 700 SCHOOLS IN 19 SCHOOL DISTRICTS, REQUIRED IMPLEMENTATION OF COOPERATIVE PLANNING AND TEACHING AND FLEXIBLE SCHEDULING OF THE LIBRARY. RESULTS OF THE STUDY INDICATED:

- **MORE COLLABORATIVE WORK ENVIRONMENTS AND INSTRUCTIONAL PROGRAMS FOCUSING ON INTERDISCIPLINARIY, INQUIRY- AND PROBLEM-BASED LEARNING;**
- **MORE FREQUENT VISITS TO THE LIBRARY AS A RESULT OF IMPLEMENTATION OF FLEXIBLE SCHEDULING;**
- **MORE ENGAGING AND EDUCATIONALLY RICH LEARNING ACTIVITIES FOR STUDENTS"**

(Research on Flexible Access to School Libraries, 2002).

FLEXIBLE ACCESS LOOKS LIKE THIS:

- Students and teachers move freely in and out of the school library media center and the computer lab for activities such as researching print and electronic resources for an assignment and creating a multimedia presentation.
  - Students come to the media center all day long to check out books and other resources regardless of other activities taking place in the media center.
  - Students move in and out of the computer lab throughout the day to use electronic resources.
- One grade level group of teachers is planning with the school library media coordinator and/or the technology facilitator for a new collaborative unit of instruction. Meanwhile, children, under the supervision of media or technology assistants, come from various classes to the media center to check out a book or read a magazine, or to use resources in the computer lab.
- Teachers check with the technology facilitator and school library media coordinator for available blocks of time to bring in their classes to begin work on a collaborative unit--or send a small group of students to work with the school library media coordinator and/or the technology facilitator
- A fourth grade class and their teacher enter the computer lab to work with the technology facilitator on the development of their North Carolina portfolios.
- Those same fourth graders may leave the computer lab periodically to find print resources in the media center to aid in the development of their portfolio. All students are working with the teacher, the school library media coordinator, and the technology facilitator to find resources and learn skills that will help them finish their assignment.
- While a class may stay in the computer lab or media center only twenty minutes during a curriculum-related activity, such as using a software application or participating in story time, other students may be in the computer lab and/or the media center for two or three hours, depending on the time allotted for an activity.

COLLABORATING TO ACHIEVE INSTRUCTIONAL GOALS LOOKS LIKE THIS:

SCHOOL LIBRARY MEDIA COORDINATORS AND TECHNOLOGY FACILITATORS:

- Develop strong instructional partnerships with classroom and special area teachers by working together to plan and implement instruction and to evaluate instructional outcomes;
- Use the best available models of instruction, collaboration, and cooperative learning;
- Ensure that instruction takes place in a student-centered, project-based environment;
- Plan projects and activities with teachers that are relevant to real-life problems and support the development of critical thinking and problem-solving skills in students;
- Create small group activities with heterogeneous groupings to accomplish curriculum goals and objectives;
- Help teachers to address different learning styles by using high-quality resources in a variety of formats;
- Involve students with setting goals for learning;
- Work with teachers and students to create rubrics for project evaluation;

- Create and share a file or database within the school of collaboratively developed lesson plans and related materials keyed to the North Carolina Standard Course of Study;
- Search for lesson plans and successful teaching models in other schools, at conferences, and in the professional literature;
- Participate actively in the planning and evaluation of local, regional, and state activities such as Battle of the Books, Multimedia Mania, technology fairs, Quiz Bowl, and the North Carolina Children's Book Award.

  (See <http://video.dpi.state.nc.us/eforums/impact_videos/>)

"COLLABORATION AFFORDS GENERAL EDUCATORS, SPECIAL EDUCATORS, AND SUPPORT PERSONNEL OPPORTUNITY TO ESTABLISH REWARDING AND LONG LASTING SOCIAL AND PROFESSIONAL RELATIONSHIPS. ACCORDINGLY, MORE SCHOOL PERSONNEL RECOGNIZE THAT COLLABORATION FOSTERS A SENSE OF SHARED RESPONSIBILITY FOR EDUCATING HETEROGENEOUS GROUPS OF STUDENTS (FRIEND & COOK, 2000). FINALLY, THE GROWING EMPHASIS ON COLLABORATION STEMS FROM THE VERY NATURE OF SCHOOLS THEMSELVES-SETTINGS IN WHICH A RANGE OF RESPONSIBILITIES AND DEMANDS CAN BE ADDRESSED MORE APPROPRIATELY BY COLLABORATIVE OR TEAM APPROACHES THAN BY INDIVIDUAL, ISOLATED EFFORTS"
(Gable, 2004).

LEADERSHIP AND THE CHANGE PROCESS

In order to implement flexible access and collaboration, school library media and tech-nology professionals need to understand their leadership roles as change agents and the change process, itself. Implementing flexible access and collaboration changes school climate, so ultimately, media and technology professionals are catalysts for school reform. When media and technology professionals assume leadership roles, they have the opportunity to facilitate discussions about how flexible access and collaboration can support teaching and learning and positively impact student achievement. At the same time, they build the capacity to implement change. Together, they should co-chair the Media and Technology Advisory Committee (MTAC) and should have a voice within the School Leadership Team (SIT). Membership on the SIT can open the door for media and technology professionals to be involved in the master scheduling of the school, including decisions regarding planning time.

WHAT MAKES FLEXIBLE ACCESS AND COLLABORATION WORK?

Vision, informed leadership, flexible attitudes, and professional development, along with staffing, budget, resources, and common planning time are the pre-existing conditions essential to making flexible access and collaboration work in schools.

"FLEXIBLE ACCESS TO MEDIA AND TECHNOLOGY RESOURCES AND PERSONNEL CAN MAKE AN IMMEDIATE SIGNIFICANT CHANGE IN THE USE AND INTEGRATION OF MEDIA/TECHNOLOGY RESOURCES WITH ADEQUATE STAFFING, RESOURCES, PROFESSIONAL DEVELOPMENT AND ADMINISTRATIVE SUPPORT. THIS CHANGE CAN HAPPEN QUICKLY IF THESE CRITICAL ELEMENTS ARE IN PLACE. THE SINGLE MOST CRITICAL FACTOR AFFECTING THE EASE OF TRANSITION TO FLEXIBLE SCHEDULING APPEARS TO BE THE PREPARATION, EXPERIENCE AND ATTITUDE OF THE MEDIA COORDINATOR AND TECHNOLOGY FACILITATOR"
(Stallings, 2005).

MEDIA AND TECHNOLOGY STAFFING FOR FLEXIBLE ACCESS/COLLABORATION

POSITION	CERTIFIED	CLASSIFIED	ROLE IN FLEXIBLE ACCESS
SCHOOL LIBRARY MEDIA COORDINATOR	076		▪ Maximize access to all resources through effective management ▪ Provide resources to support the curriculum in a timely manner ▪ Provide instructional support at the point of need (small or large group) ▪ Co-Lead the Media and Technology Advisory Committee (MTAC) ▪ Participate in the School Improvement Team (SIT)
TECHNOLOGY FACILITATOR	079 OR 077		▪ Maximize access to all technology resources through effective management ▪ Provide technology resources to support the curriculum in a timely manner ▪ Provide instructional technology support at the point of need (small or large group) ▪ Co-Lead the Media and Technology Advisory Committee (MTAC) ▪ Participate in the School Improvement Team (SIT) ▪ Serve as liaison between the school and the system-level technology director
FULL-TIME MEDIA ASSISTANT*		Yes	▪ Manage circulation of resources to provide access throughout the day. ▪ Provide clerical assistance for resources management ▪ Provide support for reference and research activities
FULL-TIME TECHNOLOGY ASSISTANT*		Yes	▪ Manage technology resources to provide access throughout the day ▪ Troubleshoot minor technology problems to ensure access to resources throughout the day
TECHNICIAN		Yes	▪ Maintain technology infrastructure, hardware, software ▪ Serve as liaison between the school and system-level technical support staff

** Appropriate media and technology assistant staffing supports collaboration by maintaining access to the media and technology resources and facilities while collaborative partners plan and conduct instructional activities.*

ROLES AND RESPONSIBILITIES OF COLLABORATIVE PARTNERS

The integration of school library media and technology programs with instruction is the joint responsibility of teachers, administrators, and media and technology professionals working together to accomplish objectives that support desired outcomes for students.

COLLABORATING PARTNER	RESPONSIBILITY
CLASSROOM TEACHER	▪ Curriculum content ▪ Learning Styles ▪ Student interest ▪ Initiate collaboration ▪ Facilitate the learning process ▪ Share student data (IEP, AIG, and Testing data) ▪ Chair collaborative meetings
SCHOOL LIBRARY MEDIA COORDINATOR	▪ Integrate information skills into the core curriculum ▪ Understand the total curriculum ▪ Share resources in a variety of formats ▪ Share instructional strategies ▪ Support small group instruction ▪ Support differentiated learning ▪ Advocate for a collaborative environment
TECHNOLOGY FACILITATOR	▪ Integrate technology skills into the core curriculum ▪ Understand the total curriculum ▪ Share resources in a variety of formats ▪ Share instructional strategies ▪ Support small group instruction ▪ Support differentiated learning ▪ Advocate for a collaborative environment
RESOURCE TEACHERS	▪ Integrate skills from their area of specialization with core curriculum content ▪ Support the necessary use of assistive technology resources ▪ Share student assessment data (IEP, AIG)
ADMINISTRATORS	▪ Allocate time for the collaborative process to occur ▪ Provide financial support for acquisition of information resources ▪ Support flexible access of media and technology programs and resources ▪ Establish expectations for a collaborative environment ▪ Evaluate effectiveness of media and technology programs ▪ Support the leadership role of the school library media coordinator and the technology facilitator
MTAC (Media and Technology Advisory Committee)	▪ Advocate for a collaborative environment ▪ Participate in the selection of resources ▪ Prioritize budget needs ▪ Facilitate long term plans for the media and technology programs ▪ Evaluate effectiveness of media and technology programs
SIT (School Improvement Team)	▪ Advocate for a collaborative environment ▪ Distribute media and technology resources appropriately ▪ Facilitate long term plans for media and technology programs ▪ Determine alignment of MTAC recommendations with the school improvement plan

Successful implementation of flexible access and collaboration requires long-term planning. Development of the IMPACT Model, including flexible access to media and technology resources and instructional support, will take 3-5 years. It is important that the MTAC and the SIT have a shared vision for the learning process that incorporates the key components of the IMPACT Model:

- Technology-rich teaching and learning environment through flexible access
- Resource-rich teaching and learning environment through flexible access
- Collaboration among teachers and media and technology personnel facilitated through flexible access
- Strong administrative leadership and support
- Adequate budget

IMPLEMENTING EFFECTIVE COLLABORATIVE PLANNING SESSIONS

Extended time is required for teachers to meet with the technology facilitator and school library media coordinator to analyze student test data, identify instructional objectives and appropriate strategies for individual needs, and determine outcomes and evaluation methods. Each grade-level or department team should have a 2-3 hour planning block every four to six weeks when all instructional partners can meet and plan together.

TWO IDEAS FOR PROVIDING EXTENDED PLANNING TIME:

- Each team meets on a different morning or afternoon, and classes are covered by assistants from other classes (lending/borrowing approach);
- Several or all grade-level teams meet on the same day in rotation with classes covered by a team of substitutes who move around the building as the teams do their planning. Substitutes are paid from staff development funds.

HOW DO YOU IMPLEMENT EFFECTIVE COLLABORATIVE PLANNING SESSIONS?

AS YOU PLAN TOGETHER:

THE CONVERSATION

- Discuss curriculum goals and objectives
- Brainstorm possible activities and scientifically-based teaching strategies based on the analysis of student test scores and the identification of individual weaknesses and strengths
- Assign responsibilities for instruction
- Determine and review necessary resources
- Determine outcomes and how to evaluate
- Schedule time for instructional activities

RULES OF THE ROAD

- Lead teacher or department head chairs the meeting
- Teachers talk about curriculum goals and ideas for instructional activities
- School library media coordinator and technology facilitator bring related resources and activity ideas

TOOLS TO GUIDE THE PROCESS

- Curriculum maps/pacing guides
- *IMPACT* for Teachers Web site
- School-wide research process (Big6, FLIP it!, I-Search, etc.)
- Planning forms
- *Collaboration Toolkit* (see Appendix)

Strategies for long-term implementation of flexible access and collaboration should include:

- alignment of the goals of flexible access and collaboration with the school improvement plan
- facilitated collaborative planning sessions
- appropriate professional development
- prioritized budget needs
- development of a communication plan for internal and external stakesholders

What interim strategies can be used in the *first* year of implementing flexible access?

- Implement flexible access for instruction in stages by grade-level (over no more than one year)
- Fixed circulation for primary during 1st semester; transition to flexible circulation 2nd semester
- Fixed instructional schedule for specified days/times; flexible access for other days/times

Individual schools are encouraged to assess the needs of their students and staff and examine their school culture to determine what is needed to promote the *IMPACT* Model and flexible access such as:

- Self-checkout/in
- Access to the online catalog from any workstation
- User login procedures
- Process and procedures for communication
- Record keeping for collaboration with each teacher or grade-level/department team
- Space/workstation utilization for small group and individual use

ADVOCACY: COMMUNICATING WHAT FLEXIBLE ACCESS AND COLLABORATION MEAN

The benefits of flexible access and collaborative planning to support instruction must be communicated to the education community. While many view flexible access as the loss of planning time for teachers, the benefits of flexible access to resources and media and technology personnel in schools far outweigh any perceived loss of planning time. When addressing administrators, teachers, parents and other members of the learning community, emphasize these benefits:

FLEXIBLE ACCESS ENABLES

- access to media center and computer lab resources when they are needed to support, supplement, and enhance teaching and learning, thus impacting student achievement;
- the school library media coordinator and the technology facilitator to plan with for instruction with teachers and staff;
- students to conduct in-depth research for information and resources, thus fostering independence and life-long learning;
- differentiated instruction in support of the goals and objectives of *No Child Left Behind* and the ABCs Plus of Public Education
- development of collaborative units of study culminating in student projects that require higher-order thinking skills based on real-world challenges;
- implementation of *The Balanced Curriculum* as recommended by the Instructional Services Division, NC DPI;
- teachable moment and just-in-time access to information and resources for students;
- integration of information and technology skills into all curriculum areas as defined by the *NC Standard Course of Study;*
- reduction of the student-teacher ratio;
- instruction to be delivered one-on-one, in small groups, or in whole-class settings in order to address a variety of learning styles.

When advocating for flexible access, help administrators and teachers understand the high price of a fixed schedule both academically and financially. Base all arguments on the research that supports appropriate use of the school library media center and the computer lab to impact student achievement (<http://www.lrs.org/impact.asp>).

Volunteer to help the principal brainstorm alternatives for coverage of teacher release time so that the media center and computer lab are outside the planning block.

"IN A STUDENT-CENTERED LIBRARY MEDIA PROGRAM, LEARNING NEEDS TO TAKE PRECEDENCE OVER CLASS SCHEDULES, SCHOOL HOURS, STUDENT CATEGORIZATIONS, AND OTHER LOGISTICAL CONCERNS."
(AASL and AECT, 1998).

READING AND LITERACY

"READING" - "LITERACY" - "INFORMATION LITERACY" - "INSTRUCTIONAL TECHNOLOGY SKILLS" - "MEDIA LITERACY" - "VISUAL LITERACY" - "CONTEMPORARY LITERACY" - "NEW LITERACIES" - "THINKING SKILLS" - "21ST CENTURY SKILLS"

WHAT ARE WE *REALLY* ALL ABOUT?

Current emphases on student reading and writing, accompanied by testing mandates and both state and national legislation, have certainly placed literacy achievement at the forefront of what educators do. The vast array of definitions and terminology used by education professionals today to define their missions or areas of expertise is giving way to the recognition that all educators share both common ground and a common goal for students: to ensure that all develop the skills necessary to be effective lifelong users of ideas and information. Effective language and communication for the 21st century involves all of the various "literacies" noted above, including enabling skills such as reading, writing, and computing, as well as creative thinking and problem solving, interpersonal skills, negotiation, and teamwork. Literacy is literacy is literacy.

Literacy is the business of the entire school and requires significant collaboration in order to create a climate and culture that clearly values literacy skills and stresses their importance. Schools must recognize that comprehension skills are not just the business of the reading teacher, that reading promotion is not just the job of the school library media program, and that Internet research strategies are not just the domain of the instructional technology facilitator.

School library media coordinators and technology facilitators can provide leadership in reinforcing the "big picture" focus, simultaneously demonstrating how the various parts (such as independent reading, project-based authentic research, online strategies, reading motivation, etc.) fit together with classroom instruction into a greater whole through successful collaboration. Effective collaboration, however, requires effective communication, and too often, semantics interferes in our efforts to work together.

"OUR CONCEPT OF LITERACY HAS BEEN BASED ON THE ASSUMPTION THAT PRINT IS THE PRIMARY CARRIER OF INFORMATION IN OUR CULTURE AND THAT THE MOST IMPORTANT SKILLS ARE THOSE THAT ENABLE STUDENTS TO UNDERSTAND AND EXPRESS THEMSELVES IN TEXT. THE NEW DEFINITION OF LITERACY IS BASED ON A DIFFERENT ASSUMPTION: THAT DIGITAL TECHNOLOGY IS RAPIDLY BECOMING A PRIMARY CARRIER OF INFORMATION AND THAT THE BROADER MEANS OF EXPRESSION THAT THIS TECHNOLOGY MAKES POSSIBLE ARE NOW CRITICAL FOR EDUCATION. TEXT LITERACY IS NECESSARY AND VALUABLE, BUT NO LONGER SUFFICIENT"
(Meyer and Rose, 2000).

Effective instructional technology and school library media programs recognize that "digital-age literacy" involves much more than basic skills in reading and writing. Both the school library media and instructional technology communities frequently express frustration that "their message" is not getting across with classroom teachers, administrators, or policy makers at the school board, state or federal levels. The news media fails to pay adequate attention to school libraries or instructional technology programs by focusing instead upon test scores and "why Johnny can't read." Media and technology professionals must recognize that public attention, and that of classroom teachers, administrators, and policy makers at the local, state, and national levels, is focused more upon such traditional concepts of reading and writing than upon "information literacy" or "instructional technology skills." Likewise, others seem to ignore or focus less on research about the impact and effectiveness of strong instructional technology and school library media programs. School library media coordinators and technology facilitators must effectively learn the terminology, best practices, and research of the reading and literacy community, and then translate media and technology terminology, best practices, and research into "their" language and experience.

The following examples highlight this "translated" collaboration, in which school library media coordinators and/or technology facilitators use current research, models, and best practices in literacy instruction to develop strong media and technology programs.

COLLABORATION: MEDIA AND TECHNOLOGY, READING, AND LITERACY

MODELED READING AND SHARED READING (as described in models for balanced literacy instruction – Routman, 1991; Fountas and Pinnell, 1996; Cooper, 2003)

- Reading aloud to students has long been a staple of school library media programs. Occasionally utilizing specific strategies and questioning techniques as a part of school library media read-aloud sessions reinforces the same kinds of explicit instruction that are used in scaffolded classroom instruction. Such strategies are thoroughly discussed in *Read It Again!: Revisiting Shared Reading* by Brenda Parkes (Stenhouse, 2000);
- Creating buddy or partner reading programs that regularly pair readers to read aloud to each other alternately;
- Developing collections of books on tape to help develop fluency in independent reading (Allen, 2000);
- Readers' theater strategies, including adapting picture books with large amounts of dialogue into scripts or using web-based resources such as Aaron Shepard's RT Page.

READING-WRITING WORKSHOP MODEL

- "Internet Workshop: Making Time for Literacy" (Leu, 2000) provides a parallel management structure to be utilized in flexibly accessed technology/computer labs and/or school library media centers, and which could serve as a model for classroom teachers seeking to integrate technology seamlessly into their daily literacy activities.

PRINT-RICH INSTRUCTIONAL ENVIRONMENTS AND BROAD CLASSROOM LIBRARY COLLECTIONS

- Existing classroom library collections can be broadened significantly by the addition of monthly-rotating "classroom collections" drawn from the school library media collection (Routman, 1991).
- Although school library media collections are organized by Dewey numbers, classroom libraries are frequently structured to be "browser-friendly" by organizing materials in a way that makes *immediate* sense to the student. Browsing bins or tubs of high-interest materials organized by genre or topic, author, etc. (such groupings need not be permanent) could rotate out as student interests change (Fountas & Pinnell, 1996).

RENEWED EMPHASIS ON COMPREHENSION OF NONFICTION AND EXPOSITORY TEXT

- In *Strategies That Work: Teaching Comprehension to Enhance Understanding* (Stenhouse, 2000) and *Nonfiction Matters: Reading, Writing, and Research in Grades 3-8* (Stenhouse, 1998), Stephanie Harvey and Anne Goudvis provide multiple strategies that parallel those modeled and taught by school library media coordinators and technology facilitators when helping students with research projects.
- Literacy strategies common to classroom instruction such as KWL or other kinds of graphic organizers are useful for a variety of research activities.
- Reading strategies for traditional print and linear text and those used for hypertext on Web pages and Internet resources are remarkably similar, though some (e.g., skimming or scanning, using guided questions, text features, etc.) may deserve greater emphasis when reading text online (Schmar-Dobler, 2003).

- Literature-based instruction and literature studies, which have traditionally focused on novels and fiction, must include multiple forms of literacy. School library media coordinators should be booktalking, creating recommended booklists, and providing reading guidance for nonfiction. School Web pages can provide quick links to engaging, high-interest informational Web sites appropriate for "recreational reading."

ENABLING STUDENTS TO LEARN HOW TO SELECT "JUST RIGHT" BOOKS BY MAXIMIZING CHOICE FOR INDEPENDENT READING ACROSS MULTIPLE LEVELS (Routman, 1991; Fountas and Pinnell, 1996; Krashen, 2004):

- The establishment of "liberal" circulation policies and procedures allows students to check out multiple library books;
- Peterson (2001) emphasizes the developmental nature of independent reading, pointing out such factors as the importance of series books; allowing students to check out easy, difficult, and "just right" books; and not restricting book choices to certain levels;
- Sibberson & Szymusiak (2003) point out concerns about "restrictive" leveling in book selection and stress the need to continue to provide students, even into middle school, with strategies for selecting appropriate texts, as well as how to promote "book choice conversations" throughout the year, not merely during orientation at the opening of the school year.

LITERACY INSTRUCTION IS NOT JUST FOR ELEMENTARY STUDENTS: MIDDLE AND HIGH SCHOOL STUDENTS CONTINUE TO NEED SUPPORT AND STRATEGIES FOR UNDERSTANDING MULTIPLE KINDS OF TEXT (Atwell, 1998; Allen, 2000; Gallagher, 2003).

ENGAGING ADOLESCENT AND YOUNG ADULT READERS – ESPECIALLY MANY BOYS AND ALSO RELUCTANT READERS – REQUIRES CONTINUED EFFORTS, ADDITIONAL STRATEGIES, AND AN UNDERSTANDING OF HOW THEY SEE LITERACY "FITTING INTO THEIR WORLD." (Atwell ,1998; Knowles and Smith, 2001; Booth, 2002; Smith & Wilhelm, 2002; Beers, 2003; Lesesne, 2003; Sullivan, 2003; Reynolds, 2004)

- Advocate for and promote maximum student choice in reading materials (Atwell, 1998; Smith & Wilhelm, 2002; Reynolds, 2004);
- Accept, validate, and support reading choices of "nontraditional" texts such as magazines, comic books, graphic novels, online material, etc. (Newkirk, 2002; Smith & Wilhelm, 2002);
- Develop "nontraditional" collections of magazines, newspapers, comics, and graphic novels (A. Nichols, 2004);
- Read aloud, read aloud, read aloud and booktalk, booktalk, booktalk a wide variety of texts including nonfiction, poetry, graphic novels, magazines, etc.;
- Aggressively merchandize and market library materials through visual displays and promotions (Nichols, 2002);
- Literacy is very much a social activity for many adolescents (Atwell, 1998; Smith & Wilhelm, 2002); therefore, organizing book clubs and discussion formats (Raphael, Kehus, and Damphousse, 2001) such as Paidaeia strategies or literature circles (Daniels and Zemelman, 2002) can be particularly effective for providing opportunities for thinking, enrichment, and motivation.

EFFECTIVE METHODS AND CONTINUAL SUPPORT FOR SUSTAINED SILENT READING (SSR) CAN BE A POWERFUL STRATEGY FOR INDEPENDENT READING (Pilgreen, 2000 and Marshall, 2002) **AND ESTABLISHING BACKGROUND KNOWLEDGE** (Marzano, 2004):

- Advocating for effective strategies in implementing SSR (Pilgreen, 2000);
- Providing "rotating" monthly classroom collections from the school library media center;
- Visiting various classrooms and "model" reading during SSR.

COOPERATIVE OR COLLABORATIVE READING (as described in models for balanced literacy instruction and reading-writing workshop):

- Online book clubs or discussion groups using Blackboard software or blogs provide another venue for interaction and dialogue.

> **"WE NEED TO CONTINUALLY REMIND OURSELVES THAT KNOWING HOW TO READ DOES NOT MAKE A PERSON A READER"**
> (Peterson, 2001).

READING PROGRAMS OR READING?

No one questions the incredible time and energy that teachers, school library media coordinators, technology facilitators, and other school personnel spend in their efforts to ensure that students become effective users and communicators of ideas and information. Although most students have participated in traditional "reading promotion" activities such as book fairs, read-ins, technology-based reading incentive programs, Read Across America, book character dress-ups, etc., numerous studies still indicate that many young people do not make the critical connection between literacy and future success.

"OFTEN IT IS THE VERY STRUCTURES WE INVENT THAT LIMIT THE POSSIBILITIES FOR OUR YOUNG READERS – THAT DRAW BOUNDARIES AROUND THEIR LEARNING EXPERIENCES – THAT SHRINK READING DOWN TO AN ACTIVITY THEY DO IN SCHOOLS, RATHER THAN A MEANINGFUL, THOUGHTFUL DAILY PART OF THEIR LIVES. OUR EFFORTS . . . TOO OFTEN TIGHTEN THE PARAMETERS, LIMIT GROWTH, AND GIVE…AN ARTIFICIAL PERSPECTIVE OF WHAT READING IS ALL ABOUT."

(Szymusiak and Sibberson, 2001).

A growing body of anecdotal evidence indicates that students, perhaps as soon as the middle of the elementary grades, develop an understanding of a difference between "school reading" and "real reading." The kind of reading promoted by schools is monotonous and routine; it may be useful in the future, but is of little use or interest now. Most importantly, students feel that they have little choice or sense of control when it comes to "schoolish" reading, and that it has little connection with real life (Smith and Wilhelm, 2002).

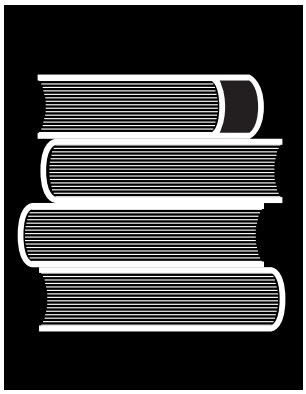
Schools that wish to create a supportive literacy environment for students must provide:

- Access to reading materials
- Opportunities to read
- Motivation to read

Creating a school climate and culture that truly shows students the value and importance of literacy may be as much, if not more than, a matter of developing relationships, informal protocols, and attitudes rather than providing motivational activities. Both literacy researchers and practitioners (Atwell, 1998; Szymusiak and Sibberson, 2001; Smith and Wilhelm, 2002; Beers, 2003; Lesesne, 2003), and students themselves, stress that the most effective ways to match the reader with the book or material include:

- *really* listening to the student
- talking with or engaging in meaningful conversations with the student
- surveying or asking the student questions
- developing a relationship of respect with the student

Media and technology professionals must not only use data-driven and scientifically-based instruction. They must get to know their students so well that they can truly provide the bridge between literacy skills and a love and appreciation for reading in all of its forms.



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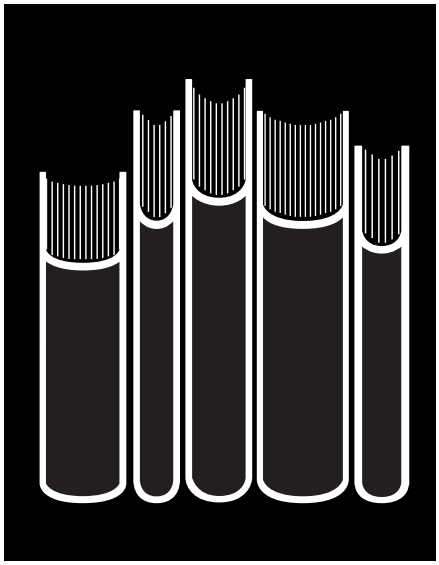
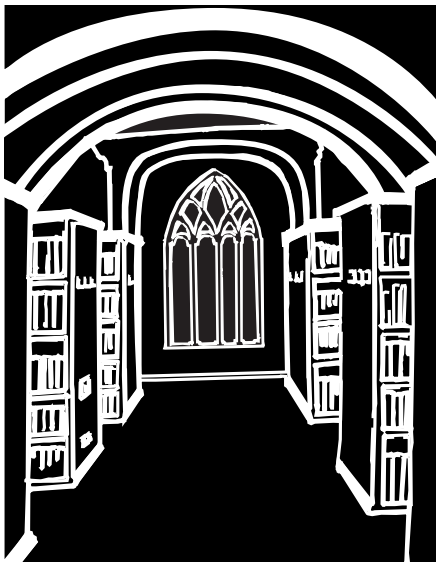


INFORMATION ACCESS AND DELIVERY



Information Access and Delivery: the Heart of Effective Programs

Resources, Needs, and Choices

Making Resources Accessible

Planning and Designing Facilities for Learning

Developing Educational Specifications

Educational Specifications for School Media/ Technology Spaces

Educational Specifications for the School Library Media Center

Educational Specifications for Furniture, Shelving, and Built-ins

General Technology Infrastructure for Instruction

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INFORMATION ACCESS AND DELIVERY: THE HEART OF EFFECTIVE PROGRAMS

All media and technology programs depend on one primary function: the access and delivery of information. Information access and delivery are multifaceted functions that have different meaning for different people. For example:

- For one teacher it may focus on Web-based resources that allow students to solve a problem through a carefully designed Web quest.
- For another teacher, it may be the assignment of a module from skills-building computer software to bring several of the lowest performing students up to the level of their classmates.
- For a student, it may be finding a special book for the latest book report or identifying resources for a research project.
- For the administrator, it may be the ability to access an Internet-based professional development module for graduate credit.

All of these needs rely on the ability of media and technology professionals to access and deliver specific information in a variety of formats and for a variety of reasons. Because information access and delivery are multifaceted, they often overlap with and complement program administration as well as teaching and learning.

The impact of information access and delivery on the quality and effectiveness of the school library media center, computer labs, and classrooms make them the heart of any school media and technology program. Sections in this chapter address the following main topics that are fundamental to information access and delivery in media and technology programs:

- Resources, Needs, and Choices
- Making Resources Accessible
- Planning and Designing Facilities for Learning
- Developing Educational Specifications

RESOURCES, NEEDS, AND CHOICES

RESOURCES ARE THE CORNERSTONES OF EFFECTIVE PROGRAMS.

Resources have always been the cornerstones of effective media and technology programs. Once the province of the book, with an occasional 16mm film or silent filmstrip to supplement its print format, media and technology programs today use myriad formats, reaching beyond the mere four walls of the school building to encompass local, state, national, and international resources.

> **"INFORMATION IS THE BASIC INGREDIENT IN THE ACTIVE, AUTHENTIC LEARNING REQUIRED OF TODAY'S STUDENT"**
> (AASL and AECT 1998, 83).

ACCESS TO RESOURCES IS CRITICAL TO MEETING DIVERSE NEEDS.

The school technology and media programs support diverse needs of learners and teachers with access to high-quality resources (print, non-print, and electronic), equipment, and facilities for classroom activities and personal or professional interests.

CHANGING RESOURCES IMPACT SELECTION AND ACCESSIBILITY POLICIES.

Selecting and providing access to diverse resources that meet unique requirements of individual schools and communities can no longer be determined using quantitative standards. In fact, the changing nature and expansion of school resources make these standards obsolete.

SELECTION OF AND ACCESS TO TODAY'S RESOURCES MUST:

- Be based on an analysis of many needs,
- Include information in a variety of formats,
- Be supported by equipment and evolving technology infrastructure,
- Be supported by effective policies and procedures that help ensure equity.

THE IMPACT OF CHANGING AND EXPANDING RESOURCES

- New and more appropriate forms of needs assessment have replaced quantitative standards.
- Many more resources must be supported by equipment and technology infrastructure.
- Ensuring equity of access means adding new policies and procedures as well as revising some existing ones to address changing resources.

MAKING RESOURCES ACCESSIBLE

THE ROLE OF MEDIA AND TECHNOLOGY PROFESSIONALS

To provide effective information access and delivery, the school library media and technology staff, with other members of the Media and Technology Advisory Committee, constantly:

- Examine the print, nonprint, and technology resources to make sure they meet curriculum development needs of students, teachers, and staff.
- Consult with system-level staff to ensure network compatibility of resources.
- Ensure access to information by students and staff with specials needs through the use of assistive/adaptive technologies.
- Discard old, worn, or obsolete resources and equipment.
- Replace or upgrade with new, more appropriate resources and equipment.

An effective, dynamic collection requires continual evaluation and yearly inventory. Assessing faculty and student needs without carefully determining how the collection is meeting those needs gives media and technology staff only part of the information necessary for acquiring resources. Adding new resources and equipment without discarding older, less appropriate items results in resources that are difficult to use and impossible to maintain.

VITAL COMPONENTS FOR RESOURCE ACCESS AND DELIVERY

Vital components of resource access and delivery include:

- Adequate and reliable technology and infrastructure.
- Network and desktop software.
- Online resources.
- Online school library media catalogs (media automation).

> **"A COLLECTION OF RESOURCES MUST BE DYNAMIC; IT MUST CHANGE IN CONTENT AND FORMAT BECAUSE THE CURRICULUM CHANGES AND NEW FORMATS BECOME AVAILABLE"**
>
> (Alabama Department of Education, 2000).

ADEQUATE AND RELIABLE TECHNOLOGY AND INFRASTRUCTURE

Connectivity to the school building is only the initial link to the world. It also must extend to the classroom. This connectivity, better known as a Local Area Network, allows instructional and administrative computers to access remote databases and applications, both within the building and to the outside world.

NETWORK AND DESKTOP SOFTWARE

Electronic resources may be available over the LAN (local area network) or from the local hard drive of a computer. Some examples of these resources would include educational application software, utility software, and Internet browsers.

Installation of software on network or desktop computers is determined by a number of technical factors:

- Number of users
- Speed of the network
- Number of software licenses
- Dispersion of users (for example, lab vs. several classrooms)
- Adequate data storage space

Whether to provide access over the network or on stand-alone computers also depends on the type of software content. For example:

- Is the software text-based reference resources or multimedia, interactive programs? Text-based software is far less demanding of network infrastructure compared to multimedia software that contains sound, streaming video, or other bandwidth intensive components. Loading multimedia software on stand-alone computers relieves the network of these bandwidth demands.
- Does the software consist of programs that run under a management system or applications that do not track student progress? By maintaining student records on a network file server, educators can monitor student work without moving from computer to computer to locate information.

PROCEDURES FOR LOADING SOFTWARE

Loading software onto a computer connected to a local area network may affect both the computer and network functioning. Procedures should be in place to ensure that changes made to a stand-alone computer follow school network guidelines based on system-level policies.

ACCESS TO ONLINE RESOURCES

Today's educational environment fosters the need for global connectivity that enriches the learning environment by allowing teachers and students to access leading libraries, peruse remote information sources (databases), converse with experts in a variety of fields, and complete research using primary sources. The vision of technology resources for North Carolina's K-12 educational community is access to these resources at the point of need, whether it is in the media center, the computer lab, the classroom, the principal's office, or the home.

Technology plays a vital role in providing equitable access to a variety of resources. The goal of access to online resources is to help students become self-directed lifelong learners, complex thinkers, quality producers, collaborative workers, and community contributors. The responsible and ethical use of online resources is a significant issue surrounding access for administrators, teachers, and students.

MEDIA AUTOMATION

All school-owned materials should be organized and arranged so students and teachers can obtain any item quickly and easily. Ease of access requires that all resources in the school be readily available through an online catalog accessible from school and remotely.

Organization of the catalog includes classifying and providing entries for all materials that form the basis of the Online Public Access Catalog (OPAC). Entries in the catalog should follow standardized procedures for machine-readable cataloging (MARC). MARC records can be obtained from a variety of vendors and from Internet sites such as the *Library of Congress* (<http://lcWeb.loc.gov/marc>) or Florida's *Sun Link* (<http://www.sunlink.ucf.edu>).

School systems using MARC may implement union catalogs that represent the collections found in every school. This can foster cooperation with other libraries through interlibrary loan and resource sharing. Also, those who are new to automation may benefit from the checklist below.

GETTING STARTED WITH MEDIA AUTOMATION

- Define the district or schools' educational objectives.
- Locate resources describing elements of library automation.
- Gather support and form a planning committee.
- Prepare the library media center's collection, including weeding and inventory.
- Select an online catalog and circulation system.
- Select a retrospective conversion process or vendor.
- Convert the cataloging information to MARC records.
- Bar-code library resources.
- Select and purchase hardware for the local library Local Area Network (LAN).
- Select and purchase network operating and communications software.
- Determine layout of site.
- Select and purchase/construct library furniture.
- Plan for and install network cable, adequate electric supply, and telecommunication lines.
- Install hardware, networking software, and the automation system.
- Consider climate control and a security system.
- Purchase and distribute patron cards with barcodes.
- Receive training to use and maintain the online catalog and circulation system.
- Create an ongoing user group for sharing and training.
- Design ongoing evaluation, upgrading, and extension of system.

(Salmon, et al. 1996, 195-8)

PLANNING AND DESIGNING FACILITIES FOR LEARNING

PEOPLE AND RESPONSIBILITIES

PLANNING COMMITTEE REPRESENTATION

Designing a new or renovated facility is not a task for one person. Coordinating the ideas and expertise of a variety of individuals ensures that all aspects of media and technology are evaluated properly and incorporated into the facility design. The personnel below should be represented on the committee.

Although it may not be possible for all committee members to attend every planning session, each member should be kept informed and allowed to have input throughout the planning process.

COMMITTEE REPRESENTATION

- School library media coordinator
- Technology facilitator
- Principal
- Teacher
- Student
- Member of the school board
- System-level facilities director
- System-level media director
- System-level technology director

LEADERSHIP FOR PLANNING

Media and technology staff from both system- and building-levels should be represented on the Planning Committee for Media and Technology Facilities. Here are a few guidelines:

- For the renovation or construction of media and technology facilities, the system-level media and technology directors, in collaboration with the building-level media and technology staff, should provide leadership.
- The chair or leader of the Planning Committee for Media and Technology Facilities should be represented on the overall facility planning committee and serve as liaison with the architect, the building project coordinator, the finance department, and others involved in the building or renovation process.

PLANNING CONSULTANTS

In addition to representatives from within the school system, outside consultants may be involved in the planning process. Assistance from the Instructional Technology Division, School Planning, and other Department of Public Instruction areas can be requested at various stages of the project. In some cases, paid consultants may be employed. If this is needed, job qualifications and experience should be verified.

To be useful, an outside consultant should:

- Have a working knowledge of building- and system-level priorities.
- Have knowledge of the system-level/school technology plan.
- Be able to offer unbiased opinions, supplement the knowledge base of the Planning Committee.
- Have expertise in overall facility design and/or a specialty in the specific program area.

RESPONSIBILITIES OF THE COMMITTEE

The Planning Committee has a critical role in determining the final outcome of the building project. The responsibilities commonly assigned to the Planning Committee include those below.

COMMITTEE RESPONSIBILITIES:

- Carry out the planning process.
- Write educational specifications.
- Review blueprints throughout the design process.
- Check technology infrastructure, utilities and other special requirements.
- Select and determine arrangement of furniture.
- Determine priorities. This means listing those features that are absolutely essential to the program and features that can be modified or eliminated, if necessary.
- Make presentations and/or reports concerning the progress of the facility.

RESPONSIBILITIES OF THE COMMITTEE CHAIR

- The chair or leader of the Planning Committee should establish an atmosphere that encourages visionary thinking.
- Define responsibilities for the committee
- Create a spirit of teamwork.
- Establish a timeline for completing tasks.
- Define terminology.
- Provide resources for background reading and study.
- Keep all committee members and other key people informed of the committee's progress.
- Coordinate the development of educational specifications for media and technology facilities.
- Communicate the educational specifications for media and technology facilities to the overall planning committee.
- Interpret the educational specifications developed by the Planning Committee for Media and Technology Facilities to the overall planning committee and other involved parties (architect, the building project coordinator, and the finance department).

ROLE OF PLANNING COMMITTEE VS. ROLE OF DESIGN PROFESSIONALS

As the Planning Committee works together to design a new facility or renovate an existing one, it is helpful to remember who does what. The Planning Committee develops function descriptions and requirements for each space, but the actual design of the facility should be left to design professionals.

OVERALL FACILITY DESIGN: BASIC CONSIDERATIONS

The considerations below are fundamental to the overall design of the facility.

SPACE REQUIREMENTS AND DESIGN

1. The mission/philosophy of the school and its media and technology program
2. The curriculum, teaching methods, and learning styles
3. The quantity and format of resources and equipment
4. The number and age range of the school population
5. Special needs of diverse student populations

IMPORTANT ELEMENTS OF GOOD DESIGN

Read more about each of these important elements of design on the pages that follow.

ACCESS
A highly accessible facility can maximize services and the use of all available resources.

LOCATION
Factors such as convenience and proximity to instructional areas need to be balanced with security issues.

FACILITIES FOR EXCEPTIONAL CHILDREN
Media and technology facilities must be barrier-free and able to accommodate wheelchairs and other assistive devices.

AESTHETICS AND ATMOSPHERE
An inviting and aesthetically pleasing environment can be created with simple solutions.

ERGONOMICS
Ergonomics maximize use of a facility and can also prevent physical strain and injury.

MECHANICS AND ENGINEERING
Mechanics and engineering dramatically affect the operations within the facility.

SAFETY
Many, but not all, safety issues are addressed by building codes.

SECURITY
The goal of any approach to security should be to increase the availability and access to resources for all users.

ACCESS

Before intellectual access to information can occur, physical access must be addressed. A highly accessible facility can maximize services and the use of all available resources.

Access to computer labs, and media resources during the summer, holidays, and after the traditional school day extends the potential of the media and technology facilities for students, staff, and the community. To make this possible, these facilities must be:

- Located near an exit to the building.
- Accessible to the restrooms.
- Secure from other areas of the building not in use.
- Accessible to a public telephone.

Appropriate signs can greatly encourage independent exploration as well as speed access to materials. Here are some suggestions for designing signs for facilities:

- Identify all areas with signs.
- Label individual shelves, cabinets, drawers, and other storage units.
- Use signs for specific instructions in using various media and equipment.
- Provide signs that are clear, concise, large enough, and attractive.
- Use commercially made, computer-generated, or other homemade signs.

LOCATION

THE MEDIA CENTER SHOULD BE:

- One level.
- Located on the ground floor.
- Convenient to instructional areas without being a thoroughfare.
- Convenient to an outside entrance, restrooms, public telephone, (and an elevator if two floors) for extended hours of operation and to expedite deliveries.
- Accessible to the administrative suite.
- Designed with possibilities for future expansion.

TECHNOLOGY FACILITIES SHOULD BE:

- Located near the media center if designated as general-purpose lab.
- Located near the applicable academic areas if dedicated.
- Easily secured with as few windows and doors as possible.
- Convenient to instructional areas without being a thoroughfare.
- Convenient to an outside entrance, restrooms, public telephone, (and an elevator if two floors) for extended hours of operation and deliveries.

NOTE: Factors such as convenience and proximity need to be balanced with security issues.

FACILITIES FOR EXCEPTIONAL CHILDREN

In accordance with Public Law 101-476, Education of the Handicapped Act Amendments 1990 (revised from the P. L. 94-142), media and technology facilities must be barrier-free and able to accommodate wheelchairs and other assistive devices.

- Public Law 99-457 extends the provisions to 3-5 year olds in early intervention programs.
- Section 661 of the law refers to access to resources and the use of assistive devices.
- Section 504 of the Rehabilitation Act of 1973 concerns the civil rights of physically impaired individuals who are not learning/mentally disabled.

For more information on this topic, see Exceptional Children Facilities Planner, School Planning at <http://www.schoolclearinghouse.org/pubs/exchild.pdf>.

STANDARDS FOR ACCESSIBLE COMPUTER WORKSTATIONS

PHYSICAL BARRIERS

Minimum standards for adapted work stations:

- Work surface at least 30" from floor
- Clearance of 29" beneath the top to a depth of at least 20"
- Minimum width of 36" to allow leg space for seated individual
- Utility and equipment controls located within easy reach
- Clear aisle width sufficient to maneuver a wheelchair, recommend 5' diameter

WORKSTATION STANDARDS

Minimum standard workstation:

- 21-inch monitor
- Track ball
- Touchpad
- Word Prediction software
- Screen reader software
- Screen magnification software
- Sound card: use any Windows compatible Sound Card for the PC along with JAWS software; Mac is sound ready
- Voice recognition software
- Scanner/reader
- Adjustable table

RECOMMENDED STANDARD APPLICATIONS AND CONFIGURATION:

- Operating System with Accessibility options installed
- Office Suite with Voice Dictation options installed
- Adobe Acrobat Reader 6 with accessibility options activated
- Apple Quicktime with captioning turned on by default
- Audio and Media Player with captioning turned on by default

"IT Assistive Technology Support." Computer Lab Access. 2004. Oklahoma State University. 12 May. 2005 <http://access.it.okstate.edu/standards.html>.

AESTHETICS AND ATMOSPHERE

An inviting and aesthetically pleasing environment can be created with simple solutions that provide the following pleasing and useful characteristics:

- Display space
- Plants, terrariums or aquariums (Maintenance time and costs should be considered.)
- Cheerful decoration
- Inviting signage
- Artwork
- Aesthetic treatments (ceiling heights, color, textures and surfaces)

ERGONOMICS

Ergonomics is related to aesthetics/atmosphere, because it affects the personal comfort of the users and can prevent physical strain and injury. To maximize use of the facility, consider the following guidelines:

- Provide appropriately sized furnishings scaled for the intended users. One size does not fit all. Attempt to provide alternative sizes as needed, particularly in student work and study areas.
- Make sure that different but related activities can be performed without strain. For example: provide a computer keyboard that is within comfortable reach and a monitor that is at eye level. Computers and keyboards require lower-than-normal work surfaces. Attached peripherals should be within easy reach.
- Place screens, monitors, and other viewing devices at proper viewing angle and height. For example:
  - Desk monitors should be at eye level.
  - The most current office and school furnishings are designed to hold monitors below eye level and tilted at just the right angle for effortless viewing.
  - Wall or ceiling-mounted screens span a wider, less-obstructed view when placed at a comfortable angle to the audience.

For more information on this topic, see Impact of Technology on School Design, at <http://www.schoolclearinghouse.org/pubs/ImpactofTechnology.PDF.>

MECHANICS AND ENGINEERING

Because adherence to building codes for mechanical features may not be sufficient to cover the program requirements, attention to the following details will dramatically affect the operations within the facility. These features should be outlined in the educational specifications and checked throughout the blueprint review process.

LIGHTING

- Master control switch should be located conveniently near main entrance.
- Separate lighting zones will allow darkening/dimming in specific areas while other areas remain lighted. Separate controls should be located within each zone.
- Natural light controls should be provided for all areas. Blinds, draperies, shades, or other applications are needed for all openings admitting natural light.

ACOUSTICS

- Noisy activity areas such as the cafeteria, music rooms, theaters, dressing rooms, or the gym should not be adjacent to media and technology facilities.
- Acoustical treatments are needed to counter noise within and outside the facility: carpet, ceiling tiles, baffles, adequate space between areas, and wall treatments.

CLIMATE

- Heating, ventilation, and air conditioning (HVAC) controls should be on separate switches from other sections of the school.
- Moisture and temperature control is needed to preserve sensitive audiovisual resources, computer software, photographic supplies, and equipment.
- HVAC systems should adequately control humidity during periods when the building is not occupied and the cooling loads are reduced.

ELECTRICAL

- Adequate electrical service and outlets should meet the needs of technical infrastructure that supports a variety of activities.
- Surge protection is needed for computers, peripherals, and communication lines. Built-in surge protection for circuits that support media and technology activities removes the need for multiple surge individual protectors.
- Adequate number of circuits is necessary to distribute electrical load in all areas, especially in production and computer areas.

DATA, VOICE, AND VIDEO INFRASTRUCTURE

- Telephone lines should be dedicated, isolated, or direct.
- Data lines should have appropriate bandwidth for the transmission of voice, data, and video.

SAFETY

Many safety issues are addressed by building codes; however, there are additional considerations that should be addressed when writing educational specifications or when selecting furnishings and equipment to ensure maximum safety and accessibility for all users of the facility.

- Adequately ground all electrical outlets and provide built-in surge protection to circuits supporting media and technology areas or technology activities.
- Adequately protect electrical outlets, especially floor outlets.
- Avoid pits and story wells because they are inflexible, hazardous, limit the ability to move equipment, and limit accessibility for physically impaired users.
- Avoid furnishings and design features that can cause tripping.
- Avoid furniture arrangements that may inhibit traffic patterns and be potentially hazardous.
- Make sure that edges for furnishings, built-ins, and other storage pieces are smooth and rounded.
- Plan for the appropriate management and bundling of electrical cables for computer and audiovisual equipment. For example, make use of trays, fasteners to secure items to table edges, conduits, and other devices that can prevent accidents.
- Provide safety straps for equipment on rolling carts.

SECURITY

The goal of any approach to security should be to increase the availability and access to resources for all users. Attention to security as a preventive measure will eliminate the prospect of a restrictive environment. Some security features can be built into the structure if they are recognized in advance. A few are listed here:

- Limit the number of entrances/exits.
- Plan for adequate visual control throughout the facility.
- Request appropriate locks for doors and windows.
- Consider security systems and alarms for media and technology areas such as secure equipment storage areas, computer labs, and network/server head-end.
- Locking storage units may be necessary for some media. Use them sparingly because they restrict access.
- Locate the circulation area near the entrance.
- Consider providing an outside “drop” for return of materials.

DESIGN CONSIDERATIONS FOR SPACES WITHIN THE FACILITY

School facilities should accommodate numerous functions related to the support of teaching and learning. Dynamic media and technology programs directly support instruction and require space for diverse learning activities, resources, equipment, technical functions, and program services.

The intent is to construct new school facilities from the inside out and provide areas or rooms for specific activities—but budget constraints may prevent planners from allocating the square footage that is ideal for each function. Therefore, it is always a good idea to design spaces flexibly with dual or overlapping uses. Special attention to the interrelationships of the spaces is also essential to ensure efficiency and convenience for users and staff.

Below are considerations to use when allocating floor space for specific and multipurpose areas within a facility.

CONSIDERATIONS FOR MEETING SPACE REQUIREMENTS

Factors within a school include the following:

- Class size
- Number of classes/groups to be served at the same time
- Size of media and technology staff
- Age and size of users
- Amount and type of provisions needed for disabled users (For example, housing special programs for physically impaired students requires additional space)
- Degree to which spaces can serve multiple uses at different times

DESIGNING FOR GROWTH AND DEVELOPMENT

While meeting present needs for the design and construction of new and/or renovated facilities, media and technology personnel should also anticipate potential facility requirements that will occur through growth and development of the program. Because construction occurs infrequently, careful planning by a team of committed individuals is essential to ensure that all current and future possibilities are considered.

Although budget constraints can threaten to limit square footage and/or amenities, the trend toward escalating costs indicates that larger square footage allowances and inclusion of enhancement features will have long-range, cost-efficient benefits.

DESIGNING FOR THE INFUSION OF TECHNOLOGY

The infusion of technology into the instructional program influences the design and renovation of media and technology facilities in order to accommodate school-wide networks and to allow access to information sources within the library media center, as well as outside the library media center, through networking and telecommunications. Computer labs, production facilities, and multipurpose classrooms adjacent to or incorporated within the library media center can increase opportunities for the use of newer technologies.

DESIGNING FOR EXPANDED HOURS AND USE

Expanded hours of operation beyond the regular school day and year may be an outgrowth of programs that endeavor to meet the personal information needs of students and adults within the schools and the local community. To extend this opportunity, accessibility to media and technology facilities from outside the school plant is a primary consideration.

DESIGNING FOR FLEXIBLE USE

Facilities can contribute to or detract from the teaching and learning opportunities that are available to students and staff. The ability to access information through various means and formats is essential. Although the diverse activities surrounding the acquisition and use of information require special facility considerations, the challenge to maintain building flexibility continues to be important when media and technology facilities are designed.

DEVELOPING EDUCATIONAL SPECIFICATIONS

DETAILS MATTER

Educational specifications are developed to communicate the function and requirements of each space to the architects, designers, and engineers who are responsible for creating new or renovated facilities. Since educational specifications must communicate the function and requirements of each space to architects, designers, and engineers, it is essential that every effort be made to describe thoroughly each space and all the desired elements within it. This detailed description will become the foundation for all further work on the facility.

FOUR PRELIMINARY STEPS

Preliminary thought, work, and investigation are essential to the development of credible educational specifications that will translate into a functional facility design. Before writing educational specifications, the Planning Committee should complete the tasks below.

BEFORE DEVELOPING EDUCATIONAL SPECIFICATIONS:

1. **Define the program.**
2. **Examine present facilities and needs.**
3. **Conduct thorough research.**
4. **Develop a vision.**

Steps that comprise each task are outlined on the lists that follow.

1. **Define the program**
   - Study the building- and system-level plans for media and technology, curriculum guides and plans, and other related documents.
   - Review media and technology applications according to discipline and/or grade level.
   - Consider future plans for restructuring instructional programs to take advantage of new and existing technologies.
   - Determine goals and objectives for students and staff related to media and technology.

2. **Examine present facilities and needs**
   - Analyze use patterns to determine possible changes for the new or renovated facility.
   - Examine space and identify features to redesign, add, or keep.
   - Survey students and staff regarding media and technology needs.

3. Conduct thorough research

- Read professional literature on program and facilities.
- Become acquainted with newer media and technology resources and their implications for facility design.
- Visit schools with exemplary programs as well as newer facilities; discuss programs/facility features with media and technology personnel, students, teachers, and administrators.
- Visit schools designed by the architect. Include the architect on these visits if possible.
- Seek information from School Planning (DPI) and other school systems.

4. Develop a vision

- Brainstorm functions of the program that could be offered through a state-of-the-art facility.
- Be aware of program, curriculum, and technology trends for the near future.
- Develop a well-reasoned picture of media and technology in the extended future.

COMPONENTS OF EDUCATIONAL SPECIFICATIONS

1. **Discernible trends**

   Major trends in the field of media and technology and how they relate to the curriculum and the facility

2. **Educational philosophy**

   Direct and concise statements of beliefs

3. **Specific objectives**

   Observable and measurable objectives

4. **Teaching methodology**

   Various ways students will be taught

5. **Main instructional areas**

   Descriptors for main instructional areas include:

   - Capacity. List maximum number of students/staff expected to use the area at one time.
   - Student grouping. Identify group variations, including age ranges that may use the area.
   - Activities. Describe the various activities that may occur in the area.
   - Special environmental considerations. List lighting, acoustical, and mechanical requirements.
   - Utilities required. List special utility requirements.
   - Infrastructure required. List quantity and format of all materials, technology, and equipment to be used in the area.
   - Storage space required. Describe all storage spaces and dimensions and indicate security needs if appropriate.
   - Furniture required. List type, size, and quantity.
   - Miscellaneous requirements.
   - Anything not appropriate in another area.

6. **Peripheral areas**

   Describe areas that relate to or support media and technology functions. Describe in as much detail as possible

7. **Spatial relationships**

   Describe relationships among areas within the library media facility and also how all media and technology facilities relate to other parts of the school.

EDUCATIONAL SPECIFICATIONS FOR SCHOOL MEDIA/ TECHNOLOGY SPACES

The following recommendations list student-to-computer ratios for hardware needed to infuse media and technology spaces *throughout the school facility* to support teaching and learning.

RECOMMENDATIONS ARE MADE FOR THE FOLLOWING:

- Classrooms
- Flexibly-Accessed Computer Labs
- Distance Learning
- Technology Administration and Planning
- Conference Areas
- Work Rooms
- Auditoriums, Cafeterias, and Gymnasiums

A school-wide 3 to 1 student to computer ratio is recommended. Computers are distributed throughout the following areas:

- classrooms
- media center
- flexibly accessed computer lab
- career/technical education lab

CLASSROOMS

ACTIVITIES

Whole class, small group, and individual instruction; research; online remediation and instruction

SIZE

To support classroom technology, add 15–20 feet per computer to standard classroom space requirements.

SPATIAL RELATIONSHIPS

- Computer stations located in areas easily accessible to students and teachers
- Computer stations located away from window areas
- Monitors visible from all locations within the classroom to allow teachers to observe student use of technology
- Telephones located near teacher workstations
- Television located away from strong light sources and mounted from ceiling or wall
- Ceiling-mounted screen located away from strong light source and in location easily seen during instruction
- Floor- or ceiling-based electrical receptacles located conveniently to allow projection device(s) to be used without extension cords

FURNITURE/EQUIPMENT

- Cabinets for secure storage of software and smaller technology devices
- Tables and chairs as needed to enhance instruction
- Ergonomically designed furniture
- Filing cabinets
- Clock
- Intercom
- Telephone with internal and external access
- Workstations that meet Standards for Accessible Computer Workstations
- One networked multimedia computer teacher workstation with 200-volt UPS with surge suppression
- Six networked multimedia computers with peripherals, at least one printer (mobile computer carts may be used to provide additional computers to classrooms)
- One surge protector per instructional computer or built-in surge protection for circuits
- A minimum of eight data ports with adequate electrical outlets in locations convenient to computers and printers (wireless networks may be used in place of hardwired data ports to provide access to network services and the Internet)
- Stand-alone tables for each networked multimedia computer and printer, or built-in counters designed to be used with technology devices
- Ceiling mounted data/video projection device
- Overhead projector or document camera
- Digital camera

- Flatbed scanner
- Appropriate technology to support course content (manipulatives, probes, midi devices, etc.)
- Digital Interactive Whiteboard
- Individual student response system
- Television or large-screen monitor

FLEXIBLY ACCESSED COMPUTER LABS

The flexibly accessed computer lab provides opportunities for large group, small group or individual instruction and activities as well as independent use. A flexibly accessed computer lab must be large enough to include student stations, a teacher station, work areas, and storage space. Forty square feet should be allowed per workstation, resulting in 1200 square-foot minimum to accommodate a typical thirty-student class.

ACTIVITIES

Word processing, data management, desktop publishing, computer-assisted instruction, presentations and multimedia, online research, online courses.

SIZE

Suggested minimum for K-12: 40 sq. ft. per workstation. For example, 1200 sq. ft. is the recommended minimum for a class of 30 students, plus additional space for instruction and storage. Size varies depending on student population and needs.

SPATIAL RELATIONSHIPS

Accessible to classrooms and media center. If managed by school library media coordinator, direct physical and visual access from the media center is necessary.

FURNITURE/EQUIPMENT

- Sufficient networked multimedia computers (to accommodate the largest class)
- 3 to 1 ratio of students to computers
- Ergonomically sound and age-appropriate furniture
- Workstations that meet Standards for Accessible Computer Workstations
- Tables or counters
- Chairs
- Storage units for software and supplies
- Bookshelves
- Telephone with internal and external access
- Clock
- One surge protector per computer or built-in surge protection for circuits
- Teacher workstation with 200-volt UPS with surge suppression
- Printer
- Flatbed scanner
- Overhead projector or document camera
- Screen
- Data/video projection capability
- White boards and/or digital interactive whiteboard
- Individual student response system
- Television or large-screen monitor
- Adequate electrical outlets

DISTANCE LEARNING VIA THE N.C. INFORMATION HIGHWAY

ACTIVITIES

Viewing and participating interactively in instruction, professional development, or ad hoc meetings (two-way video, two-way audio).

SIZE

Should accommodate a minimum of 25 students with facilitator desk, file cabinet, and other equipment.

SPATIAL RELATIONSHIPS

Ideally, this classroom will be located near other classrooms. There may be security considerations for access after regular school hours. It is advisable to locate the room close to the head-end for the fiber optics cable.

FURNITURE/EQUIPMENT

- Tables and chairs for each student
- Adequate electrical outlets
- Possible acoustic changes
- Possible lighting changes

Important: The specialized equipment and facilities required for an Information Highway room must be installed or constructed by a state-approved company due to the complex wiring and audio/video standards that must be met. This equipment would include:

- Video cameras
- Microphones
- Control panel
- Codec

For more information, contact ITS Customer Support Center 1-800-441-5296

STAFF OFFICES

ACTIVITIES

Lesson plan development, one-on-one conferences, small group conferences, research, collaborative efforts with other staff members

SIZE

Varies with number of staff occupying the space and activities to be undertaken; should be large enough to accommodate personnel, technology hardware, storage of personal items, and needed workspace.

SPATIAL RELATIONSHIPS

Proximity to instructional areas

FURNITURE/EQUIPMENT

- Desk(s) and chair(s)
- Filing cabinet(s)
- Table
- Telephone(s)
- Networked multimedia computer(s) and peripherals (including flatbed scanner)
- One 200-volt UPS with surge suppression for every administrative computer
- One data port or wireless access per computer and printer
- Printer
- Television or monitor
- Workstations that meet Standards for Accessible Computer Workstations
- Adequate climate control
- Adequate electrical outlets

TECHNOLOGY ADMINISTRATION AND PLANNING

ACTIVITIES

Administrative tasks, consultation, collaborative program planning, and management functions.

SIZE

Minimum 200 sq. ft. plus 50 sq. ft. for each additional staff person

SPATIAL RELATIONSHIPS

Easily accessible to flexibly accessed computer lab, network/server head-end, and secure storage; preferably near the school library media center

FURNITURE/EQUIPMENT

- Storage for files, manuals, and supplies
- Locked storage for coats and personal items
- Desks, tables, and chairs
- Networked multimedia computer with 200-Volt UPS with surge suppression
- Multiple data ports or wireless access
- Printer
- Flat-bed scanner and other peripherals for administrative uses
- Workstations that meet Standards for Accessible Computer Workstations
- Telephone

CONFERENCE AREAS

ACTIVITIES

One-on-one conferences, small group conferences, research, collaborative efforts with other staff members and students

SIZE

Varies with number of staff occupying the space and activities to be undertaken

SPATIAL RELATIONSHIPS

Proximity to instructional areas

FURNITURE/EQUIPMENT

- Table and chairs
- Telephone
- Multiple data ports or wireless access
- Data/video projection capability
- Adequate climate control
- Adequate electrical outlets

WORKROOMS

ACTIVITIES

- Photocopying
- Producing instructional materials
- Storing supplies
- Laminating
- Computing
- Collaborative planning

(if no other space is available)

SIZE

Varies with number of staff occupying the space and activities to be undertaken

SPATIAL RELATIONSHIPS

Proximity to instructional areas

FURNITURE/EQUIPMENT

- Table and chairs
- Telephone
- Multiple data ports or wireless access
- Networked multimedia computer with 200-volt UPS with surge suppressor or built-in surge protection for circuits
- Scanner
- Fax
- Adequate climate control
- Adequate electrical circuits and outlets
- Workstations that meet Standards for Accessible Computer Workstations

AUDITORIUMS, CAFETERIAS, AND GYMNASIUMS

ACTIVITIES

Large group interaction, assembly programs, meal preparation and serving

SIZE

Varies with activities to be undertaken

SPATIAL RELATIONSHIPS

Located conveniently within the school or on the school campus

FURNITURE/EQUIPMENT

- Tables and chairs
- Telephones with internal and external access
- Networked multimedia computers and peripherals where applicable
- One surge protector per computer or built-in surge protection for circuits
- Multiple data ports or wireless access
- Data/video projection capabilities
- Large screen
- Adequate, flexible lighting control
- Adequate climate control
- Adequate electrical outlets

EDUCATIONAL SPECIFICATIONS FOR THE SCHOOL LIBRARY MEDIA CENTER

VISUALIZING USE OF SPACE

Media center facilities can include a variety of areas or rooms. In selecting the areas, each space must be justified by a close link to the program objectives that will be advanced by including these areas in the facility design.

SOME KEY DESIGN QUESTIONS

In planning and designing the school library media center, many questions must be answered, including, but not limited to, these:

1. How many square feet does a school library media center need?
2. What are the needs and requirements for each area of the center?
3. What furniture and equipment are appropriate for the various areas and what specifications should be considered for each?
4. Where and how will furniture and equipment be stored?
5. What general technology infrastructure should guide purchasing and installation decisions?

CHARTS OF RECOMMENDATIONS

The remainder of this section provides charts of recommendations for planning an effective multipurpose school library media center.

MINIMUM SQUARE FOOTAGE FOR THE SCHOOL LIBRARY MEDIA CENTER AND SUPPORT AREAS

MEETING RECOMMENDED MINIMUMS

All schools should have school library media centers no smaller than the recommended minimum square footage listed in the chart below. Since schools with enrollments below 400 must offer the same scope and variety of resources as schools with higher student enrollments, their space requirements will be similar.

MINIMUM RECOMMENDED SIZE FOR SCHOOL LIBRARY MEDIA CENTERS	
From *North Carolina Public Schools Facilities Guidelines* (revised September 2003), developed by School Planning, NCDPI, available at <http://www.schoolclearinghouse.org/pubs/FacilityGuidelines2003.pdf>	
ELEMENTARY SCHOOLS	At least 2800 sq. ft. + 1200 sq. ft. for support areas
MIDDLE SCHOOLS	At least 3400 sq. ft. + 1800 sq. ft. for support areas
HIGH SCHOOLS	At least 3600 sq. ft. + 2000 sq. ft. for support areas

PLANNING FOR MORE THAN 400 STUDENTS

Schools with more than 400 students should use guidelines in the chart below for additional space allotments.

PLANNING FOR MORE THAN 400 STUDENTS	
From *North Carolina Public Schools Facilities Guidelines* (revised September 2003), developed by School Planning, NCDPI, available at <http://www.schoolclearinghouse.org/pubs/FacilityGuidelines2003.pdf>	
ELEMENTARY SCHOOLS	4-6 sq. ft. per student for the school library media center
MIDDLE SCHOOLS	4-6 sq. ft. per student for the school library media center
HIGH SCHOOLS	4-6 sq. ft. per student for the school library media center

SUPPORT AREAS

The size and types of various support spaces needed are dependent upon the size and grade level of the school. The charts that follow list some typical support areas and their recommended sizes, including recommended square footage for office, workroom, storage, and video production areas.

RECOMMENDED SIZE FOR TYPICAL SUPPORT AREAS: OFFICE, WORKROOM, AND STORAGE

From North Carolina Public Schools Facilities Guidelines (revised September 2003), developed by School Planning, NCDPI, available at <http://www.schoolclearinghouse.org/pubs/FacilityGuidelines2003.pdf>

AREA	PLAN FOR:
MEDIA OFFICE AND ADMINISTRATION	200 sq. ft. + 50 sq. ft. for each additional staff member
WORKROOM	400-600 sq. ft.
PROFESSIONAL AREA	150 sq. ft.
CONFERENCE ROOM, SMALL OFFICE	150 sq. ft.
EQUIPMENT STORAGE, DISTRIBUTION, AND MAINTENANCE	175 sq. ft.
PERIODICAL STORAGE **	150-200 sq. ft.

*** Periodical storage may be reduced where a majority of back issues are available online*

RECOMMENDED SIZE FOR TYPICAL SUPPORT AREAS: VIDEO PRODUCTION AREAS

From North Carolina Public Schools Facilities Guidelines (revised September 2003), developed by School Planning, NCDPI, available at <http://www.schoolclearinghouse.org/pubs/FacilityGuidelines2003.pdf>

AREA	PLAN FOR:
VIDEO STUDIO	400 sq. ft.
CONTROL AND EDITING	260 sq. ft.
EQUIPMENT STORAGE	80 sq. ft.

LARGE GROUP INSTRUCTION

ACTIVITIES

Whole class instruction, study, reference, viewing, listening, reading, browsing, professional development programs, meetings, presentations

SIZE

Large enough to accommodate the largest class. (For each 3' x 5' table and 4–6 chairs: 143 sq. ft.) Additional space for teaching station that will accommodate use of audiovisual and multimedia computer-related equipment

SPATIAL RELATIONSHIPS

Near reference area and book stacks

FURNITURE/EQUIPMENT

- Tables and chairs
- White board
- Various audiovisual and networked multimedia computer-related equipment
- Data/video projection capabilities
- One 200-volt UPS with surge suppression for every teacher computer
- One networked printer
- Workstations that meet Standards for Accessible Computer Workstations
- Two TV/monitors
- Digital interactive whiteboard
- Individual student response system
- Screen

REFERENCE

ACTIVITIES

Reading, studying, finding information in various formats, accessing electronic and print indexes, accessing back issues of periodicals, printing information, word processing, listening, viewing, photocopying

SIZE

Varies with student population, grade levels, and size of collection

SPATIAL RELATIONSHIPS

Accessible from administrative and circulation areas; ideally located near main entrance

FURNITURE/EQUIPMENT

- Tables and chairs
- Shelves
- Filing cabinets
- Carrels or individual work stations
- Specialized storage formats
- Copy machine
- Networked multimedia computers with peripherals - for research and online public access catalog (OPAC)
- 3 to 1 ratio of students to computers
- One surge protector per computer or built-in surge protection for circuits
- Workstations that meet Standards for Accessible Computer Workstations
- Printer
- VCR and/or DVD Players
- Cassette players or CD

STORY SHARING

ACTIVITIES

- Elementary: Storytelling, individual reading, reading/presenting to groups, puppetry, teaching, role-playing or acting, listening, viewing, housing everybody/picture books
- Middle and High School: Booktalking to literature discussion groups, informal reading (See **Informal Reading** section)

SIZE

- Elementary: Open floor space for seating a class of 30 (approximately 6 to 9 sq. ft. of open space per student or approximately 180 to 270 total sq. ft.)
- Middle and High School: Informal reading space is used for this purpose

SPATIAL RELATIONSHIPS

- Elementary: Away from heavy traffic flow, near easy picture books
- Middle and High School: (See **Informal Reading** section)

FURNITURE/EQUIPMENT:

ELEMENTARY

- Divided shelving for Everybody/picture books
- Rocking chair
- Stool
- Floor cushions
- Extra carpet padding
- Various audiovisual and multimedia computer equipment as needed
- Permanently-mounted white board
- Portable puppet theater
- Easel
- Flannel board
- Digital interactive whiteboard
- Data/video projection capability

FURNITURE/EQUIPMENT:

MIDDLE/HIGH SCHOOL

- Informal furniture

INDEPENDENT WORK AREAS

ACTIVITIES

Listening, viewing, computing, studying, reading

SIZE

Varies

SPATIAL RELATIONSHIPS

May be merged with other areas such as reference or conference

FURNITURE/EQUIPMENT

- Table (or carrels) and chairs for independent work
- Various audiovisual equipment as needed
- Networked multimedia computer with surge protector or built-in surge protection for circuits
- Workstations that meet Standards for Accessible Computer Workstations
- Printers
- Storage for software

SMALL GROUP ACTIVITY

ACTIVITIES

Consultations; meetings; small group reference and study; independent study, listening, viewing, and computing

SIZE

Minimum 150 sq. ft.

SPATIAL RELATIONSHIPS

Accessible with visual control from reference area

FURNITURE/EQUIPMENT

- Table and chairs
- Networked multimedia computers with one surge protector per computer or built-in surge protection for circuits
- Digital interactive whiteboard
- Data/video projection capability
- Printer
- Workstations that meet Standards for Accessible Computer Workstations
- Screen
- White board

INFORMAL READING

ACTIVITIES

Reading; browsing

SIZE

Varies

SPATIAL RELATIONSHIPS

Away from quiet study areas

FURNITURE/EQUIPMENT

- Comfortable informal seating
- Tables that complement seating arrangement
- Magazine and newspaper display unit/shelving

PRODUCTION

Various production facilities may be located throughout the building with specific functions serving the adjacent areas. The production facilities are intended to support the media and technology program as it serves the school.

ACTIVITIES

Making books, book jackets, videotapes, audiotapes, computer graphics, graphics, posters, signs, bulletin board materials, photographs, enlargements of pictures or maps; duplicating; laminating; producing video programs (such as news shows); transmitting live audio and video to classrooms.

SIZE

Varies with intended uses, 400-600 sq. ft.

SPATIAL RELATIONSHIPS

Adjacent to or incorporated in the workroom, accessible from administrative area; audio/video production area can be a por-tion of larger production space

FURNITURE/EQUIPMENT

- Water and stain-resistant tables and countertops
- Chairs
- Sink with warm and cold water
- Storage units, drawers, cabinets
- Legal-sized filing cabinets
- Flat files for oversized storage
- Bookbinding equipment

FURNITURE/EQUIPMENT

- Adequate electrical circuits and outlets
- Video camera/recorder
- Curtain or backdrop
- Tripod- dolly
- Video editing equipment
- Video graphics generating equipment
- Sound mixer
- Microphones
- Networked multimedia computer and peripherals
- One surge protector per computer or built-in surge protection for circuits
- Workstations that meet Standards for Accessible Computer Workstations
- DVD player
- CD/DVD recorder
- Data/video projection capabilities
- Digital camera with tripod
- Copy machine
- Laminator
- Overhead projector or document camera
- Opaque projector

PERIODICAL STORAGE

Periodicals are becoming increasingly more available in online format, requiring less storage space for back issues of hard copies. However, students will continue to need and prefer to have access to hard copies of certain magazines for leisure reading and browsing. For this reason, storage space for the back issues of periodicals should not be completely eliminated.

ACTIVITIES

Storage, management, and retrieval of back issues of print magazines and newspapers

SIZE

Varies with size of school and grade levels; 150-250 sq. ft. (may be reduced when a majority of back issues are available online)

SPATIAL RELATIONSHIPS

Accessible to reference area, copy machine, workroom, circulation, periodical indexes, and independent work areas with networked multimedia computer/printer

FURNITURE/EQUIPMENT

- Adjustable shelving
- Magazine files
- Kick-step stool
- Table
- Counter or other furniture for periodical processing
- Computer hardware

ADMINISTRATION AND PLANNING

ACTIVITIES

Administrative tasks, consultation, collaborative program planning, management functions, and visual control of other areas.

SIZE

Minimum 200 sq. ft. plus 50 sq. ft. for each additional staff person

SPATIAL RELATIONSHIPS

Easily accessible to circulation, reference, workroom

FURNITURE/EQUIPMENT

- Storage for files, books, and supplies
- Locked storage for coats and personal items
- Desks, tables, and chairs
- Networked multimedia computer with 200-Volt UPS with surge suppression
- Workstations that meet Standards for Accessible Computer Workstations
- Printer
- Flat-bed scanner and other peripherals for administrative uses
- Telephone

CIRCULATION

ACTIVITIES

Checking out and returning materials, processing overdues, general inquiries, visual supervision of facility

SIZE

Varies, but should be limited to bare minimum needed for activities

SPATIAL RELATIONSHIPS

Easily accessible to administrative area, workroom

FURNITURE/EQUIPMENT

- Work surfaces at appropriate height for students
- Seating for 1 or 2 personnel
- Two Networked multimedia computers with barcode readers (one computer for student checkout and one computer for school library media coordinator access)
- One surge protector per computer or built-in surge protection for circuits
- Printer
- Storage for personal items of student workers and supplies
- Files for patron barcode cards
- Security system for theft prevention (secondary only)
- Clock
- Telephone

AUTOMATED CATALOG

ACTIVITIES

Searching the index to the collection, printing bibliographies

SIZE

Varies with furniture and equipment needed to support the collection and serve the school population

SPATIAL RELATIONSHIPS

Easily accessible from reference stack areas, the main entrance, and from all networked computers in the school.

FURNITURE/EQUIPMENT

- Minimum of one networked computer station in the media center per 150 students with a printer
- One surge protector per computer or built-in surge protection for circuits
- Tables or counters (Note: furniture that requires standing to access the automated catalog may encourage faster use of the catalog)
- Workstations that meet Standards for Accessible Computer Workstations

PROFESSIONAL AREA

In some schools it may be advantageous to merge the school staff lounge area with the professional resources area. If so, the space allotment should be expanded. In addition, the space should be directly accessible to a hallway.

ACTIVITIES

Storing professional materials, planning, previewing instructional materials, doing paperwork, computing

SIZE

Minimum 150 sq. ft. (allow 60 sq. ft. per person expected to use the space at one time)

SPATIAL RELATIONSHIPS

Accessible to workroom/production areas

FURNITURE/EQUIPMENT

- Table and chairs
- Leisure furniture
- Storage cabinets
- Sink
- Refrigerator
- Variety of audiovisual equipment
- Networked multimedia computer and peripherals
- 200-volt UPS with surge suppression
- Workstations that meet Standards for Accessible Computer Workstations
- Telephone
- Shelving
- One surge protector per computer or built-in surge protection for circuits

PARENT RESOURCE AREA

The National Parent Teacher Association has recommended that every school have a parent resource area located somewhere on the campus. A logical location for this area would be the media center where relevant materials can be easily displayed and processed for circulation.

ACTIVITIES

Previewing materials related to parenting and the role of parents in supporting learning at home

SIZE

Varies with size of media center and availability of space

SPATIAL RELATIONSHIPS

Proximity to circulation desk and professional area

FURNITURE/EQUIPMENT

- Shelving
- Table and chairs (optional)
- Networked multimedia computer

WORKROOM

ACTIVITIES

Selecting, ordering, receiving, mending, and processing media resources; photocopying; producing instructional materials; storing supplies; laminating; computing

SIZE

Varies with activities: approximately 400-600 sq. ft.

SPATIAL RELATIONSHIPS

Accessible to administration, equipment storage, and overlapping with production and professional areas; visual access to instructional areas

FURNITURE/EQUIPMENT

- Cabinets with countertops
- Sink with warm and cold water
- Tables and chairs
- Stools
- Telephone
- Networked multimedia computers and peripherals
- One surge protector per computer or built-in surge protection for circuits
- Workstations that meet Standards for Accessible Computer Workstations
- TV monitors
- Laminator
- Paper cutter
- Copy machine
- Fax
- VCR/DVD Player
- Filing cabinets
- Clock
- Intercom

DISPLAY AND EXHIBIT

ACTIVITIES

Display projects or artifacts, display information

SIZE

Varies

SPATIAL RELATIONSHIPS

Varies according to purpose

FURNITURE/EQUIPMENT

- Display cases
- Shelves
- Bulletin boards
- Tables
- Data/video projection capability

SECURE EQUIPMENT STORAGE, DISTRIBUTION, AND MAINTENANCE

ACTIVITIES

Security and storage for back-up and specialized equipment, maintenance, and circulation of audiovisual equipment

SIZE

Minimum 175 sq. ft. (size varies with amount of equipment needing storage)

SPATIAL RELATIONSHIPS

Direct access to a hallway, access to workroom

FURNITURE/EQUIPMENT

- Shelving
- Storage bins
- Countertop or worktable
- Chair
- Filing cabinet
- Portable Screen
- Data/video projection capability
- Mobile lab Storage area with electrical service

EDUCATIONAL SPECIFICATIONS FOR FURNITURE, SHELVING, AND BUILT-INS

GENERAL CONSIDERATIONS

Furnishings are selected and arranged for efficient use and housing of all types of media. The facilities planning committee best determines the quantity of furnishing/shelving to purchase by calculating the housing requirements for the facility's collection, as well as the workspace requirements. A scaled furniture layout is also useful in determining furnishing/shelving needs. Below are general considerations when planning for storage and furniture needs.

- Dimensions should be scaled to physical differences and special needs of users.
- Furniture requirements should be calculated accurately to meet program needs without over-estimating furniture needs.
- Placement of furniture should adhere to fire codes and other safety requirements.
- Flexibility in arrangement of furnishings should be considered (for example, island shelving with wheels).
- Changing resources and services may alter furniture requirements.

GUIDELINES FOR SHELVING

Following are guidelines, standards, and formulas to help you select the correct amount and type of shelving.

GENERAL GUIDELINES FOR SHELVING

1. Shelving should be:
   - Sturdy with adjustable shelves.
   - Wood, wood laminate, or steel.
   - Single-faced for perimeter, double-faced for freestanding.
   - Be divided shelving for elementary schools, especially for Everybody/picture books. Dividers should be 5" high, spaced 7"– 8" apart.
2. The width of shelves should be determined by the size of materials to be stored on shelves.
3. Quantities should be determined by the size of the collection and by anticipated growth of the collection.
4. Calculate linear feet of shelving needed based on educational specifications. The chart that follows provides some helpful formulas.

FORMULAS FOR CALCULATING SHELVING NEEDS

LINEAR FEET OF STORAGE =	Number of items to be stored	÷ (DIVIDED BY)	Number of items per 1 foot of shelving

SHELVING FLEXIBILITY. Although some items can be stored on more narrow shelving than indicated, it is highly advisable to limit the number of shelf widths to be purchased in order to maximize flexibility.

TYPE OF SHELVING	CAPACITY OF 1-FOOT SHELF	DEPTH	SHELF DIVIDERS
STANDARD BOOKS	10	10" – 12"	
REFERENCE BOOKS	6 – 7	12"	
EVERYBODY/ PICTURE BOOKS*	13 – 16	12"	5" high 7" to 8" apart
PERIODICALS**	11	16" slanting	
VIDEOCASSETTES	8	12" – 16"	
CD-ROM/DVD *	3 – 8	16"	5" high 7" to 8" apart

** This type shelving is highly recommended for all of the general book collection for elementary schools.*

*** Specialized storage units may be used in lieu of standard shelving.*

CONVERTING HEIGHT TO NUMBER OF SHELVES		
42" HIGH	=	2 or 3 shelves
48" HIGH	=	3 shelves
60" HIGH	=	4 shelves
66"–72" HIGH	=	5 shelves
84" HIGH	=	6 shelves

MAXIMUM HEIGHTS FOR DIFFERENT TYPES OF FURNITURE AND SHELVING

When selecting furniture and shelving, make sure both are an appropriate height. Use the chart below to make sure furniture and shelving are not too high or low.

FURNITURE

TABLES, CARRELS, AND COMPUTER WORKSTATIONS		
ELEMENTARY	MIDDLE	HIGH
25" - 28"	26" - 30"	29" - 30"
CHAIRS/OTHER SEATING		
14" - 17"	16" - 18"	18"

SHELVING

PERIMETER SHELVING (MAXIMUM HEIGHTS)		
ELEMENTARY	MIDDLE	HIGH
60"–66"	60"–66"	72"
FREESTANDING SHELVING		
48"	48"	48"

MORE HELPFUL TIPS ABOUT FURNITURE AND SHELVING

TIPS ABOUT TABLES AND CARRELS

- Standard 3-ft. x 5-ft. tables seat 4 comfortably with sufficient workspace.
- Standard 4-ft. round tables provide less workspace than rectangles for similar floor space.
- Workspace heights vary with activities (reading, writing, viewing, and computing) and size of users.
- Multimedia computer tables should allow a working surface that is 36–40 in. wide and have lower work surface for comfortable keyboarding with minimum of 30-in. clearance under the table.
- Carrels should be equipped with electrical outlets for maximum flexibility.
- Wheelchairs require a minimum height of 28 in. between floor and bottom of table or carrel.

TIPS ABOUT CHAIRS AND OTHER SEATING

- Use sled-type chairs for carpeted floors.
- Chairs with curved backs are more comfortable.
- Make sure seating is scaled at the appropriate height for users and is correctly scaled and positioned in relationship to work surfaces.
- For professional staff, use rolling, upholstered chairs with pneumatic and mechanical adjustment devices.
- Upholstered furniture (sofas, love seats, individual chairs) with backs, scaled to users, should be used for informal seating for all grade levels.

TIPS ABOUT EQUIPMENT STORAGE

Store equipment on shelves that are:

- Metal, wood, or wood laminate
- Adjustable, built-in, or moveable
- Sturdy enough to hold heavy pieces without bending

NOTE: Rolling carts also can be used for some storage.

TIPS ABOUT BUILT-INS

- Because built-in units lack flexibility, it is important that they be designed for the intended functions and checked throughout the blueprint review process.
- Built-in storage units are generally included in the standard contract and are usually more cost efficient than adding storage units after construction.

TIPS ABOUT OTHER FURNITURE

- **Automated catalog**
  Work surfaces are needed to accommodate users who are standing, seated, or in wheelchairs.
- Built-in units, tables, carrels, or counters should have adequate space for computers, peripherals, printers, and paper. They will also need space and devices to manage power cords and connecting cables. There should be a minimum of 1 workstation per 100 students.
- **Circulation Desk**
  Limit furniture to absolute necessities (a computer and peripherals, barcode reader, and printer) and scale the surface height to the size of users.
- Filing Cabinets for administration may be legal sized, vertical or lateral, with or without hanging files.
- Flat Files for storing oversized print materials (such as prints, bulletin board materials, and posters) need to be 40"H x 30"W x 3"–5" deep.
- Information File with legal-sized filing cabinets with hanging folders, either vertical or lateral may be needed. Open, hanging lateral files may also be used.
- Specialized alternatives to shelving:

  Check library supply catalogs and furniture manufacturers for customized shelving for items such as:

  - Audiocassette recordings
  - CD-ROM/DVD
  - Paperback books
  - Periodicals
  - Videocassettes

GENERAL TECHNOLOGY INFRASTRUCTURE FOR INSTRUCTION

NETWORK/SERVER HEAD-END AREA

ACTIVITIES

Houses the building's computer network services, telephone system infrastructure, reception, and distribution equipment for video/television programming.

SIZE

450–800 sq. ft. with adequate space for all equipment and personnel.

SPATIAL RELATIONSHIPS

Centrally located in a well-ventilated, climate-controlled environment (with a separate thermostat). Requires adequate electrical service, lighting, and security.

FURNITURE/EQUIPMENT

- Wire/equipment racks
- Cabling/wireless devices
- Connectivity (routers, switches, patch panels)
- Telephone patch panel
- Desk
- Networked multimedia computer with 200-volt UPS with surge suppression and printer
- Telephone
- Storage space
- One surge protector per computer or built-in surge protection for circuits
- HVAC systems should adequately control temperature and humidity

VIDEO WIRING CLOSET AREA

ACTIVITIES

Houses video reception and distribution equipment (distribution and connectivity hardware as well as wiring).

SIZE

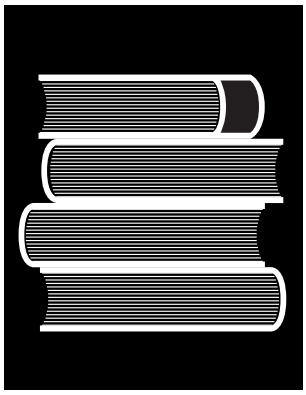
15–120 sq. ft. with adequate space for all equipment and personnel.

SPATIAL RELATIONSHIPS

Distributed throughout the campus as needed to support video services. Room should be well ventilated and have adequate electrical service, lighting, and security. This space should be accessible from the media center.

FURNITURE/EQUIPMENT

- Wire/equipment racks
- Cabling
- One surge protector per computer or built-in surge protection for circuits



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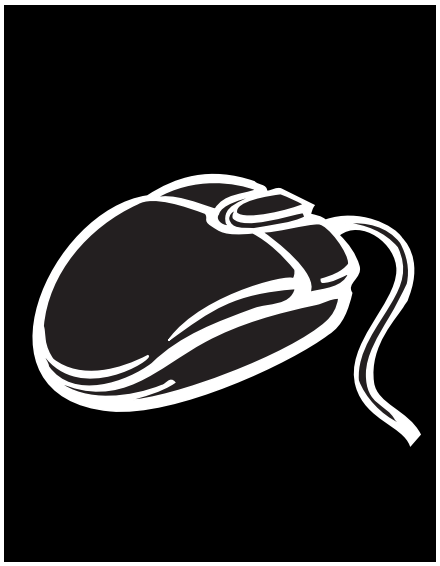
PROGRAM ADMINISTRATION



Planning the Program

Being the Change Agent

Advocating for the Program

Media and Technology Advisory Committee Membership and Responsibilities

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Works Cited

PROGRAM ADMINISTRATION

PLANNING THE PROGRAM

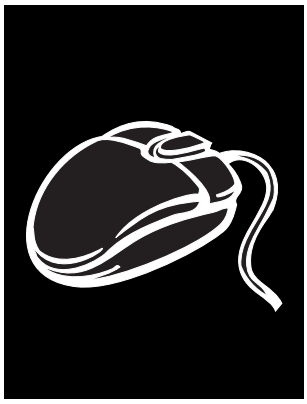
"COMPREHENSIVE, COLLABORATIVE, AND CREATIVE PLANNING IS ESSENTIAL TO THE LIBRARY MEDIA PROGRAM'S LONG-TERM SUCCESS. PLANS ARE ROAD MAPS FOR ACHIEVING PROGRAM GOALS AND OBJECTIVES, AND ONGOING AND DYNAMIC PLANNING IS REQUIRED TO KEEP THE LIBRARY MEDIA PROGRAM AT THE CORE OF THE SCHOOL'S LEARNING COMMUNITY. LONG-RANGE, STRATEGIC PLANS MUST REFLECT THE MISSION OF THE LIBRARY MEDIA PROGRAM, SUPPORT THE SCHOOL S OVERALL MISSION, AND ESTABLISH THE PROGRAM AS CRITICAL TO THAT MISSION"

(AASL and AECT 1998, 106-107).

WHY PLAN?

"TO ENSURE THAT TECHNOLOGY IS EFFECTIVELY INTEGRATED INTO THE SCHOOLS, EDUCATORS AND COMMUNITY MEMBERS MUST COLLABORATE TO CREATE A FORMAL TECHNOLOGY PLAN. DEVELOPING A PLAN FOR USING TECHNOLOGY TO SUPPORT EDUCATION REFORM MEANS MORE THAN PROVIDING FOR THE ACQUISITION OF COMPUTERS AND SOFTWARE. TO BE SUCCESSFUL, A TECHNOLOGY PLAN MUST PROMOTE MEANINGFUL LEARNING AND COLLABORATION, PROVIDE FOR THE NEEDED PROFESSIONAL DEVELOPMENT AND SUPPORT, AND RESPOND FLEXIBLY TO CHANGE."

(NCREL 1998, <http://www.ncrel.org/sdrs/areas/issues/methods/technlgy/te300.htm>)



VISION: THE KEY TO SUCCESS

A crucial element of planning is the vision to bring about change. Vision can improve programs and services that affect student achievement and the instructional process by being directed toward changes in goals and objectives, instructional practices to improve student learning, and the use of new personnel and resources.

VISIONS SHOULD:

- Be inspiring.
- Be clear and challenging and about excellence.
- Make sense and stand the test of time.
- Be stable, but constantly challenged and changed.
- Be beacons, not controls.
- Be empowering.
- Prepare for the future but honor the past.
- Be lived in details not broad strokes.

  (Peters, 1987)

SHORT-TERM AND LONG-TERM PLANNING

An effective school library media and technology program relies on short-term and long-term planning. These plans must be based on the mission of the school, program objectives, and policies adopted by the local school board and school.

Because both of these change over time, those involved in the planning process must:

- Be alert to changes in curriculum, program initiatives, and staff development requirements.
- Develop and continuously revise both short-term and long-term plans to meet the needs of the instructional program and to develop support for new efforts.

SHORT-TERM PLANS should be in place for efforts that need approximately a year or less to complete. They can also be used for making minor changes, solving problems, and covering smaller scale expenditures.

A short-term plan might also be used for:

- Acquiring and using resources (such as books, software, and computer equipment).
- Re-locating areas of the collection.
- Developing procedures for work room use.

LONG-TERM PLANS, on the other hand, provide vision and direction for a two-to five-year period and for planning major changes or acquisitions that require large expenditures. Effective student-centered media and technology programs are based on careful planning by the Media and Technology Advisory Committee.

BEING THE CHANGE AGENT

WHAT IS A CHANGE AGENT?

"BEING A CHANGE AGENT OR AN INSTRUCTIONAL LEADER MEANS NOT BEING CONTENT WITH THE STATUS QUO, IT REQUIRES PERSONAL COMMITMENT AND HARD WORK, IT GOES FAR BEYOND THE REQUIREMENTS OF THE JOB…WE HAVE A DREAM OR VISION OF WHAT CAN BE, PERHAPS A PASSION FOR EXCELLENCE, AND WE HAVE ACTED ON IT"
(Brown, 1998, 70-71).

WHO IS RESPONSIBLE FOR BEING AN AGENT OF CHANGE?

Once a concept for the future has been envisioned and outlined through a well-designed process, it remains the responsibility of the technology facilitator and media coordinator to act as change agents by providing leadership and by being proactive in directing and overseeing the change process. In this way, they become catalysts for educational reform.

HOW DO YOU FULFILL THIS ROLE?

"IF YOU WANT TO FULFILL THIS ROLE, YOU WILL NEED TO BE LIFELONG LEARNERS, TO CONSTANTLY SEEK NEW ANSWERS AND SOLUTIONS TO EDUCATIONAL PROBLEMS, TO STAY IN TOUCH WITH THE PUBLIC, THE STUDENTS, AND YOUR FELLOW TEACHERS. YOU WILL NEED TO KEEP FAITH IN WHAT YOU ARE DOING, NEVER LOSING SIGHT OF THE VALUE OF WHAT YOU HAVE TO OFFER. YOU WILL NEED TO KEEP YOUR VISION SIMPLE, AND YOU WILL NEED TO LEARN TO WORK WITH YOUR FELLOW TEACHERS IN TRUE PARTNERSHIP, TREATING THEM WITH A SENSE OF DIGNITY AND RESPECT"
(Brown, 1998, 70-71).

> **". . . FLEXIBILITY, COLLABORATION AND CHANGE HAVE TO BE CRITICAL COMPONENTS OF YOUR INSTRUCTIONAL PROGRAM TO MAKE IT WORK"**
> (Fields, 2005).

ADVOCATING FOR THE PROGRAM

WHAT IS ADVOCACY?

According to the American Library Association, **advocacy** is "the process of turning passive support into educated action by stakeholders" (ALA, 2005). It must be based on specific needs and supported with evidence. In order to effectively advocate for a school's media and technology program, it is important to determine goals, identify the target audience, and gather appropriate data to tell your story and make your case.

The vision of media and technology programs reflects the instructional mission of the school. All stakeholders in the learning process need to acknowledge and support this vision. Advocacy is a vital component for communicating the vision and building support for media and technology programs that impact instruction and promote student achievement. Ongoing advocacy is needed to sustain the existing media and technology program and to promote new initiatives.

THE GOALS OF ADVOCACY:

- Communicating the vision
- Involvement of stakeholders
- Creating change
- Building new programs and initiatives
- Acquiring necessary personnel and resources
- Sustaining and improving existing programs
- Continuous financial support

BUILDING SUPPORT WITHIN THE SCHOOL

There are a number of ways to build support within the school for the vision of media and technology programs. Two important objectives are:

- Create a positive atmosphere wherever programs are located
- Build trust and support of stakeholders

The patrons of media and technology programs must first feel welcome—with a sense of ease and belonging where learning will take place. An inviting school library media center and computer lab will influence how students perceive and interact with media and technology resources and staff.

The checklists that follow suggest ways to create a positive and welcoming environment and provide tips for beating the "study hall syndrome.

CREATING A POSITIVE AND WELCOMING ENVIRONMENT

1. Talk to students and listen to their opinions.
2. Re-examine priorities if you discover you do not have time to work with students.
3. Encourage teachers to assign research projects so that students may be led to develop research skills.
4. Leave the library to promote its services (Pearson 1999).

BEATING THE STUDY HALL SYNDROME

1. Schedule plenty of meaningful activities.
2. Add technology to the arena.
3. Share the space with other people.
4. Have few rules.
5. Provide alternate activities: books, magazines, scavenger hunts.
6. Change the school climate: educate teachers and administrators, serve on site-based management teams, work to change teaching strategies to make media [and technology] indispensable (Johnson 1997, 34-35).

Building trust and support of faculty and administrators is vital to the success of school media and technology programs. Below are some simple strategies for winning this support.

TIPS FOR GETTING SUPPORT OF FACULTY

1. Use faculty as subject area specialists.
2. Offer to assist faculty in the process of curriculum development.
3. Assist the faculty in compiling bibliographic lists of available materials for specific subject areas.
4. Publish a newsletter for faculty and administration.
5. Meet with all first-year teachers for a tour of the library and discussion.
6. Take student, faculty and administrator opinion polls on the library and technology programs.
7. Help teachers find applicable grant sources.
8. Be an active participant in school meetings and committees.
9. Meet with individual teachers to discuss needs and interests (Pearson, 1999, 17-18).

ADDITIONAL STRATEGIES

Other strategies for fostering communication with faculty and administration include:

- Exchange comments, questions, and information via e-mail.
- Provide staff development and presentations.
- Sponsor contests, competitions and promotions such as Battle of the Books, Computer Learning Month, Children's Book Week, Multimedia Mania, North Carolina Children's Book Award, and ThinkQuest.
- Coordinate efforts with Career-Technical Education personnel
- Offer in-house news programs
- Provide current Web sites

BUILDING SUPPORT WITHIN THE COMMUNITY

Keeping community members apprised of program developments and successes is one of the best ways to build ongoing support for the media and technology program.

The checklists that follow contain ideas for communicating program development and successes and for getting the community involved in media and technology programs.

WAYS TO COMMUNICATE PROGRAM DEVELOPMENT AND SUCCESSES

- School Web sites
- Newsletters for PTA/PTO
- Media and technology articles in local newspapers
- Sharing program highlights with central office staff
- Presentations for the Board of Education and community groups
- Displays/presentations at local events
- Personal visits to community leaders
- Telephone calls to community leaders
- Letters/emails to community leaders
- Invitations to local politicians and community leaders to visit the school/ attend school events
- Thank you notes/gifts for volunteers
- Designated area in the school as a Parent Resource Center with a variety of family resources to support learning
- Membership in professional organizations

WAYS TO GET THE COMMUNITY INVOLVED

- Develop and keep a list of volunteers.
- Develop a file of community experts willing to present programs.
- Open the library/technology facilities for use in the evenings and on weekends.
- Develop a file of community organizations, businesses, and individuals who may be contacted for fundraising purposes.
- Become a collection point for local history resources (Pearson, 1999).

"A WELL-DOCUMENTED, WELL-PUBLICIZED PROGRAM AFFIRMS ITS OWN EXCELLENCE AND DEMONSTRATES ITS VALUE TO THE ENTIRE LEARNING COMMUNITY. AN EFFECTIVE PROGRAM INCREASES ITS STATURE THROUGH REGULAR AND SYSTEMATIC COMMUNICATION ABOUT ITS MISSION, GOALS, FUNCTIONS, ACHIEVEMENTS, AND OVERALL IMPACT"
(AASL and AECT 1998, 112).

DEVELOPING AN ADVOCACY PLAN

A good advocacy plan should serve as a guide for a media and technology team's actions and should address the following questions:

- What program objectives is the school's plan targeting?
- What is the concern or message that the team wants to convey?
- What would the team like to achieve?
- What is an acceptable solution?
- What research does the team have to support the request?
- What data does the team have to support the request?
- What information and/or data does the team still need to collect?
- Who is the target audience?
- What strategies will the team use to communicate with each target audience?
- What communication tools (presentations, brochures, Web sites, letters) will the team use with each target audience?
- What is the timeline for implementing this plan? This should include evaluation checkpoints.

When collecting data to support the objectives of an Advocacy Plan, a variety of sources can be used to build a compelling case. This chart provides examples of data sources for different target audiences.

DATA SOURCES	INTERNAL AUDIENCE	EXTERNAL AUDIENCE
Student Achievement Data	X	X
Electronic Portfolios	X	
Annual Media and Technology Report	X	X
Needs Assessment Data	X	
Total Cost of Ownership		X
Resource Statistics	X	X
Event Participation Data	X	X
Attendance Patterns		X
Discipline Referrals		X
Output Measures	X	X
Teacher Retention		X
LoFTI	X	
Program Rubrics	X	
Survey Results	X	X
Demographics		X

Listed below are additional resources for gathering ideas and sample documents for promoting your media and technology program:

- **AASL Advocacy Toolkit**

  <http://www.ala.org/ala/aasl/aaslproftools/toolkits/toolkits.htm>

- **Advocacy Toolkit: Making the Case for Educational Technology**

  <http://www.iste.org/Content/NavigationMenu/Professional_Development/Advocacy_Toolkit/Advocacy_Toolkit_Making_the_Case_for_Educational_Technology.htm>

- **How to Organize a Friends of the School Library Media Center**

  <http://www.folusa.org/html/fact06.html>

MEDIA AND TECHNOLOGY ADVISORY COMMITTEE MEMBERSHIP AND RESPONSIBILITIES

Planning is most effective when those responsible for the instructional program are involved in:

- designing the planning process.
- implementing the planning process.
- making decisions about the process.

Effective student-centered media and technology programs are based on careful planning by a Media and Technology Advisory Committee (MTAC). The committee should be co-chaired by the media coordinator and technology facilitator. For more detailed information on the make-up of the MTAC see Media and Technology Committee in the appendix.

The lists that follow outline the make-up and functions of the Media and Technology Advisory Committee and the responsibilities of the committee chairs and members.

MEDIA AND TECHNOLOGY ADVISORY COMMITTEE MEMBERSHIP

- Principal
- Technology facilitator
- School library media coordinator
- Representative from each grade level or department
- Representative from special areas
- Parent representative
- Student representative (at the middle and high school levels)

MEDIA AND TECHNOLOGY ADVISORY COMMITTEE RESPONSIBILITIES

- Set goals and priorities
- Promote initiatives
- Communicate expectations
- Evaluate program effectiveness
- Solve problems
- Handle challenges to instructional materials
- Advocate for the media and technology program
- Identify and recommend resources, hardware, and infrastructure. (This responsibility requires members to follow the North Carolina Educational Technology Plan, the board-approved LEA selection policy, and the school library media center's collection development plan to meet the curriculum and individual needs of students and staff.)

RESPONSIBILITIES OF COMMITTEE CO-CHAIRS

- Attend grade level or departmental meetings to become knowledgeable about the school curriculum and instructional initiatives;
- Keep up-to-date on available resources, equipment, and trends;
- Plan and prepare for committee meetings and provide agendas;
- Provide the committee with relevant resources and information for consideration or discussion based on current standard selection tools;
- Follow through on any recommendations, directives, or decisions reached by the committee;
- Provide leadership in implementing and adapting plans and monitor planning processes and results;
- Advocate for the media and technology program.

The committee should be co-chaired by both the technology facilitator and the school library media coordinator.

RESPONSIBILITIES OF INDIVIDUAL MEMBERS

- Seek input from teachers and students.
- Participate in the decision-making and other work of the committee.
- Support the decisions and actions of the committee.
- Keep faculty informed of actions and recommendations of the committee.
- Assist the technology facilitator and school library media coordinator with public relations efforts.
- Advocate for the media and technology program.

BUDGETING FOR THE PROGRAM

SOME FACTS ABOUT BUDGETS AND FUNDING

DOES FUNDING MAKE A DIFFERENCE?

"A VARIETY OF RESEARCH STUDIES INDICATE THAT FUNDING FOR SCHOOL LIBRARY MEDIA CENTER RESOURCES HAS DIRECT IMPACT UPON STUDENT LEARNING, ESPECIALLY UPON READING AND WRITING TEST SCORES. (LANCE, 1992/1999) **THE ECONOMIC VALUE OF WELL-EQUIPPED, FLEXIBLY-ACCESSED SCHOOL LIBRARY MEDIA CENTERS HAS BEEN VALIDATED BY THE PLACES RATED ALMANAC** (1998) **AND SCHOOL MATCH** (NPR, 1992)"
(North Carolina Educational Technology Plan 2001-2005, <http://tps.dpi.state.nc.us/techplan2000>).

DOES CONTINUOUS FUNDING HELP?

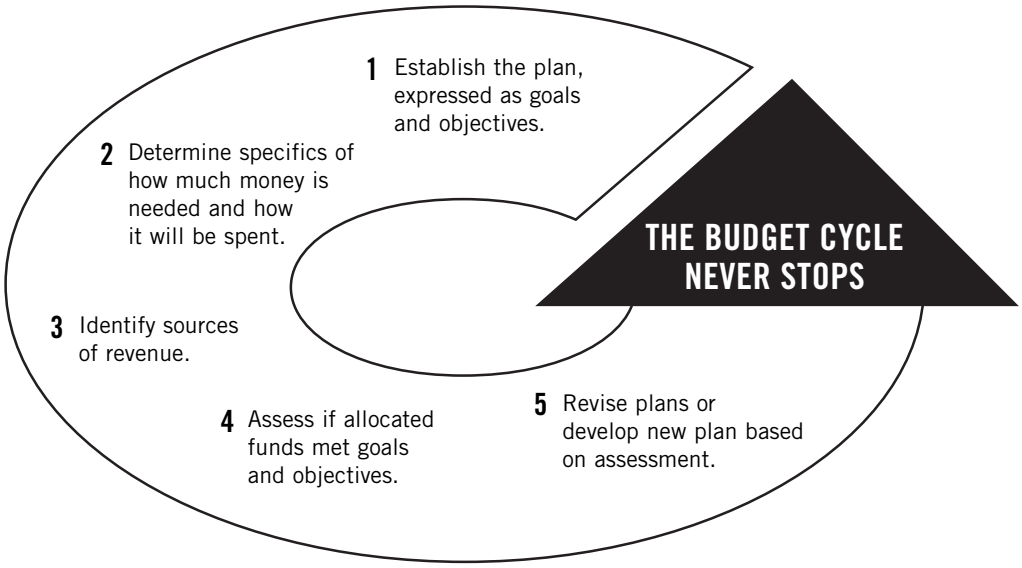
The most effective implementation of learning and instructional management technologies occurs when the funding program is continuous over a multiyear period. Continuous funding facilitates the development of high-quality, long-range local plans and allows for the deployment of resources to be coordinated with staff development and infrastructure improvement. Funding strategies and acquisition activities must be well-planned, organized, and coordinated.

DEVELOPING AN EFFECTIVE BUDGET

THE BUDGET CYCLE IS CONTINUOUS.

As the financial component of program planning, budgeting should begin with the overall goals of the LEA/school technology plan and the school's instructional program as outlined in the school improvement plan—and these goals should be reflected in the budget priorities and details.

Effective budget development is a continuous cyclical process. Wise budget planners *continuously* complete the cycle of steps shown.



BUDGETING IS A COLLABORATIVE EFFORT.

The budget needs the support of teachers, administrators, students, and the community. Acting in their leadership roles, the technology facilitator and the media coordinator seek the support of these groups and use school and community public relations strategies to:

- Ensure that budget requests are presented and considered within the appropriate context of program goals and objectives.
- Ensure that approximately 60% of the instructional budget is used to acquire materials of lasting value for the school library media center so that every student and teacher can use them.
- Ensure that recurring technology expenses become a part of the annual capital outlay budget.
- Heighten awareness of the need for a wide variety of up-to-date resources and infrastructure to extend and enrich learning opportunities.

THE BUDGET PROCESS IS IMPLEMENTED BY BUILDING-LEVEL SITE-BASED MANAGEMENT TEAMS.

The budget process in North Carolina schools is implemented at the building level by site-based management teams whose members:

- Determine the needs of the entire school program based on formative evaluation measures.
- Set overall goals and objectives.
- Work with grade level teams and departments in developing budget needs lists.
- Generate a priority list for expenditures.

Building-level school library media coordinators and technology facilitators:

- Coordinate the efforts of the Media and Technology Advisory Committee.
- Advocate for adequate funding for media and technology programs by making budget recommendations that reflect the components shown on the next page.
- Develop and implement formative evaluation measures to determine program success related to budget support.

CONSIDER INNOVATIVE BUDGETING

Needed technology often can be funded successfully through innovative restructuring and reallocation of existing budgets to realize efficiencies and cost savings. The new focus begins with the educational objective and evaluates funding requests – for technology or other programs – in terms of how they support student learning. Today, every program in No Child Left Behind is an opportunity for technology funding, but the focus is on how the funding will help attain specific educational goals.

Funding and budgetary recommendations for states, schools, and school systems include:

- Determine the total costs for technology as a percentage of total spending.
- Consider a systemic restructuring of budgets to realize efficiencies, cost savings and reallocation. This can include reallocations in expenditures on textbooks, instructional supplies, space and computer labs.
- Consider leasing with 3-5 year refresh cycles.
- Create a technology innovation fund to carry funds over yearly budget cycles (National Education Technology Plan, 2004).

WHAT BUDGETS SHOULD REFLECT

1. The overall mission of the school
2. Media and technology short- and long-term goals and objectives based on the school improvement plan
3. Regularly scheduled analysis and synthesis of formative evaluation data
4. Assessments of specific needs
5. Teaching methodologies and student learning styles
6. Strengths and weaknesses of existing informational and instructional resources
7. Necessary cycle of updating materials based on curriculum changes and the building-level collection development plan
8. Necessary cycle of replacement of equipment reflecting the system-level technology plan and guidelines
9. An operational budget that allows for the maintenance of media and technology resources
10. Priorities set by the Media and Technology Advisory Committee in conjunction with teacher and student recommendations
11. Average cost of resources
12. Total cost of ownership (TCO)
13. Accreditation standards
14. State and national guidelines and standards (including those developed by National Council of Teachers of Mathematics, National Science Teacher Association, American Association of School Librarians, Association for Educational Communications and Technology, etc.)

PRIMARY SOURCES OF FUNDING

- LOCAL – funds allocated for each school determined by the local school board.
- STATE – funds allocated for current operating expenses for each LEA; funds allocated by the legislature for implementation of the local LEA Technology Plan based on the goals and objectives outlined in the North Carolina Educational Technology Plan.
- FEDERAL – funds allocated on the basis of an application process (For example: E-Rate, NCLB Enhancing Education Through Technology Fund).

OTHER SOURCES OF FUNDING

Technology and media professionals should be proactive in securing additional funding from the following sources:

- PTA/PTOs – contributions that may be allocated by an established formula or based on specific requests to support program initiatives.
- LOCAL BUSINESSES AND COMMUNITY ORGANIZATIONS – allocations based on specific requests to support program initiatives.
- OTHER GRANT SOURCES – awards for special programs and purchases based on an application process.

WRITING BUDGET PROPOSALS

To create new programs or expand services, technology facilitators and school library media coordinators should develop funding proposals that include the components listed below.

Educators must do a better job of selling programs to the public. Without public support, initiatives are much more difficult to begin and to maintain. It has been proven repeatedly that the organization that projects its needs and accomplishments the most effectively usually receives the most support.

Collaboration, like communication, is essential in today's world. Working with other organizations to promote a common goal has a greater chance of success.

BASIC COMPONENTS OF A BUDGET PROPOSAL

1. Statement of needs with supporting data
2. Goals and objectives
3. Plan of action
4. Description of local resources
5. Budget for requested resources
6. Evaluation component

POLICY

> "THE QUALITY OF OUR ACTIONS CAN BE NO GREATER THAN THE QUALITY OF OUR UNDERSTANDINGS"
> (Kerr, 1976).

POLICY AND PROCEDURE DEFINED

A useful definition of **policy** is a process where needs, goals, and intentions are translated into a set of objectives, laws, and tenets that affect resource allocation, action, and output, and govern evaluation, reform, conduct, and disciplinary protocol (Cooper, Fusarelli, and Randall, 2004). Based on professional knowledge and philosophy, policies guide decision-making, help determine procedures of action, ensure equity of services, create awareness of resources and services, and guide appropriate decision-making in controversial situations.

PROCEDURES represent an implementation of policy and should change according to the development of new tools, new processes, new organizational patterns, or environmental changes.

GUIDELINES outline the appropriate circumstances, use and/or development of resources including instructional print materials, online instructional materials, facilities, and equipment.

Rather than combine policies, procedures, and guidelines in a single document, it is recommended that policies be a separate document from procedures and guidelines.

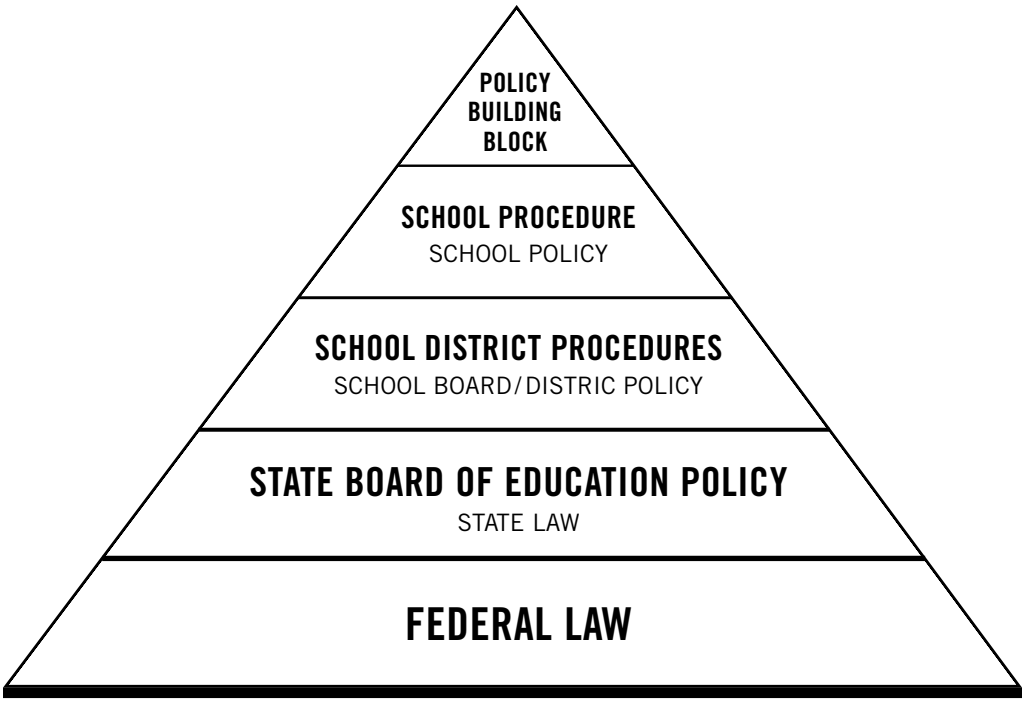


FIGURE 1 illustrates the hierarchical nature and relationship of policy, law, and procedure. Each level of the policy building block must adhere to the underlying block that supports it. Law is the foundation for all policies and procedures. While everyone within an organization may not be familiar with the details of a particular law or statute, a well-written school procedure assures that everyone is abiding by the law.

POLICY VS. PROCEDURE

	GOOD POLICY	GOOD PROCEDURE
LANGUAGE	Policies are written in concise, simple language with clearly stated principles and objectives.	Procedures adhere to policy. Well-written procedures should reference the policy that they enforce. The procedure should assure that institutional goals are met by providing the appropriate steps for compliance with policy.
PURPOSE	Policy statements address what the rule says, not how to implement the rule.	Procedures outline the process or directions for implementing the rule. Well-developed and thought-out procedures should be written to provide the most benefit to the greatest number of users.
AUDIENCE	Policy statements are readily available to the community and their authority is clear.	Procedures are developed and enacted by the institution and are generally distributed to those who must directly follow procedure.
GOVERNANCE	Policy is enforced by the legislators, boards and practitioners at the federal, state and local level. Designated "content experts" should be identified in each policy and are readily available to interpret policies and resolve problems.	Procedures are developed by the department or office within the agency responsible for procedural implementation of the policy. Procedures should be written so that what needs to be done can be easily followed by all users and by those designated to implement the procedure.
CONTENT	As a body, policies represent a consistent, logical framework for action.	Procedures should offer precise steps for action. Guidelines provide a frame-work and appropriate circumstances for when procedures should be implemented.

CREATING POLICY AND PROCEDURE MANUALS

The overall goal for any policy or procedure document is for the design to be *simple, consistent, and easy to use.*

THE WRITING STYLE

- Concise
- Factual
- Current
- Non-technical

THE DESIGN AND LAYOUT

- Organized numbering system
- Clean with ample white space
- A systematic format for all policies and procedures
- Clearly labeled headings (Campbell, 1998)

COMPONENTS OF A POLICY DOCUMENT

HEADER
The policy title, issuing date, and an identification number, page number, effective date, supersedes notification, governing office, and policy approval authority

PURPOSE
A concise statement of the rationale for the policy, including reference to external regulations, legislation and other policy

REVISION HISTORY
History of document changes.

POLICY STATEMENT
Complete policy statement

APPLICABILITY/PERSONS AFFECTED
Exactly whom the policy applies to and the consequences for non-compliance

DEFINITIONS
Definitions of terms

GOVERNING OFFICE(S)/GETTING HELP RESPONSIBILITIES
The office and specific individual, position title, that should be contacted for interpretations, resolution of problems, and special situations

AUTHORITY
The highest administrative group authorizing the policy

REFERENCES
Federal and state laws and regulations; policies; or other guidelines, procedures, references, or documents directly applicable to the policy

IMPLEMENTATION PROCEDURES
Reference to department or organization responsible for implementing procedures that are recommended in order to carry out the intent of the policy.

(Chart adapted from Page, 2002)

COMPONENTS OF A PROCEDURE DOCUMENT

HEADLINE
The procedure title, date approved, office responsible for its implementation, and the procedure approval authority.

PROCEDURE DESCRIPTION
Describes the overall objectives, functions, or tasks that the procedure is designed to accomplish, and the circumstances under which the procedure should be used.

RESPONSIBILITY
Lists departments, units, offices, and/or individual job titles for those who have responsibility for

- daily control and coordination of the procedure
- procedural implementation (including responsibility for any electronic or written forms)
- authority to approve exceptions to the procedure

Clearly explain the scope of responsibility of the governing department, unit, office, or individual.

PROCEDURE DETAILS
Format a statement that outlines

- each step required
- a checklist of what needs to be done
- the appropriate contact for completing each step or to whom questions should be addressed
- copies of all forms needed to complete the procedure
- an explanation of how to complete the necessary forms or screens (include copies of the forms or screens)
- Procedural and "how to" information
- Optional: A procedural flow chart

DEFINITIONS
Definitions of terms

REFERENCES
Federal and state laws and regulations, policies or other guidelines, procedures, references, or documents directly applicable to the procedure

HELP PAGE
A list of training programs, classes, other documentation, contact information, and other sources of help for completing forms or carrying out procedures.

(Chart adapted from Campbell, 1998)

POLICY, PROCEDURES, AND GUIDELINES IMPLEMENTATION CHART

POLICIES, PROCEDURES, & GUIDELINES
POLICIES REQUIRED
A. Materials Selection Policy (GS §115c-98(b))
B. Disposal of Equipment / Replacement of Obsolete Equipment (GS §115c-518)
C. Hardware and Software Procurement (GS § 115c-522, 115c-522.1)
D. Copyright Policy (PL §94-553, 90 Stat. 2541)
E. Acceptable Use Policy (PL §106-554)
F. Equipment/Materials Donation Policy (GS §115C-518
G. Data Privacy Policy (20 U.S.C. § 1232g; 34 CFR Part 99 (FERPA))
H. Inventory Control Policy (GS §115c-539, 115c-102.6A-C(5))
I. Access to Services Policy (GS §115c-106)
J. Student Discipline and Liability Policy (GS § 115C-391, 115C-398)
K. Remote Access Policy (GS §147-33.111)
L. Virus Protection Policy (GS §147-33.111)
M. NC WISE ID and Password Workstation Policy (GS § 147-33.111)
N. Security Awareness Policy (GS §147-33.111)
O. Network Security Policy (SBE EEO-C-018, SB 991, 2004)
P. Advertising and Commercialism Policy (GS §115c-98)
PROCEDURES
A. Hardware and Software Deployment
B. Equipment maintenance and repairs
C. Outdated Resources and Equipment Replacement
D. Disaster Recovery of Data and Hardware
E. Administration of Online Courses
F. Other(s) (as needed by LEA)
GUIDELINES
A. Policy Translation
B. Web Site Development
C. Instructional Use of Videos
D. Development of Online Resources
E. Other(s) (as needed by LEA)

COLLECTION DEVELOPMENT

VISION

"WITH A BROAD VIEW OF THE CURRICULUM, EXTENSIVE KNOWLEDGE OF BOTH TRADITIONAL AND ELECTRONIC RESOURCES, AND COMMITMENT TO SERVE THE FULL RANGE OF STUDENTS AND OTHER USERS OF THE LEARNING COMMUNITY, THE SCHOOL LIBRARY MEDIA SPECIALIST [COORDINATOR] CAN DIRECT THE DESIGN AND MAINTENANCE OF CURRENT, COMPREHENSIVE, HIGH-QUALITY COLLECTIONS"
(*Information Power,* 1998, 90).

"ALTHOUGH ANSWERS TO STUDENTS' QUESTIONS WERE TRADITIONALLY FOUND IN THE COLLECTION HOUSED IN THE SCHOOL MEDIA CENTER, THE ANSWERS TODAY MAY OR MAY NOT BE FOUND WITHIN THE ITEMS ON THE SHELVES OF THE MEDIA CENTER. THE COLLECTION GOES BEYOND THE WALLS OF THE IMMEDIATE MEDIA CENTER AND CONTAINS MANY SOURCES THAT CAN BE ACCESSED THROUGH ONLINE SERVICES. THUS, THE MEDIA CENTER IS CONNECTED ELECTRONICALLY TO A FAR-REACHING WORLD OF SOURCES AND INFORMATION"
(Van Orden and Bishop, 2001, 6).

A primary function of the school library media coordinator and technology facilitator, in collaboration with the Media and Technology Advisory Committee (MTAC) is collection development. Developing a collection that supports the curriculum with appropriate print and non-print resources is a team effort. This team effort will result in a collection that includes a variety of materials so that all students' needs are met.

ROLE OF THE MTAC IN COLLECTION DEVELOPMENT

MTAC plays a vital role in the collection development process. Communication between MTAC members and teachers to assess curriculum needs and gather recommendations is an important part of the selection process. The strength and value of the collection are ensured when the MTAC is involved actively by soliciting input from teachers.

ROLE OF THE SCHOOL LIBRARY MEDIA COORDINATOR

"AUTHENTIC STUDENT LEARNING IS THE FOCUS OF THE MEDIA CENTER PROGRAM. AS A TEACHER, INSTRUCTIONAL PARTNER, INFORMATION SPECIALIST, AND PROGRAM ADMINISTRATOR, THE MEDIA SPECIALIST [COORDINATOR] NOW PROVIDES THE LEADERSHIP TO BUILD A COMMUNITY OF LEARNERS, WORKING COLLABORATIVELY WITH TEACHERS, ADMINISTRATORS, AND STUDENTS. BOTH THE MEDIA SPECIALIST [COORDINATOR] AND THE COLLECTION PLAY IMPORTANT ROLES IN THE MEDIA PROGRAM IN THAT THE MEDIA SPECIALIST [COORDINATOR] SERVES AS THE INTERFACE CONNECTING STUDENTS TO THE COLLECTION (BOTH WITHIN AND BEYOND THE WALLS OF THE MEDIA CENTER) AND ULTIMATELY TO THE ANSWERS TO THE STUDENTS' QUESTIONS"

(Van Orden and Bishop, 2001, 8).

Responsible for planning, developing, and administering the school library media program, the media coordinator oversees the collection development process and assures that the collection supports the established goals and objectives of the school. With professional training and experience in library science, the media coordinator uses recognized techniques for maintaining a building collection of materials and resources through weeding, inventory, and staying abreast of current resources, books, and nonprint materials that support the school media program. Most important, the media coordinator informs the staff of the school of new resources and materials that support the SCOS objectives and assist teachers in the instructional program. When determining the most appropriate resources for the media center, the media coordinator seeks input of the staff through an evaluation procedure of materials and through professional recommendations. A knowledgeable media coordinator can ensure that the collection is an integral part of the school's instructional program, meeting the needs of the program and its users.

ROLE OF THE TECHNOLOGY FACILITATOR

Technology plays a vital role in providing equitable access to a variety of resources. Today's educational environment fosters the need for global connectivity that enriches the learning environment by allowing teachers and students to access leading libraries, examine remote information sources, converse with experts in a variety of fields, and complete research using primary sources.

The technology facilitator serves as a specialist for the selection of online and other technology resources. Even though the criteria for the selection of these materials is essentially the same as for more traditional formats, additional considerations should be noted. These resources should promote instructional goals and support the curriculum through a variety of media formats that are compatible with the school's technology hardware resources and meet the diverse needs of the students.

FIVE "RIGHTS" TO REMEMBER

DELIVER

1. **THE RIGHT INFORMATION**
2. **TO THE RIGHT PERSON**
3. **AT THE RIGHT TIME**
4. **IN THE RIGHT FORMAT**
5. **AND IN THE RIGHT LOCATION**

[Loertscher, 2000]

ASSESSING THE COLLECTION

"THE COLLECTIONS OF THE LIBRARY MEDIA PROGRAM ARE DEVELOPED AND EVALUATED COLLABORATIVELY TO SUPPORT THE SCHOOL'S CURRICULUM AND TO MEET THE DIVERSE LEARNING NEEDS OF THE STUDENTS"

(AASL and AECT, 1998, 90).

School library media coordinators and technology facilitators need information on which to base decisions about the collection and for communicating the needs of the collection to administrators. Collection assessment answers the following questions:

1. Is the collection responsive to changes in the school's program?
2. Is the collection integral to curricular and instructional needs?
3. Does the collection meet the users' needs?
4. Does the collection provide access to materials from outside the school?
5. Does the collection include formats that users prefer?
6. Does the collection hinder or facilitate the media and technology program?

In addition, collection assessment should consider school improvement goals and student achievement data, as well as national standards, or "ideal collection" percentages.

- EXAMPLE: If your high school's Science End-of-Course scores are low, you may need more resources to support the science curriculum, or better use of existing materials in collection.
- EXAMPLE: The school library media coordinator focuses on third grade math skills using reading and literature while the students are in the media center.
- EXAMPLE: The technology facilitator develops/recommends software that will support the reading curriculum as a result of low reading scores.

ASSESSING THE COLLECTION: METHODS

Various methods should be used to assess collections so school library media coordinators and technology facilitators can determine how well the resources align with the curriculum and meet teaching and learning needs. Information gathered from diverse measures, including measures listed in the following checklists can be used to plan and to develop budget proposals.

"USING OUTPUT MEASURES REQUIRES MUCH MORE THAN MASTERING FORMULAS AND COLLECTING DATA. A GOOD UNDERSTANDING OF WHAT INFORMATION EACH MEASURE CONVEYS, JUDICIOUS SELECTION OF WHICH MEASURES TO USE, AND CAREFUL CONSTRUCTION OF YOUR CASE ARE ALL NECESSARY FOR PRESENTING CONVINCING DATA TO SUPPORT A PROPOSAL AND THEIR USE CAN GUIDE YOUR PLANNING"
(Bradburn, 1999, XV).

QUANTITATIVE ASSESSMENT MEASURES

- Statistics by materials type
- Electronic resources hit rates
- Analysis by copyright date
- Circulation statistics

QUALITATIVE ASSESSMENT MEASURES

- Direct examination for alignment with cirriculum topics, instructional units, etc.
- Comparison with standard selection sources, bibliographies, etc.

The physical condition of resources can be assessed only by examining resources firsthand. Some media coordinators may prefer to assess the collection by working with the curriculum guide at hand while physically "eyeballing" the collection. By recording impressions on a graphic organizer (See Collection Analysis Form), each section of the collection can be examined. This approach can be very useful; however, it is possible only at such times as when the majority of the resources are in the media center (i.e., at the end of a semester, school year, or in preparation for inventory).

Maintaining a media and technology collection with thousands of items can be difficult and time-consuming without a strategy or organized approach to adding and discarding resources. There are a number of ways to create a Collection Development Plan that are outlined in library science and instructional technology literature, but this chapter will discuss three of the most viable ones:

- Collection Mapping
- Resource Alignment
- Systematic Random Sampling

ASSESSING THE COLLECTION: COLLECTION MAPPING

DAVID LOERTSCHER'S COLLECTION MAPPING PROCESS

"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"

(Loertscher, 2000, 213).

STEPS FOR DEVELOPING A COLLECTION MAP

1. Describe the community.
2. Describe the curriculum of the school.
3. Provide a statement of the vision of the school library media program.
4. Draw a collection map that shows the strengths and weaknesses of the current collection.
5. Draw a proposed collection map for a one- to three-year period.

(Loertscher, 2000, 211-213)

STEPS IN COLLECTION MAPPING

1. Collect data on the various segments of the collection by estimating the number of items in the library in all the different categories. Count non-book resources, too.
2. For some parts of the collection, age is a very significant factor.
3. Quality is probably the most important factor; therefore, only evaluate the quality of a collection segment when a collaborative unit has been completed.
4. Create a collection that is responsive to your school's individual needs.
5. Create a collection map, in the form of a bar graph or a series of pie charts—what the collection looks like now and how it will change when specific purchases are made.
6. Compare the collection size with regional, state or national standards.

(Salmon, et al., 1996, 99)

The resulting collection map provides a graphic presentation of the analysis of a collection. The process involves four phases of activity:

PHASE 1: Identify collection's areas of strength, diversity of formats, publication dates, and duplicate titles.

PHASE 2: Meet curriculum demands, identify areas of the collection that need emphasis, re-map for proposed changes, and create budget allocations to reflect proposed changes.

PHASE 3: Design an automated acquisition system to match the map; use it to maintain the consideration file, create purchase orders, record received items, and track the budget.

PHASE 4: Evaluate and monitor the collection's progress.

(Van Orden and Bishop, 2001, 281)

ASSESSING THE COLLECTION: RESOURCE ALIGNMENT

"SCHOOL LIBRARY MEDIA CENTER RESOURCES NEED TO BE ASSESSED IN ORDER TO DETERMINE HOW CLOSELY THE RESOURCES ALIGN WITH THE STATE ADOPTED CURRICULUM FOR THE VARIOUS GRADE LEVELS IN THE INDIVIDUAL SCHOOLS AND/OR DISTRICT. RESOURCES THAT ARE TOO OLD, WORN, OR INAPPROPRIATE TO PROVIDE CURRICULUM SUPPORT SHOULD BE REMOVED AND REPLACED WITH ATTRACTIVE, CURRENT MATERIALS THAT ARE CLOSELY ALIGNED WITH THE STATE'S CURRICULUM"

(Lowe, 2004, 13).

KAREN LOWE'S RESOURCE ALIGNMENT PROCESS:

Resource Alignment is a step-by-step approach to collection development.

A five-year plan is developed so that every marked resource is replaced by the end of the cycle. A budget supports the plan and communicates funding needs to the Parent-Teacher Organization, administrators, business and community leaders, and/or is attached to grant proposals.

PROCEDURE FOR THE RESOURCE ALIGNMENT PROCESS

1. Print a shelf list or materials list from the catalog menu of the automated catalog; be sure it includes the copyright date. (If the school is not automated, the procedure can still be done using the shelf list cards.)
2. Using the weeding criteria provided later in this chapter, highlight the copyright date of materials that appear to be out of date (with yellow highlighter) and highlight the copyright date of materials on the outer edge of usefulness (with another color highlighter).
3. Take the shelf list to the shelves; highlight worn copies and/or materials which are above or below the reading and interest levels of the students, or inappropriate in other ways.
4. Using the Collection Analysis Form, develop a list of resource strengths and needs.
5. Prioritize the needs.
6. Divide the needs over three to five years, based on available funds.
7. Determine funds needed per year.
8. Prepare a narrative to accompany budget recommendations, explaining the rationale for the plan and budget.
9. Share plan, budget and narrative with principal, the PTO, interested parents, teachers, community and businesses in the area, or use the reports to demonstrate the school's needs in a grant proposal.

(Lowe, 2004)

ASSESSING THE COLLECTION: SYSTEMATIC RANDOM SAMPLING

CAROLE DOLL AND PAM BARRON'S SYSTEMATIC RANDOM SAMPLING

"IT IS NEITHER NECESSARY NOR PRACTICAL TO EVALUATE EVERY ITEM IN THE COLLECTION. INSTEAD, A SMALL PORTION OF THE TOTAL COLLECTION CAN AND SHOULD BE USED, IF THAT SMALLER PORTION IS PROPERLY SELECTED. THIS SMALLER PORTION, CALLED A SAMPLE, CAN BE USED TO MAKE GENERALIZATIONS ABOUT THE ENTIRE COLLECTION . . . THE SAMPLE MUST BE REPRESENTATIVE. THAT IS, THE SAMPLE MUST BE CAREFULLY CHOSEN SO IT CONTAINS ALL OF THE CHARACTERISTICS OF THE LIBRARY COLLECTION.

THE COMMON METHOD OF OBTAINING A REPRESENTATIVE SAMPLE IS TO SELECT IT RANDOMLY. THIS ENSURES THAT EVERY ITEM IN THE COLLECTION HAS AN EQUAL CHANCE OF BEING SELECTED FOR THE SAMPLE"

(Doll and Barron, 1990, 12)

There are three techniques for obtaining random samples: simple random sampling, stratified random sampling, and systematic random sampling.

STEPS IN SYSTEMATIC RANDOM SAMPLING:

1. Identify all items in the library to be evaluated.
2. Determine the total number of such items in the collection.
3. Decide on the sample size (200 is recommended).
4. Divide the total number of items by the desired sample size to find the interval size.
5. Randomly select a starting point less than or equal to the interval.
6. Starting at the beginning of the list, count to the starting point.
7. If that item is unacceptable, continue to the first acceptable item.
8. Add the interval size to the starting place to locate the second title.
9. Continue until the end of the list is reached.

Once the samples have been selected, a number of procedures can be followed to analyze the data:

- Collection percentages
- Average age of collection
- Collection use
- Comparison to standard bibliographies
- Comparison to textbooks or periodical indexes
- Evaluation of limited area
- Estimating update costs and benefits
- Cost of changing the average age of the collection
- Effect of expenditures on average collection age
- Teacher requests

AUTOMATED ASSESSMENTS

Most automation vendors have functions in their software to produce a variety of reports of collection age statistics. Pie charts and graphs can be generated from the data to show administrators at a glance the status of the media center collection. Follett Software's free *Titlewise* service <http://www.flr.follett.com/> also can be used to produce statistical information. Sagebrush <http://www.sagebrushcorp.com/> has a program that compares a collection against "Blue Ribbon" schools and identifies areas that are "aged." This system also can generate a variety of statistical reports.

School library media coordinators should check with automation vendors to determine the types of quantitative analysis and reports and formats that are available. The most powerful and compelling data, however, combines the quantitative data from the automation system and the qualitative data from a process such as collection mapping or resource alignment.

WEEDING THE COLLECTION

WEEDING AND QUALITY

The ongoing weeding or de-selection of materials that are no longer relevant or accurate is an essential component of collection development and should be done as systematically and objectively as possible.

"A SMALLER, MORE ATTRACTIVE COLLECTION OF RELEVANT, UP-TO-DATE MATERIALS IS MORE IMPORTANT TO STUDENTS AND TEACHERS THAN A LARGE COLLECTION OF MOSTLY USELESS MATERIALS THAT WILL BE IGNORED BY ALL BUT THE MOST AGGRESSIVE STUDENTS"
(Woolls, 1999, 169)

CRITERIA FOR WEEDING/SELECTING SCHOOL LIBRARY MEDIA RESOURCES

- Relevance to the curriculum
- Copyright date
- Condition of the material
- Date last circulated
- Enduring value (classics, rare books, etc.)
- Reading/interest level
- Authoritative writing
- Bias/stereotypes
- Recommended in current selection tool and/or other review sources
- Local interest/community needs (Lowe, 2001)

The technology facilitator needs to evaluate software resources to determine if there are newer versions or releases available and if upgrades of hardware create problems for existing digital resources, possibly even making them obsolete.

Even if they meet all weeding criteria, the following items may be kept:

- Historically significant works of literature that cannot be replaced
- Works with unusual illustrations or illustrations done by a well-known artist
- Works by a local author or illustrator
- Descriptions of local history or personalities

The five time-sensitive sections of the media collection, referred to as the "Big Five,":

- Science (500s),
- Health and Technology (600s),
- Geography and History (900s),
- Government and Economics (300s) and
- Reference.

The copyright dates in these materials should be within five to ten years, with some exceptions. For example, in the 500s, plants and animals are exceptions; in the 300s, holidays and folklore are exceptions. The school library media coordinator should commit to keeping the "Big Five" as current as possible.

There are two approaches to weeding the collection:

1. Weed in the areas being developed or weed by decades. For example, if resources are being added in the areas of science, religions, and fiction during the first year of the collection plan, weed these areas well. Follow this pattern throughout the remaining years of the plan.
2. In year one, discard every resource older than 1969 unless it is an award winner, a classic, a primary source, historically significant, or meets other valid criteria for keeping the resource. In year two, discard everything in the 1970s; year three, the 1980s. By year four, everything in the collection will have a 1990s or above copyright date unless it fits the exceptions listed above.

To update the collection, two steps must be taken—weed the old, add the new—before the task is accomplished. If new resources are added without discarding the old materials, the new resources just get lost among the old ones.

GUIDE TO WEEDING THE COLLECTION

DEWEY CATEGORY	% OF COLLECTION	TOPICS	SUGGESTED GUIDELINES
REFERENCE	5-10%	Encyclopedias Reference	Five years except for historical materials. At least one print encyclopedia within five years.
000	1%	Encyclopedias Reference	New edition is needed every ten years; five years is better.
		Computer science	Seldom of use after five years from date of copyright.
		Books about reading	Guides, etc. Value determined by use.
100	1%	Ethics/Values/ Character Ed.	Value determined by use. Most unscholarly works are useless after ten years.
200	1%	Religion	Value determined by use. Collection should contain basic information (but not propaganda) about as many sects and religions as possible.
300	5-13%	Social Sciences (Studies)	See that controversial issues are well represented from all sides.
310		Almanacs/Yearbooks	Superseded by each new volume. Seldom of use after five years.
320		Politics	Books dealing with historical aspects—determined by use. Timely or topical material: discard after approx. ten years. Replace with new editions when available.
330		Economics	Timely or topical material; discard after approx. ten years.
340-350		Government	Ten years. Watch for new material on government to supersede older.
360		Social Welfare	Weeding depends on use. Most non-historical materials, ten years.
370-380		Education/ Commerce	Keep historical materials if they are used. Non-historical materials need replacement after ten years.
390		Customs/holidays/folklore	Keep basic material; discard when worn out.
400	.5-5%	Languages	Keep basic material; weeding depends on use. Consider ESL/LEP students.
500	5-10%	Science	Except for botany and natural history, science books are usually out of date within five years.
510		Mathematics	Keep basic material. Include literature tie-ins.
520		Astronomy	Five years.
600	5-10%	Health/Technology	Most resources are out of date in five years.
		Inventions	Keep significant historical materials; otherwise, five years.
610		Medicine	Five years.
620		Engineering	Five years.
621		Radio/Television	Five years at most; progressing too rapidly to be of use any longer unless it's historical.

DEWEY CATEGORY	% OF COLLECTION	TOPICS	SUGGESTED GUIDELINES
629		Technology/Space Tech	Five years at most unless retrospective look.
630		Farms/Gardens/Pets	Keep up to date with new editions and replacements.
640		Home Economics/Food	According to use. Keep mostly current material; keep almost all cookbooks.
650		Business, etc.	Ten years unless it relates to computers.
660		Chemical/Food Products	Five to ten years
690		Manufactures/Building(s)	Ten years, except older books on crafts, clocks, guns, toys which may be useful
700	4.5-10%	Art/Music	Keep basic material.
800	4-10.8%	Literature	Keep basic material.
900	20.5-24.8%	History	Depends on use and needs of community, accuracy of fact and fairness of interpretation.
910		Travel/Geography	Discard travel books before 1994 unless useful from historical point of view or of interest as personal accounts. African, European, and Asian geography before 1994 is probably only of historical interest. Watch later books for hasty writing and misinformation. Check materials on the Middle East, Southeast Asia, the former Soviet Union, Central America and Africa carefully; materials prior to 1999 probably of little use.
920-921		Biography	Unless subject has permanent interest or importance, discard as soon as demand subsides. Replace older biographies of mediocre literary value whenever better ones appear. Keep those that are outstanding in content or style as long as they are useful. (Discard or reclassify as historical fiction any biographies with invented dialogue and/or events.)
940-990		History	Depends on use and needs of community. Only outstanding World War II material should be left by this time. Best material is now incorporated in regular histories. Much was catchy and poorly written because of haste to get on market. Check materials on Native Americans and other ethnic groups carefully for stereotypes (usually materials older than ten years).
		Rare books	Usually published before 1900. Get advice on value from rare book dealer, university or State Library.
F	20-23%	Fiction	Use standard selection tools for evaluation, weeding, etc.
E	14-25%	Easy Fiction	Use standard selection tools for evaluation, weeding, etc.
P		Professional	Use teacher/principal input to build a basic collection.

(NCDPI; Updated 2004 by krl)

COLLECTING DATA

After marking the shelf list, the next step is to transfer the identified gaps and weaknesses to the Collection Analysis Form by highlighting the topics on the form. The form is organized in the same order as the Dewey Decimal system to make it easier to record the topics. When developing the five-year collection development plan, this form can be used to help prioritize needs.

This graphic organizer can be very helpful in working through the entire collection. The evaluator may prefer to use a collection map to record data. At the very least, the school library media coordinator should keep a running list of materials discarded and the resulting gaps left in each section. It is important to realize that the gaps were there before discarding, not as a result of discarding; weeding just makes the gaps more visible.

THE NON-PRINT COLLECTION

In order to make judgments regarding electronic resources, the technology facilitator should collaborate with the media coordinator to determine and make notes about curricular objectives or about the media center print collection that might be better supported or enhanced with electronic resources. The same criteria used for the print collection should be used to evaluate the non-print collection. The key consideration is always the accuracy of the information contained in the media.

COLLECTION ANALYSIS FORM

DATE: _____

SCHOOL: _____ GRADES: _____

MEDIA SPECIALIST: _____ PRINCIPAL: _____

AVERAGE AGE: _____

COLLECTION SIZE: _____ ADM: _____

BUDGET: _____ BOOKS PER STUDENT: _____

AREA	HOLDINGS	DISCARD	+/-	GAPS/WEAK AREAS
REFERENCE	No. of items/ Avg. copyright date	Most reference works over 10 yrs.; encyclopedias atlases, 5 yrs.		Print Encyclopedia, Almanacs, Religion, Mythology, Careers, Etiquette, Dictionaries, Science Dictionary/Encyclopedia, Field Books, Medical Dictionary/Encyclopedia, Drug Dictionary/ Encyclopedia, First Aid, Art Encyclopedia/Dictionary, Sports Encyclopedia/Dictionary, Music Dictionary, Poetry Index, Atlas(es), Geographical Dictionary, Biographical Dictionary, Other per CC/MJHC/SHC and/or reviews
000s GENERAL WORKS		Most resources over 10 yrs.		Phenomena, Library/Information Science, News/Journalism, Organizations/Museums
100s PHILOSOPHY				Philosophy, Social Issues/Coping with..., Knowledge/Purpose of Man, Parapsychology/Ghost stories, Psychology, Senses, Feelings/Values, Character Education, Ancient/Modern Western Philosophy
200s RELIGION				Great Religions, World cultures, Bible stories, Mythology
300s SOCIAL SCIENCES		Most resources over 10 yrs.		Sociology (Women, African Americans, Family, Violence, Crime, Abuse, Drugs, Alcohol, Diseases, Welfare, Disabilities, Poverty), Ethnic Backgrounds, Cities/Towns, Political Science (Voting/Elections, Political Parties, Foreign Policy, Immigration), Law/Legislation, Constitution, Civil Rights, Civil Procedure), Community Helpers, Economics (Labor/Careers, Finance/Money, Conservation/Environment, Socialism/Capitalism, Public Finance/Taxes, Production), Government (State/Local/Federal, Military), Education/Higher Education, Commerce, Communications, Transportation, Metrology, Customs (Costume, Life customs, Death Customs, Etiquette)
394 - HOLIDAYS 398 - FOLKLORE		Use condition of books		Holidays, Folk/Fairy Tales
400s LANGUAGE				Language/Linguistics, Dictionaries, Thesaurus, ESL/LEP Native languages, Multiculturalism
500s PURE SCIENCE		Use 10 yrs. except for plants and animals; use 5 yrs. for space science		Projects/Experiments, Nature/Seasons, Math-Literature Tie-ins, Space Science (Astronomy, Universe, Solar System, Moon, Comets/Meteors, Planets, Sun, Stars, Time), Physical Science/Physics (Matter, Energy, Energy sources, Force/Motion, Simple Machines, Tools, Air, Water, Solids/Liquids/Gases, Sound, Light/Color, Heat, Electricity, Magnetism/Electromagnetism, Atoms/Molecules), Chemistry (Elements, Compounds, Mixtures, Rocks/Minerals), Earth Science (Geology, Soils, Lithosphere, Atmosphere, Hydrosphere, Movements of Earth, Landforms, Oceanography, Weather/Climate, Seasons) Paleontology (Fossils, Dinosaurs), Life Science (Nature of Life, Life Cycles, Evolution, Genetics, Early Man, Human Races, Anthropology, Biology, Habitats/Ecosystems, Microbes, Cells, Microscopy, Population Dynamics), Plants/Botany, Animals/Zoology, Animal Behavior

AREA	HOLDINGS	DISCARD	+/-	GAPS/WEAK AREAS
600s APPLIED SCIENCE/ TECHNOLOGY		Use 5 yrs. in health and technology; 10 years for other areas		Inventors/Inventions, Medicine (Senses, Anatomy/Human Body, Health, Hygiene, Fitness, Public Health, First Aid, Drugs, Diseases, Safety), Engineering (Energy/Energy sources, Machines, Military, Civil, Land, Water, Air/Space, Space Exploration, Sanitary/ Municipal), Careers/Community Helpers, Agriculture, Pets, Home Economics (Food/Drink, Cookbooks, Sewing, Grooming, Homemaking, Child rearing), Management/Office Services, Chemical Technology, Manufacturing/Products, Building/s
700s FINE ARTS/SPORTS		Use condition of books for 700-789; use 10 yrs. in sports (790's)		Art/Art History, Landscape, Architecture, Sculpture, Drawing, Crafts, Painting, Painters, Photography, Music, Recreational Arts, Sports
800s LITERATURE		Use condition of books		Use CC/MJHC/SHC and/or reviews to build basic collection; consider rebinding books which are out of print
900s HISTORY/ GEOGRAPHY		Historical works: 20 yrs. unless historically significant and/or primary sources Geography: 5-10 yrs.		Explorers/Discoveries, Atlas(es), Easy Country Books, Geography (Ancient World, Europe, Former Soviet Union, Asia, Africa, North America, Canada, Mexico, Central America, U.S., NC, South America, Oceania), Insignia, Native Americans, History (Ancient World, Europe-Middle Ages, Renaissance, Reformation, WWI, WWII, 20th Century, Former Soviet Union, Asia-Vietnam War, Africa, North America-Exploration, Colonial Period, Revolutionary War, Constitutional Period, Westward Expansion, Civil War, Reconstruction, 20th Century, Canada, Mexico, Central America, U.S., NC, South America, Oceania)
920-921 BIOGRAPHY		Collective Biography: 20 yrs. unless historically significant or primary source Individual biography: 10 yrs.		Use CC/MJHC/SHC and/or reviews to build basic collection
EASY/PICTURE BOOKS		Use condition of books, reading level, but may keep classics		Use CC, award books, and/or reviews to build basic collection
FICTION		Use condition of books, reading level, but may keep classics		Use CC/MJHC/SHC, award books, and/or reviews to build basic collection
PROFESSIONAL				Use Teacher/Principal input

BD = Before discarding
CC = Children's Catalog, Selection Tool, Gr. K-6
MJHC = Middle and Junior High Catalog, Selection Tool, Gr. 6-8
SHC = Senior High Catalog, Gr. 9-12

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WRITING A COLLECTION DEVELOPMENT PLAN

The need for such a collection development plan cannot be overemphasized. It will be useful, not only to present the needs of the media and technology program to the principal or other administrators who make budget decisions, but it may also be used to make presentations to school board members, community and business leaders, parent/teacher organizations, other concerned groups, and to document needs for grant proposals. The careful work that goes into a collection analysis is impressive when it is presented to one of these groups; for example, to show parents that the average age of the science collection in the media center is 25 years old.

Outdated collections do not get that way overnight, neither can they be fixed overnight. The budget commitment from the principal, system-level administrators and/or the MTAC will determine the length and detail of the plan that is developed. A realistic plan spans five years in most cases. The purpose of the plan is to cycle throughout the entire media and technology collection within five years so that at any given time, time-sensitive resources are within five years of currency. This is particularly important for collections such as reference, space science, technology, geography and other time-sensitive areas. Occasionally a resource gap will be so great that it may need heavy emphasis in the plan for more than one year.

Some areas have a logical place in the plan each year; for example, fiction or picture books. High schools may want to target funds for literature each year. This type of budgeting must be approached with caution, however. If too many areas are targeted in each year, progress will be more difficult. Best practice suggests including one of the "Big Five" (reference, 300s, 500s, 600s, 900s), one or two of the "little areas" (000s, 100s, 200s, etc.), and fiction in each year of the plan. An "other" category should be included each year to cover discretionary and/or non-book expenses.

Once in place, the plan should be reviewed annually to determine that curriculum priorities continue to be reflected in the plan and that resources are being selected and purchased according to the plan.

DEVELOPING A BUDGET

The most common reason that media and technology collections become outdated is the inability to purchase new and replacement resources at a rate to match the heavy demands placed on the collection. When budgets remain constant, schools lose ground because of the escalating prices of resources; for example, $1,000 will only buy 40 books in today's market. Reference books, software, and online subscriptions average much more than that.

The success of the collection development plan will depend on a generous budget (usually much greater than is currently budgeted for media resources) and careful selection of resources. Often funds are allocated on a per pupil basis using the average daily membership of the school. Such an approach will not work unless each school in a system starts with a baseline collection. A school with fewer than 200 students needs the same access to a core group of materials in reference and other collections as a school of 2000. After all, the students and teachers need materials to support the same curriculum.

The more money that can be applied toward completing the plan, the faster the collection can be brought up to date. The principal can provide much needed support and encouragement during this five-year growth plan. The collection development plan may also be useful to demonstrate the school's needs to the Parent Teacher Organization, community groups and/or businesses in the surrounding area. Collection data can be included in grant proposals (see bibliography at end of chapter for information on writing grant proposals). In order to help prepare budget requests, dollar amounts should be attached to the collection development plan.

There are at least three formulas from which to choose to determine budget amounts:

FORMULA 1: *IMPACT* recommends that 60% of the per pupil allotment of state funds be spent on non-consumable materials available to all students and teachers through the media center. (See <http://www.ncwiseowl.org/>, follow the path through Media and Technology to *IMPACT*, ©2005). Use this formula method: 60% of state allotted funds x number of students = amount needed to determine the amount recommended. For example, 60% of 2003-2004 per pupil allotment is 60% of $46.51 = $28; thus a school of 500 students would need 500 x $28 = $14,000 per year, or a five-year total of $70,000.

FORMULA 2: The second method for determining a recommended budget is by calculating the minimum amount needed to add *one book per child,* per year (per David Loertscher's presentation at the 1998 North Carolina Association of School Librarians). If the average cost of a print resource is $25, then a school of 500 students would need $12,500 per year, or $62,500 over the five-year period of the plan to maintain, not build, the media collection.

FORMULA 3: The third method for determining a recommended budget is by basing it on accreditation standards such as Southern Association of Colleges and Schools. If a collection currently meets the standard of ten usable books per child, for example, and 300 books are discarded, the amount needed is no less than 300 x $25 = $7500 for that year to maintain accreditation.

SELECTING RESOURCES

Selecting resources should be under the guidance of the media coordinator, the technology facilitator, and the MTAC. If the school does not have a MTAC, one should be established (see the section on the MTAC in the Program Administration chapter). Selecting materials for the media and technology collection should be a committee decision based on input from the teaching staff in each school. Selection by committee is especially important when buying controversial resources.

The media coordinator and technology facilitator should keep in mind that the resources in a school serve a different function than a public library collection or any other type of library. While a public library must "cover the waterfront," the primary function of a school library media center is to support the curriculum. The curriculum includes recreational reading and information seeking, as well as curricular support. Since schools rarely have all the money they need to buy resources for the media and technology program, following the curriculum helps the MTAC make difficult decisions about what to purchase.

In addition to the *North Carolina Standard Course of Study,* selectors should use appropriate standard selection tools for the collection being developed (e.g., *Children's Catalog, Middle and Junior High Catalog, Senior High Catalog;* book review sources such as *School Library Journal* and *BookList;* selection guides such as *Infotech: The Advisory List* and the Evalutech Web site <http://www.evalutech.sreb.org/criteria/index.asp> and criteria for weeding/adding resources.

SOME GUIDING QUESTIONS FOR SELECTING RESOURCES:

1. Do the resources meet criteria and guidelines developed by the North Carolina Department of Public Instruction?

   For more information on North Carolina guidelines, refer to <http://www.evalutech.sreb.org/criteria/index_frames.htm>
2. Is this the best format for presentation of the information?
3. Is the format appropriate for this age group and ability level?
4. Can the school provide ongoing support for this format?
5. Does this format take into consideration the school's goals and objectives for its students/teachers?
6. Is this the best use of limited funds?
7. Do the items selected require adherence to State Purchase and Contract guidelines*?
8. Do technology resources meet the system's technical infrastructure requirements?

   *For more information on State Purchase and Contract guidelines, refer to <http://www.doa.state.nc.us/PandC>

> **"AN ARRAY OF TOOLS FOR ACQUIRING INFORMATION AND FOR THINKING AND EXPRESSION ALLOWS MORE STUDENTS MORE WAYS TO ENTER THE LEARNING ENTERPRISE SUCCESSFULLY AND TO LIVE PRODUCTIVE LIVES IN THE GLOBAL, DIGITAL, AND INFORMATION-BASED FUTURE THEY ALL FACE."**
>
> (Philosophy: Standard Course of Study 2004)

ADDITIONAL QUESTIONS

1. Are materials selected based on school board plans and policies?
2. Do programs provide access to local, regional, statewide, national and global information?
3. Are resources bibliographically and physically accessible?
4. Are resources developmentally appropriate?
5. Do resources reflect diversity?
6. Are resources evaluated, inventoried, and managed according to school board policies? (ISLMA, 1999, 17)

Additional review criteria for the selection of resources can be found at the Evalutech Web site <http://www.evalutech.sreb.org/criteria/index.asp>:

- Criteria for Evaluating Computer Courseware
- Criteria for Evaluating CD-ROM
- Criteria for Evaluating Web Sites
- Criteria for Evaluating Online Courses
- Criteria for Evaluating Videodiscs
- Educational Web Portals: Guidelines for Selection and Use
- Criteria for Evaluating Fiction Books
- Criteria for Evaluating Nonfiction Books
- Reviewing Books and Other Media
- Guide To Writing an Annotation for Courseware
- Professional Resources for Selection and Collection Department

SELECTING EQUIPMENT, HARDWARE, AND INFRASTRUCTURE

Selection of these resources is a joint responsibility of administrators and media and technology staff.

Equipment/hardware is required to permit access to audiovisual and computer-based instructional resources. Securing appropriate equipment/hardware in sufficient quantities to serve the needs of teachers and students is the responsibility of administrators and media and technology staff. Guidelines should be developed at the system level to ensure standardization of equipment and resources and equipment compatibility.

Making choices based on the needs of individual schools is essential. The Department of Administration, through the Division of Purchase and Contract, is charged with maintaining state term contracts for equipment, materials, supplies, and services. Schools should be aware of the options provided by current policies, procedures, and statutes for the purchase of these items with state funds.

Many aids are available to help schools. The North Carolina Department of Public Instruction (NCDPI) and the State Information Technology Services (ITS) have developed a series of technical standards, recommendations, statements of direction, and other aids to assist schools and school systems in implementing a wide range of instructional and administrative technology. The purpose of these recommendations is to provide a blueprint of what the minimum level of infrastructure (walls, wires, hubs, routers, computer hardware) should be in each school system throughout North Carolina.

For more information, refer to *North Carolina Educational Technology Plan: Technological Recommendations and Standards* at <http://tps.dpi.state.nc.us/techstandard/>

CONDUCTING AN INVENTORY

WHAT IS INVENTORY?

Inventory is an ongoing systematic procedure that verifies the location of every item in the resources collection. Conducting inventory should be part of the process of maintaining a collection of resources that meets the needs of students and teachers. Information derived from the inventory can be used to determine budget needs for collection development.

WHY INVENTORY?

An accurate inventory provides multiple benefits to a school, including:

- Helps determine budget needs for collection development
- Helps assure more appropriate selections by identifying weak areas or gaps in the collection
- Helps assess the extent to which students and teachers are provided a wide variety of resources suitable to different learning styles and curriculum areas
- Helps identify resources that need minor repairs or those that should be discarded because they are physically deteriorating, out of date, inaccurate, or duplicate

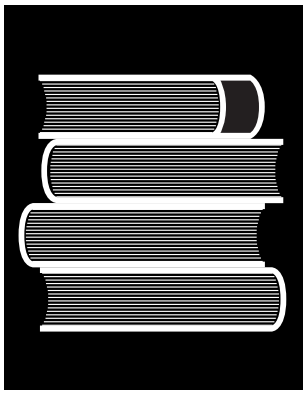
GUIDELINES FOR SCHEDULING INVENTORY

- At no time should media and technology facilities be closed when school is in session to complete the inventory process.
- Inventory can be performed throughout the year or annually.
- The schedule chosen for inventorying materials will depend on circumstances in the individual schools.

SCHOOL EQUIPMENT INVENTORY

Performed annually

- Conducted at the beginning and/or end of each school year.
- Operative condition assured at the time of inventory.
- Preventive maintenance performed periodically.
- Hardware Inventory
- Performed by the technology staff
- Media and Technology Inventory
- Performed by media and technology personnel
- Reported to NCDPI as the Annual Media and Technology Report (AMTR) <http://amtr.dpi.state.nc.us>



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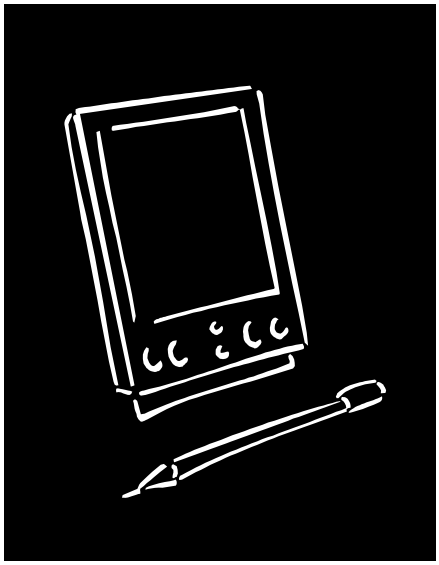
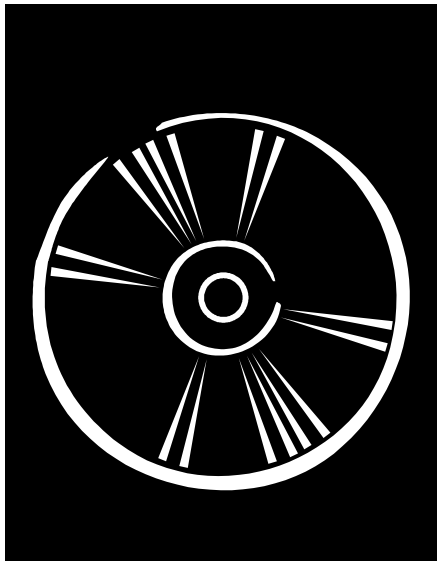


SYSTEM-LEVEL GUIDELINES



System-level Leadership

Teaching and Learning

Information Access and Delivery

Program Administration

Works Cited

SYSTEM-LEVEL GUIDELINES

This chapter, designed expressly for the system-level media and technology professional, reflects those responsibilities that are best carried out by a central office advocate, one who is certified in school library media and technology and whose daily tasks are not divided among other curriculum areas. These system-level responsibilities, however, are based on building-level practice, and reflect the support, nurturing, and decision-making that move individual program excellence to over-all LEA program excellence.

IMPACT is organized to assist the system-level professional in this quest for excellence. By referring to the other chapters, as well as to this one alone, central office staff will broaden their knowledge of and support for building-level programs so that they mirror best practice and expand the services needed to make possible information and technology literate students for the 21st Century.

SYSTEM-LEVEL LEADERSHIP

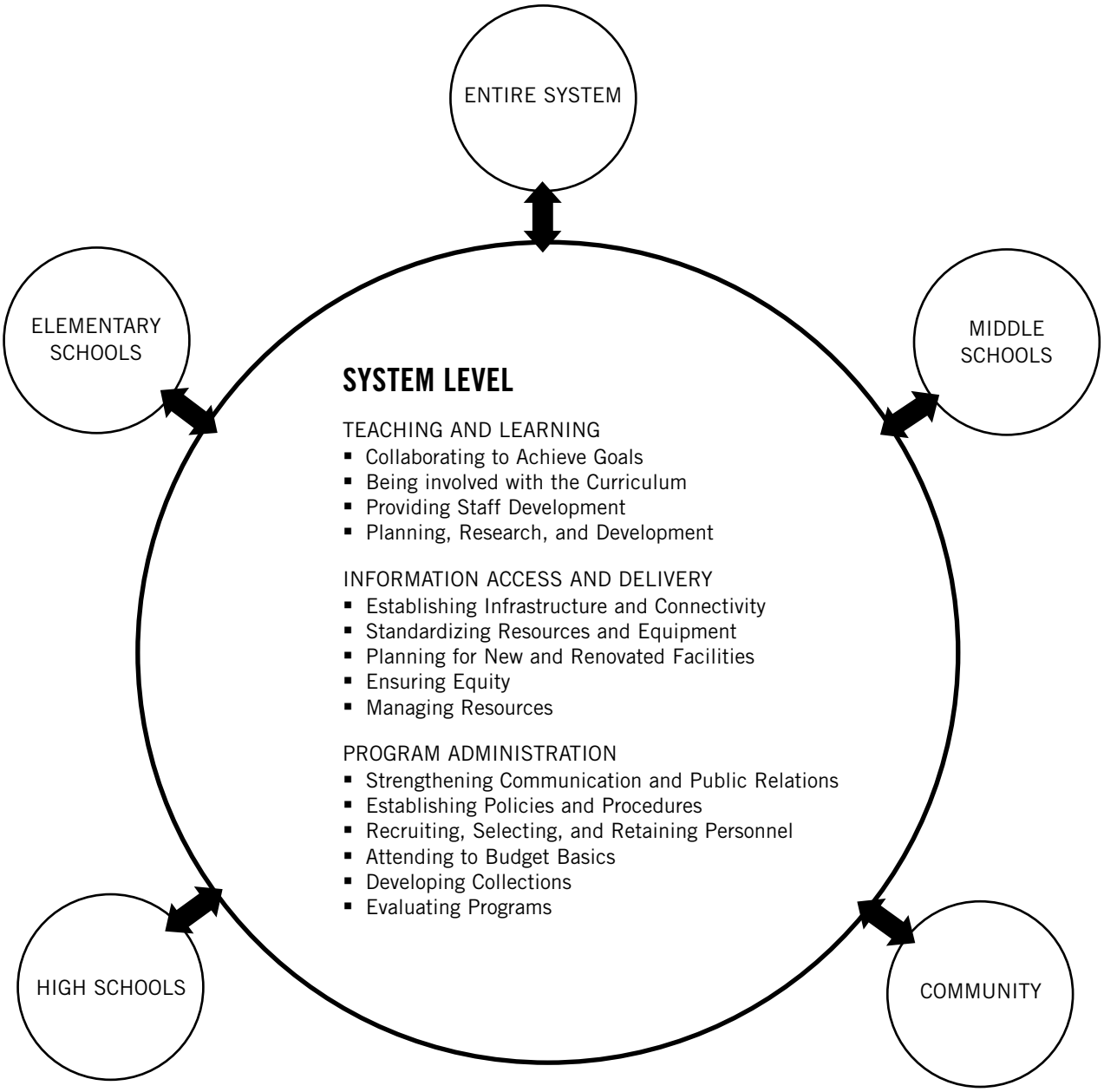
It is imperative that schools graduate students who can collaborate; solve problems; think critically; function at higher literacy levels; adapt readily to change; and create, synthesize, and apply information. A system-level advocate for the appropriate role of media and technology in the learning process can be a catalyst for developing an environment that meets individual learning needs and provides students with survival skills for the 21st Century.

System-level programs, functioning under the direction of licensed school library media directors and/or technology directors, offer a broad range of services to individual schools and system-level personnel. Through the use of media and technology, these services improve, enhance, and support learning and teacher performance. System-level leadership of media and technology programs increases the opportunities for equitable and effective programs at each school within a school system.

To develop equitable and effective media and technology programs, system-level leaders should be actively involved in teaching and learning at all levels, in developing workable and useful information access and delivery strategies, and in managing an evolving complexity of programs. In implementing these three roles, the system-level leader provides vision and demonstrates an understanding of the value and uses of collaboration through flexible access in developing media and technology programs.

AREAS FOR LEADERSHIP

1. TEACHING AND LEARNING
2. INFORMATION ACCESS AND DELIVERY
3. PROGRAM ADMINISTRATION


ENTIRE SYSTEM
ELEMENTARY SCHOOLS
MIDDLE SCHOOLS
SYSTEM LEVEL
TEACHING AND LEARNING
Collaborating to Achieve Goals
Being involved with the Curriculum
Providing Staff Development
Planning, Research, and Development
INFORMATION ACCESS AND DELIVERY
Establishing Infrastructure and Connectivity
Standardizing Resources and Equipment
Planning for New and Renovated Facilities
Ensuring Equity
Managing Resources
PROGRAM ADMINISTRATION
Strengthening Communication and Public Relations
Establishing Policies and Procedures
Recruiting, Selecting, and Retaining Personnel
Attending to Budget Basics
Developing Collections
Evaluating Programs
HIGH SCHOOLS
COMMUNITY

TEACHING AND LEARNING

Being an active participant in teaching and learning should be the system-level leader's role and professional passion. To become active participants, leaders must model the process of collaboration among disciplines, across grade levels, and within the community.

Using the collaborative model, the system-level leader participates in curriculum development in a variety of ways, such as being a contributing member of curriculum committees, a designer and promoter of literacy and computer skills continuums, and in assessing, encouraging, and consulting on staff development.

To stay abreast of contemporary developments, the system-level technology and media leaders are active researchers, consultants, and disseminators of appropriate information that will assist building-level staff in improving student achievement.

COLLABORATING TO ACHIEVE GOALS

"COLLABORATING WITH THE FULL RANGE OF SCHOOL PERSONNEL TO IDENTIFY AND SOLVE INFORMATION PROBLEMS PRESENTS A MODEL OF THE APPROACH THAT STUDENTS AND OTHERS MUST TAKE TO THRIVE IN THE INFORMATION AGE"

(AASL and AECT 1998, 51).

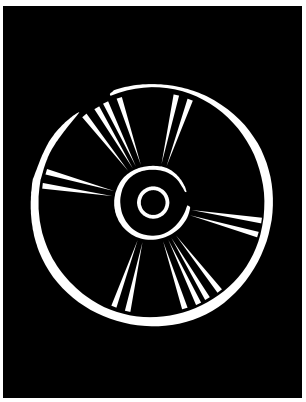
COLLABORATING TO ACHIEVE GOALS MEANS:

- Participating in curriculum decision-making at all levels;
- Participating in curriculum, budget, grade-level, subject area specialists', and principals' meetings;

  For additional information, see *North Carolina Standard Course of Study* matrix: <http://www.ncpublicschools.org/curriculum/>
- Maintaining liaison with other system-level curriculum/program directors and school-based administrators;
  - Disseminating best practices through a variety of means–print, non-print, and electronic;
  - Working with business, civic, and community groups to give these organizations the opportunity to provide resources for instruction.

BEING INVOLVED WITH THE CURRICULUM

BEING INVOLVED WITH THE CURRICULUM MEANS:



- Promoting the integration of media and technology across all curriculum areas;
- Participating, as a member of the system-level instructional team, in the development and implementation of the statewide curriculum, alternative teaching/learning strategies, and in the use of appropriate media and technology resources;
- Consulting with building-level administrative and instructional staff to ensure that carefully selected, high quality, and appropriate resources are purchased to enhance the curriculum;
- Designing and promoting–in collaboration with system and building-level media and technology professionals, administrators, and teachers–sequential information skills and computer/technology skills continuums to be integrated with classroom instruction in all curriculum areas.

PROVIDING PROFESSIONAL DEVELOPMENT

PROVIDING PROFESSIONAL DEVELOPMENT MEANS:

- Ensuring that professional development supports the integration of media and technology programs across all curriculum areas;
- Establishing and maintaining on-going assessment of professional development needs for media and technology professionals and paraprofessionals;
- Planning, providing, and evaluating follow-up support for professional development through workshops, one-on-one training, online training, and distance learning;
- Ensuring that media and technology staff at the system and building levels have opportunities to participate in subject-area professional development;
- Planning and delivering professional development that is based on the International Society for Technology in Education National Educational Technology Standards (ISTE NETS);
- Encouraging building-level media and technology staff to assess needs and to provide media and technology professional development for teachers and administrators;
- Consulting with building-level administrators, media and technology staff, and instructional staff to ensure that appropriate professional development opportunities are provided for all educators.

PLANNING, RESEARCH, AND DEVELOPMENT

PLANNING, RESEARCH, AND DEVELOPMENT MEANS:

- Promoting media and technology programs as central to the educational process as shown in the research literature;
- Consulting with building-level administrators and site-based management teams to facilitate school improvement planning and delivery;
- Researching and evaluating resources and instructional strategies that assist teachers in raising student achievement;
- Disseminating information on new developments in media and technology program research and on instructional strategies for building-level administrators and instructional staff;
- Interpreting national, state, regional, and local research, standards, and guidelines.

INFORMATION ACCESS AND DELIVERY

> "ACCESS TO INFORMATION, INFORMATION TECHNOLOGIES, AND LIBRARY FACILITIES MUST NOT BE A MAJOR BARRIER TO TEACHERS AND STUDENTS LEST THE COLLABORATIVE PROCESS BE SQUELCHED."
> (Loertscher 1999, 16)

The challenge of dealing with information access and delivery for the system-level leader means working with two requirements that seem diametrically opposed. On the one hand, collections of media and technology equipment and resources must be individualized to meet the unique needs of each school's teaching and learning program. On the other hand, fully achieving the effective use of many resources, especially digital formats, depends on an infrastructure and standardization that provide comprehensive, cost-effective, and equitable access by all students and teachers.

The demands to individualize and standardize require system-level participation in all aspects of the planning and design of both new and renovated media and technology facilities.

ESTABLISHING INFRASTRUCTURE AND CONNECTIVITY

ESTABLISHING INFRASTRUCTURE AND CONNECTIVITY MEANS:

- Providing leadership in the development of system- and building-level networks;
- Identifying, reviewing, and negotiating a variety of system- and building-level agreements for the lease or purchase of hardware and resources for all schools within the system;
- Evaluating, monitoring, and maintaining licensing agreements and compliance policies;
- Providing leadership in developing and implementing system- and building-level deployment procedures to make available up-to-date resources;
- Providing leadership in developing and implementing system- and building-level security policies and procedures to safe-guard available resources.

STANDARDIZING RESOURCES AND EQUIPMENT

STANDARDIZING RESOURCES AND EQUIPMENT MEANS:

- Providing leadership in developing, evaluating, and monitoring system- and building-level technology plans;
- Promoting the standardization of resources (including hardware and equipment) as specified in the long-range technology plan;
- Promoting the acquisition of high-quality, building-level resources that reflect the diverse nature of the individual school's community;
- Providing high quality, system-level resources that support media and technology faculty and staff in the teaching and learning process;
- Providing leadership in developing and implementing system- and building-level policies and procedures to assure equitable access to available resources.

PLANNING FOR NEW AND RENOVATED FACILITIES

PLANNING FOR NEW AND RENOVATED FACILITIES MEANS:

- Assessing needs for new and renovated facilities by gathering input from all stakeholders;
- Developing, in collaboration with the planning committee, educational specifications that describe the functions and requirements of each space in new and renovated facilities for architects, designers, and/or engineers;
- Providing leadership in the planning of new and renovated facilities by working closely with the superintendent (or his/her designee), site-based planning committees, engineers, and architects to ensure the construction of adequate media and technology facilities. (See Information Access and Delivery)

ENSURING EQUITY

ENSURING EQUITY MEANS:

- Working cooperatively with building-level administrators to assure equitable provision of resources and facilities to meet the learning needs of each school's student population
- Facilitating resource-sharing among schools and between schools and other libraries and community agencies to provide equitable access to ideas and information;
- Providing leadership in developing and implementing system- and building-level policies and procedures to ensure equitable distribution of available resources.

MANAGING RESOURCES

MANAGING RESOURCES MEANS:

- Promoting the establishment and maintenance of system-level technology training labs as a resource to demonstrate emerging technologies;
- Developing and maintaining an up-to-date professional resource collection at the system-level;
- Establishing a circulation system to share expensive, rarely used equipment and specialized materials housed in a central location;
- Promoting consideration of resource management options such as help desk or work order tracking software, centralized processing, union catalogs, and system-level tracking of fixed-asset inventory.

PROGRAM ADMINISTRATION

> "COMMUNITY RESOURCES, INCLUDING PUBLIC LIBRARIES, MUSEUMS, COLLEGES AND UNIVERSITIES, AND LOCAL BUSINESSES AND CIVIC GROUPS, ARE NATURAL ALLIES IN FOSTERING LEARNING."
>
> (AASL and AECT 1998, 127)

Technological developments, increased pressures for funding options, and the reality of more community interest and involvement in the development of school programs are bringing changes to the function of program administration.

Public relations means interpreting programs to the entire community. Budgeting means finding supplementary funding as well as projecting needs through the regular budgeting process. Collection development to provide individualized resource collections means encouraging current policies and procedures to ensure that all learners will have access to meaningful and useful information and up-to-date technology.

In an environment that is supportive of school reform, the evaluation of personnel, resources, and programs takes on new meaning and requires system-level personnel to have an intimate knowledge of evaluation techniques.

STRENGTHENING COMMUNICATION AND PUBLIC RELATIONS

STRENGTHENING COMMUNICATION AND PUBLIC RELATIONS MEANS:

- Establishing and maintaining communication and collaboration with public and academic libraries;
- Participating in community/civic organizations;
- Providing programs to interpret media and technology goals and needs for community, civic, and parent groups;
- Involving community/civic groups in technology and media needs assessment and in planning through surveys, questionnaires, and focus groups;
- Collaborating with other school systems to create user groups, resources, and support in a changing technology environment.

ESTABLISHING POLICIES AND PROCEDURES

ESTABLISHING POLICIES AND PROCEDURES MEANS:

- Providing leadership in developing system-level and building-level policies and procedures to ensure that quality teaching and learning are reflected in the selection, acquisition, and maintenance of instructional materials and equipment;
- Establishing deployment policies and procedures to ensure compatibility between hardware infrastructure and resources;
- Assuring equitable access to media and technology resources to the entire school community;
- Establishing security policies and procedures for a safe technology environment;
- Consulting with building-level media and technology personnel in developing procedures for program management at the building level;
- Consulting with building-level media and technology and instructional staff to establish policies and procedures for the maintenance of attractive, adequate, up-to-date collections of resources.

RECRUITING, SELECTING, AND RETAINING PERSONNEL

RECRUITING, SELECTING, AND RETAINING PERSONNEL MEANS:

- Evaluating and adopting State Board-approved job descriptions for media and technology personnel;
- Communicating LEA media and technology personnel needs to higher education preparation programs throughout the state;
- Promoting the development of plans that include stipends, supplements, and other incentives to recruit and retain media and technology personnel;
- Ensuring that building-level, initially licensed media and technology personnel have appropriate mentors;
- Ensuring that building-level media and technology personnel have a support structure for professional growth and development in alignment with the State Board-approved professional development standards;
- Promoting awareness of State Board-approved evaluation instruments for building-level media and technology personnel;
- Consulting with building-level administrators as requested in the evaluation of building-level media and technology staff;
- Providing professional development to building-level administrators in the use of appropriate, State-Board-approved evaluation instruments.

ATTENDING TO BUDGET BASICS

ATTENDING TO BUDGET BASICS MEANS:

- Providing leadership in the development of a budget at the system- and building-levels that addresses total cost of ownership (TCO). This helps ensure equitable and appropriate funding for the media and technology programs including licensing, maintenance, repair, replacement, contracts, consultants, and professional development;
- Promoting the concept of consolidation of funds at the system-level to address total cost of ownership (TCO) issues, including cost effective acquisition of resources to meet student needs;
- Securing supplementary funding sources for media and technology programs such as federal, state, and private grants, business partnerships, and endowments;
- Creating an annual operational budget to sustain the system- and building-level media and technology programs.

DEVELOPING COLLECTIONS

DEVELOPING COLLECTIONS MEANS:

- Consulting with building-level media and technology and instructional staff to develop accessible collections of print, nonprint, and digital resources that will meet the curricular, developmental, and personal needs within the individual schools;
- Consulting with building-level media and technology and instructional staff to maintain attractive, adequate, up-to-date collections of resources;
- Consulting with building-level media and technology staff to develop a system-level accessible collection of print, non-print, and digital resources that will meet their needs;
- Providing opportunities for review and evaluation of new media and technology resources;
- Developing procedures for requesting and evaluating resources to ensure their compatibility with system network configurations;
- Disseminating information on evaluation criteria for selection of resources.

EVALUATING PROGRAMS

EVALUATING PROGRAMS MEANS:

- Providing leadership and vision for evaluating the overall effectiveness of media and technology programs;
- Facilitating formative and summative evaluation as a vital component in teaching and learning, information access and delivery, and program administration;
- Aggregating evaluation data to use in planning and advocacy for media and technology programs;
- Assisting building-level media and technology staff in evaluating their interactions with teachers, students, administrators, and parents.

"REGULAR AND SYSTEMATIC EVALUATION PROVIDES THE BASIS FOR DECISIONS REGARDING THE DEVELOPMENT, CONTINUATION, MODIFICATION, OR ELIMINATION OF POLICIES AND PROCEDURES, ACTIVITIES, AND SERVICES, AND BEGINS ANEW THE PLANNING PROCESS. THE ALLOCATION OF RESOURCES AND THE QUALITY AND CONSISTENCY OF STAFF PERFORMANCE ARE OF PRIMARY IMPORTANCE IN PROGRAM REVIEW."

(AASL and AECT 1988, 48)

"ASSESSMENT IS COLLABORATIVE AND BASED ON SOUND PRINCIPLES RELATED TO LEARNING AND TEACHING, INFORMATION LITERACY, AND PROGRAM ADMINISTRATION. ABOVE ALL, ASSESSMENT FOCUSES ON HOW WELL THE PROGRAM FOSTERS STUDENTS' LEARNING AND THEIR DEVELOPMENT INTO ACTIVE, INDEPENDENT MEMBERS OF THE LEARNING COMMUNITY WHO USE INFORMATION EFFECTIVELY, CREATIVELY, AND RESPONSIBLY."

(AASL and AECT 1998, 108)

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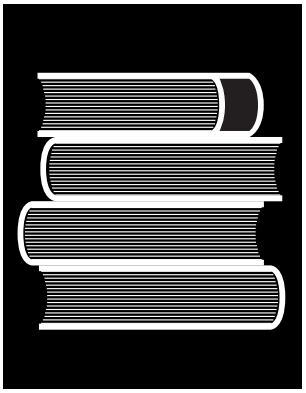

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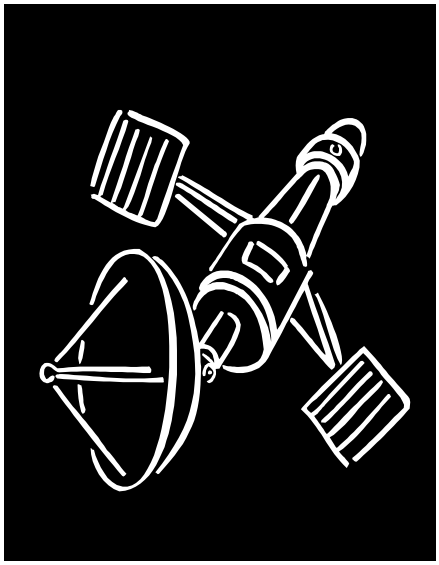


RESEARCH AND EVALUATION

Compelling Data from Current Research

Research

Evaluation

How to Evaluate Programs

Using Output Measures for Evaluation

Reference Chart: Measures and What They Support

Research and Evaluation Models

Program Evaluation Rubrics

Works Cited

RESEARCH AND EVALUATION

COMPELLING DATA FROM CURRENT RESEARCH

"13,000 KIDS CAN'T BE WRONG" noted Professors Ross Todd, and Carol Kuhlthau of Rutgers University (Whelan, 2004, 46). In a study of 13,123 students from 39 effective school libraries in Ohio, Todd and Kuhlthau found that an effective school library, lead by a credentialed school librarian who has a clearly defined role in information-centered pedagogy, plays a critical role in facilitating student learning for building knowledge (Todd, 2004, 6).

Existing research into media and technology programs offers us a baseline of information to begin our own building-, system-, and state-level evaluations. Some of the most compelling data that illustrates how media and technology programs impact student achievement is summarized in information that follows.

Since 1993 when Keith Curry Lance, Linda Welborn, and Christine Hamilton-Pennell first published the Colorado Study, *The Impact of School Library Media Centers on Academic Achievement,* school library media coordinators have had baseline research on the importance of school librarians and their programs.

LIBRARY MEDIA CENTER STAFFING

TEST SCORES TEND TO BE HIGHER WHEN THERE IS:

- A librarian
- A full-time librarian rather than a part-time one
- A part-time librarian rather than no librarian at all

LIBRARY MEDIA CENTER HOURS OPEN

HIGHER LEVELS OF LIBRARIAN STAFFING LEAD TO:

- Longer LMC hours of operation,
- Higher levels of library media staff activity
- Higher student usage, and consequently, higher test scores

STAFF ACTIVITIES

The higher the level of librarian staffing, the greater the percentage of library media staff hours dedicated to:

- Delivering library/information literacy instruction to students,
- Planning instructional units cooperatively with teachers, and
- Providing in-service training to teachers and other staff.
- Regardless of the level of librarian staffing, the more library media staff time devoted to these activities, the higher the test scores.

IN OTHER RESEARCH LANCE ALSO FOUND:

LIBRARY MEDIA PROGRAM USAGE

- The more often students receive library/information literacy instruction in which library media staff are involved, the higher the test scores.

TEST SCORES ALSO TEND TO BE HIGHER WHEN:

PARTNERSHIPS

- There is a cooperative relationship between the LMC and the public library

TECHNOLOGY

- The library media program provides online access to information—particularly the facilities required to reach the Internet and the World Wide Web.

POLICY

- The MLC has a collection development policy that addresses reconsideration of materials.

(Lance, et al. 1999, 5-6)

Since 2000, the Lance study has been replicated in 14 states: Alaska, Arkansas, Florida, Iowa, Illinois, Massachusetts, Missouri, Minnesota, Michigan, North Carolina, New Mexico, Oregon, Pennsylvania and Texas.

The results from the other state studies on the impact of school library media programs on student achievement have validated Lance's original study. For instance:

MICHIGAN	IN MIDDLE SCHOOLS, SEVENTH GRADE READING SCORES USUALLY RISE AS SCHOOL LIBRARIES REPORT: ▪ higher numbers and weekly hours of librarian and total library staff; ▪ offering more weekly hours for flexible access/scheduling; ▪ librarians spending more time planning and teaching cooperatively with classroom teachers, and providing in-service training to teachers; ▪ larger collections of print volumes and video materials; ▪ access to more library and school computers that connect to Access Michigan, library catalogs and licensed databases, and the Internet and the World Wide Web; ▪ more frequent individual and group visits to the library; and ▪ spending more on library operations. (Rodney, Lance, Hamilton-Pennell, 2003)
NEW MEXICO	ACHIEVEMENT TEST SCORES TEND TO RISE WITH INCREASES IN: ▪ school librarian and total library staff hours per 100 students; ▪ print volumes per student; ▪ periodical subscriptions, video materials, and software packages per 100 students; and ▪ school library expenditures per student. (Lance, Rodney, and Hamilton-Pennell, 2003, VII)
PENNSYLVANIA	READING TEST SCORES INCREASE WITH INCREASES IN: ▪ school librarian staff hours; and ▪ support staff hours. TEST SCORES INCREASE AS SCHOOL LIBRARIANS ▪ teach cooperatively with teachers; ▪ integrate information literacy skills standards and curriculum; ▪ provide in-service training to teachers; ▪ serve on standards committee; ▪ serve on curriculum committee; and ▪ manage information technology. (Lance, Rodney, and Hamilton-Pennell, 2000, 6-7)

THE ROLE OF TECHNOLOGY

Technology has an important role to play in K-12 education, but it will not solve all educational problems. Technology can:

- Make learning more interactive.
- Enhance the enjoyment of learning.
- Individualize and customize the curriculum to match learners' developmental needs as well as personal interests.
- Capture and store data for informing data-driven decision making.
- Enhance avenues for collaboration among family members and the school community.
- Improve methods of accountability and reporting.

Ultimately technology may transform the educational content and motivate students toward life-long learning. (NCREL 1999)

For technology to play a positive role, the following factors must be given consideration:

- The success or failure of technology is more dependent on human and contextual factors than on hardware or software. The extent to which teachers are trained to use computers to support learning plays a role in determining whether or not technology has a positive impact on achievement.
- The success or failure of technology involves seeing it as a valuable resource that requires determining where it can have the highest payoff and then matching the design of the application with the intended purpose and learning goal.
- The success of technology depends on having significant critical mass numbers and types of technology applications that are appropriate to the learning expectations of the activity.
- The most pervasive perception among teachers is that computers have improved the climate for learning by increasing student motivation in subjects for which they use computers.

  (NCREL 1999)

HUMAN AND CONTEXTUAL FACTORS	THE MOST IMPORTANT FACTOR AFFECTING STUDENT LEARNING IS THE TEACHER. (Wright, Horn, Sanders, 1997, 63) TEACHERS' BELIEFS WILL DETERMINE THE EXTENT TO WHICH THEY WILL USE THIS MOTIVATING TECHNOLOGY IN THE CLASSROOM. (Smita and Leonard, 2002, 41)
MATCHING THE DESIGN OF THE APPLICATION WITH THE INTENDED PURPOSE AND LEARNING GOAL	THE FINDINGS FROM THESE STUDIES SHOW THAT COMPUTERS AND TECHNOLOGY CAN BE AN IMPORTANT COMPONENT OF EDUCATIONAL REFORM AND RELATED TO STUDENT LEARNING. THE RESULTS CLEARLY SUPPORT THE FINDINGS FROM OTHER CATEGORIES OF RESEARCH THAT INDICATE THAT COMPUTERS AND TECHNOLOGY ALONE WILL ACCOMPLISH LITTLE, AND THAT HOW IT IS USED AND HOW A PARTICULAR PROGRAM IS PLANNED AND IMPLEMENTED IS EQUALLY, IF NOT MORE, IMPORTANT. (Fouts, 2000, 29).
SIGNIFICANT CRITICAL MASS NUMBERS AND TYPES OF TECHNOLOGY APPLICATIONS	WE SEE THAT AS THE NUMBER OF COMPUTERS AVAILABLE IN THE CLASSROOM GOES UP, SO DOES THE USE OF COMPUTERS . . . IF TEACHERS HAVE COMPUTERS IN THEIR ROOM, THEY USE THEM; IT THEY DON'T HAVE THEM, THEY DON'T. (Norris and Soloway, 2003, 60) OTHER DATA SUGGEST THAT SCHOOL TECHNOLOGY EXPENDITURES ON EQUIPMENT, TRAINING, AND SUPPORT INFLUENCE TEACHERS' DECISIONS ON HOW TO USE TECHNOLOGY IN SCHOOL. (Anderson and Becker, 2001)
INCREASING STUDENT MOTIVATION	THE COMPUTER, IN EFFECT, GAVE ADDED INTEREST AND MOTIVATION WITHIN THE WRITING PROCESS TO STUDENTS IN REACHING THEIR FINAL OUTCOMES. THE USE OF TECHNOLOGY GIVES THEM A SENSE OF EMPOWERMENT AND REWARD AS THEY GO THROUGH THE WRITING PROCESS. (Daniels, 2004, 172)

RESEARCH

EVIDENCE-BASED EDUCATION

Grover J. (Russ) Whitehurst, Assistant Secretary of Education, defines evidence-based education as "the integration of professional wisdom with the best available empirical evidence in making decisions about how to deliver instruction" (Student Achievement and School Accountability Conference, October 2002). He further acknowledges that

WITHOUT PROFESSIONAL WISDOM EDUCATION CANNOT

- adapt to local circumstances
- operate intelligently in the many areas in which research evidence is absent or incomplete

[and]

WITHOUT EMPIRICAL EVIDENCE EDUCATION CANNOT

- resolve competing approaches
- generate cumulative knowledge
- avoid fad, fancy, and personal bias

It is difficult to implement an experiential, instructional intervention within a controlled environment in education. Consequently, collecting and analyzing empirical data to support and modify instructional practice has been viewed by education practitioners and researchers as problematic. For education practitioners to combine professional wisdom with professional knowledge, they must be able to critically determine if the evidence of a school or classroom reform is valid and if that particular reform is applicable to their situation. In order for teachers and administrators to be successful in this standards-based era of education, they must be able to recognize sound empirical research and interpret their own school data. Although it is not possible to provide in-depth procedures for reviewing data and conducting research here, a brief explanation is provided on the most prominent, current methods of inquiry and data collection in education: scientifically-based research, action research, and data-driven decision-making.

SCIENTIFICALLY BASED RESEARCH

According to Title IX PART A (SEC. 9101) of the No Child Left Behind legislation, "scientifically based research:"

(A) means research that applies rigorous, systematic, and objective procedures to obtain reliable and valid knowledge relevant to educational activities and programs; and

(B) includes research that -

(i) employs systematic, empirical methods that draw on observation or experiment;

(ii) uses rigorous data analyses that are adequate to test the stated hypotheses and justify the general conclusions drawn;

(iii) relies on measurements or observational methods that provide reliable and valid data across evaluators and observers, across multiple measurements and observations, and across studies by the same or different investigators;

(iv) is evaluated using experimental or quasi-experimental designs in which individuals, entities, programs, or activities are assigned to different conditions and with appropriate controls to evaluate the effects of the condition of interest, with a preference for random-assignment experiments, or other designs to the extent that those designs contain within-condition or across-condition controls;

(v) ensures that experimental studies are presented in sufficient detail and clarity to allow for replication or, at a minimum, offer the opportunity to build systematically on their findings; and

(vi) has been accepted by a peer-reviewed journal or approved by a panel of independent experts through a comparably rigorous, objective, and scientific review.

School leaders and educators who receive federal funds and work with outside evaluators and researchers need to recognize strong scientifically based research practices. One source that identifies "scientifically based interventions (studies)" is the What Works Clearinghouse (WWC). Contracted by the Department of Education, Institute of Sciences, the What Works Clearinghouse

> established a set of standards for the review of experimental and quasi-experimental research….[Using these standards] the WWC identifies studies that provide the strongest evidence of effects: primarily well conducted randomized controlled trials and regression discontinuity studies, and secondarily, quasi-experimental studies of especially strong design (Retrieved on May 17, 2005 from the What Works Clearinghouse http://w-w-c.org/reviewprocess/standards.html).

ACTION RESEARCH

Action research involves the in-depth study of one's own classroom or school over an established period of time. In action research, the researcher (i.e. teacher, technology facilitator, media coordinator) is not removed from the intervention or the environment but, rather, is a key component of either the intervention or the environment. Like more complex research methodologies, action research involves the systematic collection and analysis of data.

ACTION RESEARCH INVOLVES:

- Identifying a problem or issue.
- Researching current literature on the issue.
- Designing a strategy to address the issue.
- Implementing the designed intervention.
- Gathering and analyzing data.
- Taking action and sharing results.

It is important to remember that at each stage of action research, the researcher is expected to reflect, but this is especially important at the completion of the research study. Researchers should reflect on their own learning and the application of this learning to the future of classroom or program practice. Action researchers should be encouraged to document and share both their process and the discoveries of their research. Sharing action research can include article publications and conference presentations.

DATA-DRIVEN DECISION MAKING IN THE MEDIA AND TECHNOLOGY PROGRAM

MEASURING THE MEDIA AND TECHNOLOGY PROGRAM

The school library media coordinator and technology facilitator should collect key data to measure the status and progress of the program. Such data should include, but not be limited to:

- Media Center Collection Statistics (collection age, circulation, titles per student, etc.)
- Equipment Inventory and Information (age of equipment, computers per student, computer lab usage, etc.)
- Numbers and types of requests for assistance, percentage of requests fulfilled and unfulfilled
- Computer Skills Test Scores
- AMTR and TCO data

The media coordinator and technology facilitator should use data to advocate for budgetary resources for the program and to demonstrate the impact of the program on students.

USING SCHOOL DATA FOR PROGRAM DECISIONS

The media coordinator and technology facilitator should use data to make key decisions concerning the program. Such data should include, but not be limited to:

- School Improvement Plan goals
- Student Testing Results
- Safe Schools Plan
- District and School Technology Plans
- Faculty/Staff Needs Assessments
- AMTR and TCO data

The media coordinator and technology facilitator should use this data to decide such issues as:

- Integration/Instructional Focus
- Grade Level Collaboration Priorities
- Purchasing Priorities
- Professional Development Offerings

EVALUATION

The evaluation of building- and system-level programs is one of the most important responsibilities of school library media and technology professionals. In this age of accountability, we must have data to illustrate the effectiveness of our media and technology programs. It is critical that we have the data to demonstrate how quality media and technology programs contribute to student achievement and effective teaching within a school.

Because we value education, we should measure it. We owe it to all teachers, children, and the community, as well as ourselves, to continue to document the impact of media and technology programs on teaching, learning, and, ultimately, student achievement. This section offers a variety of information to assist educators in the evaluation process: strategies for assessing individual programs, rubrics for program evaluation, and the performance evaluation instruments for professional staff. Choosing to use these resources is a commitment to program improvement!

"EDUCATION COUNTS IN THE UNITED STATES. IT COUNTS BECAUSE EVERY ELEMENT OF PERSONAL WELL BEING, SOCIAL PROGRESS, AND ECONOMIC DEVELOPMENT IS BOUND INEXTRICABLY TO KNOWLEDGE, LEARNING, AND SKILL. BECAUSE WE VALUE EDUCATION WE SHOULD MEASURE IT. . . . [WE BEGIN TO VALUE ONLY WHAT WE CAN MEASURE. WE MUST LEARN TO MEASURE WHAT WE VALUE RATHER THAN VALUING WHAT WE CAN EASILY MEASURE"

(Ralph 1991).

HOW TO EVALUATE PROGRAMS

The development of any school library media and technology program involves formative and summative evaluation through the collection of data over time and the analysis/synthesis of the data to make informed decisions regarding the future direction of the program. It is important to create a plan with specific indicators, methods/measures, benchmarks, and findings delineated.

Formative evaluation is ongoing throughout the year. Devices to aid in the collection of this data include rubrics designed to measure *IMPACT* components, benchmarks, and output measures.

Summative evaluation reviews formative data to determine the extent to which pre-established program goals have been achieved. Summative evaluation should occur annually. There are many reasons why the evaluation of media and technology programs is difficult, most specifically:

VARIETY AND COLLABORATION MAKE ISOLATION OF PROGRAMS DIFFICULT.

1. Good media and technology resources and programs are part of a school's infrastructure, thoroughly infused and embedded in a school's overall approach to teaching and learning. Good media and technology programs and resources acknowledge the wide variety of learning and teaching styles that make up a school building and address ways to make each person—student and teacher—successful. This success translates into increased self-esteem, higher motivation, and, ultimately, student achievement.
2. Truly successful media and technology programs are based on collaboration among the media coordinator, the technology facilitator, and the individual classroom teacher. Because collaboration acknowledges the contributions of all to the teaching/learning process, isolation of media and technology programs once again is a difficult process.

STUDYING A MOVING TARGET IS DIFFICULT.

3. Finally, the perception exists that research into media and technology resources and programs is the study of "a moving target, [that] rapid technological changes and advances in [hardware and] software development have made some findings obsolete even before they are published" (NCREL 1999, 1).

GUIDELINES FOR EVALUATION

Experience has produced a variety of guidelines to assist us in program evaluation. The key to valid evaluation of school library media and technology programs is to measure the results, not the resources and technology itself. In an effort to assist states in justifying the investment in technology, the U.S. Department of Education held a series of conferences on evaluation in 1999 and 2000. The following steps to evaluation in general, and to technology evaluation specifically, have resulted from these conferences:

GOALS

- Where do we want to go?

COMPARISONS

- Where are we now?
- Where were we before?
- Where are others like us?
- Are there others like us who are ahead of us?

LEARNING

- What have we learned from our own experience?
- If there are others like us who are ahead of us, what are they doing?
- What does the research say?
- What does "best practice" suggest?

(Van der Ploeg 2000)

STEPS TO EVALUATION

1. Set clear, specific, attainable goals.
2. Build multiple measures; keep them simple; explain them.
3. Measure all persons.
4. Collect, record, and store the data.
5. Report the data, often; draw pictures.
6. Know what the measures miss.
7. Measure resources as well as problems.
8. Focus first on comparisons over time and then on comparisons to others.
9. Study variability as well as averages.
10. Enlist a critical friend, a faithful witness.
11. Try something new.

(Van der Ploeg 2000)

USING OUTPUT MEASURES FOR EVALUATION

EVALUATION, SUPPORT, AND FUNDING

Good schools require school library media and technology programs that are integral to learning and teaching; however, in times of limited revenues and increasing demands, media and technology programs must compete with other educational priorities to obtain sufficient resources. To ensure that administrative support and financial resources are provided for quality programs, it is critical that media and technology personnel regularly evaluate and document all aspects of their programs. Research and data are needed to demonstrate how quality media and technology programs contribute to student learning and effective teaching.

USE AND AVAILABILITY OUTPUT MEASURES

For many years, public libraries have used "output measures" to evaluate and measure the effectiveness of programs and services. This process approach to evaluation was adapted by Frances Bryant Bradburn from her book, Output Measures for School Library Media Programs.

Output measures provide the data needed to document how the resources and services in the school library media center and in all areas of technology are used, and how well the program meets the needs of its patrons. "Use measures" provide data about how often resources or services are used by patrons. "Availability measures" document not only whether requested materials and services are available, but also whether the media coordinator and technology facilitator are accessible to assist students or to participate in collaborative activities with teachers.

OUTPUT MEASURES DOCUMENT:

- How resources and services are used
- How well the program meets the needs of its patrons

USE MEASURES DOCUMENT:

- How often resources or services are used

AVAILABILITY MEASURES DOCUMENT:

- If requested materials and services are available
- If the media coordinator/technology facilitator is accessible to assist

PUTTING OUTPUT MEASURES TO WORK

Using output measures, media and technology personnel can:

- Document which aspects of an individual media and technology program (or across programs in a district) are functioning well and which aspects of the program(s) need attention
- Evaluate how well collections and services support curricular needs
- Produce a compelling argument for maintaining/ increasing staff and budget
- Justify the value and need for flexibly accessed media and technology programs

MAKING SURE YOU DETERMINE AND OBTAIN TYPE OF INFORMATION NEEDED

Data collection for some measures is relatively simple. For others, the process may take significantly more time and effort. It is important, therefore, to determine the information necessary to justify recommendations or "to make a case" and to select ONLY the measures that will provide the most compelling arguments.

IMPORTANT MEASURES

Following are measures for evaluating and improving school library media and instructional technology programs.

MEASURES FOR EVALUATING AND IMPROVING SCHOOL LIBRARY MEDIA AND TECHNOLOGY PROGRAMS

Adapted From *Output Measures for School Library Media Programs* by Frances Bryant Bradburn with permission of Neal-Schuman Publishers, Inc.

FACILITIES USE MEASURE

The amount of time a number of individuals are using the media center, computer labs, wireless labs, or video studio on a daily, weekly, monthly, or yearly basis. For many to whom these data will be reported, how the media and technology facilities are being used at a given moment is important information to tally as well.

TYPES OF MATERIALS USE MEASURES

MATERIALS USE MEASURES
Calculate the specific resources being used within and outside the school library media center.

CIRCULATION RATE
Gives the number of resources checked out on a daily, weekly, or monthly basis. This figure can be broken down to reflect specific areas of the collection or individual student and teacher populations. It can also be used to track circulation of various technologies: wireless laptop carts, portable keyboards, PDAs, GPS peripherals. (Separate collection and technology statistics.)

IN-LIBRARY USE RATE
Tallies the number of resources being used within the media center at a specific time. As the name implies, these materials do not circulate, but are being used within the library by students and/or teachers.

ELECTRONIC RESOURCES HIT RATE
Calculates the number of times students and teachers use stand-alone or networked electronic resources both within the media center or, if resources are networked to individual classrooms, throughout the school. (May be provided by vendor)

TURNOVER RATE
Provides the average number of times a given item within a collection circulates during the year.

FURNITURE AND EQUIPMENT USE RATE
Estimates the amount of time a piece of furniture or equipment is being used during the school day.

CURRICULUM SUPPORT REQUEST RATE
Calculates the number of requests from teachers that deal directly with their need for teaching support. This figure is most helpful when paired with the actual request for resources or services.

AVAILABILITY MEASURES

RESOURCE AVAILABILITY MEASURES.

These are calculations designed to reflect the number of materials available for students and teachers.

POTENTIAL CURRICULUM SUPPORT RATE
Measures the collection's potential to support a specific area or areas of an individual school's curriculum.

CURRICULUM SUPPORT FILL RATE
Figures how effectively the existing media and technology collection is supporting a school's curriculum. This measure can be calculated from both the teacher's and the student's perspective.

INDEPENDENT READING/INFORMATION FILL RATE
A student-generated statistic that monitors how well the collection is meeting the leisure reading/activity needs of a student population.

SCHOOL LIBRARY MEDIA COORDINATOR/ TECHNOLOGY FACILITATOR AVAILABILITY MEASURES.

These measures illustrate whether the school library media coordinator and/or the technology facilitator are available to assist both students and teachers at point of need.

PLANNING OPPORTUNITY RATE
Gives the percentage of time a media coordinator and/or the technology facilitator are able to completely fill a teacher's or team's request for assistance in planning a lesson or unit of instruction.

TEACHING AVAILABILITY MEASURE
Provides the percentage of time the media coordinator and/or the technology facilitator are available to work with individuals, small groups, or whole classes at the specific request of a teacher. Daily fixed schedules are not included in this calculation.

TROUBLESHOOTING REQUEST RATE
Represents any request for assistance in solving an equipment problem.

PROFESSIONAL DEVELOPMENT AVAILABILITY MEASURES.

This is a calculation of the number and kind of professional development opportunities available to an educational community.

PROFESSIONAL DEVELOPMENT REQUEST RATE
Lists the percentage of professional development activities offered compared to those requested by school personnel.

PROFESSIONAL DEVELOPMENT ATTENDANCE RATE
Calculate the percentage of staff attending specific professional development opportunities compared to potential participants.

REFERENCE CHART: MEASURES AND WHAT THEY SUPPORT

Reprinted with permission of Neal-Schuman Publishers, Inc. from *Output Measures for School Library Media Programs* by Frances Bryant Bradburn.

SUPPORT-MEASURES	BUDGET	FLEXIBLE SCHEDULE	PLANNING TIME	STAFFING	EXISTING DATA	EFFORT REQUIRED+	TIME FRAME
FACILITIES USE RATE	X	X		X		Medium	Specified
CIRCULATION RATE	X	(X)		X	X*	Low	Specified
IN-LIBRARY USE RATE	X	X	(X)	X		Medium	Specified
ELECTRONIC RESOURCE HIT RATE	X			X	X*	Low	Specified
ONLINE RESOURCES SUCCESS RATE	X			X		High	Specified
TURNOVER RATE	X				X*	Low	Specified
FURNITURE EQUIPMENT USE RATE	X	(X)		X		Medium	Specified
POTENTIAL CURRICULUM FILL RATE	X		(X)	(X)		High	Specified
CURRICULUM SUPPORT FILL RATE	X	(X)	(X)	(X)		High	Specified
INDEPENDENT READING-INFORMATION FILL RATE	X	(X)	(X)	(X)	Survey	High	Specified
MEDIA COORDINATOR/ TECHNOLOGY FACILITATOR AVAILABILITY RATE		X	X		Survey	High	Specified
PLANNING OPPORTUNITY RATE		X	X	X		High	Over time
TEACHING AVAILABILITY RATE		X		X		High	Over time
TROUBLESHOOTING RATE		X	X			High	Specified or Over time
PROFESSIONAL DEVELOPMENT REQUEST RATE	X	X				Medium	Over time
PROFESSIONAL DEVELOPMENT ATTENDANCE RATE	X	(X)				Low	Specified

* With automated circulation systems

\+ Effort required:

Low – data either already available or easily calculated. **Medium** – Data can be gathered while media coordinator, technology facilitator, or designee does other tasks: minimum interruption. **High** – Requires extra time and effort to gather and calculate data. These measurements, together with those specifically targeted to address a certain issue, can be used to make a stronger case.

RESEARCH AND EVALUATION MODELS

COMPREHENSIVE PROGRAM EVALUATION MODEL

THE SEIR*TEC MODEL FOR FORMATIVE EVALUATION

The SEIR*TEC Model for Formative Evaluation is primarily intended to guide formative evaluation of programs that apply technology to teaching and learning activities in classrooms (SEIR*TEC Framework, 2004).

It is hoped that this framework will be valuable for a variety of reasons:

- Evaluation is a relatively expensive undertaking and is generally under-funded as a component of education technology initiatives.
- Granting agencies are raising expectations of accountability that come with technology-focused awards.
- The collective understanding of "how technology works" to improve teaching and learning has expanded, and old assumptions may no longer hold.
- Most educators, schools, and local education agencies lack the internal capacity to effectively evaluate complex technology programs.

The framework provides a step-by-step approach to help non-evaluators plan and implement efficient, well-founded, theoretically sound evaluations of technology programs in education settings by breaking a complex process into manageable pieces:

- Planning the evaluation
- Explaining how the program is supposed to work
- Establishing program goals, objectives, and strategies
- Developing the basic components of an evaluation plan
- Identifying data sources for the evaluation
- Implementing the evaluation effort
- Communicating the evaluation results

It also provides tested resources, data-collection instruments tailored to technology implementations, and examples to guide the above steps.

TECHNOLOGY FOCUSED EVALUATION MODELS

NCREL ENGAUGE MODEL

The NCREL enGuage Model is designed to help districts and schools plan and evaluate the system wide use of educational technology. In doing so EnGauge provides insights into tracking progress with technology at three levels: students, educators and systems. Their resources include online evaluation and assessment tools. Visit <http://www.ncrel.org/engauge/> for more information (enGauge®: A Framework for Effective Technology Use).

COLLABORATION LED BY LOCAL EVALUATORS: A PRACTICAL, PRINT- AND WEB-BASED GUIDE

To understand the overall process involved in establishing a system of evaluation, visit <http://www.neirtec.org/products/evaluation_guide/neirtec_evalguide.pdf.> (Collaboration Led by Local Evaluators: A Practical, Print- and Web-Based Guide). This would be particularly effective to use within the system-level technology planning process.

TECHNOLOGY IN SCHOOLS: SUGGESTIONS, TOOLS AND GUIDELINES FOR ASSESSING TECHNOLOGY IN ELEMENTARY EDUCATION

Key audiences for this handbook are those people who collect, store, publish, or use information about technology in its applications in schools and districts. The guide is organized around key questions that the Technology in Schools Task Force authors have determined to be central, pertaining to the type, availability, and use of technology in education systems. (*Technology in Schools,* 2005 <http://nces.ed.gov/pubs2003/tech_schools/>).

USER-FRIENDLY HANDBOOK FOR MIXED METHOD EVALUATIONS

Provided by the National Science Foundation (NSF), this document outlines the evaluation process recommended for NSF-funded projects. Visit <http://www.ehr.nsf.gov/EHR/REC/pubs/NSF97-153/start.htm> for more information. *(User-Friendly Handbook for Mixed Method Evaluations*)

PROGRAM EVALUATION RUBRICS

One of the most effective ways to determine how well media and technology programs are meeting the needs of students, teachers, staff, and community is through self-reflection. While teacher and student surveys certainly provide a realistic assessment of the daily impact of programs and services on the teaching and learning process, an objective comparison of an individual program with state and national standards and recommendations offers an opportunity for self-assessment.

The rubrics that follow, while based on the chapters found in *IMPACT*, provide a global perspective of school library media and technology programs at both the building and system levels. Use these rubrics to reflect on your individual program. Then begin the process of developing your vision of the future—outstanding school library media and technology programs that impact teaching and learning for high student achievement and life-long learning.

NOTE: The rubric comparison points are Outstanding, Developing, Minimum, and Below Minimum. All North Carolina media and technology programs must have the expectation that they will be at least at a minimum level for successful teaching and learning to occur. If this is not the case, immediate action should be taken by media and technology personnel, the principal, and the Media and Technology Advisory Committee.

MEDIA AND TECHNOLOGY PROGRAM EVALUATION RUBRICS

NOTE: **"Most"** represents more than half and **"some"** represents less than half.
Terms designated with an asterisk* are defined at the end of the document.

TEACHING AND LEARNING

	OUTSTANDING	DEVELOPING	MINIMUM	BELOW MINIMUM
INSTRUCTIONAL DELIVERY – Meaningful instruction in the full range of concepts and skills that students need to interact effectively with all information resources.				
INTEGRATION	Information and Computer/Technology skills are integrated with all curriculum areas and grade levels.	Information and Computer/Technology skills are integrated across most curriculum areas and grade levels.	Information and Computer/Technology skills are integrated across **core curriculum areas*** and some grade levels.	Information and Computer/Technology skills are taught in isolation from curriculum areas.
DIFFERENTIATED INSTRUCTION	**Differentiated instruction*** is addressed through instructional strategies designed for all students.	**Differentiated instruction*** is addressed through instructional strategies designed for most students.	**Differentiated instruction*** is addressed through instructional strategies designed for some students.	**Differentiated instruction*** is not provided.
LEARNING STYLES	The **learning styles*** of all students are addressed through a variety of instructional resources and strategies.	The **learning styles*** of most students are addressed through a variety of instructional resources and strategies.	The **learning styles*** of some students are addressed through a variety of instructional resources and strategies.	**Learning styles*** are not addressed in instructional resources and strategies.
LITERACIES FOR THE DIGITAL AGE	All learning experiences promote **literacies for the digital age*.**	Most learning experiences promote **literacies for the digital age*.**	Some learning experiences promote **literacies for the digital age*.**	Learning experiences do not promote **literacies for the digital age*.**
RESOURCES IN LEARNING EXPERIENCES	All learning experiences are examined for application of appropriate resources.	Most learning experiences are examined for application of appropriate resources.	Some learning experiences are examined for application of appropriate resources.	Learning experiences do not include the application of appropriate resources.
RESEARCH PROCESS	A **systematic research process*** is consistently implemented school-wide.	A **systematic research process*** is implemented at some grade levels or departments.	A **systematic research process*** is implemented in some classrooms.	No **systematic research process*** is implemented.
FLEXIBLE ACCESS FOR INSTRUCTION	Media and technology flexible access for instruction is implemented at all grade levels.	A fixed/flex media and technology schedule for instruction is implemented for no more than a year, and a plan for the implementation of flexible access in the following year is in place.	A fixed/flex media and technology schedule for instruction is implemented.	Fixed scheduling for media and technology instruction is implemented at all grade levels.

TEACHING AND LEARNING

	OUTSTANDING	DEVELOPING	MINIMUM	BELOW MINIMUM
COLLABORATION – Partnership between media and technology professionals and teachers to design instructional activities that promote student achievement *(See Collaborative Planning Session Rubric for additional information)*				
COLLABORATION BETWEEN SLMC & TF	Collaboration occurs between media and technology personnel all the time.	Collaboration occurs between media and technology personnel most of the time.	Collaboration occurs between media and technology personnel on some occasions.	Collaboration does not occur between media and technology personnel.
COLLABORATIVE ENVIRONMENT	An environment based on shared instructional goals, a shared vision, and a climate of trust and respect is established that fosters collaboration between media and technology personnel and all teachers.	An environment based on shared instructional goals, a shared vision, and a climate of trust and respect is established that fosters collaboration between media and technology personnel and most teachers.	An environment based on shared instructional goals, a shared vision, and a climate of trust and respect is established that fosters collaboration between media and technology personnel and some teachers.	An environment that fosters collaboration between media and technology personnel has not been established.
COLLABORATION FOR DATA-DRIVEN INSTRUCTION	Media and technology personnel consistently collaborate with teachers in using assessment data to design instructional activities.	Media and technology personnel frequently collaborate with teachers in using assessment data to design instructional activities.	Media and technology personnel occasionally collaborate with teachers in using assessment data to design instructional activities.	Media and technology personnel do not collaborate with teachers.
BEST PRACTICES	The media and technology program implements **best practices*** for instruction at all grade levels.	The media and technology program implements **best practices*** for instruction at most grade levels.	The media and technology program implements **best practices*** for instruction in some classrooms or at some grade levels.	The media and technology program does not implement **best practices*** for instruction.
INSTRUCTIONAL FEEDBACK	**Instructional feedback*** is provided to students all of the time to ensure that learning goals are being met.	**Instructional feedback*** is provided to students most of the time to ensure that learning goals are being met.	**Instructional feedback*** is provided to students some of the time to ensure that learning goals are being met.	**Instructional feedback*** is not provided to students to ensure that learning goals are being met.
CO-TEACHING	An environment is established that fosters **co-teaching*** between media and technology personnel and all teachers.	An environment is established that fosters **co-teaching*** between media and technology personnel and most teachers.	An environment is established that fosters **co-teaching*** between media and technology personnel and some teachers.	An environment for **co-teaching*** between media and technology personnel and teachers has not been established.

TEACHING AND LEARNING				
	OUTSTANDING	**DEVELOPING**	**MINIMUM**	**BELOW MINIMUM**
PROFESSIONAL DEVELOPMENT – Appropriate professional development provided for individual growth.				
PROFESSIONAL DEVELOPMENT	Professional development for teachers related to the media and technology program is included in the school-wide professional development plan and addresses school improvement plan goals.	Professional development for teachers related to the media and technology program is included in the school-wide professional development plan.	Professional development for teachers related to the media and technology program is provided in isolation from the school-wide professional development plan.	Professional development for teachers related to the media and technology program is not provided.
MEDIA AND TECHNOLOGY PROFESSIONAL DEVELOPMENT	Media and technology personnel are provided professional development opportunities through local, state, and national conference/ workshop attendance that are a part of the school-wide professional development plan.	Media and technology personnel are provided professional development opportunities through local or state conference/ workshop attendance that are a part of the school-wide professional development plan.	Media and technology personnel are provided professional development opportunities through local or state conference/ workshop attendance.	Media and technology personnel are not provided professional development opportunities.

INFORMATION ACCESS AND DELIVERY

	OUTSTANDING	DEVELOPING	MINIMUM	BELOW MINIMUM
ACCESS TO RESOURCES – Access to resources regardless of ability or physical challenges				
FLEXIBLE ACCESS (NOTE: does not apply to career technology education labs)	Computer lab and media center facilities and resources are available through flexible access.	Computer lab and media center facilities and resources are available on a fixed/ flex schedule for no more than a year, and a plan for implement-ing flexible access in the following year is in place.	Fixed/flexible access to computer lab and media center facilities and resources is provided.	Computer lab and media center facilities are available only on a fixed schedule.
ACCESS TO ELECTRONIC RESOURCES	The school's electronic resources are available throughout the school before, during, and after school, as well as through remote access.	The school's electronic resources are available throughout the school before, during, and after the school day.	The school's electronic resources are available during the school day within the school library media center and computer labs.	The school's electronic resources are available part of the school day from the school library media center and/or computer labs.
EQUITABLE ACCESS TO RESOURCES	The school's media and technology resources are available school wide before, during, and after school.	The school's media and technology resources are available school wide throughout the entire school day.	The school's media and technology resources are available during the school day within the school library media center and computer labs.	The school's media and technology resources are not available throughout the school day from the school library media center and/or computer labs.
EQUITY OF ACCESS (assistive/adaptive)	Equitable access to resources and facilities that exceed requirements of federal ADA and special education laws is provided for identified students and others with special needs.	Equitable access to resources and facilities that meet minimum requirements of federal ADA and special education laws is provided for identified students and others with special needs.	Equitable access to resources that meet minimum requirements of federal ADA and special education laws is provided for identified students.	Equitable access to resources and facilities is not provided for all students.
ORGANIZATION OF RESOURCES	All media and technology resources, including classroom sets, are cataloged and circulated using standard library conventions or a comparable tracking system.	All media and technology resources are cataloged and circulated using standard library conventions or a comparable tracking system.	Most media and technology resources are cataloged and circulated using standard library conventions or a comparable tracking system.	Resources are not cataloged and circulated using standard library conventions or a comparable tracking system.

INFORMATION ACCESS AND DELIVERY

	OUTSTANDING	DEVELOPING	MINIMUM	BELOW MINIMUM
DESIGNING FACILITIES FOR TEACHING AND LEARNING – Adequate facilities to meet the instructional needs of teachers and the learning needs of students				
AESTHETICALLY PLEASING ENVIRONMENT	Media and technology facilities provide an aesthetically pleasing and stimulating environment with numerous attractive decorations, current information displays, and student work/art.	Media and technology facilities provide an aesthetically pleasing environment with a variety of attractive decorations and displays and student work/art.	Media and technology facilities provide an aesthetically pleasing environment with some decorations and displays.	Media and technology facilities do not provide an aesthetically pleasing environment.
ADEQUATE FACILITY SPACE	Media and technology facility spaces meet 90% or more of the square footage recommendations in the *IMPACT Guidelines*.	Media and technology facility spaces meet 75% -89% of the square footage recommendations in the *IMPACT Guidelines.*	Media and technology facility spaces meet 50% - 74% of the square footage recommendations in the *IMPACT Guidelines.*	Media and technology facility spaces meet less than 50% of the square footage recommendations in the *IMPACT Guidelines*.
APPROPRIATE FURNISHINGS AND EQUIPMENT	90% or more of the media and technology furnishings and equipment meet *IMPACT Guidelines.*	75% -89% of the media and technology furnishings and equipment meet the *IMPACT Guidelines.*	50% - 74% of the media and technology furnishings and equipment meet the *IMPACT Guidelines.*	Less than 50% of the media and technology furnishings and equipment meet the *IMPACT Guidelines.*
PLANNING FOR NEW AND RENOVATED FACILITIES	Opportunities are provided for media and technology staff to play an ongoing and active role throughout the planning and construction of new, renovated, or repurposed facilities.	Opportunities are provided for media and technology staff to offer advice on a regular basis for the planning of new, renovated, or repurposed facilities.	Opportunities are provided for media and technology staff to make initial suggestions during the planning of new, renovated, or repurposed facilities.	Opportunities are not provided for media and technology staff to participate in the planning of new, renovated, or epurposed facilities.
TECHNOLOGY INFRASTRUCTURE/ EQUIPMENT	Technology infrastructure and equipment exceeds state technology plan standards and *IMPACT Guidelines.*	Technology infrastructure and equipment meets state technology plan standards and *IMPACT Guidelines.*	Technology infrastructure and equipment does not meet state technology plan standards but a plan has been developed to meet standards and *IMPACT Guidelines.*	Technology infrastructure and equipment does not meet state technology plan standards and a plan has not been developed to meet standards and *IMPACT Guidelines.*

PROGRAM ADMINISTRATION				
	OUTSTANDING	**DEVELOPING**	**MINIMUM**	**BELOW MINIMUM**
PLANNING THE PROGRAM – Planning to support program development				
MEDIA AND TECHNOLOGY PLANNING	Short- and long-range plans are in place and continuously assessed and updated to ensure balance among all aspects of the media and technology program.	Short- and long-range plans are in place and assessed and updated at least once a year to ensure balance among all aspects of the media and technology program.	Short-range plans for the media and technology program are in place and assessed occasionally.	Only short-range plans for the media and technology program are in place and are not assessed.
MEDIA AND TECHNOLOGY ADVISORY COMMITTEE (MTAC) – Representative committee that guides media and technology program development				
MEMBERSHIP	The MTAC meets and exceeds the membership recommendations outlined in the *IMPACT Guidelines* (e.g., community member, paraprofessional representative).	The MTAC meets most of the membership recommendations outlined in the *IMPACT Guidelines.*	The MTAC meets some of the membership recommendations outlined in the *IMPACT Guidelines.*	The MTAC does not meet the membership recommendations outlined in the *IMPACT Guidelines.*
MEETING FREQUENCY	The MTAC meets at least monthly to provide support for the planning and implementation of the media and technology program.	The MTAC meets at least quarterly to provide support for the planning and implementation of the media and technology program.	The MTAC meets occasionally to provide support for the planning and mplementation of the media and technology program.	The MTAC meets only as needed to react to a specific situation or problem.
MTAC RESPONSIBILITIES FOR PLANNING	MTAC participates in developing long- and short-term plans for the media and technology program at least quarterly.	MTAC participates in developing long- and short-term plans for the media and technology program at least twice a year.	MTAC participates in developing long- and short-term plans for the media and technology program at least once a year.	MTAC does not participate in developing long- and short-term plans for the media and technology program.
MTAC RESPONSIBILITIES FOR FORMAL ADVOCACY *(See Advocacy and MTAC sections)*	MTAC participates in developing, implementing, and continuously updating a comprehensive, research-based advocacy plan for the media and technology program.	MTAC has developed and is in the beginning phase of implementing a comprehensive, research-based advocacy plan for the media and technology program.	MTAC is in the process of developing a comprehensive, research-based advocacy plan for the media and technology program.	MTAC does not participate in developing an advocacy plan for the media and technology program.

PROGRAM ADMINISTRATION				
	OUTSTANDING	**DEVELOPING**	**MINIMUM**	**BELOW MINIMUM**
MEDIA AND TECHNOLOGY ADVISORY COMMITTEE (MTAC) – continued				
MTAC RESPONSIBILITIES FOR INFORMAL ADVOCACY	The MTAC informally communicates the role of the media and technology program in supporting instruction and promoting student achievement on a continuous basis.	The MTAC informally communicates the role of the media and technology program in supporting instruction and promoting student achievement at scheduled meetings and events.	The MTAC informally communicates the role of the media and technology program in supporting instruction and promoting student achievement in response to challenges that would compromise the program, e.g., budget cuts, reversion to fixed scheduling, cutting staff, etc.	The MTAC does not communicate the role of the media and technology program.
MTAC RESPONSIBILITIES FOR COLLECTION DEVELOPMENT	The MTAC provides input for an up-to-date and well-balanced media and technology collection on a continuous basis.	The MTAC provides input for an up-to-date and well-balanced media and technology collection through regularly scheduled MTAC meetings.	The MTAC provides input for an up-to-date and well-balanced media and technology collection once a year.	The MTAC does not provide input for an up-to-date and well-balanced media and technology collection.
MTAC RESPONSIBILITIES FOR BUDGET	The MTAC is actively involved in developing and advocating for a budget plan for the media and technology program that is prioritized, justified, and includes school-based and additional funding sources.	The MTAC is actively involved in developing a budget plan for the media and technology program that is prioritized, justified, and includes school-based and additional funding sources.	The MTAC is actively involved in developing a budget plan, representing school-based and additional funding sources, for the media and technology program.	The MTAC is not involved in developing a budget plan for the media and technology program.
MTAC RESPONSIBILITIES FOR DE-SELECTION (WEEDING) OF THE COLLECTION	The MTAC is involved in making recommendations for removing items from the entire collection that are outdated and no longer support the curriculum.	The MTAC is involved in making recommendations for removing items from most areas of the collection that are outdated and no longer support the curriculum.	The MTAC is involved in making recommendations for removing items from some areas of the collection that are outdated and no longer support the curriculum.	The MTAC is not involved in making recommendations for removing items from the collection.

PROGRAM ADMINISTRATION				
	OUTSTANDING	**DEVELOPING**	**MINIMUM**	**BELOW MINIMUM**
POLICIES AND PROCEDURES – Framework for program implementation				
POLICIES AND PROCEDURES	System-level and school-level media and technology policies and procedures based on the *IMPACT Guidelines* are followed.	System-level policies and procedures based on the *IMPACT Guidelines* are followed and school-level policies and are being developed.	System-level media and technology policies and procedures are followed.	System-level policies and procedures are not followed.
REVIEW/REVISION OF POLICIES AND PROCEDURES	All policies/procedures related to the media and technology program are reviewed and revised on a regularly scheduled basis.	Most policies/ procedures related to the media and technology program are reviewed and revised on a regularly scheduled basis.	Some policies/ procedures related to the media and technology program are reviewed and revised on a regularly scheduled basis.	Policies/procedures related to the media and technology program are not reviewed and revised on a regularly scheduled basis.
COMMUNICATION OF POLICIES AND PROCEDURES - STAFF	Media and technology policies are communicated to the entire staff through meetings, documentation, and professional development.	Media and technology policies are communicated to the entire staff through meetings and documentation.	Media and technology policies are communicated to the entire school staff through documentation.	Media and technology policies are not communicated to the school staff.
COMMUNICATION OF POLICIES – EDUCATION COMMUNITY	Media and technology policies are communicated to the education community through meetings and documentation on an ongoing basis.	Media and technology policies are communicated to the education community through meetings and documentation annually.	Media and technology policies are communicated to the education community through documentation annually.	Media and technology policies are not communicated to the education community.

PROGRAM ADMINISTRATION				
	OUTSTANDING	**DEVELOPING**	**MINIMUM**	**BELOW MINIMUM**
HIGH QUALITY COLLECTION OF RESOURCES – Appropriate range of resources in a variety of formats to meet the needs of teachers and students				
BUDGET	An operational budget is provided for maintaining all resources that includes Total Cost of Ownership (TCO) and that meets the needs of anticipated growth.	An operational budget is provided for maintaining all resources that includes Total Cost of Ownership (TCO) and a budget plan for anticipated growth is in development.	An operational budget is provided for maintaining all resources that includes Total Cost of Ownership (TCO).	An operational budget is not provided for maintaining resources.
HIGH QUALITY COLLECTION	A high quality and well-balanced collection of current resources is provided that aligns to the curriculum and that supports teaching and learning.	Most areas of the collection represent high quality, current resources that align to the curriculum and support teaching and learning.	Some areas of the collection represent current resources that align to the curriculum and support teaching and learning.	The collection of resources is not current and does not support the curriculum.
DIVERSE COLLECTION	A collection of resources is provided that meets the needs of learners with diverse learning styles, cultural backgrounds, and physical challenges.	A collection of resources is provided.that meets the needs of most learners with diverse learning styles, cultural backgrounds, and physical challenges.	A collection of resources is provided.that meets the needs of some learners with diverse learning styles, cultural backgrounds, and physical challenges.	A collection of resources is not provided.that meets the needs of learners with diverse learning styles, cultural backgrounds, and physical challenges.
COLLECTION DEVELOPMENT PLAN	The MTAC provides input for the long-range (3-5 year) collection development plan for an up-to-date and well-balanced media and technology collection that is revised annually.	A long-range (3-5 year) collection development plan for an up-to-date and well-balanced media and technology collection is in place and revised annually.	A long-range (3-5 year) collection development plan for an up-to-date and well-balanced media and technology collection is in place.	A long-range (3-5 year) collection development plan for an up-to-date and well-balanced media and technology collection is not in place.
INVENTORY	Annual inventories of media and technology resources are conducted and shared with the MTAC to determine needs for additional resources.	Annual inventories of media and technology resources are conducted and used to determine needs for additional resources.	Annual inventories of media and technology resources are conducted.	Annual inventories of media and technology resources are not conducted.

PROGRAM ADMINISTRATION				
	OUTSTANDING	**DEVELOPING**	**MINIMUM**	**BELOW MINIMUM**
EVALUATION – Documentation demonstrating the effectiveness of the media and technology program				
PROGRAM EVALUATION	Working with the MTAC, qualitative and quantitative measures are used to document and evaluate how media and technology resources and program initiatives meet the needs of students and staff.	Qualitative and quantitative measures are used to document and evaluate how media and technology resources and program initiatives meet the needs of students and staff.	Quantitative measures are used to document and evaluate how media and technology resources and program initiatives meet the needs of students and staff.	Data is not used to evaluate how media and technology resources and program initiatives meet the needs of students and staff.
STAFFING – Personnel resources needed to support the media and technology program				
ADEQUATE STAFFING *(See Personnel Chart below**)*	Media and technology programs are fully staffed as recommended.**	Media and technology programs are in the process of fully staffing media and technology programs as recommended.**	Plans are in place with an implementation timeline to fully staff media and technology programs as recommended.**	Media and technology programs are not fully staffed as recommended.**

PROGRAM ADMINISTRATION PERSONNEL CHART**

ADM	Recommended minimum staffing for each school based on average daily membership (ADM)	
1-500	▪ 1 full-time library media coordinator ▪ 1 full-time technology facilitator	▪ 1/2 media assistant ▪ 1/2 technology assistant
501-1000	▪ 1 full-time library media coordinator ▪ 1 full-time technology facilitator	▪ 1 full-time media assistant ▪ 1 full-time technology assistant.
1001-1500	▪ 2 full-time library media coordinators ▪ 2 full-time technology facilitators	▪ 1 1/2 media assistants ▪ 1 1/2 full-time technology assistants
1501-2000	▪ 2 full-time library media coordinators. ▪ 2 full-time technology facilitators	▪ 2 full-time media assistants ▪ 2 full-time technology assistants

SYSTEM-LEVEL LEADERSHIP AND SUPPORT EVALUATION RUBRICS

NOTE: **"Most"** represents more than half and **"some"** represents less than half.
Terms designated with an asterisk* are defined at the end of the document.

TEACHING AND LEARNING (SYSTEM-LEVEL)

	OUTSTANDING	DEVELOPING	MINIMUM	BELOW MINIMUM
CURRICULUM INVOLVEMENT – Ensuring the integration of information and computer/technology skills				
PROMOTING BEST PRACTICE	Leadership continuously promotes a collaborative environment that incorporates **best practices*** for instruction, provides up-to-date resources, and shares information with others outside of the school system.	Leadership continuously promotes a collaborative environment that incorporates **best practices*** for instruction and provides up-to-date resources.	Leadership promotes a collaborative environment that incorporates **best practices*** for instruction.	Leadership does not promote a collaborative environment that incorporates **best practices*** for instruction.
INTEGRATION OF MEDIA AND TECHNOLOGY	Leadership supports curriculum integration of information and computer/technology skills across all curriculum areas and grade levels.	Leadership supports curriculum integration of information and computer/technology skills across most curriculum areas and grade levels.	Leadership supports curriculum integration of information and computer/technology skills across **core curriculum areas*** and some grade levels.	Leadership does not support curriculum integration of information and computer/technology skills across subject areas and grade levels.
COLLABORATION – Strengthening media and technology programs by working with a variety of individuals and organizations				
COLLABORATION BETWEEN LEVELS	Leadership continuously promotes communication and collaboration between system-level curriculum/program directors and school-based administrators.	Leadership frequently promotes communication and collaboration between system-level curriculum/program directors and school-based administrators.	Leadership occasionally promotes communication between system-level curriculum/program directors and school-based administrators.	Leadership does not promote communication between system-level curriculum/program directors and school-based administrators.
COLLABORATION WITH COMMUNITY RESOURCES	Partnerships are continuously developed with business, civic, and community groups to provide resources for instruction and to implement collaborative initiatives in schools (e.g., volunteer speakers and tutors; field trip opportunities).	Partnerships are developed occasionally with business, civic, and community groups to provide resources for instruction (e.g., volunteer speakers and tutors; field trip opportunities).	A plan is being developed to work with business, civic, and community groups to give these organizations opportunities to provide resources for instruction.	No efforts are made to work with business, civic, and community groups.

TEACHING AND LEARNING (SYSTEM-LEVEL)

	OUTSTANDING	DEVELOPING	MINIMUM	BELOW MINIMUM
PROFESSIONAL DEVELOPMENT – Appropriate professional development provided for individual growth				
PROFESSIONAL DEVELOPMENT	All professional development for teachers related to the media and technology program is included in the system-wide professional development plan.	Most professional development for teachers related to the media and technology program is included in the system-wide professional development plan.	Some professional development for teachers related to the media and technology program is included in the system-wide professional development plan.	Professional development for teachers related to the media and technology program is not included in the system-wide professional development plan.

INFORMATION ACCESS AND DELIVERY (SYSTEM-LEVEL)

	OUTSTANDING	DEVELOPING	MINIMUM	BELOW MINIMUM
INFRASTRUCTURE AND CONNECTIVITY – Ensuring equity of access to resources				
STANDARDIZATION OF TECHNOLOGY RESOURCES	System-wide guidelines for the standardization of all technology resources are in place	System-wide guidelines for the standardization of most technology resources are in place.	System-wide guidelines for the standardization of some technology resources are in place.	System-wide guidelines for the standardization of technology resources are not in place.
TECHNOLOGY INFRASTRUCTURE, EQUIPMENT, AND CONNECTIVITY	System-wide technology infrastructure, equipment, and connectivity exceeds state technology plan standards and *IMPACT Guidelines.*	System-wide technology infrastructure, equipment, and connectivity meets state technology plan standards and *IMPACT Guidelines.*	A plan has been developed for system-wide technology infrastructure, equipment, and connectivity that meets state technology plan standards and *IMPACT Guidelines.*	A plan has not been developed for system-wide technology infrastructure, equipment, and connectivity that meets state technology plan standards and *IMPACT Guidelines.*
EQUITY OF ACCESS (assistive/adaptive)	Equitable access to resources and facilities that meet requirements of federal ADA and special education laws is provided for all schools with identified students and others with special needs.	Equitable access to resources and facilities that meet minimum requirements of federal ADA and special education laws is provided for some schools with identified students and others with special needs.	Equitable access to resources that meet minimum requirements of federal ADA and special education laws is provided only for schools with identified students.	Equitable access to resources and facilities is not provided for all students.

INFORMATION ACCESS AND DELIVERY (SYSTEM-LEVEL)

	OUTSTANDING	DEVELOPING	MINIMUM	BELOW MINIMUM
NEW AND RENOVATED FACILITIES – Ensuring adequate facilities for system-wide media and technology programs				
PLANNING AND CONSTRUCTION OF NEW AND RENOVATED FACILITIES	System-level media and technology personnel play an active and ongoing role throughout the planning and construction of new, renovated, or repurposed facilities, in collaboration with building-level personnel.	System-level media and technology personnel offer advice on a regular basis for the planning of new, renovated, or repurposed facilities.	System-level media and technology personnel make initial suggestions during the planning of new, renovated, or repurposed facilities.	System-level media and technology personnel do not participate in the planning of new, renovated, or repurposed facilities.

PROGRAM ADMINISTRATION (SYSTEM-LEVEL)

	OUTSTANDING	DEVELOPING	MINIMUM	BELOW MINIMUM
ADVOCACY – Leadership promotes system-wide media and technology programs				
FORMAL ADVOCACY	A comprehensive, research-based advocacy plan for the role of media and technology programs in supporting instruction and promoting student achievement is implemented and updated.	A comprehensive, research-based advocacy plan for the role of media and technology programs in supporting instruction and promoting student achievement has been developed and is in the beginning phase of implementation.	A comprehensive, research-based advocacy plan for the role of media and technology programs in supporting instruction and promoting student achievement is in the process of being developed.	A comprehensive, research-based advocacy plan for the role of media and technology programs in supporting instruction and promoting student achievement has not been developed.
INFORMAL ADVOCACY	The role of media and technology programs in supporting instruction and promoting student achievement is communicated continuously throughout the community.	The role of media and technology programs in supporting instruction and promoting student achievement is communicated at scheduled meetings and events.	The role of media and technology programs in supporting instruction and promoting student achievement is communicated in response to challenges that would compromise the program.	The role of media and technology programs in supporting instruction and promoting student achievement is not communicated.

PROGRAM ADMINISTRATION (SYSTEM-LEVEL)				
	OUTSTANDING	**DEVELOPING**	**MINIMUM**	**BELOW MINIMUM**
POLICIES AND PROCEDURES – Leadership provides framework for system-wide media and technology program implementation				
DEVELOPMENT OF POLICIES AND PROCEDURES	All system-level policies/procedures related to the media and technology program are based on the *IMPACT Guidelines* and all are aligned with state and federal laws and regulations.	Most system-level policies/procedures related to the media and technology program are based on the *IMPACT Guidelines* and all are aligned with state and federal laws and regulations.	Some system-level policies/procedures related to the media and technology program are based on the *IMPACT Guidelines* and all are aligned with state and federal laws and regulations.	Policies/procedures related to the media and technology program are not aligned with state and federal laws and regulations or *IMPACT Guidelines.*
REVIEW/REVISION OF POLICIES AND PROCEDURES	Review and revision of all policies/procedures related to the media and technology program are conducted on a regularly scheduled basis.	Review and revision of most policies/ procedures related to the media and technology program are conducted on a regularly scheduled basis.	Review and revision of some policies/ procedures related to the media and technology program are conducted on a regularly scheduled basis.	Review and revision of policies/procedures related to the media and technology program are not conducted.
COMMUNICATION OF POLICIES AND PROCEDURES	All media and technology policies and procedures are communicated consistently throughout the school system annually.	Most media and technology policies and procedures are communicated throughout the school system annually.	Some media and technology policies and procedures are communicated throughout the school system annually.	Media and technology policies and procedures are not communicated throughout the school system annually.

PROGRAM ADMINISTRATION (SYSTEM-LEVEL)				
	OUTSTANDING	**DEVELOPING**	**MINIMUM**	**BELOW MINIMUM**
PLANNING - Planning to support program development				
TECHNOLOGY PLAN	A system-level technology plan is in place and assessed as required by state legislation and *IMPACT Guidelines* and monitored at scheduled intervals to assure forward progress.	A system-level technology plan is in place and assessed as required by state legislation and *IMPACT Guidelines* and monitored occasionally to assure forward progress.	A system-level technology plan is in place and assessed as required by state legislation and *IMPACT Guidelines*.	A system-level technology plan is not in place.
PLANNING FOR TECHNOLOGY	The system-level technology plan is developed with input from representatives of all stakeholder groups: administrators, teachers, technology facilitators, media coordinators, parents/ community members, and students.	The system-level technology plan is developed with input from representatives of most stakeholder groups: administrators, teachers, technology facilitators, media coordinators, parents/ community members, and students.	The system-level technology plan is developed with input from representatives of some stakeholder groups: administrators, teachers, technology facilitators, media coordinators, parents/ community members, and students.	The system-level technology plan is developed without input from stakeholders.
COLLECTION DEVELOPMENT	Building-level collection development plans (created with input from the MTAC) for up-to-date and well-balanced media and technology collections are in place for all schools and revised annually.	Building-level collection development plans for up-to-date and well-balanced media and technology collections are in place for all schools and revised annually.	Building-level collection development plans for up-to-date and well-balanced media and technology collections are in place for all schools.	Building-level collection development plans for up-to-date and well-balanced media and technology collections are not in place for all schools.

PROGRAM ADMINISTRATION (SYSTEM-LEVEL)				
	OUTSTANDING	**DEVELOPING**	**MINIMUM**	**BELOW MINIMUM**
BUDGET – Leadership for the provision of adequate funding to support system-wide media and technology programs				
BUDGET	Every school has an operational budget for maintaining all media and technology resources that includes Total Cost of Ownership (TCO), and a budget plan for anticipated growth.	Every school has an operational budget for maintaining all media and technology resources that includes Total Cost of Ownership (TCO), and a budget plan for anticipated growth that is in development.	Every school has an operational budget for maintaining all media and technology resources that includes Total Cost of Ownership (TCO).	Schools do not have an operational budget for maintaining all media and technology resources.
ADDITIONAL FUNDING SOURCES	Every school is continuously made aware of additional media and technology funding sources, and support is offered and provided throughout the application process.	Every school is frequently made aware of additional media and technology funding sources and has the support needed to apply for these funds when requested.	Every school is made aware of additional media and technology funding.	Schools are not made aware of additional media and technology funding sources.
PROGRAM EVALUATION – Leadership and vision for evaluating the effectiveness of system-wide media and technology programs				
DATA COLLECTION	System-wide data from quantitative and qualitative measures related to media and technology programs is aggregated, analyzed, and disseminated to system-level administrators, curriculum staff, school board, and community members when appropriate.	System-wide data from quantitative and qualitative measures related to media and technology programs is aggregated and analyzed.	System-wide data from quantitative and qualitative measures related to media and technology programs is aggregated.	System-wide quantitative data related to media and technology programs is aggregated.
USING DATA FOR RECOMMEN-DATIONS	System-level staff and building-level media and technology representatives team with teachers to use analyzed quantitative and qualitative data to make recommendations for media and technology programs system-wide.	System-level staff and building-level media and technology representatives use analyzed quantitative and qualitative data to make recommendations for media and technology programs system-wide.	System-level staff use analyzed quantitative and qualitative evaluation data when making recommendations for media and technology programs system-wide.	Data is not used when making recommendations for media and technology programs system-wide.

PROGRAM ADMINISTRATION (SYSTEM-LEVEL)				
	OUTSTANDING	**DEVELOPING**	**MINIMUM**	**BELOW MINIMUM**
STAFFING – Personnel resources needed to support system-wide media and technology programs				
ADEQUATE STAFFING *(See System-Level Personnel Chart below**)*	All system-level media and technology personnel are in place as recommended in the System-Level Personnel Chart.**	Most of the system-level personnel r ecommended in the System-Level Personnel Chart** are in place, and a timeline exists for full staffing.	Plans are in place for providing system-level media and technology personnel as recommended in the System-Level Personnel Chart.**	System-level media and technology staff are not in place staffed as recommended the System-Level Personnel Chart.**

SYSTEM-LEVEL PERSONNEL CHART**

# SCHOOLS IN SYSTEM	**RECOMMENDED STAFFING:**
1-5	▪ 1 Director/Coordinator for both media and technology, with other system-level duties.
6-15	▪ 1 Director/Coordinator for both media and technology, with "lead teachers" for each school level that have only part-time teaching responsibilities.
16-50	▪ 1 Director/Coordinator for school library media programs. ▪ 1 Director/Coordinator for technology programs.
50+	▪ 1 Director/Coordinator for media/technology at the Associate Superintendent's level. ▪ 1 School Library Media Programs Supervisor ▪ 1 Instructional Technology Supervisor

MEDIA AND TECHNOLOGY PROGRAM EVALUATION RUBRICS
SYSTEM-LEVEL LEADERSHIP AND SUPPORT EVALUATION RUBRICS

*DEFINITION OF TERMS:

BEST PRACTICES
Instructional strategies based on scientific research proven to promote student achievement.

CORE CURRICULUM AREAS
Math, English Language Arts, Science, Social Studies

CO-TEACHING
Instructional practice wherein educators implement collaboratively planned instructional activities side-by-side in the same physical location or by implementing instruction with groups of students who rotate among the various educators in different locations within the school.

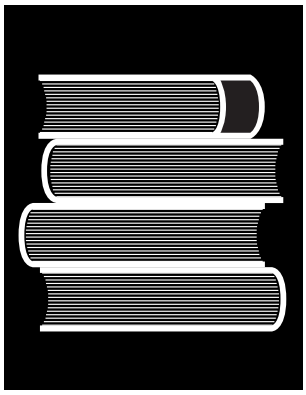
DIFFERENTIATED INSTRUCTION
Design of instruction to meet the abilities and learning needs of individual students.

INSTRUCTIONAL FEEDBACK
Authentic assessment, such as rubrics, checklists, or conferencing, designed to determine that learning outcomes have been met.

LEARNING STYLES
Differences in how students perceive and process information (http://www.ldpride.net/learning_style.html).

LITERACIES FOR THE DIGITAL AGE
Learning skills identified by the Partnership for 21st Century Skills that incorporate information and communication skills, thinking and problem-solving skills, and interpersonal and self-directional skills (www.21stcenturyskills.org).

SYSTEMATIC RESEARCH PROCESS
Information problem solving strategy that begins with identifying the essential question or problem, e.g., The Big6. Adoption of a systematic research model is recommended to ensure that all students and teachers understand and use the same framework and terminology.



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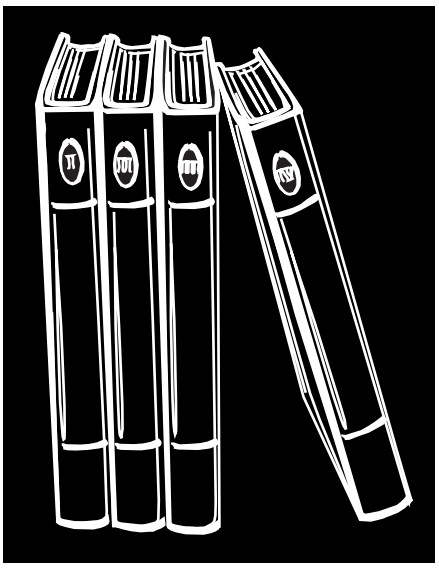

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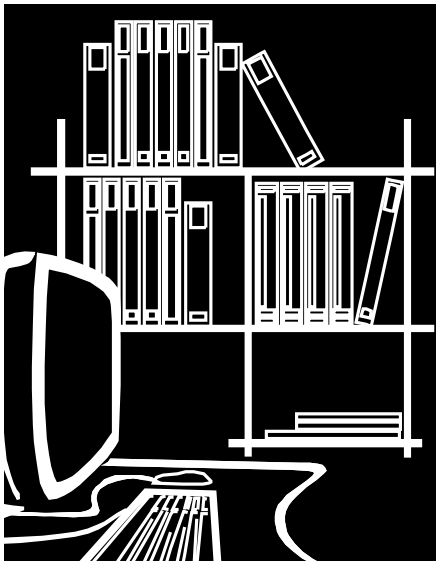

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AMTR GUIDELINES

PURPOSE

The Annual Media and Technology Report (AMTR), a legislatively mandated instrument, allows stakeholders at the school, local educational agencies (LEA), and state level to access data related to school media and technology programs. The information is based on what a school district has on their school and district level inventory as of July 1 each year. This gives both the legislature and the public a picture of the state of media and technology programs in North Carolina's schools.

Questions included in this report are derived from the N. C. Educational Technology Plan and requests for data from agencies within the NCDPI and state government.

Once collected and analyzed, this data is used by:

- The federal and state government
- N.C. State Board of Education
- Other divisions of the N.C. Department of Public Instruction (NCDPI)
- LEAs
- The public

Frequently, budgetary and resource allocation decisions are impacted by this data. The data may be used to:

- Determine eligibility for grant funding
- Support the needs addressed in grant proposals
- Evaluate and improve school media and technology programs

Data and reports generated from this data are disseminated:

- At state and national conferences
- In publications at the national, state, and local levels
- On NCDPI websites
- As part of the ABC Report Card process

POSSIBLE USES OF AMTR DATA AT THE LOCAL LEVEL

- Determine trends related to acquisition of hardware and resources in media and technology programs
- Maintain equitable distribution of hardware, resources, and personnel
- Support need for additional technology and media personnel
- Support need for additional hardware and infrastructure
- Support need for additional resources/upgrades needed as compared to other LEAs of similar size and/or location
- Develop demographic sections of grant proposals
- Support the Southern Association of Colleges and Schools (SACS) accreditation process
- Use as part of a formative and summative evaluation process

DATA RETRIEVAL

A series of reports generated from AMTR data can be accessed at:

<http://tps.dpi.state.nc.us> under the Data and Statistics Menu.

The direct link to the AMTR data is:

<http://tps.dpi.state.nc.us/amtrYYYYdata> where YYYY is the year the data was collected.

Entire sections of the AMTR data or individual reports can be downloaded for analysis and comparisons at the local district and school level. Historical data also is available at the above links for at least the previous two years.

NORMAL TIMELINE FOR THE AMTR

AUGUST / SEPTEMBER

School level media and technology personnel should begin to collect data related to AMTR questions (i.e. Questionnaire/survey to determine home access to technology for students and staff).

NOVEMBER THROUGH JANUARY

New questions are developed and edited by NCDPI.

MID FEBRUARY

The current year's questions for both the school and district level reports are made available online at <http://tps.dpi.state.nc.us/amtrYYYY> where YYYY is the current year. The questions are downloadable in Excel format and are provided to allow school and LEA personnel to prepare for the current year's AMTR.

This document can be modified and used as a template to organize and collect the data for the current year.

ON OR NEAR APRIL 1

The AMTR is available online for data entry.

JUNE 30

All data must be entered and verified by June 30 of each year. It is highly recommended that LEAs require schools to have their portions of the AMTR completed by mid to late May each year. This will allow data to be verified at the LEA prior to school personnel leaving for the summer. No data entry or corrections are permitted after June 30.

MID JULY

In mid July, LEAs will receive a copy of the ABC Report Card reports containing the information that will appear on this year's ABC Report Card based on AMTR entries. LEAs and schools will have a designated period of time to make corrections to these reports. No changes will be accepted after this final deadline.

LATE SUMMER/EARLY FALL

Data analyzed and provided for local, state, and national reports and requests.

DATA COLLECTION PROCESS

The collection of data needed to complete the school level AMTR is a collaborative process involving the school level Media and Technology Advisory Committee (MTAC), led by the media coordinator and technology facilitator, and may involve district-level media and technology personnel. Since accuracy is essential, a process must be established that insures the information gathered is correct. It should be noted that some questions are removed, added, or modified each year. The following are suggestions for assisting in data collection and entry:

- Training should be provided yearly for school level personnel by district-level media and technology leaders. This training should be on processes and procedures related to data collection and completion of the AMTR.
- Data should be collected continuously throughout the year to expedite retrieval. A database or spreadsheet with categories matching those requested in the AMTR (i.e., location of computers such as Gen/Acad Clrm, Gen/Acad Lab, Office/SIMS, amount of memory, processor speed, etc.) is one method of doing this.
- Since help screens are updated yearly to provide answers to frequently-asked questions for each section, they should be reviewed prior to beginning data entry.
- Printed copies of the previous year's AMTR should be kept on file.
- Questions about infrastructure and hardware may need to be addressed by district personnel early in April.
- Media coordinators should keep track of number of books and equipment purchased, discarded, and lost using media retrieval software or some other method.
- It is highly recommended that LEAs establish an internal due-date that reflects their current calendar. This will guarantee that personnel complete the report prior to leaving for summer break
- Media coordinators and technology facilitators should decide early in the school year who will be responsible for various sections of the AMTR and establish a timeline for collecting and entering the data. One person should take responsibility for verifying that all sections of the report are complete by the deadline established at the local level or by June 30 at the latest.
- A printed copy of the verified report should be submitted to the principal for approval prior to the media coordinator and technology facilitator leaving for the summer.

DATA ENTRY

- Schools will be required to use their LEA-School Number (i.e., 360-336) and a password to enter the AMTR site. Passwords can be obtained from system-level technology directors.
- Each section on the AMTR must be saved before moving to the next section by clicking the SAVE button at the bottom of each screen. This saves the data entered up to that point on the AMTR server at NCDPI.
- Each section has a 10-minute time-out feature. Any data entered should be saved within this 10-minute interval. Partially completed sections can be saved and retrieved later for completion.
- Changes can be made to any section until the cut-off date established by your LEA, or June 30 at the latest.

COLLABORATION PLANNING SESSION RUBRIC

"WHAT SETS COLLABORATION APART…IS THAT THE OUTCOME IS GREATER THAN THE SUM OF THE PARTS." (Bush ALA, 2003)

NOTE: **"Most"** represents more than half and **"some"** represents less than half

	OUTSTANDING	DEVELOPING	MINIMUM	BELOW MINIMUM
I. MANAGEMENT/ADMINISTRATION – meeting facilitation and other non curricula related tasks necessary for a successful collaborative session.				
TIME	Session adheres to all of the items on the planned schedule including beginning and ending on time.	Session adheres to most of the items on the planned schedule including beginning and ending on time.	Session adheres to some of the items on the planned schedule including beginning and ending on time.	Session does not adhere to planned schedule.
MATERIALS	All materials are readily available.	Most materials are readily available.	Some of the materials are readily available.	Materials are not readily available.
FACILITATION	The collaborative session leader ensures that all topics are addressed.	The collaborative session leader ensures that most topics are addressed.	The collaborative session leader ensures that some topics are addressed.	The collaborative session leader does not ensure that topics are addressed.
LEADERSHIP FOR COLLABORATION	All participants are included in the discussion.	Most participants are included in the discussion.	Some of the participants are included in the discussion.	Participants are not included in the discussion.
PARTICIPATION	A collaborative spirit exists with all participants contributing to the process.	Most participants contribute in the planning process.	Some of the participants contribute in the planning process.	The planning process is dominated by one or more participants.
COMMUNICATION	All participants are notified about meeting details, including time, location, and purpose.	Most of the participants are notified about meeting details, including time, location, and purpose.	Some of the participants are notified about meeting details, including time, location, and purpose.	The meeting details, including time, location, and purpose are not communicated.
ROLES/ RESPONSIBILITIES	Clear assignments for all responsibilities are made.	Clear assignments for most responsibilities are made.	Clear assignments for some of the responsibilities are made.	No clear assignments for responsibilities are made.
ON TASK	The entire session is dedicated to curriculum planning with no time devoted to administrative or management tasks (reports, etc.)	Most of the session is dedicated to curriculum planning with a minimum amount of time devoted to administrative or management tasks (reports, etc.)	Very little time is spent on curriculum planning with most of the time devoted to administrative or management tasks.	The entire session is dedicated to administrative or management tasks (reports, etc.)

	OUTSTANDING	DEVELOPING	MINIMUM	BELOW MINIMUM
I. MANAGEMENT/ADMINISTRATION – continued				
ON TASK EVALUATION OF COLLABORATIVE INSTRUCTION	Participants discuss and evaluate recent collaborative instruction and suggest strategies for improvement.	Participants discuss and evaluate most of the recent collaborative instruction, noting successes and failures.	Participants discuss collaborative instruction, noting successes and failures.	Participants do not discuss or evaluate previous collaborative instruction.
PERSONNEL	All necessary persons participate, including administrator, grade level or department teachers, media coordinator, technology facilitator, and resource/special teachers.	Grade level or departmental teachers meet with media coordinator and technology facilitator, with reports of discussions provided to administrators and resource/special teachers.	Grade level or departmental teachers plan together without media coordinator or technology facilitator and administrators, and other teachers had little or no knowledge of the session.	Grade level or departmental teachers do not plan together or with the media coordinator, technology facilitator, and administrators, or other teachers.
RECORD KEEPING	Session notes are detailed and include a summary.	Session notes provide a summary.	Session notes provide some details of the meeting.	No session notes are recorded.
II. STUDENT DATA – uses of test data including EOG/EOC				
USE OF ASSESSMENT DATA FOR DATA DRIVEN DECISION MAKING	Participants use already compiled students' test data profile across the grade-level/course to identify strengths and weaknesses.	Participants compile students' test data profile across the grade-level/course and identify strengths and weaknesses.	Participants brought students' test data profile and discuss strengths and weaknesses.	Participants do not bring students' test data profile.
BENCHMARKS	Student progress toward all benchmarks are examined and plans are adjusted accordingly.	Student progress toward most benchmarks are examined and plans are adjusted accordingly.	Student progress toward some of the benchmarks are examined and plans are adjusted accordingly.	Student progress toward benchmarks are not examined.
TARGETING INSTRUCTION	Test data is used in individualizing and targeting all instructional activities.	Test data is used in individualizing and targeting most instructional activities.	Test data is used in individualizing and targeting some instructional activities.	Test data is not used in individualizing and targeting instructional activities.
EVALUATION CRITERIA	Participants develop evaluation criteria, including authentic assessments, using expected outcomes for planned instructional activities.	Participants develop evaluation criteria, including authentic assessments, using expected outcomes for most planned instructional activities.	Participants develop evaluation criteria, including authentic assessments, using expected outcomes for some of the planned instructional activities.	No clear plans are made to evaluate planned instructional activities.

NOTE: To support your team in conducting the most efficient and productive collaborative planning session, you may find it valuable to list the overall strengths your team exhibited during the session and the areas that need improvement. Also you may find it beneficial to develop a plan of action that addresses needed improvements.

OVERALL STRENGTHS:

NEEDS IMPROVEMENT:

PLAN OF ACTION:

HOW TO TALK TO A PRINCIPAL

1. **Gather and use data. Make sure you have built a case before you make a request. For instance:**
   a. More money for the collection
      i. Circulation data
      ii. Collection development plan
      iii. Identification of MTAC priorities after input from teachers
   b. A media assistant
      i. Circulation and/or media center use data
      ii. Tracking data of paraprofessional duties media coordinator must perform
      iii. Planning schedule that justifies need for additional assistance
      iv. Recommendation by MTAC
   c. More computers or peripherals
      i. Use data for current equipment
      ii. Service records for current equipment
      iii. Verification of need for additional equipment based on unfilled requests
      iv. Specific curriculum units that require additional equipment (e.g., digital cameras for field trips)
      v. MTAC 3-year plan for equipment purchases

2. **Align data with School Improvement Plan or system-level goals.**

3. **Refer to the research. Provide quotes/citations, but don't belabor the issue. For example:**
   a. Elementary school students with the most collaborative teacher-librarians scored 21% higher on Colorado Student Assessment Program reading than students with the least collaborative teacher librarians.

      Lance, Keith Curry, Marsha J. Rodney, and Christine Hamilton-Pennell (2000). *How School Librarians Help Kids Achieve Standards: The Second Colorado Study.* Spring, TX. High Willow Research and Publishing.

   b. Teacher-librarians from high schools with the best Oregon Statewide Assessment reading-language scores are twice as likely as their colleagues from the lowest scoring schools to plan collaboratively with classroom teachers, and their students are more than three times as likely to visit the library as part of a class or other group.

      Lance, Keith Curry, Marsha J. Rodney, and Christine Hamilton-Pennell (2001). *Good Schools Have School Librarians: Oregon School Librarians Collaborate to Improve Student Achievement.* Terrebonne. OR: Oregon Educational Media Association.

4. **For every problem, offer solutions. For example:**
    a. More money for the collection
        i. Present budget to MTAC
        ii. Ask MTAC representatives to bring back priorities from grade level/department, etc.
        iii. Have MTAC prioritize for entire school based on grade level priorities.
    b. Media Assistant
        i. Have MTAC/School Improvement Team look at clerical allotment for school.
        ii. Pilot by sharing an assistant with a classroom teacher.
        iii. Talk to PTA about possible local funding opportunities.

5. **Always be pleasant and positive. View every glass as half full rather than half empty.**

6. **Don't over-stay your welcome on any topic. Present your information, leave, and re-visit the conversation a few days later.**
    a. Find ways to make this the principal's solution, not yours.
    b. Think of 3 different ways to present the same information. Use one during each conversation.

7. **Be ready to negotiate.**
    a. If you sense reluctance, suggest a pilot.
    b. Offer alternatives that will get you to your ultimate goal.

8. **Avoid a solid "No." There is always a chance if that has not been said.**

GUIDELINES FOR BASELINE INFORMATION IN MEDIA AND TECHNOLOGY POLICIES

INTRODUCTION

All policies should reflect the mission and goals of the organization. A school system and school policy manual should reflect its mission in the format and organization of its policy manual. The following section provides a brief description of policies that pertain specifically to instructional media and technology programs and the components that should be included in a policy to address legal requirements for a written policy.

Policies are board approved and should be subject to review by the legal counsel of the school system to ensure that the policies are enforceable and do not violate any law or statute.

MATERIALS SELECTION POLICY*

Generally, a Materials Selection Policy outlines guiding principles and strategies for:

- Developing a collection that supports teaching and learning.
- Maintaining the collection.
- Dealing with challenges to materials in the total instructional program.

WHY DO WE NEED A MATERIALS SELECTION POLICY?

Every school system should have a comprehensive materials selection policy to strengthen the collection development process and to provide an objective philosophy for the evaluation of materials. Furthermore, when there is a complaint regarding a textbook, library material, or technology resource, a well-written policy identifies the appropriate person to handle the complaint and the appropriate response.

WHAT IS INCLUDED IN A MATERIALS SELECTION POLICY?

A good policy on the selection of all instructional materials will be relevant to the local school system and include basic sections on objectives, responsibility, criteria for selection of materials, reference procedures for selection, reconsideration of materials, and policies on controversial materials.

A MATERIALS SELECTION POLICY SHOULD ADDRESS THE FOLLOWING:

- The purpose and function of a materials selection policy
- Criteria for the selection of materials:
  - authority
  - format
  - potential use
  - price
  - scope
  - reputation of publisher
  - subject interest
  - readability
  - timeliness
  - treatment of subject
- Weeding
- Guidelines for Reconsideration of Challenged materials
- Acceptance of gift materials
  - The department, office and/or individual job titles for those who have responsibility for procedural implementation of the policy

** See appendix for sample policy.*

DISPOSAL OF EQUIPMENT POLICY

A Disposal of Equipment policy identifies the appropriate measures for removing government property from inventory and the recommended methods for sale or disposition.

WHY DO WE NEED A DISPOSAL OF EQUIPMENT POLICY?

A disposal equipment policy should cover state and federal guidelines for disposing of government property and appropriate procedures for adhering to environmental regulations. Appropriate procedures include the proper destruction of electronic data prior to the surplus of equipment (i.e., over writing data 7 times with random bit patterns). A disposal of equipment policy also helps assure that accurate inventories are maintained.

WHAT IS INCLUDED IN A DISPOSAL OF EQUIPMENT POLICY?

A DISPOSAL OF EQUIPMENT POLICY SHOULD INCLUDE:

- The purpose of the policy.
- Methods for determination of an item as surplus.
- Reference to procedures for appropriate disposal of equipment--this includes proper destruction of electronic data prior to the surplus of equipment.
- Appropriate use of funds acquired in sale of surplus items.
- A statement of adherence to environmental regulations in the disposal of computer equipment.
- The department, office, and/or individual job titles for those who have responsibility for procedural implementation of and monitoring adherence to the policy.

HARDWARE AND SOFTWARE PROCUREMENT POLICY

A Hardware and Software Procurement Policy establishes procurement procedures that promote the most favorable purchases and services for the organization.

WHY DO WE HAVE A HARDWARE AND SOFTWARE PROCUREMENT POLICY?

Procurement of hardware and software is bound by state legislation (most popularly know as Senate Bill 222. <http://www.ncleg.net/Sessions/1999/Bills/Senate/HTML/S222v7.html>. A procurement policy assures that procedures are followed as outlined by the State Department of Administration and the State Office of Information Technology Services for soliciting competitive bids for the purchasing of goods and services, the efficient transition of purchasing transactions between local boards of education and the Department of Administration, and compliance with the state government-wide technical architecture.

WHAT IS INCLUDED IN A HARDWARE AND SOFTWARE PROCUREMENT POLICY?

A HARDWARE AND SOFTWARE PROCUREMENT POLICY SHOULD INCLUDE:

- The purpose of the policy.
- Definitions of the terms, services, and technologies addressed in the policy.
- All technology purchases involving the expenditure of public funds by agencies shall be in conformity with the "Best Value" information technology procurement requirements.
- A statement for soliciting competitive bids for goods and services in accordance with the rules established by North Carolina Administrative Code.
- The department, office, and/or individual job titles for those who have responsibility for procedural implementation of the policy.

COPYRIGHT POLICY

Original works of authorship are the property of the creator and are protected by copyright law. A Copyright Policy alerts staff and students to the ramifications for violating copyright and protects the organization when staff violates fair use guidelines.

WHY DO WE NEED A COPYRIGHT POLICY?

"AS EDUCATORS, WE HAVE A VESTED INTEREST BOTH IN MODELING CORRECT BEHAVIOR AND IN OBTAINING NEW, HIGH-QUALITY EDUCATIONAL MATERIALS. BY ABIDING BY FAIR USE EDUCATIONAL OR LIBRARY EXEMPTIONS AND ENCOURAGING OUR COLLEAGUES TO DO THE SAME, WE CAN HELP INSURE A FREE FLOW OF INFORMATION INTO THE HANDS OF OUR PATRONS, ASSURE A FAIR RETURN TO AUTHORS AND EDUCATIONAL PUBLISHERS AND PRODUCERS, AND SET AN EXAMPLE OF RESPONSIBLE CITIZENSHIP."

(Simpson, 2001, p.12)

WHAT IS INCLUDED IN A COPYRIGHT POLICY?

The copyright law (P.L. 94-553) assures authors/creators/distributors the exclusive rights to their created works. A copyright policy points to resources that can help schools understand and comply with copyright laws for a variety of media and technology formats.

A COPYRIGHT POLICY SHOULD INCLUDE:

- The purpose of the policy;
- Fair use guidelines for all formats (books, art, on-line resources, speeches, software, music, multimedia, etc.);
- A mechanism for distribution and awareness;
- Identify of person responsible for publicizing and sharing the policy and updates;
- Ethical and professional statement of responsibility of adherence to copyright law for students and staff;
- The department, office, and/or individual job titles for those who have responsibility for maintaining an identification and password authorization system;
- The department, office, and/or individual job titles for those who have responsibility for procedural implementation of the policy.

Issues related to intellectual property rights and copyright are too broad a topic to be addressed adequately in this document. There are numerous resources to consult, including:

Becker, Gary H. *Copyright: A Guide to Information and Resources, Third Edition.* Lake Mary, 2003

Simpson, Carol. *Copyright for Schools: A Practical Guide for Schools, Fourth Edition.* Worthington: Linworth, 2005

ACCEPTABLE USE POLICY (AUP)

An Acceptable Use Policy is the formal set of rules for an organization that governs how electronic and networked resources may and may not be used.

WHY DO WE NEED AN AUP?

Access to the Internet is making on-line resources an integral part of the instructional program on a par with all other types of resources. The learning community needs to be educated about the important role that all resources have in the learning process. It is important that students, parents, and staff are aware of the nature of the resources available within the school and the responsibilities of users of school resources. An AUP is a list of rules and guidelines for students and staff using computer equipment and online resources.

WHAT IS INCLUDED IN AN ACCEPTABLE USE POLICY?

An AUP explains the importance of having such a policy and recommends AUP components and strategies. A good policy will establish clear rules and expectations for appropriate use of online resources and equipment and the consequences of misuse of resources or destruction of equipment.

AN AUP SHOULD INCLUDE:

- The purpose of the policy.
- Types of materials that can be accessed.
- Expected behaviors and proper use of computer time.
- Inappropriate behaviors: (i.e., illegal activities, vandalism, destructive behavior).
- Access rights.
- Network privileges.
- Password security.
- File storage on network drives.
- System safety.
- Copyright issues.
- Academic integrity.
- Privacy and personal safety.
- Appropriate language and material with electronic communications and content.
- Consequences of misuse.
- The department, office, and/or individual job titles for those who have responsibility for procedural implementation of the policy.

For more information about developing AUPs, refer to <http://www.rice.edu/armadillo/acceptable.html>

EQUIPMENT MATERIALS DONATION POLICY

An Equipment Materials Donation Policy deters the acceptance of equipment and materials that will provide no educational benefit to the school. The policy identifies the standards for equipment that will be accepted to assure that equipment will support the educational program of the school.

WHY DO WE NEED AN EQUIPMENT MATERIALS DONATION POLICY?

It is important to assure that technology equipment and resources support the instructional program, and do not impede it. Successfully incorporating technology within the school program requires:

- assurance of compatibility between equipment, infrastructure, and software.
- technical support to maintain the operation of equipment.
- strong teacher and student technology skills.

Computer equipment that does not meet the school's current standards for technology can tax already limited resources and support. Due to ever changing technology upgrades, the caliber of acceptable equipment should be reviewed and updated every 9 to 12 months. (What is usable today may not be of any value 6 to 12 months from now.) An Equipment Materials Donation Policy assures that donations support the instructional program rather than disrupt it.

WHAT IS INCLUDED IN AN EQUIPMENT MATERIALS DONATION POLICY?

AN EQUIPMENT MATERIALS DONATION POLICY SHOULD INCLUDE:

- The purpose of the policy.
- An acknowledgement of the appreciation of individuals or organizations that support the school or school system with donations.
- A statement that recognizes that all equipment that is supported and maintained by school personnel becomes school property.
- A reference to procedures for donating equipment to a school.
- A reference to the standards of equipment that is acceptable to donate.
- The department, office, and/or individual job titles for those who have responsibility for accepting equipment donations.

DATA PRIVACY POLICY

A Data Privacy Policy protects the personal information of an individual that is collected, or used by an organization from disclosure to the private sector and from unauthorized access by individuals.

WHY DO WE NEED IN A DATA PRIVACY POLICY?

The Family Educational Rights and Privacy Act (FERPA) protects the privacy of student education records and grants parents or a child 18 years of age or older access to the student's education records. The law applies to all schools that receive funds under an applicable program of the U.S. Department of Education. A data privacy policy reinforces the requirements of the federal law by providing explicit instructions for the handling and dissemination of student information and education records by defining under what circumstances an institution or an individual has access to an education record.

WHAT IS INCLUDED IN A DATA PRIVACY POLICY?

"Education Records" generally include any records in the possession of the institution that contain information directly related to a student. Records include any information related to students in any format: handwritten, print, typewritten documents, electronic files, computer, magnetic tape, electronic mail, film, or any other medium except for information as outlined in subpart (a) (3) of public law 20 U.S.C. § 1232g(a) (3); 34 CFR Part 99 (FERPA). Under FERPA, there is no requirement that obligates an institution to maintain student information.

A DATA PRIVACY POLICY SHOULD INCLUDE:

- The purpose of the policy;
- A definition of education records (items that are included in an education record);
- A statement on public disclosure of directory information;
- A statement on the annual notification of parents and students of their rights under the FERPA act;
- Circumstances under which the institution may charge a fee for the copy of education records;
- The department, office, and/or individual job titles for those who have responsibility for procedural implementation of the policy;
- Under what conditions and from whom prior consent is not required to disclose information.

INVENTORY CONTROL POLICY

An Inventory Control Policy establishes a consistent process to classify and protect organizational assets.

WHY DO WE NEED AN INVENTORY CONTROL POLICY?

The purpose of an Inventory Control Policy is to ensure adequate monitoring and verification of resources and effective acquisition and use of assets. Inventory policies are paramount when computer equipment is distributed throughout the organization facility, and the quality and usefulness of computers depends on many technical variables.

WHAT IS INCLUDED IN AN INVENTORY CONTROL POLICY?

For an inventory to be useful, it needs to include enough information on each inventoried item so that each item is easily identified and matched with an inventory number. An Inventory Control Policy should provide adequate direction on asset management to assure the usefulness of an inventory in the event of loss of equipment or materials or for program planning.

AN INVENTORY CONTROL POLICY SHOULD INCLUDE:

- Purpose of the policy;
- Types of items that should be included in an inventory;
- Guidelines for identifying ownership of equipment and materials;
- A reference to procedures for tagging and numbering new equipment and materials;
- A reference to procedures for removing items from an inventory;
- Guidelines on the specifications for each equipment and material item that should be included on the inventory;
- Person responsible for maintaining an inventory of equipment and an inventory of materials;
- Timeline for conducting an inventory audit;
- Consequences for responsible parties not following an inventory control policy.

ACCESSIBILITY POLICY (ACCESS TO SERVICES POLICY)

Accessibility Policy assures the right of all individuals, including those with disabilities, to have an equal opportunity to experience success in their academic endeavors within the education institution.

WHY DO WE HAVE AN ACCESSIBILITY POLICY?

Providing access to materials and resources is an important function of library/media and technology programs. Policies should address issues of both physical and intellectual access.

WHAT IS INCLUDED IN AN ACCESSIBILITY POLICY?

AN ACCESSIBILITY POLICY SHOULD INCLUDE:

- Purpose of the policy;
- Open, flexible access to facilities for instruction and leisure reading;
- Provisions for those with special needs, including the use of assistive/adaptive equipment;
- Standards regarding building access for parents and community members after normal school hours;
- Policy statements for intellectual access including students' right to read and intellectual freedom;
- Department, office, and/or individual job titles for those who have responsibility for procedural implementation of the policy.

PHYSICAL ACCESS MEANS:

- Physical facilities arranged to meet the needs of students, teachers, parents, and community members (for example, assistive/adaptive equipment);
- Open hours within and beyond the school day;
- Flexible, equitable access that provides instruction for all at the point of need;
- Free, timely, and easy access to program services, resources, and facilities;
- Circulation policies and procedures that encourage optimal access and use of all types of materials.

INTELLECTUAL ACCESS MEANS:

- Well-organized collection of resources;
- Information in a variety of formats;
- Accurate, current information that meets the needs of learners;
- Methods for finding, judging, and using information;
- Equal educational opportunity;
- Atmosphere of free inquiry and life-long learning.

STUDENT DISCIPLINE AND LIABILITY POLICY

Students and staff are expected to adhere to standards of conduct when representing school business or participating in school functions. A discipline and liability policy establishes appropriate codes of conduct and appropriate disciplinary procedures for misconduct.

WHY DO WE NEED A STUDENT DISCIPLINE AND LIABILITY POLICY?

The purpose of a Student Discipline Policy is to diminish disruptive behavior that interferes with school operations or the instructional program and to protect the property of the organization from damage. A student discipline policy helps everyone understand the expectations of students in regard to conduct and care of school property. It also identifies educators, staff, and parent responsibility to direct students in appropriate behavior and care of public property.

WHAT IS INCLUDED IN A STUDENT DISCIPLINE AND LIABILITY POLICY?

Adequate care of computer equipment requires proactive behavior and care unique to technology; therefore, it should be included within a special section of the Student Discipline and Liability Policy. That section should include:

- The purpose of the policy;
- Duties of principals and teachers to instruct students in the proper care of technology equipment;
- An outline of an awareness program for students on the appropriate use of technology;
- The unique requirements for proper care of technology for the prevention, detection, and eradication of destructive software (a virus) on computer workstations and networks;
- Reference procedures for reporting inappropriate behavior or destruction of property by a student;
- Reference procedures for parent/guardian or student to appeal disciplinary action;
- The responsibility and liability of parents or legal guardians of a child who damages property including technology equipment;
- Consequences for students who violate discipline and liability policies;
- The department, office, and/or individual job titles for those who have responsibility for enforcing student discipline and liability policies and procedures;
- A scheduled review and modification of discipline and liability policies to identify new technology that needs to be included under a student discipline and liability policy.

REMOTE ACCESS POLICY

A Remote Access Policy alerts users of any institutional or legal requirements most appropriately addressed through a formal policy.

WHY DO WE NEED A REMOTE ACCESS POLICY?

Remote access to an organization's technology and networks provides greater flexibility in its use and maintenance to employees and to the technical support department. To prevent unauthorized and malicious remote access to the organization's technology networks, resources, and electronic data, a network policy that enforces guidelines and procedures for remote access is paramount.

WHAT IS INCLUDED IN A REMOTE ACCESS POLICY?

A REMOTE ACCESS POLICY SHOULD INCLUDE:

- The purpose of the policy;
- The scope and applicability of the policy;
- Definitions of the technologies addressed in the policy;
- A process for verifying an employee's authorization to obtain remote access capability;
- A statement that the level of remote access to the organization's network resources will correspond with job responsibilities;
- A reference procedure for an employee to obtain remote access;
- A reference to acceptable methods for remote access to the organization's technology, networks, and data;
- A statement that prohibits a user from sharing remote access with unauthorized users;
- A reference to procedures for reporting unauthorized access;
- Systems management procedures that include management of stored data, monitoring of network system usage, virus protection, data encryption, and hardware to prevent unauthorized access and a breech of security;
- Consequences for users (staff, students) who do not follow the rules of the Remote Access Policy and procedures;
- The department, office, and/or individual job titles for those who have responsibility for procedural implementation of the policy;
- A scheduled review and modification of remote access policy and procedures;
- A disclaimer of liability should an employee agree to and then violate the policy.

VIRUS/THREAT PROTECTION POLICY

A Virus/Threat Protection Policy establishes the requirements for detection and eradication of malicious software.

WHY DO WE NEED A VIRUS PROTECTION POLICY?

In order to provide the most efficient information system that offers the least amount of interruption in the educational program, a safe and secure network environment must be maintained. All users of technology systems must be aware of their responsibility to ensure a safe and secure environment. In order to ensure a safe and secure environment, users must understand how viruses and other software threats infiltrate a technology system; the precautions that users can take with their own data and computer management; and electronic communications needed to diminish the threat of viruses.

WHAT IS INCLUDED IN A VIRUS PROTECTION POLICY?

THE PURPOSE OF THE POLICY;

- The requirements for the prevention, detection, and eradication of destructive software (a virus) on computer workstations and networks;
- Approved software and hardware requirements for diminishing virus threats;
- The requirements for maintaining virus protection on workstations;
- The requirement of all users of the computing system to report a virus threat;
- The department, office, and/or individual job titles for those who have responsibility for managing virus protection procedures and utilities;
- Consequences for users (staff, students) who interfere with virus protection protocols or intentionally enable a virus or any destructive software on the organization computing system.

NC WISE ID AND PASSWORD WORKSTATION POLICY

An NC WISE ID and Password Workstation policy establishes a directive for governing the management of user accounts and identification.

WHY DO WE NEED AN ID/PASSWORD POLICY?

One method to assure the security of student records and school information on the school technology system is to permit only those employees with a business need to have access to the information. This is accomplished by establishing an identification and authorization system that allows employees access only to the information they need to perform their jobs. To maintain a secure and safe technology environment, a system for administering account identification and passwords to authorized users of the information network within the organization must be established.

WHAT IS INCLUDED IN AN ID/PASSWORD POLICY?

AN ID/PASSWORD POLICY SHOULD INCLUDE:

- The purpose of the policy;
- A process for verifying an employee's authorization to information;
- A confidentiality statement that prohibits sharing of IDs and passwords;
- The protocols for password composition;
- A statement that the level of access to information will correspond with job responsibilities;
- A timeline for changing passwords;
- A procedure for an employee to obtain a new password;
- The department, office, and/or individual job titles for those who have responsibility for maintaining an identification and password authorization system;
- Consequences for users (staff, students) who do not follow the rules of the password policy.

NETWORK SECURITY POLICY

A comprehensive Network Security Policy codifies security procedures and a detailed security plan. This includes how monitoring of information and network activity is authorized and activities that will be monitored.

WHY DO WE NEED A NETWORK SECURITY POLICY?

A Network Security Policy provides overall guidelines for the full breadth of technologies and for the network of systems prevalent in the organization. A Network Security Policy provides detailed guidance for users and chief technology officers on the overall administration of the information network.

WHAT IS INCLUDED IN A NETWORK SECURITY POLICY?

A NETWORK SECURITY POLICY SHOULD INCLUDE:

- The purpose of the policy
- The scope and applicability of the policy
- Definitions of the technologies addressed in the policy
- The department, office, and/or individual job titles for those who have responsibility for procedural implementation of the policy
- Identification of appropriate users of equipment
- Appropriate use of equipment
  - User access
  - Responsible use of equipment
  - Protection of individual privacy
- Prohibitive use of equipment that identifies
  - Disruptive use or misuse
  - Criminal Use
  - Offensive or harassing activity
  - Copyright or intellectual property infringement
- Systems management procedures that include
  - Management of stored data
  - Monitoring of network system usage
  - Including the monitoring, tracking and filtering of Internet sites accessed by users
  - Virus protection
  - Physical Access security (authorization to equipment rooms)
  - Data encryption
  - Hardware
- Identify procedures for reporting security violations
- Consequences for users (staff, students) who do not follow the rules of the network security policy
- A scheduled review and modification of security policy and procedures
- A disclaimer of liability should an employee agree to and then violate the policy

SECURITY AWARENESS POLICY

"THE SINGLE GREATEST FACTOR IN SUCCESSFUL INFORMATION SECURITY IS THE EMPLOYEE."
(Peltier, 1999)

A Security Awareness Policy provides the framework for a good network and data security management program. A Security Awareness Policy describes the requirements for classifying information as sensitive (private) and the requirements for handling such information.

WHY DO WE NEED A SECURITY AWARENESS POLICY?

Access to student information is governed by state and federal law. With technology and information systems, unauthorized access to information can occur both remotely and on-site. Moreover, the increased risk of unauthorized access to student information increases the risk of statutory infringement. It is the responsibility of each educational agency to assure that employees are aware of the importance of electronic management of information and methods for its security.

WHAT IS INCLUDED IN A SECURITY AWARENESS POLICY?

Security awareness is an ongoing process that should include awareness campaigns to its employees at regular intervals.

A SECURITY AWARENESS POLICY SHOULD INCLUDE:

- The purpose of the policy;
- Reference procedures for alerting employees to a security threat;
- An outline of the security awareness program (new employee orientation, workshops, manuals, processes for reporting security threats);
- The department, office, and/or individual job titles for those who have responsibility for maintaining a security awareness program;
- Consequences for users (staff, students) who do not follow the procedures of a security awareness program.

ADVERTISING AND COMMERCIALISM POLICY

An Advertising and Commercialism Policy establishes practical guidelines to ensure that the advertisements and sponsored content of an instructional resource in no way detracts from the credibility of the educational content and that any advertising and commercialism complies with ethical and professional standards for the protection of minors.

WHY DO WE NEED AN ADVERTISING AND COMMERCIALISM POLICY?

It is at the discretion of local school boards to purchase instructional materials, whether or not the materials contain commercial advertising, and to determine if the materials are related to and/or within the limits of the prescribed curriculum, and to determine when the materials may be presented to students during the school day.

WHAT IS INCLUDED IN AN ADVERTISING AND COMMERCIALISM POLICY?

AN ADVERTISING AND COMMERCIALISM POLICY SHOULD INCLUDE:

- The purpose of the policy;
- A statement that the selection of materials and resources should support the mission and goals of the instructional program;
- Recognition that the selection of materials should be based on established criteria of a selection materials policy and procedures;
- A statement on the non-intrusiveness of advertising on instructional resources;
- A statement that instructional resources should be free from bias;
- A reference to guidelines regarding commercial advertising on instructional resources;
- The department, office, and/or individual job titles for those who have responsibility for procedural implementation of and monitoring adherence to the policy.

ELECTRONIC COMMUNICATIONS POLICY (EMAIL AND INSTANT MESSAGING)*

An Electronic Communications Policy provides overall direction for the appropriate use of electronic communication by the staff of an organization.

WHY DO WE HAVE AN ELECTRONIC COMMUNICATIONS POLICY?

Electronic communications are usually considered public record of any government agency (this includes public schools). Therefore the management, retention and deletion of electronic mail should adhere to Open Records Law (G. S. 132).

WHAT IS INCLUDED IN AN ELECTRONIC COMMUNICATIONS POLICY?

AN ELECTRONIC COMMUNICATIONS POLICY SHOULD INCLUDE:

- The purpose of the policy;
- Definitions of the terms, services, and technologies addressed in the policy;
- A statement that email is provided to staff for the purpose of conducting business within and outside of the organization;
- A statement that the electronic communications are public record. Electronic communications should be stored and deleted according to state and federal guidelines and managed by appropriate records management procedures;
- A statement that as a public record, electronic communications may be monitored for abuse. The organization reserves the right to retrieve and review any messages composed, sent, or received through the electronic communication system;
- A statement that prohibits users from sharing their email account;
- A reference to procedures for reporting unauthorized use of, or abusive content (spam or harassing or threatening content);
- Consequences for users (staff, students) who do not follow the rules of the Electronic Communications Policy and procedures;
- The department, office, and/or individual job titles for those who have responsibility for procedural implementation of the policy;
- A disclaimer of liability should an employee agree to and then violate the policy.

* While an email policy is not required by federal or state statute (therefore, not listed in the required policies on page six), the maintenance of email is governed by Open Records Law and is a security issue. The Instructional Technology Division of NCDPI recommends that school systems implement an Electronic Communications policy.

WEB SITE DEVELOPMENT POLICY*

A Web Site Development Policy outlines the appropriate information for staff to include on a school related Web site to conduct school business. It also clarifies personal information of individuals that should not be included on a school Web site.

WHY DO WE NEED A WEB SITE DEVELOPMENT POLICY?

The school Web site is one of the best methods to communicate program goals and successes with parents and community. It is a wonderful forum for advocacy, but guidelines for appropriate content must be carefully followed.

WHAT IS INCLUDED IN A WEB SITE DEVELOPMENT POLICY?

A Web Site Development Policy should refer to the procedures to be followed for school and teacher Web sites, and should include guidelines for content and format. Additionally, the department and the position responsible for addressing issues regarding the posting of information on the Web site should be included.

A WEB SITE DEVELOPMENT POLICY SHOULD INCLUDE:

- The purpose of the policy;
- Definition of acceptable content;
- Identity of the person responsible for content hosted on school servers;
- Adherence to W3C standards for Web site Accessibility;
- Location for posting teacher or work related Web pages;
- Allowing/disallowing student access to school Web pages;
- Rules governing commercial content/links;
- Guidelines for gaining permission to use hyperlinks to other sites;
- Rules for dealing with photographs of students and/or their work;
- A reminder of copyright laws;
- Rules governing the posting of faculty/staff email addresses;
- The department, office and/or individual job titles for those who have responsibility for procedural implementation of the policy.

* While a Web Site Development Policy is not required by federal or state statute (therefore, not listed in the required policies), the Instructional Technology Division of NCDPI recommends that school systems implement a Web Site Development Policy to guide school personnel in the appropriate content and format for Web sites developed for school purposes.

SUGGESTED GUIDELINES FOR THE RECONSIDERATION OF INSTRUCTIONAL MATERIALS IN THE NORTH CAROLINA PUBLIC SCHOOLS

I. All school systems shall have in place a system-wide selection policy in compliance with General Statute 115C-98.

II. The Department of Public Instruction recommends that each school have a building-level Media and Technology Advisory Committee whose members are responsible for assisting media and technology professionals in the selection process and the building-level challenge of materials. This committee, appointed by the principal and co-chaired by the school library media coordinator and the technology facilitator, should consist of:

- Principal
- Representative from each grade level or department
- Representative from special areas
- Parent representative
- Student representative (at the middle and high school levels

All requests for reconsideration of materials should begin at this level with the submission of a Request for Reconsideration of Instructional Resources (see sample).

III. In accordance with GS 115C-98 (b1), a school system's Community Media Advisory Committee may be appointed by the local board of education to investigate and evaluate challenges. If the appointment is made, the Department of Public Instruction recommends that the committee should consist of:

- the superintendent or his/her designee
- the media director or his/her designee
- the technology director or his/her designee
- a media coordinator and technology facilitator/or teacher from each level of school within the system (i.e., elementary, middle, high school)
- a principal from each level of school within the system
- a parent/community member from each level of school within the system
- a parent from the school from which the challenge originates
- at least 1 high school student

The chair of this committee should be appointed by the board of education. If the person originating the challenge at the building level is not satisfied with the building-level recommendation, he/she should submit a *Citizen's Request for Review of Building-Level Recommendation* within one week of the publication of the building-level decision.

IV. In accordance with GS 115C-98 (bl), "The local board, at all times, has sole authority and discretion to determine whether a challenge has merit and whether challenged material should be retained or removed."

SAMPLE MEDIA AND TECHNOLOGY SELECTION POLICY

I. RESPONSIBILITY FOR SELECTING MEDIA AND TECHNOLOGY

In accordance with PUBLIC SCHOOL LAWS OF NORTH CAROLINA, General Statute 115C-98 (b) "Local boards of education shall adopt written policies concerning the procedures to be followed in their local administrative units for the selection and procurement of supplementary textbooks, library books, periodicals, and other instructional materials needed for instructional purposes in the public schools of their units . . ." The Board of Education delegates the responsibility for coordinating the selection of instructional resources and recommendation for purchase to the professional media and technology professionals in the administrative unit.

Each school's Media and Technology Advisory Committee will assist media and technology professionals in the selection process and the school-level challenge of materials. The Media and Technology Advisory Committee is appointed by the principal and co-chaired by the school library media coordinator and the technology facilitator. This committee includes teachers representing all subject areas and/or grade levels, students (in middle and high school), and parent/community representatives. Under the leadership of professional media personnel, this group sets priorities for resources to be acquired based on school-wide objectives and on strengths and weaknesses in the existing collection. It is also the first level of response to any challenge of resources within the school system.

In 1996, GS 115C-98 was amended by adding a new subsection to read, "A local board of education may establish a community Media Advisory Committee to investigate and evaluate challenges from parents, teachers, and members of the public ... The local board, at all times, has sole authority and discretion to determine whether a challenge has merit and whether challenged material should be retained or removed."

II. OBJECTIVES FOR SELECTING MEDIA AND TECHNOLOGY

The primary objective of each school's library media and technology program is to enrich and support the instructional program of the school. The media and technology program makes available, through the school's collections, a wide range of print, nonprint, and technology on varying levels of difficulty with a diversity of appeal compatible with the different needs, interests, and viewpoints of students and teachers.

To this end, the _____ Board of Education in keeping with the ideas expressed in the *Library Bill of Rights,* asserts that the responsibility of the media program is as follows:

1. to provide resources that will enrich and support the curriculum, taking into consideration the varied interests, abilities, socio-economic backgrounds, learning styles, and developmental levels of the students served.
2. to provide resources that stimulate growth in factual knowledge, literary appreciation, aesthetic values, and ethical standards.
3. to provide a background of information enabling students to comprehend their role as citizens in society and to make intelligent judgments in their daily lives.
4. to provide resources on opposing sides of controversial issues so that students may develop, under guidance, the practice of critical thinking and of critical analysis of all media.
5. to provide resources representative of the many religious, ethnic, and cultural groups in our nation and the contributions of these groups to our American heritage.
6. to place principle above personal opinion and reason above prejudice in selecting media of the highest quality in order to assure a comprehensive collection appropriate for all users.

III. CRITERIA FOR SELECTING MEDIA AND TECHNOLOGY

Individual teaching and learning styles, the curriculum, and the existing collection are given consideration in determining the needs for resources in individual schools.

After a careful needs assessment, resources considered for purchase are judged on the basis of the following criteria:

PURPOSE: Overall purpose and its direct relationship to instructional objectives/curriculum

RELIABILITY: Accurate, authentic, up-to-date, authoritative treatment: Clear, skillful, well-organized, unbiased, comprehensive, well-balanced

TECHNICAL QUALITY: Relevant to content, sound and visuals consistent with state-of-the-art capabilities

FORMAT: Well-organized, attractive, appropriate

CONSTRUCTION: Durable, manageable

POSSIBLE USES: Individual, small group, large group, introduction, in-depth study, remediation, enrichment

IV. PROCEDURES FOR SELECTING AND MAINTAINING THE MEDIA AND TECHNOLOGY COLLECTION

In coordinating the selection of resources, the media and technology professionals, assisted by the Media and Technology Advisory Committee, should:

1. use reputable, unbiased selection tools prepared by professional educators and arrange, when possible, for firsthand examination of resources to be purchased
2. judge gift items and classroom collection purchases by standard selection criteria
3. weed continuously and purchase replacements for worn, outdated, damaged, or missing resources basic to the collection

V. PROCEDURES FOR RECONSIDERATION OF INSTRUCTIONAL RESOURCES

Occasional objections to some resources may be voiced by the public despite the care taken in the selection process and despite the qualifications of persons selecting the resources. If a complaint is made the following procedures should be observed:

1. Inform the complainant of the selection procedures and request that the complainant file his/her objections in writing by completing the Request for the Reconsideration of Instructional Resources form to be submitted to the building-level Media and Technology Advisory Committee.

2. The building-level Media and Technology Advisory Committee will:
   - examine the item and the objection(s)
   - survey reviews of the item in professional reviewing sources
   - determine the extent to which the item supports the curriculum
   - weigh the merits against the alleged weaknesses, considering the whole item instead of isolated passages
   - discuss the item and prepare a written report of the findings and recommendations of the committee
   - send copies of the report to the principal, the media director, and technology director. The media director and technology director should discuss the report with the superintendent, who may present it to the board.

3. If the complainant is not satisfied, he/she may file a Citizen's Request for Review of Building-Level Recommendation with the Community Media Advisory Committee if such a committee exists. Following the steps outlined above, the community-level committee will re-examine all documentation from the original reconsideration decision. They will prepare a written report of their findings and recommendation and report directly to the local school board.

4. In accordance with GS 115C-98 (bl), "The local board, at all times, has sole authority and discretion to determine whether a challenge has merit and whether challenged material should be retained or removed."

REQUEST FOR RECONSIDERATION OF INSTRUCTIONAL RESOURCES

NAME OF PERSON MAKING REQUEST: _____

ADDRESS: _____ TELEPHONE: _____

Complainant represents: _____ himself/herself or _____ organization
If organization, what is the name of the organization: _____

Are you a parent or guardian of a student in this school? _____ Child's grade level: _____

Name of school owning the item to be reconsidered: _____

TITLE OF ITEM: _____ FORMAT: _____
(Please complete separate form for each individual title to be reconsidered) *(book, video, etc.)*

AUTHOR/ARTIST/COMPOSER, ETC.: _____

PUBLISHER/PRODUCER: _____ COPYRIGHT DATE: _____

How did you acquire this item? _____

Did you read, view, or listen to the entire item? _____
If not, what parts? _____

Is this item part of a series or set? Yes _____ No _____.
If yes, did you examine other items in the series or set? _____

To what in the item do you object? *(Please be specific: cite pages, frames, etc.)*

_____

_____

What do you feel might be the result of a student's reading, viewing, or listening to this item?

_____

Are you aware of any evaluations of this item by authoritative sources? Yes _____ No _____.
If yes, did those sources agree with your opinion? Yes _____ No _____.

List the sources: _____

Do you want other persons in the community to determine the kind of materials your child may or may not use in school? _____

Other comments: _____

_____

_____

_____ _____
SIGNATURE OF COMPLAINANT DATE

CITIZEN'S REQUEST FOR REVIEW OF BUILDING-LEVEL RECOMMENDATION

NAME OF PERSON MAKING REQUEST: _____

ADDRESS: _____ TELEPHONE: _____

Complainant represents: _____ himself/herself or _____ organization

If organization, what is the name of the organization: _____

Are you a parent or guardian of a student in this school system? _____ Child's grade level: _____

Name of school owning the item to be reconsidered: _____

TITLE OF ITEM: _____ FORMAT: _____

(Please complete separate form for each individual title to be reconsidered) *(book, video, etc.)*

AUTHOR/ARTIST/COMPOSER, ETC.: _____

PUBLISHER/PRODUCER: _____ COPYRIGHT DATE: _____

Are you aware of the reasons for the building-level decision regarding this resource? Yes _____ No _____.

What aspects of the decision are you requesting be reviewed? _____

_____

_____

Do you have additional comments or information about the resource that you did not include on the building level Request for Reconsideration form? Yes _____ No _____.

If yes, please include: _____

_____

_____

Other comments: _____

_____

_____

_____

_____ _____

SIGNATURE OF COMPLAINANT DATE

MEDIA DIRECTOR/SUPERVISOR (078) JOB DESCRIPTION

The media director/supervisor is a system-level media professional who may be identified as Director of Library Media Services, Director of Media and Technology, Coordinator of Library Media Services, or Library Supervisor. Competencies are required in the areas of administration, supervision/management, and curriculum development for this certification area.

CERTIFICATION: Director/Supervisor (master's level) certification is required for service as director of media services in a school system. Certification is based on eligibility to hold the media coordinator (076) certificate plus 12 graduate semester hours of credit in administration, curriculum development, and supervision and three years of acceptable experience as a media coordinator.

MEDIA DIRECTOR/SUPERVISOR JOB DESCRIPTION

REPORTS TO: Superintendent or Designee

SUPERVISES: School library media professionals and media support personnel

PURPOSE: To provide leadership in the development, implementation, and evaluation of the school library media program to promote student learning and teacher effectiveness for the benefit of the system's total educational program.

DUTIES AND RESPONSIBILITIES

1. MAJOR FUNCTION: Program Management

   - Provides effective leadership in developing, implementing, and evaluating plans for a comprehensive, system wide school library media program
   - Coordinates the planning and design of new, renovated, and existing school library media facilities and school wide infrastructure.
   - Assists in the development of inservice staff development for school library media staff and other school system personnel especially in the area of print and electronic resources and services
   - Communicates the system's vision, goals, and priorities especially regarding school library media programs to the public
   - Coordinates system-level programs and resources

2. MAJOR FUNCTION: Fiscal Management

   - Prepares budgets, coordinates with other departments or agencies to assure maximum services and resources, and maintains records/reports/inventories in accordance with local/state/federal policies.
   - Guides building level school library media coordinators and principals in the selection and purchase of materials and equipment
   - Advocates standardization and investigates licensing issues for system wide resources
   - Researches, initiates, and encourages a wide range of grants and external funding opportunities for the support and enhancement of school library media programs

3. MAJOR FUNCTION: Information Management

- Advocates for school library media programs within the school system and the community
- Serves as a liaison between the school and other agencies especially in regards to school library media and technology issues
- Adheres to and advises all school personnel regarding copyright as well as other laws and guidelines pertaining to the distribution and use of resources
- Advocates the principles of intellectual freedom and ethical behavior

4. MAJOR FUNCTION: Collaboration

- Collaborates with other program directors to affect student achievement and teacher effectiveness
- Teams with other technology staff to assure standardization of equipment and software across programs and buildings
- Initiates collaboration with other libraries and agencies to share resources that enhance the educational community's learning environment
- Works with principals, teachers, and system-level directors to assure standardization and equity of resources across programs and buildings

5. MAJOR FUNCTION: Personnel Management

- Assists principals and site-based committees in the selection and placement of school library media personnel
- Assists principals in the delegation and supervision of school library media personnel responsibilities
- Supports school library media personnel in the day-to-day operation of the school library media program
- Works with principals and/or teacher evaluators to appraise the performance of school library media personnel.
- Supervises district level media and technology support personnel

SCHOOL LIBRARY MEDIA COORDINATOR (076) JOB DESCRIPTION

In North Carolina, the school's library media coordinator may be identified by a variety of titles, such as librarian, library teacher, or media specialist. The official title for certification purposes is school library media coordinator, and this position is considered a teaching certification.

CERTIFICATION: Approved program requirements that must be met to qualify for K-12 School Library Media Coordinator certification are at the master's degree level and were adopted by the State Board of Education in 1987.

SCHOOL LIBRARY MEDIA JOB DESCRIPTION

REPORTS TO: Principal and Media Supervisor

SUPERVISES: Coordinates and directs the activities of school library media support personnel including library media assistants, technical assistants, student assistants, and/or volunteers.

PURPOSE: To provide the leadership and instructional resources and services for implementation of a school library media program that serves as an integral part of a student-centered educational process

DUTIES AND RESPONSIBILITIES

1. MAJOR FUNCTION: Planning and Implementing for Teaching and Learning
   - 1.1 Assesses learning and information needs of students and staff
   - 1.2 Plans and works collaboratively with teachers to use appropriate resources that address curricular needs and learning goals
   - 1.3 Works with the principal and school leadership team to provide flexible access to the instructional services of the school library media coordinator
   - 1.4 Instructs students and staff in the effective use of the media center and its resources
   - 1.5 Incorporates information literacy into day-to-day instruction
   - 1.6 Advocates and promotes reading and life-long learning through motivational activities
   - 1.7 Collaborates with the Technology Facilitator to provide leadership in the school's use of instructional technology resources to enhance learning
   - 1.8 Follows a plan for personal professional development and actively seeks out opportunities to grow professionally

2. MAJOR FUNCTION: Planning and Implementing for Information Access, Evaluation, and Use
   - 2.1 Creates and maintains an environment conducive to learning
   - 2.2 Works with the principal and school leadership team to provide flexible access to school library media center resources to accommodate individuals and groups simultaneously
   - 2.3 Organizes school library media facilities and resources in a manner that supports the mission, goals, and objectives of the school and maximizes intellectual and physical access to resources
   - 2.4 Encourages the widest possible use of print and electronic resources and services--within the school library media center, throughout the school, and through remote access
   - 2.5 Works cooperatively with other libraries and agencies to share resources that enhance teaching and learning
   - 2.6 Adheres to and communicates copyright as well as other laws and guidelines pertaining to the distribution and ethical use of all resources
   - 2.7 Advocates the principles of intellectual freedom

3. MAJOR FUNCTION: Planning and Implementing for Program Administration

3.1 Works with school staff to design and implement short- and long-range plans that ensure balance among all aspects of the school library media coordinator's role and responsibilities

3.2 Develops and implements an ongoing collection development and evaluation planning process, in collaboration with the Media and Technology Advisory Committee, that focuses on a variety of formats and resources to meet diverse learning needs

3.3 Evaluates and selects resources that build a collection addressing curricular needs and learning goals in collaboration with teachers, technology staff, and students

3.4 Maintains a collection addressing curricular needs and learning goals

3.5 Evaluates the school library media program on a continual basis according to accepted standards of quality

3.6 Plays a leading role in the school's budgetary process to ensure funding for the school library media program to support school-wide goals

3.7 Leads, in partnership with the Technology Facilitator, the Media and Technology Advisory Committee in effective decision making to promote the media and technology program

3.8 Interacts effectively with students, staff, administration, parents, and the community to promote and expand the school library media program

3.9 Prepares and submits accurate reports as required

3.10 Adheres to established laws, policies, rules, and regulations

3.11 Carries out non-instructional duties as assigned and/or as need is perceived

MEDIA ASSISTANT JOB DESCRIPTION

NATURE OF WORK

An employee in this class performs routine tasks in the areas of materials and hardware acquisition, file and records management, and circulation. Clerical responsibilities include tasks related to ordering, receipt, maintenance, inventory, and production of instructional materials. The employee also provides ongoing support to teachers and students (K-12) using resources in the school library media center. When working directly with users, the media assistant must be able to respond effectively to their needs.

The employee provides hardware and software support to users of computer workstations in the school library media center. Tasks include minor troubleshooting problems such as logging on to computer systems or software, printing malfunctions, or routine error messages. In some cases, the employee will research appropriate manuals to find answers. If standard techniques do not resolve the situation, the employee will seek assistance from the appropriate technical professional.

The employee may assist in the development of instructional materials and make purchase recommendations. The media assistant carries out all tasks under the direction of the professional members of the school library media staff, reporting, as appropriate, to designated professionals and administrators.

ILLUSTRATIVE EXAMPLES OF WORK

CLERICAL RESPONSIBILITIES

- Assume general clerical responsibilities
- Compile statistics
- Order and process print and non-print materials
- Maintain inventory of and order supplies
- Circulate print and non-print materials
- Perform other clerical duties as assigned

TECHNICAL RESPONSIBILITIES

- Maintain the online catalog
- Perform preventive maintenance and minor repairs on equipment
- Maintain the school library media center collection
- Provide timely resolution of computer problems by providing assistance or referral
- Perform other technical support responsibilities as assigned

INSTRUCTIONAL SUPPORT RESPONSIBILITIES

- Assist students and staff with location and use of materials and equipment
- Prepare displays
- Schedule use of and deliver materials and equipment
- Assist with the preparation of instructional materials
- Assist with the preparation of bibliographies and pathfinders
- Perform other instructional support responsibilities as assigned

KNOWLEDGE, SKILLS AND ABILITIES

- Competency in basic clerical procedures such as filing, sorting, organizing, and shelving
- Competency in maintaining records, inventory, and accounting
- General knowledge of computers
- Competency with word processing and other basic office applications
- General knowledge of information technology devices
- General knowledge of software packages utilized in the school library media center
- Competency in online searching
- Ability to communicate with users to determine the nature of assistance needed
- Ability to establish and maintain effective working relationships
- Ability to solve independently most minor problems

SUGGESTED TRAINING AND EXPERIENCE

Graduation from high school or GED and experience in office clerical procedures and the use of computer and information technology resources. An equivalent combination of training and experience which provides the required knowledge, skills, and abilities for the position.

This specification has been designated to represent the general nature and level of work found in positions in this class. As such, it is not intended to contain all of the duties and qualifications required of an employee in a single position (job). Consequently, it is not to be perceived as a position (job) description or as identification of essential functions as required by ADA.

DIRECTOR OF TECHNOLOGY JOB DESCRIPTION

TITLE: Director of Technology

LOCATION: System-Level

LICENSE: (077) Supervisor's License

REPORTS TO: Superintendent or designee

SUPERVISES: System-level technology staff, technicians, network engineers, and others as designated

NATURE OF WORK

The Director of Technology is primarily concerned with the development, implementation, operation, monitoring, and evaluation of the technology program for the school system. This individual provides leadership in identifying hardware and software purchases, ensuring that they are consistent with the school system instructional technology plan and state technology guidelines. The employee coordinates, and may deliver, staff development on technology competencies needed for teaching the North Carolina Computer/Technology Skills Curriculum to students and for acquiring the required North Carolina Technology Competencies for Educators needed for licensure renewal. The employee works collaboratively with the other members of the school system central office staff and school building staff to use technology and include technology applications as an integral part of the total instructional program.

ILLUSTRATIVE EXAMPLES OF WORK

- Provides leadership for short- and long-range planning for all technology initiatives: vision, goals, program objectives/strategies/activities, infrastructure, staffing, training, evaluation, budgeting, and collaboration with others. Assist the coordinators and facilitators with implementing the system and the building-level technology plans in accordance with the North Carolina Instructional Technology Plan, the North Carolina Technological Recommendations and Standards, and other state recommendations and guidelines.
- Plans, develops, and implements staff development activities to meet established instructional technology integration needs, computer skills curriculum, and the North Carolina Educator Technology Competencies licensure renewal.
- Works with other Directors to integrate technology in the ongoing instructional program for all curriculum areas by identifying strategies and materials, and by implementing activities for integration.
- Is knowledgeable of the hardware configurations and computer-related items on state contract and of the other technology-related state contract products. Use the state and local technology plans to establish standards for the purchase of equipment, software, related media, and supplies for instructional technology integration and management activities according to the local purchasing guidelines.
- Supervises the system-wide inventory of technology assets.
- Assists technology users in resolving problems associated with ordering, service, and support.
- Plans and coordinates the implementation of special activities to promote technology.
- Serves as a clearinghouse of information on trends, research, applications, and effective practices related to the use of technology in the school program and school system.
- Serves as a system contact for all technology-related communication.

KNOWLEDGE, SKILLS, AND ABILITIES

- General knowledge of computers and related technologies as they apply to pre K-12 education.
- General knowledge of resources that support the North Carolina Computer/Technology Skills Curriculum, the North Carolina Educator Technology Competencies, and instructional integration of technology.
- General knowledge of infrastructure requirements and components of local and wide area networks, Internet, intranets, and distributed learning.
- Ability to communicate effectively with all levels of school system staff.
- Ability to assist users and trainers with software and hardware direction, guidance, and vision-setting.
- Ability to establish evaluation strategies and implement formative and summative activities.
- Ability to train educators in the use of hardware and software to meet the NC Technology Competencies for Educators.
- Ability to lead technology planning efforts including activities to develop, implement, and evaluate both system and school technology plans.
- Ability to manage financial resources.

SUGGESTED TRAINING AND EXPERIENCE

- Master's degree in related field with 077 licensure
- Teaching experience

TECHNOLOGY COORDINATOR JOB DESCRIPTION

TITLE: Technology Coordinator

LOCATION: System-Level

LICENSE: 18079 - Special Endorsement in Computer Education 077 Preferred

REPORTS TO: Director of Technology

NATURE OF WORK

The Technology Coordinator is responsible for working with system-level technology staff, technicians, and network engineers as well as with school-based technology facilitators. This individual coordinates the implementation of the school system's instructional technology plan at the building level. The employee should promote and implement the use of instructional and administrative technology systems, and will develop, coordinate and implement technology professional development to meet requirements of the North Carolina Educator Technology Competencies and for the teaching of the computer skills curriculum. The employee should work collaboratively with central office and school-based personnel to use technology and include technology applications as an integral part of the total instructional program.

ILLUSTRATIVE EXAMPLES OF WORK

- Provides onsite assistance to staff in the selection of technology resources and solutions.
- Develops, coordinates, and implements technology professional development.
- Works with system-level personnel to assess and plan for new technologies.
- Facilitates planning and implementation of local and wide area networks.
- Investigates and disseminates information on best practices for technology integration.
- Communicates with technology vendors.
- Supports school staff in the operation of instructional and administrative technology systems.
- Assists in the integration of technology into the instructional program.
- Develops and models instructional activities for staff within the district.
- Serves as a source of information on trends, research, applications, and effective practices related to technology use in the school program.

KNOWLEDGE, SKILLS, AND ABILITIES

- Knowledge of pre K-12 curriculum.
- Effective communication and interpersonal skills.
- Knowledge of technology resources and systems.

SUGGESTED TRAINING AND EXPERIENCE

- 18079 Special Endorsement in Computer Education required
- Teaching experience in pre K-12 required
- Master's degree in related content area with 077 licensure preferred

TECHNOLOGY FACILITATOR JOB DESCRIPTION

In North Carolina, the school's technology facilitator is the key instructional technology specialist for the school.

CERTIFICATION: NC Teacher Licensure + 18079 Special Endorsement in Computer Education

TECHNOLOGY FACILITATOR JOB DESCRIPTION

REPORTS TO: Principal and Technology Supervisor

SUPERVISES:

PURPOSE: This individual provides training and support to the staff on technology integration, the North Carolina Computer/ Technology Skills Curriculum, the North Carolina Technology Competencies for Educators, and administrative applications. The employee assists with identifying, acquiring, and maintaining hardware, software, and network products. This individual also assists in the implementation of the system and building-level technology plans.

DUTIES AND RESPONSIBILITIES

1. MAJOR FUNCTION: Planning and Facilitating Teaching and Learning

   - Collaborates with teachers and other instructional staff to develop curriculum materials and specific lesson plans that integrate technology
   - Models the integration of technology in all curriculum areas
   - Facilitates school participation in technology programs and activities
     Conducts staff development in the areas of technology integration, the North Carolina Computer/Technology Skills Curriculum, and the North Carolina Technology Competencies for Educators
   - Collaborates with the school library media coordinator to provide leadership in the school's use of instructional technology resources to enhance learning
   - Follows a plan for professional development and actively seeks out opportunities to grow professionally

2. MAJOR FUNCTION: Planning and Facilitating Information Access and Delivery

   - Implements best practices related to technology use in the school program based on research, pilot programs, and state/national standards
   - Works with the principal and school leadership team to provide access to technology resources and services of the technology facilitator at point of need
   - Works with teachers and technology staff in the selection of resources that are compatible with the school technology infrastructure
   - Assists with planning the design of the technology infrastructure so that information resources are continually available to the school community
   - Promotes family, business, and community partnerships that support the academic success, career readiness, and general well-being of all children
   - Adheres to and communicates copyright as well as other laws and guidelines pertaining to the distribution and ethical use of all resources
   - Assists in maintaining hardware, software, and network infrastructure
   - Serves as the school contact for addressing hardware and software issues

3. MAJOR FUNCTION: Planning and Facilitating Program Administration

- Leads, in partnership with the School Library Media Coordinator, the Media and Technology Advisory Committee in effective decision making to promote the media and technology program.
- Provides leadership and collaborates with the Media and Technology Advisory Committee to develop, implement, and update a school instructional technology plan aligned with the system-level technology plan
- Collaborates with teachers, media and technology staff, and students to evaluate and select resources addressing curricular needs and learning goals
- Plays a leading role in the school's budgetary process to ensure funding for the instructional technology program to support school-wide goals
- Leads in the ongoing evaluation of the effectiveness of the instructional technology program
- Prepares and submits accurate reports as required
- Carries out non-instructional duties as assigned and/or as needed to ensure student safety

TECHNOLOGY ASSISTANT (SALARY GRADE 61) JOB DESCRIPTION

NATURE OF WORK

An employee in this class performs tasks to aid in the ongoing support of teachers and students using computers in K-3 classrooms as well as other classrooms K-12. The employee provides hardware and software support to teachers including but not limited to software training, technical advice on software packages, LAN/hard disk back-ups for disaster recovery, hardware and software installation, disk formatting, and troubleshooting printer malfunctions. The employee may assist in the development of applications for users, generate ad hoc reports, develop user documentation, and evaluate hardware, software, and new technology to make purchase recommendations. Tasks also include troubleshooting problems such as logging on to computer systems or software, printing malfunctions, or routine error messages. In some cases, the employee will research appropriate manuals to find answers. If standard techniques do not resolve the situation, the employee will seek assistance from the appropriate technical professional.

ILLUSTRATIVE EXAMPLES OF WORK

- Ensure teachers know how to use available software and hardware.
- Ensure equipment is working properly.
- Perform disk backups as required.
- Train users for full utilization of hardware and software.
- Provide timely resolution of computer problems by providing answers or referral.
- Install new software.
- Develop applications for users.
- Evaluate hardware and software and make purchase recommendations.

KNOWLEDGE, SKILLS AND ABILITIES

- General knowledge of computers.
- General knowledge of related information technology devices.
- General knowledge of software packages utilized.
- Ability to communicate with users to determine the nature of problems.
- Ability to communicate effectively with users who may not be adept in clarifying problem situations.
- Ability to assist users with applications development.
- Ability to train teachers in the use of hardware and software.
- Ability to establish and maintain effective working relationships.
- Ability to comprehend the purpose of teacher designed strategies as a fulfillment of the instructional objectives.
- Ability to solve independently most minor problems.

SUGGESTED TRAINING AND EXPERIENCE

Graduation from high school and three years of experience in the use of computing and information technology resources. Specific knowledge of the particular software or systems supported may be required. An equivalent combination of training and experience which provides the required knowledge, skills, and abilities for the position.

This specification has been designated to represent the general nature and level of work found in positions in this class. As such, it is not intended to contain all of the duties and qualifications required of an employee in a single position (job). Consequently, it is not to be perceived as a position (job) description or as identification of essential functions as required by ADA.

TECHNOLOGY TECHNICIAN I (SALARY GRADE 64) JOB DESCRIPTION

NATURE OF WORK

The Technology Technician I performs skilled repair and maintenance of all technology- related equipment as well as technical support for all technology-related systems. Employee provides technical support to users including, but not limited to, technical advice on equipment setup and operation, general troubleshooting, and software installation. Employee typically works in a centralized microcomputer environment; however, positions may be located in other environments. Employee reads and interprets schematics, wiring diagrams, and repair manuals to provide required technical support.

ILLUSTRATIVE EXAMPLES OF WORK

- Repairs, maintains, and upgrades technology-related equipment.
- Reads and interprets schematics, wiring diagrams, and manuals.
- Operates standard and specialized electronics devices in testing and troubleshooting computers and other technology-related equipment.
- Maintains an inventory of electronics components needed to make timely repairs.
- Uses a work-order tracking system for routine repair and maintenance of equipment. Refers complex problems to higher level technical support.

KNOWLEDGE, SKILLS AND ABILITIES

- Basic knowledge of electronic principles and fundamentals of physics as applied in electronics.
- General knowledge of computers and related technology devices.
- General knowledge of electronics devices.
- Familiarity with the operation and uses of standard test equipment.
- Basic knowledge of mathematical principles as applied in electronic circuit analysis.
- Ability to systematically troubleshoot standard electronics devices.
- Ability to communicate effectively with users.

SUGGESTED TRAINING AND EXPERIENCE

Graduation from a two-year college or technical school and one year experience; or equivalent combination of training and experience.

This specification has been designated to represent the general nature and level of work found in positions in this class. As such, it is not intended to contain all of the duties and qualifications required of an employee in a single position (job). Consequently, it is not to be perceived as a position (job) description or as identification of essential functions as required by ADA.

TECHNOLOGY TECHNICIAN II (SALARY GRADE 68) JOB DESCRIPTION

NATURE OF WORK

The Technology Technician II supports and maintains both administrative and instructional computers, software, and networks. This work includes repair of all technology-related equipment. Employee provides on-site assistance in classrooms, media centers, computer labs, and administrative offices. Employee identifies problems and takes appropriate corrective action. Employee installs and upgrades all technology-related equipment in network and stand-alone environments. Typically, this employee will provide first response support from the system level for the maintenance and operation of computers, software, and networks at the building level. Employee may have multiple sites to maintain. Complex problems are referred to Technician III or Network Engineer positions. This position is distinguished from the Technician I by its emphasis on building-level support and more specialized knowledge of computer hardware, software, and computer networks.

ILLUSTRATIVE EXAMPLES OF WORK

- Under the supervision of the Technician III or Network Engineer, assists with the installation of hardware, software, and related peripherals
- Ensures the maintenance of all computers, software, an local area networks by monitoring performance
- Installs upgrades to hardware and software
- Makes recommendations to building-level staff regarding upgrades and replacement of technology-related equipment
- Reads and interprets schematics, wiring diagrams, and manuals.
- Operates standard and specialized electronics devices in testing and troubleshooting computers and other technology-related equipment.
- Attends classes and seminars to enhance knowledge of equipment and operating systems

KNOWLEDGE, SKILLS AND ABILITIES

- Strong knowledge of computers and related technologies
- General knowledge of components of local area networks
- Understanding of mechanical, electronic, and computer principles as applied to the repair and maintenance of computers and peripherals
- Ability to communicate effectively with all levels of technology users
- Ability to establish and maintain effective working relationships

SUGGESTED TRAINING AND EXPERIENCE

Graduation from a two-year college or technical school with a degree in a related field and eighteen months experience; or equivalent combination of education and experience. Experience in computer and peripheral troubleshooting.

This specification has been designated to represent the general nature and level of work found in positions in this class. As such, it is not intended to contain all of the duties and qualifications required of an employee in a single position (job). Consequently, it is not to be perceived as a position (job) description or as identification of essential functions as required by ADA.

TECHNOLOGY TECHNICIAN III (SALARY GRADE 72) JOB DESCRIPTION

NATURE OF WORK

The Technology Technician III works as the senior or lead technician at the system level. This employee performs skilled, supervisory, and managerial work in directing the activities of Levels I and II Technology Technician. This work includes repair and maintenance of all technology-related equipment as well as technical support for all technology-related systems. This employee is responsible for maintaining the operation and integrity of local area networks, file servers, and workstations. Through scheduling and assigning technical support staff work tasks, the Technology Technician III supports the Director of Technology and Network Engineer in the design, configuration, and installation of local area networks and file servers.

ILLUSTRATIVE EXAMPLES OF WORK

- Works with the technology director and/or network engineers in the development and implementation of all technical aspects of the local technology plan
- Supervises the daily activities of the Levels I and II technical support staff
- Assigns, monitors, and evaluates all repair and maintenance work done by the technical support staff to ensure reliability of performance
- Supervise and/or perform the installation of hardware, software, and related peripherals
- Assist with the installation of local area networks, file servers, and other related peripherals under the supervision of the network engineer
- Ensure the maintenance of all local area networks by tracking significant problems, monitoring performance, and installing upgrades to hardware and software
- Develop and implement training for technical support staff
- Attend classes and seminars to enhance knowledge of equipment and operating

KNOWLEDGE, SKILLS AND ABILITIES

- Strong knowledge of computers and related technologies
- Strong knowledge of infrastructure requirements and components of local area networks
- Ability to supervise technical support staff
- Ability to communicate effectively with all levels of technology users

SUGGESTED TRAINING AND EXPERIENCE

An associate's degree in Computer Science or related field, two years' experience in a network environment, or any equivalent combination of training and experience.

This specification has been designated to represent the general nature and level of work found in positions in this class. As such, it is not intended to contain all of the duties and qualifications required of an employee in a single position (job). Consequently, it is not to be perceived as a position (job) description or as identification of essential functions as required by ADA.

DISTANCE LEARNING FACILITATOR (SALARY GRADE 54) JOB DESCRIPTION

TITLE: Distance Learning (DL) Facilitator

LOCATION: Building Level (for Classroom Instruction)

Building or System Level (for Staff Development)

LICENSE: None required

REPORTS TO: Principal (for Classroom Instruction)

Personnel Administrator or Staff Development Coordinator (for Staff Development)

NATURE OF WORK

The Distance Learning Facilitators for Online Courses and NCIH (North Carolina Information Highway) facilitators make a critical difference in the level of student and staff involvement and success. In cases of direct instruction courses, the teacher at the originating site depends on facilitators to recognize and report the level of student involvement and to assist students in maintaining active participation. Facilitators must also be familiar with the functioning of hardware to ensure satisfactory program transmission during instructional hours.

In the case of staff development courses, the facilitator is needed to introduce staff members to the use of equipment and encourage active participation. The facilitator should also be present during the staff development courses or any other video conferences in which a site participates.

ILLUSTRATIVE EXAMPLES OF WORK

The specific duties and responsibilities of DL Facilitators will be determined by the types and numbers of DL courses provided. The following is an illustrative, but not exhaustive, list of duties and responsibilities:

- Attend training sessions
- Monitor equipment operation and install software updates & plug-in as required.
  - Demonstrate proper use of equipment
  - Report technical difficulties
  - Record courses for replay
- Support instruction/staff development
  - Disseminate and return, as needed, course materials
  - Monitor and facilitate instruction (keep students on task, maintains an orderly classroom, has necessary instructional materials/handouts available for each session)
  - Keep records, e.g., registration, attendance, facility scheduling
  - Consult with DL instructors (for direct instruction)
  - Administer evaluations

KNOWLEDGE, SKILLS, AND ABILITIES

- Ability to operate and troubleshoot hardware and software
- Organizational skills
- Classroom management skills
- Effective communication and interpersonal skills

SUGGESTED TRAINING AND EXPERIENCE

- High school diploma or GED
- Training on specific distance learning equipment and network procedures
- Training in specific course provider platforms

This specification has been designed to represent the general nature and level of work found in positions in this class. As such, it is not intended to contain all of the duties and qualifications required of an employee in a single position (job). Consequently, it is not to be perceived as a position (job) description or as identification of essential functions as required by ADA.

WIDE AREA NETWORK (WAN) ENGINEER (SALARY GRADE 76) JOB DESCRIPTION

NATURE OF WORK

The Wide Area Network (WAN) Engineer is responsible for designing and implementing wide area networks in a local school agency. Employee supervises the installation, maintenance, and operation of a wide area network and associated computer hardware and software. Employee coordinates with the Director of Technology the evaluation of school system networking needs and recommends improvements and modifications to existing infrastructure. Employee diagnoses and resolves complex wide and local area network issues.

ILLUSTRATIVE EXAMPLES OF WORK

- Designs and implements wide area networks including network servers, hubs, routers, workstations and other peripheral devices.
- Installs and configures wide area network servers for email, Internet, and Proxy services.
- Installs and configures all necessary telecommunication devices.
- Operates and maintains wide area networks, tracks significant problems, monitors performance, and performs upgrades to hardware and software as required.
- Installs or modifies existing installations of networked computer hardware, software, and other components.
- Participates in long- and short-range technology planning.
- Trains technical staff at the system and building level to follow proper operating procedures necessary to maintain the integrity of the network.
- Maintains documentation regarding network configurations, operating procedures, and service records relating to network hardware and software.
- Assists in developing training for building level faculty and staff in the proper operation of the wide and local area networks.
- Attends classes, seminars, conferences and reviews professional literature to enhance knowledge of trends and developments related to wide and local area network systems.

KNOWLEDGE, SKILLS AND ABILITIES

- Strong knowledge of wide and local area network architecture
- Strong knowledge of computers and related technologies
- Strong knowledge of infrastructure requirements and components of wide and local area networks
- Strong knowledge of network operating systems
- Considerable knowledge of wide and local area network protocols and diagnostic tools
- Ability to supervise technical support staff
- Ability to communicate effectively with all levels of technology users

SUGGESTED TRAINING AND EXPERIENCE

Associate's degree in Computer Science or related field, two years' experience in a wide area network environment, or any equivalent combination of training and experience. Knowledge of networking protocols, experience in routed and frame relay network environments, experience with network management utilities. Certification as a Novell Administrator, Novell Engineer, or Microsoft Engineer or any equivalent combination of training, certification, and/or experience which provides the required knowledge, skills, and abilities.

This specification has been designated to represent the general nature and level of work found in positions in this class. As such, it is not intended to contain all of the duties and qualifications required of an employee in a single position (job). Consequently, it is not to be perceived as a position (job) description or as identification of essential functions as required by ADA.

LOCAL AREA NETWORK (LAN) ENGINEER (SALARY GRADE 74) JOB DESCRIPTION

NATURE OF WORK

The Local Area Network (LAN) Engineer is responsible for designing and implementing local area networks in a school environment. Employee supervises the installation, maintenance, and operation of local area networks and associated computer hardware and software. Employee coordinates with the Director of Technology the evaluation of school system networking needs and recommends improvements and modifications to existing infrastructure. Employee diagnoses and resolves complex local area network issues.

ILLUSTRATIVE EXAMPLES OF WORK

- Installs local area networks including network servers, hubs, routers, workstations, printers, and other peripheral devices.
- Operate and maintain local area networks, track significant problems, monitor performance, and perform upgrades to hardware and software as required.
- Install or modify existing installations of networked computer hardware, software, and other components.
- Participates in long and short range technology planning.
- Trains technical staff at the building level to follow proper operating procedures necessary to maintain the integrity of the network.
- Maintains documentation regarding network configuration, operating procedures, and service records relating to network hardware and software.
- Assists in developing and providing training to building level faculty and staff in the proper operation of the local area network.
- Attends classes, seminars, conferences and reviews professional literature to enhance knowledge of trends and developments related to local area network systems.

KNOWLEDGE, SKILLS AND ABILITIES

- Strong knowledge of local area network architecture
- Strong knowledge of computers and related technologies
- Strong knowledge of infrastructure requirements and components of local area networks
- Strong knowledge of network operating systems
- Considerable knowledge of local area network protocols and diagnostic tools
- Ability to supervise technical support staff
- Ability to communicate effectively with all levels of technology users

SUGGESTED TRAINING AND EXPERIENCE

Associate's degree in Computer Science or related field, two years' experience in a network environment, or any equivalent combination of training and experience. Certification as a Novell Administrator, Novell Engineer, or Microsoft Engineer preferred.

This specification has been designated to represent the general nature and level of work found in positions in this class. As such, it is not intended to contain all of the duties and qualifications required of an employee in a single position (job). Consequently, it is not to be perceived as a position (job) description or as identification of essential functions as required by ADA.

MEDIA AND TECHNOLOGY ADVISORY COMMITTEE

The Media and Technology Advisory Committee (MTAC) has long been an assumed component in the selection of materials in North Carolina's public schools since most school system board policies require such a committee. However, the responsibilities of this committee should not be limited to resource selection. An active MTAC can: (1) serve to strengthen the media and technology program and in turn strengthen the total instructional program in the school; (2) promote positive relationships among media and technology personnel, teachers, students, and administrators; (3) serve as a line of communication between the school and community; and (4) assist in maintaining a balanced collection of resources and equipment. Active involvement of the MTAC in the media and technology program leads to better awareness, understanding, support, and commitment.

MAKE-UP OF THE MTAC

Appointed by the principal, who serves on the committee, the MTAC generally is composed of a representative from each grade level in an elementary and middle school or the department head (or a representative) in a high school, as well as resource teachers. The MTAC also should have student (at middle and high school level) and parent representation. The school library media coordinator and technology facilitator co-chair the MTAC, other media and technology staff are members, and the system level media/technology supervisor serves as a resource person.

ADVISORY COMMITTEE MEMBERSHIP

- Principal
- School library media coordinator (co-chair)
- Technology facilitator (co-chair)
- Representative from each grade level or department
- Representative from resource areas
- Parent representative
- Student representative (at the middle and high school levels)

Each member has something to provide to the MTAC. The media coordinator and technology facilitator serve as co-chairs and provide leadership and expertise in evaluation and selection techniques for resources and equipment. Teachers add their knowledge of the curriculum content, instructional needs, learning styles, and teaching methods. The principal provides information on budget, curriculum, textbook adoption, and special projects. The system-level media and technology directors serve in an advisory capacity. Students provide information related to personal needs and preferences of the student population. Parents represent the community concerns, mores, and standards.

FUNCTIONS AND RESPONSIBILITIES

The functions and responsibilities of the MTAC can be divided into two areas: (1) serving in an advisory capacity to the media and technology staff and program, and (2) maintaining a collection of resources that reflects curricular and individual needs in all formats.

The MTAC can serve in many ways to promote the overall media and technology program. The MTAC can assist the school library media coordinator and technology facilitator in planning for the media and technology program, setting goals and priorities, evaluating the effectiveness of the program, and considering problems that arise.

WHAT ARE SOME THINGS THE MTAC CAN DO TO PROMOTE THE MEDIA AND TECHNOLOGY PROGRAM?

- Encourage the integration of information and technology skills into the study of other subjects by planning with teachers to provide appropriate activities to enhance student learning.
- Promote access to the media center and computer labs through flexible scheduling.
- Promote access to the services of the school library, media coordinator, and technology facilitator to support classroom instruction.
- Determine if circulation procedures and policies are as simple as possible and allow students access to resources when needed.
- Initiate book fairs, technology nights, family reading programs, technology literacy classes, and other activities which strengthen and promote the media and technology program.
- Communicate expectations — what teachers expect from the media and technology program and what the media coordinator and technology facilitator expect from teachers.
- Solve problems (i.e., insufficient materials on a given topic for several classes/grades to study it at the same time; computer labs for remedial packages vs. flexibly accessed computer labs for curriculum-related activities; levels that certain material should be used).

The function of maintaining a well-balanced media and technology collection is a primary responsibility of the MTAC. The media coordinator and technology facilitator are responsible for coordinating the acquisition of all hardware, software, and resources in the school, but cannot assume the total responsibility for selecting every item. All members of the MTAC need to provide input.

A well-balanced collection is balanced in terms of the needs of the school—balanced in curriculum areas, learning styles, formats, and interests. Building a balanced collection involves: (1) careful planning, which should be provided by the media coordinator and technology facilitator; (2) an understanding of the school's instructional program; (3) an understanding of the abilities, interests, and problems of students; (4) a broad current knowledge of resources available and related equipment provided or determined by school and system level media/technology personnel; and (5) an understanding of the system's selection policy and budget procedures.

Decisions about resources and equipment purchased for the school are a serious responsibility. With the cost of resources constantly increasing, thoughtful consideration should be given to every item recommended for purchase. A systematic procedure for the MTAC should be developed to ensure the acquisition of media and technology resources to provide a well balanced collection. The process should include:

1. Examine the present collection—review inventory records, recent Annual Media and Technology Reports, circulation records.
2. Review the budget—the MTAC should be informed of all available funds in order to set priorities for expenditures.
3. Examine the objectives and curriculum of the school—changes in curriculum, new textbook adoptions, etc.
4. Consider special needs—replacement of materials and equipment, requests that cannot be met, school-wide emphasis on certain areas.
5. Consider needs and interests of students.
6. Consider new technologies—The MTAC should initiate and plan for acquisition and maintenance of up-to-date technologies throughout the school.
7. Review the selection policy.
8. Determine and prioritize school-wide needs.
9. Review, evaluate, and preview materials—media and technology personnel should
10. use approved lists and selection tools
11. Make recommendations for purchase.
12. Assist in evaluating resources when they are received—read books, preview software.
13. Assist in evaluating gift materials—use same procedures and criteria as selecting new materials.
14. Assist in the continuous evaluation of the collection—which materials and equipment should be weeded from the collection. Worn and obsolete materials discourage students and teachers in their search for reliable information, they encourage users to handle materials carelessly, and they distract from the appearance of the collection. It is much worse to provide misinformation than to provide no information.
15. Serve on reconsideration committees to re-evaluate challenged materials.

RESPONSIBILITIES OF THE TECHNOLOGY FACILITATOR AND SCHOOL LIBRARY MEDIA COORDINATOR

1. Be an effective leader —plan well and be prepared for MTAC meetings. Don't waste the time of committee members. Make certain everyone is aware of their responsibilities and committee procedures. Provide agendas prior to the meeting.
2. Keep up-to-date on available materials and equipment.
3. Be involved in the school curriculum— attend grade level or departmental meetings, be familiar with courses of study, competency goals, and textbooks.
4. Provide the MTAC with appropriate reviewing sources, criteria, and procedures for evaluations.
5. Conduct interest inventories with students to determine current topics of interest.
6. Provide the MTAC with inventory, circulation, and request information.
7. Provide materials for hands-on examination when possible.
8. Keep a consideration file—important to verify information for ordering and to justify the purchase.
9. Make professional judgments regarding the addition of new resources to the school and its collection.

RESPONSIBILITIES OF TEACHERS

1. Keep the faculty informed of the selection process.
2. Actively seek input from teachers and students.
3. Inform teachers of what the MTAC has determined to be school wide priorities and support the decisions of the committee.
4. Ask opinions of other teachers when searching reviews.
5. Inform teachers of recommendations for purchase.
6. Actively participate in and support the selection process.

RESULTS OF AN ACTIVE MTAC

While the selection of materials, allocation of the media and technology budget, and weeding of the collection are the traditional roles of the MTAC, this committee is a public relations tool for the school's media program. Because the members work so closely with the materials housed within the media center and computer labs, they also realize the potential for increased instructional enrichment and enhance-ment when these resources are used. Because, by the nature of their positions, the committee members are usually the instructional leaders within their schools, MTAC members can model the effective use of a variety of resources available to supplement the textbooks. The MTAC can also make media and technology needs known to the principal and other teachers. It can, in turn, be a wealth of information, conveying new curriculum offerings, program ideas, and educational trends to media and technology personnel. In short, the MTAC can be the eyes, ears, and mouthpiece for the media and technology program. It is the key to quality.

revised and updated from the original article by Bradburn, F. B. (Spring, 1988). "The School Media Advisory Committee: Key to Quality." North Carolina Libraries, p. 16.

ONE-TO-ONE COMPUTING

"TECHNOLOGY IS LIKE THE AIR. KIDS LOOK AT COMPUTERS THE SAME WAY THAT BOOMERS LOOK AT TV. WE DON'T MARVEL AT THE TECHNOLOGY OR WONDER HOW TELEVISION TRANSFERS VIDEO AND AUDIO THROUGH THIN AIR - WE SIMPLY WATCH THE SCREEN. TV IS A FACT OF LIFE. SO IT IS WITH KIDS AND COMPUTERS"
(Tapscott, 2005).

One-to-one computing is an educational environment where students have ubiquitous access to technology and resources that allow them to gather, organize, analyze, and communicate information. As the size and price of technology have grown smaller, the power of this personal technology – personal computers, laptops, handhelds, cell phones – has grown exponentially. As we move into the 21st Century, schools should consider providing one-to-one computing to students.

In the 21st Century, many children have access to computers and educational technology beginning in infancy. Known as the *millennials,* these children were born from 1980-2000 into a world that has always had home computers, Internet access, and cell phones. Consider the following statistics from *Connected to the Future: A Report on Children's Internet Use* that included data available through the end of 2002:

- 83% of family households with children ages 2-17 have a computer
- 78% of these household have Internet access (a 70% increase from 2000 to 2002)
- 35% of children ages 2-5 years old access the Internet from their home computer, typically under adult supervision.
- 65% of low-income families own a home computer

Moreover, their parents inhabit a world in which technology is central to their work and their leisure. They and their children understand that technology provides a platform for the 21st Century.

For many students, however, technology is ubiquitous -- everywhere, all-the-time--until they enter the school-house. Soloway states the obvious "As long as technology remains down the hall, and up the stairs in the lab, they are irrelevant to education" (Soloway, April 2001). Students with limited access to technology will have limited opportunities to use it resulting in no measurable impact.

"The use of technology can have a positive impact on teaching and learning for children aged 5 to 18 when the following conditions are met.

- Sufficient access to technology
- Adequate teacher preparation
- Effective curriculum
- Relative assessment
- Supportive school/district administration
- Supportive family/community.

Given these conditions, the range of impacts includes increased time on task, higher test scores, lower cost, and increased participation" (Honey, 2003).

Soloway provides this summary ". . . in order for computing technology to be effective in classroom instruction, there must be enough hardware for all the students, teachers must know how to use it, and administrators and parents must be supportive of the curriculum that incorporates it" (Soloway, August 2001).

The potential benefits of using technology as a tool for learning will not be achieved without access. Equitable access and appropriate application of technology are required for the benefit to be realized. The student to technology ratio should be one-to-one. The technology should be appropriate for the task and available when and where it is needed rather than when it "fits into the schedule."

EXAMPLES OF AN EDUCATIONAL ONE-TO-ONE COMPUTING ENVIRONMENT

- All middle and high school students have a laptop that they use both in school and at home to complete schoolwork.
- Many of their textbooks are electronic rather than in book form.
- They collaborate in small groups, working together to solve a teacher-posed problem, accessing the school's network for the media center's catalog of resources, online subscription databases, and Web conferences with university or business experts.
- Teachers often ask the entire class to "Go to a certain Web site."
- A high school provides wireless laptops inside each core content classroom. Students pick up their laptops as they enter the classroom and use them throughout the period. They save their files to the school's network. The media center and computer labs are available throughout the day for the students to continue to use computers to complete assignments.
- Upper elementary school and middle school students are issued Personal Digital Assistants for the year to help them keep track of assignments, complete teacher-directed worksheets, and take quick fact-check tests.
- High school administrators have every student's schedule on a handheld computing device. If they find a student in the hallway or campus parking lot, they can quickly tell where that student is supposed to be.
- Elementary students may have a handheld device with full keyboard that they use for all their writing assignments. They also take them on field trips and enter data as they gather it, exporting it to their lab or classroom computers for analysis once they return to the school.
- Students write directly on the screen of a Tablet PC when taking notes. The handwriting recognition software converts the students' handwriting to text. This special feature of a Tablet PC is especially useful for those with limited keyboard skills or in an environment where the note taker is moving around.
- School administrators use the Tablet PC for tasks such as making classroom observations or logging a "punch list" for building repairs.

MEDIA COORDINATOR PERFORMANCE APPRAISAL INSTRUMENT - REVISED

MEDIA COORDINATOR'S NAME: _____

SCHOOL: _____

INSTRUCTIONS

- Based on the evidence from observation, documentation, and discussion, the evaluator will rate the media coordinator's performance on the 3 major functions listed below.
- The evaluator must add pertinent comments at the end of each major function.
- The media coordinator must be provided an opportunity to react to the evaluator's ratings and comments.
- The evaluator and media coordinator must review and discuss the results of the appraisal and any recommended actions pertinent to it.
- The evaluator and media coordinator must sign the instrument in the assigned spaces.
- The instrument must be filed in the media coordinator's personnel folder.
- The rating scale's four Levels of Performance are described below.

RATING SCALE

ABOVE STANDARD

Performance is consistently above defined job expectations. The media coordinator demonstrates outstanding teaching practice and program management skills. The media coordinator seeks to provide leadership; take initiative; expand scope of competencies; and undertakes additional, appropriate responsibilities.

AT STANDARD

Performance is consistently adequate/acceptable. Teaching practices fully meet all performance expectations at an acceptable level. The media coordinator maintains an adequate scope of competencies and performs additional responsibilities as assigned.

BELOW STANDARD

Performance within this function is sometimes inadequate/unacceptable and needs improvement.
The media coordinator requires supervision and assistance to maintain an adequate scope of competencies and sometimes fails to perform additional responsibilities as assigned.

UNSATISFACTORY

Performance is consistently inadequate/unacceptable and most practices require considerable improvement to meet minimum performance expectations. The media coordinator requires close and frequent supervision in the performance of all responsibilities.

MAJOR FUNCTION: PLANNING AND FACILITATING TEACHING AND LEARNING

CHECK ONE (☑): ☐ Above Standard ☐ At Standard ☐ Below Standard ☐ Unsatisfactory

1.1 Assesses learning and information needs of students and staff

1.2 Plans and works collaboratively with teachers to use appropriate resources that address curricular needs and learning goals

1.3 Works with the principal and school leadership team to provide flexible access to the instructional services of the school library media coordinator

1.4 Instructs students and staff in the effective use of the media center and its resources

1.5 Incorporates information literacy into day-to-day instruction

1.6 Advocates and promotes reading and life-long learning through motivational activities

1.7 Collaborates with the Technology Facilitator to provide leadership in the school's use of instructional technology resources to enhance learning

1.8 Follows a plan for personal professional development and actively seeks out opportunities to grow professionally

COMMENTS: _____

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MAJOR FUNCTION: PLANNING AND FACILITATING INFORMATION ACCESS AND DELIVERY, EVALUATION, AND USE

CHECK ONE (☑): ☐ Above Standard ☐ At Standard ☐ Below Standard ☐ Unsatisfactory

2.1 Creates and maintains an environment conducive to learning

2.2 Works with the principal and school leadership team to provide flexible access to school library media center resources to accommodate individuals and groups simultaneously

2.3 Organizes school library media facilities and resources in a manner that supports the mission, goals, and objectives of the school and maximizes intellectual and physical access to resources

2.4 Encourages the widest possible use of print and electronic resources and services--within the school library media center, throughout the school, and through remote access

2.5 Works cooperatively with other libraries and agencies to share resources that enhance teaching and learning

2.6 Adheres to and communicates copyright as well as other laws and guidelines pertaining to the distribution and ethical use of all resources

2.7 Advocates the principles of intellectual freedom

COMMENTS: _____

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MAJOR FUNCTION: PLANNING AND FACILITATING PROGRAM ADMINISTRATION

CHECK ONE (☑): ☐ Above Standard ☐ At Standard ☐ Below Standard ☐ Unsatisfactory

3.1 Works with school staff to design and implement short- and long-range plans that ensure balance among all aspects of the school library media coordinator's role and responsibilities

3.2 Develops and implements an ongoing collection development and evaluation planning process, in collaboration with the Media and Technology Advisory Committee, that focuses on a variety of formats and resources to meet diverse learning needs

3.3 Evaluate and select resources that build a collection addressing curricular needs and learning goals in collaboration with teachers, technology staff, and students

3.4 Maintains a collection addressing curricular needs and learning goals

3.5 Evaluates the school library media program on a continual basis according to accepted standards of quality

3.6 Plays a leading role in the school's budgetary process to ensure funding for the school library media program to support school-wide goals

3.7 Leads, in partnership with the Technology Facilitator, the Media and Technology Advisory Committee in effective decision making to promote the media and technology program

3.8 Interacts effectively with students, staff, administration, parents, and the community to promote and expand the school library media program

3.9 Prepares and submits accurate reports as required

3.10 Adheres to established laws, policies, rules, and regulations

3.11 Carries out non-instructional duties as assigned and/or as need is perceived

COMMENTS: _____

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EVALUATOR'S SUMMARY COMMENTS: _____

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MEDIA COORDINATOR'S REACTION TO EVALUATION: _____

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EVALUATOR'S SIGNATURE AND DATE

MEDIA COORDINATOR'S SIGNATURE AND DATE

Signature indicates the evaluation was reviewed and discussed.

TECHNOLOGY FACILITATOR PERFORMANCE APPRAISAL INSTRUMENT

TECHNOLOGY FACILITATOR'S NAME: _____

SCHOOL: _____

INSTRUCTIONS

- Based on the evidence from observation, documentation, and discussion, the evaluator will rate the technology facilitator's performance on the 3 major functions listed below.
- The evaluator must add pertinent comments at the end of each major function.
- The technology facilitator must be provided an opportunity to react to the evaluator's ratings and comments.
- The evaluator and technology facilitator must review and discuss the results of the appraisal and any recommended actions pertinent to it.
- The evaluator and media coordinator must sign the instrument in the assigned spaces.
- The instrument must be filed in the technology facilitator's personnel folder.
- The rating scale's four Levels of Performance are described below.

RATING SCALE

ABOVE STANDARD

Performance is consistently above defined job expectations. The technology facilitator demonstrates outstanding teaching practice and program management skills. The technology facilitator seeks to provide leadership; take initiative; expand scope of competencies; and undertakes additional, appropriate responsibilities.

AT STANDARD

Performance is consistently adequate/acceptable. Teaching practices fully meet all performance expectations at an acceptable level. The technology facilitator maintains an adequate scope of competencies and performs additional responsibilities as assigned.

BELOW STANDARD

Performance within this function is sometimes inadequate/unacceptable and needs improvement. The technology facilitator requires supervision and assistance to maintain an adequate scope of competencies and sometimes fails to perform additional responsibilities as assigned.

UNSATISFACTORY

Performance is consistently inadequate/unacceptable and most practices require considerable improvement to meet minimum performance expectations. The technology facilitator requires close and frequent supervision in the performance of all responsibilities.

MAJOR FUNCTION: PLANNING AND FACILITATING TEACHING AND LEARNING

CHECK ONE (☑): ☐ Above Standard ☐ At Standard ☐ Below Standard ☐ Unsatisfactory

1.1 Collaborates with teachers and other instructional staff to develop curriculum materials and specific lesson plans that integrate technology

1.2 Models the integration of technology in all curriculum areas

1.3 Facilitates school participation in technology programs and activities

1.4 Conducts staff development in the areas of technology integration, the North Carolina Computer/ Technology Skills Curriculum, and the North Carolina Technology Competencies for Educators

1.5 Collaborates with the Media Coordinator to provide leadership in the school's use of instructional technology resources to enhance learning

1.6 Follows a plan for professional development and actively seeks out opportunities to grow professionally

COMMENTS: _____

_____

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MAJOR FUNCTION: PLANNING AND FACILITATING INFORMATION ACCESS AND DELIVERY

CHECK ONE (☑): ☐ Above Standard ☐ At Standard ☐ Below Standard ☐ Unsatisfactory

2.1 Implements best practices related to technology use in the school program based on research, pilot programs, and state/national standards

2.2 Works with the principal and school leadership team to provide access to technology resources and services of the technology facilitator at point of need

2.3 Works with teachers and technology staff in the selection of resources that are compatible with the school technology infrastructure

2.4 Assists with planning the design of the technology infrastructure so that information resources are continually available to the school community

2.5 Promotes family, business, and community partnerships that support the academic success, career readiness, and general well-being of all children

2.6 Adheres to and communicates copyright as well as other laws and guidelines pertaining to the distribution and ethical use of all resources

2.7 Assists in maintaining hardware, software, and network infrastructure

2.8 Serves as the school contact for addressing hardware and software issues

COMMENTS: _____

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MAJOR FUNCTION: PLANNING AND FACILITATING PROGRAM ADMINISTRATION

CHECK ONE (☑): ☐ Above Standard ☐ At Standard ☐ Below Standard ☐ Unsatisfactory

3.1 Leads, in partnership with the Media Coordinator, the Media and Technology Advisory Committee in effective decision making to promote the media and technology program.

3.2 Provides leadership and collaborates with the Media and Technology Advisory Committee to develop, implement, and update a school instructional technology plan aligned with the system-level technology plan

3.3 Collaborates with teachers, media and technology staff, and students to evaluate and select resources addressing curricular needs and learning goals

3.4 Plays a leading role in the school's budgetary process to ensure funding for the instructional technology program to support school-wide goals

3.5 Leads in the ongoing evaluation of the effectiveness of the instructional technology program

3.6 Prepares and submits accurate reports as required

3.7 Carries out non-instructional duties as assigned and/or as needed to ensure student safety

COMMENTS: _____

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EVALUATOR'S SUMMARY COMMENTS: _____

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TECHNOLOGY FACILITATOR'S REACTION TO EVALUATION: _____

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EVALUATOR'S SIGNATURE AND DATE

TECHNOLOGY FACILITATOR'S SIGNATURE AND DATE
Signature indicates the evaluation was reviewed and discussed.

MIDDLE SCHOOL MEDIA COORDINATOR SCHEDULE

	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
DAILY NOTES	Video Camera Reserved (Hargis)	Video Camera Reserved (Hargis)	Reserve Cart - Poetry (Perdue)	Videotape Young Today Erni - Cover Class 10:00	Reserve Cart - Career Project (Greenstine)
BEFORE SCHOOL	Pull States Research Reserve materials	Guidance Parent Vols - Reserve PCs (all day)	Send Holocaust books Interschool Loan	Guidance Parent Vols - Reserve PCs (all day)	School Psych. - Res. Room (all day)/ School Speech Ther - Res. 2 PCs (AM)
7:30	Griffie (check-out)	Meet with Scholastic Rep (Book Fair)	Work on Electronic Pathfinder for Sci Inq	**7:45** Bangham (Research for Science Inquiry Project)	
8:00			**8:00 – 9:15** SCHOOL SPELLING BEE (help with judging)		Host PTSA Reflections Breakfast (Open)
8:30	Plan w/ W-Smith (States Research) Johnson (check-out)			work on at-risk book order	
9:00		Admin. Team Meeting (open)		**9:00** Bangham (Research for Science Inquiry Project)	**9:15** meet with Hutchins (Hero Hall of Fame Research)
9:30	Visit Johnson (Book Talk) classroom		Beard (check-out) Book Talk Biographies		
10:00	Perdue (check-out)	AR READING GOLD RUSH CELEBRATION with winners from lunch classes	visit - EC Class	work on at-risk book order	
10:30	Perdue (check-out)		**10:50** Meet with Brasfield Spain Fair Research	**LUNCH** (open)	**10:10** Wallace-Smith (US "States" Research)
11:00	Griffie (check-out)		**11:15-11:40** Meet with B. Smith (Travel Brochure Research)	**11:00** Bangham (Research for Science Inquiry Project)	
11:30	Visit Johnson (Book Talk) classroom				Wallace-Smith (US "States" Research)
12:00	**LUNCH** (open)		**LUNCH** (open)		
12:30	Perdue (check-out)		Finish Electronic Pathfinder for Sci Inq	Videotape Young (Erni)	**LUNCH** (open)
1:00	Griffie (check-out)	Johnson (check-out)	Beard (check-out) Book Talk Biographies	Set-up display of new fiction books	WALLACE-SMITH (US "States" Research)
1:30	Set-up for AR Gold Rush Celebration	Help with interviews	Pull Reserve Cart - Careers (Greenstine)	**1:20** Meet with Curr. Coord & Tech Facilitator to work on curr. budget	
2:00		(set-up) Poetry & Art Club Meeting	Check/Update Web Pathfinder (Careers)	**2:15** Book Worms Club Meeting	Submit at-risk book order for approval
AFTER SCHOOL	Dept. Meetings - Attend Lang. Arts Meeting				
EVENING		New Teacher Support Group Meeting		8th Grade HS Regist./Guid. Meeting	

MIDDLE SCHOOL TECHNOLOGY FACILITATOR SCHEDULE

	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
BEFORE SCHOOL	Check mobile carts	Check mobile carts	Check mobile carts Get Handhelds ready for Global Lab project Smith Class	Check mobile carts	Check mobile carts
8:30	Plan w/ W-Smith (Global Lab Project)	Work on Electronic Pathfinder for Domes	Smith Global Lab Project	Williams health-fitness monitoring spreadsheet	Smith Global Lab Project
9:00		**9:00** Admin. Team Meeting (open)		Bangham (Research for Science Inquiry Project)	
9:30	Call district IT about computer standards for order of computers				
10:00	Foust 7th China Project (check-out mobile lab)	Mulroney EC Class Volcanoes	**10:50** Meet with Brasfield Spain Fair Research	Foust China Project	Caison Music Class (Midi)
10:30				**LUNCH** (open)	
11:00	Brown Language Arts (Weblogs) classroom		Brown Language Arts (Weblogs) classroom	**11:00** Bangham (Research for Science Inquiry Project)/w media coordinator	Caison Music Class (Midi)
11:30	**LUNCH** (open)		**LUNCH** (open)		
12:00	Planning sixth grade team		Walters 8th SS cause and effect organizer for North Carolina economic development		
12:30				Videotape Young (Erni) w/media coordinator	**LUNCH** (open)
1:00		Bartholomew (check-out mobile lab)	Finish Electronic Pathfinder for Domes	Meet with Curr. Coord & Tech Facilitator to work on curr. budget	Caison Music Class (Midi)
1:30					
2:00		Computer Club meeting (set-up)	Handheld staff development	Handheld staff development	Handheld staff development
AFTER SCHOOL	Dept. Meetings - Attend Lang. Arts Meeting				

ELEMENTARY MEDIA CENTER SCHEDULE

MONDAY DATE:	**COMMENTS**	**ASSISTANTS** DATE:
7:00 a.m.	Open for checkout and independent use	**7:00 a.m.** Robin, Jeff
8:00 a.m. Riser 2nd	Researching teeth small groups	**8:00 a.m.**
9:00 a.m. Johnson 1st	Great Books - Cinderella	**9:00 a.m.**
10:00 a.m.	Purchase Orders	**10:00 a.m.** Parent volunteers - Williams, Lanier
11:00 a.m.		**11:00 a.m.**
12:00 p.m. 4th grade	Lunchtime Bunch club - Trumpet of the Swans	**12:00 p.m.**
1:00 p.m. York 4th	Book Evaluation - Caldecott	**1:00 p.m.**
2:00 p.m.	Kindergarten planning meeting	**2:00 p.m.**
3:00 p.m.	Open for checkout and independent use	**3:00 p.m.** Kathy, John
4:00 p.m.	**4:00 p.m.**	**4:00 p.m.**

ELEMENTARY TECHNOLOGY FACILITATOR SCHEDULE

MONDAY DATE:	**COMMENTS**	**COMPUTER LAB** DATE:	**MOBILE CART**
7:00 a.m. news broadcast club		**7:00 a.m.**	**7:00 a.m.**
8:00 a.m. Whitfield 4th	Publisher project - history newspaper	**8:00 a.m.** Whitfield 4th	**8:00 a.m.** Fountain 4th
9:00 a.m.		**9:00 a.m.** Russell 3rd	**9:00 a.m.** Cole 2nd
10:00 a.m. Thompson 4th	reading remediation	**10:00 a.m.** Collins 5th	**10:00 a.m.** Rodgers 3rd
11:00 a.m.		**11:00 a.m.** Hodges 4th	**11:00 a.m.** Fountain 4th
12:00 p.m. Randolph 4th	planning meeting math lesson on data analysis	**12:00 p.m.** Sharpe 2nd	**12:00 p.m.** Smith 2nd
1:00 p.m.		**1:00 p.m.** Johnson 5th	**1:00 p.m.** Fountain 4th
2:00 p.m. Third grade planning meeting		**2:00 p.m.**	**2:00 p.m.**
3:00 p.m. Staff Development - Imovie		**3:00 p.m.** Staff Development	**3:00 p.m.**
4:00 p.m.	**4:00 p.m.**	**4:00 p.m.**	**4:00 p.m.**
6:00 p.m.	**6:00 p.m.**	**6:00 p.m.**	**6:00 p.m.**

MIDDLE SCHOOL MASTER SCHEDULE

7:55	8:00	9:00	10:00	11:00	12:00	1:00	2:00	3:00
6th	AA/HR 8:00 - 8:45	CORE 8:45 - 11:00		LUNCH 11:00 - 11:45	CORE 11:45 - 1:45		ELECTIVES 1:45 - 3:15	
7th	AA/HR 8:00 - 8:45	CORE 8:45 - 11:15		ELECTIVES 11:15 - 12:45	LUNCH 12:45 - 1:30	CORE 1:30 - 3:15		
7th	AA/HR 8:00 - 8:45	ELECTIVES 8:45 -10:15	CORE 10:15 - 11:55		LUNCH 11:55 - 12:40	CORE 12:35 - 3:15		
Electives	AA/HR 8:00 - 8:45	1st 8th Grade Elective 8:45 - 9:30	2nd 8th Grade Elective 9:30 - 10:15	PLANNING	1st 7th Grade Elective 11:15 - 12:00	2nd 8th Grade Elective 12:00 - 12:45	LUNCH	1st 6th Grade Elective 1:45 - 2:25	2nd 6th Grade Elective 2:25 - 3:15

MASTER SCHEDULE 2004 – 2005

7:20 – 2:50	7.5 hours	Professional Day For Morning Duty Staff	**2:45 – 2:50**	5 min	Afternoon Announcements
7:45		Staff Report To Homerooms	**2:50 – 2:55**	5 min	Dismissal of Walkers, Van Riders & Car Riders
7:30 – 8:00	30 min	Breakfast Is Served	**2:55 – 3:05**	10 min	Bus Dismissals – Called From Office
7:50 – 8:05	15 min	Students Report To Homerooms	**7:45 – 3:15**	7.5 hours	Professional Day For Afternoon Duty Staff
8:10 – 8:15	5 min	Morning Announcements			
8:15 – 8:45	30 min	D. E. A. R. Time			
8:05 – 2:45	400 min	Instructional Day			

TIME	MONDAY					TUESDAY					WEDNESDAY					THURSDAY					FRIDAY				
	A	**M**	**P**	**L**	**T/L**	**A**	**M**	**P**	**L**	**T/L**	**A**	**M**	**P**	**L**	**T/L**	**A**	**M**	**P**	**L**	**T/L**	**A**	**M**	**P**	**L**	**T/L**
8:50 – 9:35	KC	KA	KB	KD	1A	5C	5A	5B	5D	4B	KB	KC	KD	KA	4D	5B	5C	5D	5A	KA	Plan	Plan	Plan	Plan	Plan
9:40 – 10:25	KD	KB	KA	KC	1B	5D	5B	5A	5C	4C	KA	KD	KC	KB	4A	5A	5D	5C	5B	KD	Plan	Plan	Plan	Plan	Plan
10:40 – 11:25	2A	2B	2C	2D	2E	1C	1A	1B	1D	5C	1B	1C	1D	1A	5B	2D	2A	2E	2C	2B	2B	2D	2A	2E	2C
11:30 – 12:15	2E	2C	2B	2A	2D	1D	1B	1A	1C	5D	1A	1D	1C	1B	KC	Plan	Plan	Plan	Plan	Plan	2C	2E	2D	2B	2A
1:00 – 1:45	4C	4A	4B	4D	5A	3D	3A	3E	3C	3B	4B	4C	4D	4A	KB	3A	3B	3C	3D	3E.	3B	3D	3A	3E	3C
1:50 – 2:35	4D	4B	4A	4C	1C	Plan	Plan	Plan	Plan	Plan	4A	4D	4C	4B	1D	3E.	3C	3B	3A	3D	3C	3E	3D	3B	3A

CAFETERIA SCHEDULE

TIME	CLASS		TIME	CLASS		TIME	CLASS	
10:40-11:05	Collins/Hines	KA	**11:00-11:25**	Vick	3A	**11:35-12:05**	Brown	4A
10:45-11:10	Riley	KB	**11:05-11:30**	Boehm	3B	**11:40-12:10**	Dornfeld	4B
10:50-11:15	Benson	KC	**11:10-11:35**	Lindsey	3C	**11:45-12:15**	Hogue-Fuggitti	4C
10:55-11:20	Mayo	KD	**11:15-11:40**	Baker	3D	**11:50-12:20**	Small	4D
10:55-11:20	Hamm	PK	**11:20-11:45**	Harrell	3E			
12:00-12:25	Farmer	5A	**12:20-12:45**	Ohree	1A	**12:40-1:05**	Lasley	2A
12:05-12:30	Lajeunesse	5B	**12:25-12:50**	Griffin	1B	**12:45-1:10**	Cooper	2B
12:10-12:35	Hawkins	5C	**12:30-12:55**	Braswell	1C	**12:50-1:15**	Price	2C
12:15-12:40	NEW	5D	**12:35-1:00**	Spivey	1D	**12:55-1:20**	Langston	2D
						1:00-1:25	Davis	2E

SCHOOL LIBRARY MEDIA COORDINATOR WITHOUT A TECHNOLOGY FACILITATOR

IMPACT guidelines specify that schools should employ the services of a full-time school library media coordinator and a full-time technology facilitator. It would be difficult for the school library media coordinator to fulfill both roles effectively. Media and technology materials and equipment constitute a major investment in the learning environment of our schools. The potential impact to student achievement of this investment cannot be realized if sufficient personnel are not in place to manage these resources and provide instructional services.

The North Carolina Department of Public Instruction has aligned the school library media coordinator and technology facilitator job descriptions in three function areas:

- Planning and Facilitating Teaching and Learning
- Planning and Facilitating Information Access and Delivery
- Planning and Facilitating Program Administration

Although their major function headings are the same, the individual job responsibilities that fall under each function are specific to each role.

In the absence of a fully-staffed media and technology program, difficult decisions must be made. The principal and the school library media coordinator need to collaborate to develop a plan of action that supports the desired student outcomes and impacts student achievement. Priorities need to be established that reflect reasonable expectations of the time and energy of the school library media coordinator. The school library media coordinator needs the flexibility to schedule use of media and technology facilities to meet the needs of teachers and students. In order to create the most effective learning environment for students, the principal and the school library media coordinator, with input from the system-level Technology Director and the Media Director, should examine the Technology Facilitator job description and the MCPAI-R to determine which job responsibilities will be assumed by the school library media coordinator. The school library media coordinator can then prioritize media and technology responsibilities.

If the school library media coordinator assumes some of the technology facilitator responsibilities, the school library media coordinator needs professional development to maintain or acquire both media and technology skills. Both a full-time media assistant and technology assistant are needed to support the media and technology program. The media assistant performs clerical tasks and provides support for reading, reference, and research activities throughout the day. A technology assistant can perform minor troubleshooting in the school and assist in the use of the flexibly accessed computer lab(s). These two assistants can free the school library media coordinator for collaborative planning sessions with teachers to integrate information skills and technology skills with SCOS curriculum objectives. It is important to note that this approach to staffing (without a technology facilitator) will shortchange the school's media and technology program.

"For those schools without technology coordinators, districts often try to control their soaring technology support costs by using library media specialists. Some library media specialists have found they now have two jobs instead of one…This strategy 'does not really save money; it simply transfers the cost to teacher [or librarian] salaries. What's more, relying on teachers and other non-technical staff could have an impact on their productivity' (Fitzgerald, 2002). It is common sense that when school librarians are shouldering the burden for school or district-wide technology support, the library program will suffer. These duties are exceptionally time-consuming" (Everhart, 2003).

WORKS CITED:

Everhart, Nancy. *Controversial Issues in School Librarianship: Divergent Perspectives.* Worthington, OH: Linworth, 2003.

WIRELESS LOCAL AREA NETWORK

WHAT IS A WIRELESS NETWORK?

A wireless local area network (WLAN) is a type of local-area network (LAN) using high-frequency radio waves rather than wires to communicate between devices (computers/Laptops, etc.).

STANDARDS FOR WIRELESS EQUIPMENT

The computing industry recognizes the need for standardization of network/data communications protocols to assure communication and compatibility between products and networks. The 802.IIx standard for wireless communications was designed by the Institute of Electrical and Electronics Engineers (IEEE) and adopted by the Wireless Ethernet Compatibility Alliance (WECA). Devices that comply with the 802.11x standard assure interoperability among vendors. Compatibility testing shows high rates of interoperability of equipment for each standard from different suppliers.

Some schools have technical problems when a mix of equipment is used. The easiest solution for schools is to select a single vendor to install and maintain a wireless network.

Wireless base stations or access points using 802.11a through 802.11g cover ranges from 75-300 feet depending on obstructions. Coverage can be improved by optimum selection of antennae. There are three main choices in implementing the 802.11 standard listed below:

- 802.11b is the oldest standard widely adopted in schools and public facilities. It easily allows up to 10 concurrent users to share the bandwidth. Twenty to 30 concurrent users are possible, but access speeds may be unsatisfactory unless users are working on very low bandwidth tasks. Drawbacks of 802.11b are speed, with rates considerably slower than wired networks, interference, and reliability problems.
- 802.11a delivers faster performance and is less prone to interference, because it uses a less widely-used radio band than 802.11b. However, its shorter range is not as good as 802.11a at penetrating walls. It is not compatible with 802.11b. For these reasons 802.11a is usually considered only for point-to-point wireless access such as connecting nearby buildings to one another.
- 802.11g is the newest standard and is compatible with 802.11b. It also offers fast speeds comparable to 802.11a. The higher speed 54 Mbps products using 802.11a or 802.11g provide higher bandwidths which mean a larger number of concurrent users can comfortably share the signal.

ADVANTAGES

Wireless networking provides a cost-effective, efficient method for networking schools. It allows students to remain connected to the network without wires, offering more flexibility and more opportunities for collaboration. Wireless LANs are particularly well suited to places where traditional Ethernet networks are too expensive or too difficult to install. They provide network coverage in large rooms, open plan buildings, or larger areas such as outdoors. Wireless networks can be easily moved. They often reduce the need for large centralized computer labs.

ADVANTAGES INCLUDE:

- MOBILITY: Wireless networking allows users of laptops, notebooks, PDAs, tablet PCs, and wireless Voice-over IP (VoIP) telephone devices to roam freely while remaining connected to the school's network.
  - Wireless networks provide great freedom for users.
  - Wireless networks allow smaller more mobile devices access to the Internet without the confines of hard-wired networks.

- FLEXIBILITY: With frequently-changing needs, schools are often faced with moving classrooms, adding "portables," retrofitting older buildings, and reconfiguring computer networks. WLAN technology makes it possible to connect portables or older buildings that have hard-to-access walls and to change lab locations and classroom set-ups frequently and easily without the need for hard-wire drops.
  - Schools can offer better technology access for students with disabilities or behavioral issues.
  - Laptop computers and wireless networking provide great flexibility for different class sizes and multi-mode teaching spaces. (e.g., large exploratory classes, etc.)
  - WLANs reduce the tangle of cables.
  - Wireless laptops can be used in a variety of different ways and are suitable for a range of teaching styles. Teachers appreciate the easy visual supervision of students -- no longer are heads obscured by clunky desktop computers or monitors.
  - Mobile carts with 10 to 30 laptops are popular for classroom use and sharing among classrooms. Wireless connectivity enhances the use of mobile labs. The laptop computers are small, light, and can be shifted easily around the classroom.
  - Classrooms are more flexible, because premium space is not reserved strictly for computers.

- EXPANDABILITY: By adding on to existing networks rather than replacing the wired with the wireless, schools can expand their options without losing the initial investment in infrastructure.

WHAT ARE THE DISADVANTAGES?

Wireless networking can provide a cost-effective, efficient method for networking schools and allow greater flexibility in the use of equipment, but there are some disadvantages to consider in the decision to install a wireless school network.

DISADVANTAGES INCLUDE:

- SECURITY: Although a number of security measures are built into the 802.11 standard, it is almost universally accepted that wireless networks are considerably less secure than wired ones. A number of vulnerabilities can allow hackers to gain access to a school's wireless network. Although the goal of such intrusions is often to gain free Internet access, these security holes can potentially be used to access confidential student information, alter records, or inflict malicious damage of other sorts on school LANs.

THINGS TO CONSIDER IN IMPLEMENTATION

To determine which option for networking (wireless, hardwired, or a combination) will best meet the needs of a school, consider all aspects for implementation:

- INSTALLATION AND HARDWARE COSTS: WLAN components include access points, computers, or other devices equipped with wireless interface cards (NICs), and management software to oversee it all. Costs vary tremendously depending on a school's needs. Other implementation costs include consultant fees for site surveys and purchasing advice. Wireless technology leads to the increased use of laptop and mobile hardware, so the cost of these devices must be factored into the equation.

- MAINTENANCE, SUPPORT, AND UPGRADING: As with most new technologies, deployment of wireless networking involves a considerable amount of work on the part of technology directors, network managers, and support staff. New management tasks range from the security monitoring described above to managing upgrades as new options are rolled out, to maintaining and scheduling the use of mobile labs. Cost estimates should include such human resource issues.

- TRAINING AND PROFESSIONAL DEVELOPMENT: Although smooth implementation of wireless technology often means that teachers need little in the way of technical training, schools must find ways to train and support technical staff, allowing them to stay up-to-speed on the technology choices, and security protocols.

STEPS IN DESIGNING A WLAN

Schools should have high bandwidth fiber-optic cable between buildings, suitable network switches, and a reasonable number of physically cabled data jacks. This allows the maximum speed of data transfer and minimizes the amount of radio traffic required for network coverage. A greater number of users and wireless devices will require more access points or higher bandwidth access points (e.g., 802.11g).

A site survey to measure how the radio signal strength varies through walls, fittings, and furniture should be performed by a wireless vendor. Wireless networks cope well with low to moderate bandwidth tasks (typical use is distances less than 100 feet). An average user may use low bandwidth 80% of the time. Very high bandwidth tasks such as editing video are still best done on local hard drives. If you have a network engineer/manager, discuss all options before plugging any wireless equipment into your network.

Several steps should be followed before beginning a wireless network installation project including:

DETERMINING THE SCOPE OF THE PROJECT

Scope determination defines the performance specification for a site, including the desired applications of the wireless network and the number and type of devices to be used. Performance specifications go on to define what the wireless infrastructure must be able to do. For example, a project's scope might be to support up to 50 laptops simultaneously connecting to and using the Internet.

PLANNING THE LAYOUT

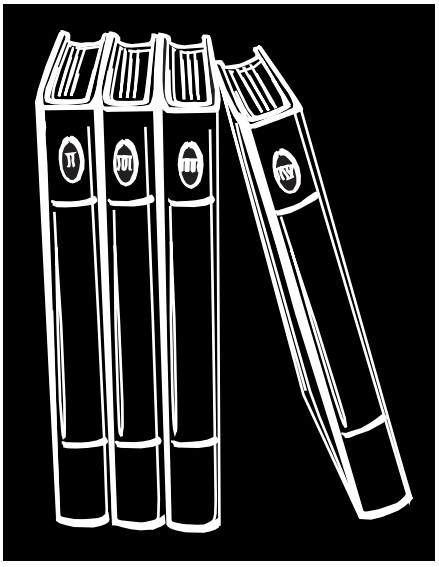
Once the scope of the implementation has been determined, it is necessary to design the layout of access points to maximize coverage and minimize cost. This generally involves a professional site survey to determine the number of access points needed, their placement, and whether they will be fixed or mobile. Maximum coverage needed and total devices available must be balanced to create the most cost-effective layout. A plan should be in place for extra access points to be added as additional users and connections enter the picture.

SELECTING WIRELESS DEVICES

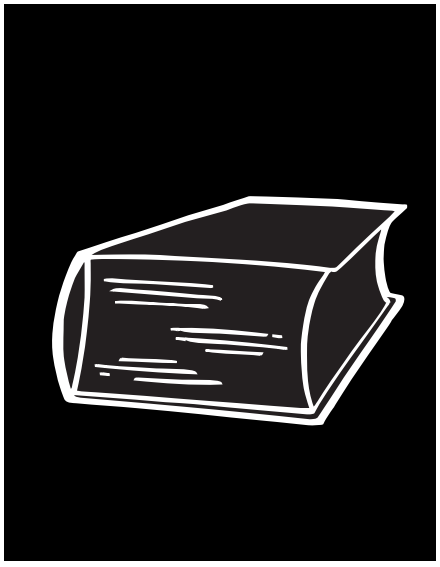
Access points and wireless mobile devices vary in price and feature. Factors to consider in determining what a school should buy include: manageability (what sorts of control the network administrators will want to have over the system - and at what cost?); scalability (do the devices fit into a long-term strategy, with upgrade paths as needs change?); level of manufacturer support; dependability and performance; and compatibility with existing devices.

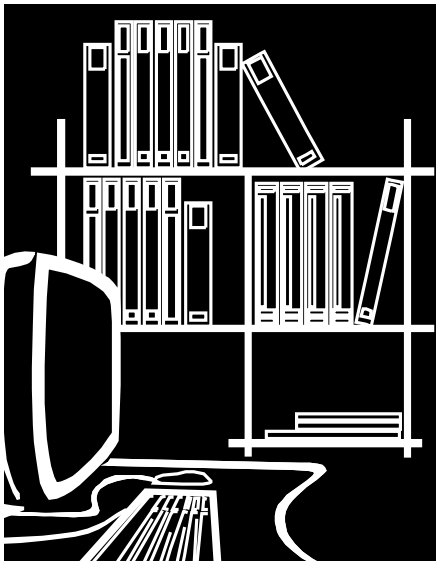
EVALUATING AND PLANNING FOR EXPANSION

The planning process does not stop once the wireless network is purchased and installed. Many districts are choosing to phase in wireless installations gradually, piloting them in one school or department to analyze the feasibility of expansion. Careful monitoring of usage patterns, unexpected problems and costs, and user opinion is essential to determining next steps.



GLOSSARY





GLOSSARY

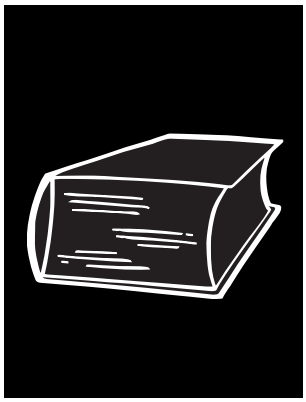
ABC REPORT CARD
North Carolina School Report Cards provide annual information about student performance, class size, school safety, and teacher quality in public, charter, and alternative schools. Report Cards are reported at the school, district and state levels and structured around the State Board of Education's Strategic Priorities.

ACCESS POINTS
An access point connects users to other users within a wireless network and can serve as the point of interconnection between the WLAN and a wired network. Access Points provide heightened wireless security and extend the physical range of service for wireless networks.

AMTR (ANNUAL MEDIA AND TECHNOLOGY REPORT)
The legislatively-mandated collection of building- and system-level media and technology data submitted to the Department of Public Instruction by July 1st of each year.

ASSISTIVE/ADAPTIVE DEVICES (HARDWARE)
". . . any item, piece of equipment or product system, whether acquired commercially off the shelf, modified or customized, that is used to increase, maintain, or improve functional capabilities of individuals with disabilities." [IDEA: 20 U.S.C. Chapter 33, Section 1401 (25)]

AUP (ACCEPTABLE USE POLICY)
Policy designed to provide guidelines for the appropriate use of a school computer or network, including access to the Internet. Acceptable Use Policies (AUPs) usually include explicit statements about the required procedures, rights, and responsibilities of a technology user as well as the consequences of inappropriate use.



BARCODE
Pattern of bars of various widths and spacing printed on paper or similar material that can be used to identify equipment, books, and other resources.

BARCODE SCANNER
Device that uses a laser beam or light source to read a pattern of bars of various widths and spacing printed on paper or similar material (barcode).

BATTLE OF THE BOOKS
Competition sponsored by the North Carolina Association of School Librarians for 6-8 grade students who participate in a Quiz Bowl-style tournament that tests their knowledge of a list of books established by the NCASL's Battle of the Books Committee.

CADWARE
Computer-assisted drawing software.

CHANGE AGENT
Role of technology facilitators and school library media coordinators who act as catalysts for educational reform by providing leadership and by being proactive in directing and overseeing the change process.

COLLABORATION
Collaboration within the *IMPACT* Model means that school library media coordinator and the technology facilitator work closely with teachers to plan, implement, and evaluate classroom lessons, units, and the overall instructional program.

COLLECTION
All of the resources (print, nonprint, software, online resources, and equipment) that come together to facilitate and impact learning. The school library media center collection consists of all the books, videos, software, and realia cataloged in the school, even if they are part of a classroom collection; the computers in classrooms that are inventoried through the media center; and equipment such as overheads and VCRs that are distributed from the media center at the beginning of/throughout the school year.

COLLECTION DEVELOPMENT
Systematic process of acquiring and maintaining current resources to build a collection that meets the needs of the curriculum and the instructional program.

COLLECTION DEVELOPMENT PLAN
Plan based on the analysis of the present collection that addresses future needs in a systematic and long-term manner.

COLLECTION MAPPING
Qualitative method of assessing a collection by direct examination for alignment of curriculum topics and instructional units, with the North Carolina Standard Course of Study, standard selection sources *(InfoTech, EvaluTech, Booklist, School Library Journal, etc.),* bibliographies, awards lists, etc.

CONNECTIVITY
Refers to the transfer of data from one device to another through a communications provider. Often refers to teh availability and speed of Internet access.

CONSIDERATION FILES
Any collection (cards, database, hard copies of documents, etc.) that represents information about materials to be ordered drawn from review sources, bibliographies, recommendations from teachers, etc.

CTO
Chief Technology Officer who supervises an information systems department.

CULTURAL PLURALISM
Respect for and representation of diversity in ethnicity, religious orientation, cultural traditions, etc.

DEPLOYMENT PROCEDURES
Procedures used in the process of disseminating software and hardware within a school.

DISTANCE LEARNING EDUCATION
Instruction that takes place when teachers and students are geographically separated but linked via technologies within a school system, across a state or states, or internationally.

DISTANCE LEARNING FACILITATOR
Instructor or teaching assistant who involves students in the process of learning in a distance education environment.

E-RATE
Federal Universal Service Fund providing telecommunications discounts to eligible schools and libraries.

ELECTRONIC DATABASE
Computer-based collection or listing of information, usually organized with searchable elements or fields. For example, a library catalog is a database that can be searched by author, title, subject, keyword, etc.

FACILITIES PLANNING
Process of planning spaces for the diverse learning activities, resources, equipment, technical functions, and program services that are necessary for a dynamic media and technology program in schools. Planning includes a thorough description of each space and all the desired elements within it, as well as the development of educational specifications to communicate the function and requirements of each space to the architects, designers, and engineers who are responsible for creating new or renovated facilities.

FORMATIVE EVALUATION
Data collected while the program is under development in order to improve its effectiveness and success.

HANDHELD COMPUTING DEVICES
Portable computing devices that allow students to access and manipulate information. Handhelds include devices such as handheld computers, laptops, PDAs, cell phones, and portable text devices.

HANDICAPPED ACCESSIBLE WORKSTATION
As required by Public Law 101-476, Education of the Handicapped Act Amendments 1990 (revised from the P. L. 94-142), media and technology facilities that are barrier-free and able to accommodate wheelchairs and other assistive devices. Standards for workstations that meet are found in the Information Access and Delivery section.

HEAD-END
Location within a building where satellite/video signals either originate or are collected via satellite or other sources, and made available for use within the facility. The head-end room contains all the hardware needed to decode and transmit the incoming signals throughout a facility.

HUBS
Common connection point for devices in a network.

LOFTI
Looking for Instructional Techonology (LoFTI) is a tool for observing the classroom use of technology by students and teachers. LoFTI is an application for handheld computers and is used by an observer who makes 15-20 "snapshot" visits to classrooms. The records are synchronized to one database so that the data can be used to generate reports for use in formative evaluation and planning for professional development.

INFORMATION TECHNOLOGY (IT)
Term that encompasses all forms of technology used to create, store, exchange, and manipulate information in its various forms (business data, voice input, still images, motion pictures, multimedia presentations, and other emerging technologies).

INFRASTRUCTURE
The underlying technological mechanism or system supports transfer of voice, video, and data.

INTELLECTUAL FREEDOM
Concept that stands for freedom of access to information and ideas without barriers that would limit inquiry. Intellectual freedom is a fundamental right that is upheld by the policies and procedures of media and technology programs within a school.

INVENTORY
An on-going systematic procedure that verifies the location of every item in the resources collection.

ISTE NETS
International Society for Technology in Education National Educational Technology Standards for students, teachers, and administrators. North Carolina has adopted the teacher and administrator standards as the state's computer competency standards.

JUST-IN-TIME STAFF DEVELOPMENT
Timely and on-going support for teachers as they attempt to acquire new skill, such as learning to use a new software program or a digital camera. This type of staff development is usually provided one-on-one.

LAN (LOCAL AREA NETWORK)
Interconnected system of computers and/or peripheral equipment (e.g., printers) that is confined to a limited area, such as a room, building, or campus, enabling connected users to communicate and share information and resources.

LEA
Local education agency is the organization that administers the non-charter public schools in a school system under the authority of the State Board of Education.

LOFTI
Looking for Technology Integration (LoFTI) is a tool for observing the classroom use of technology by students and teachers. LoFTI is an application for handheld computers and is used by an observer who makes 15-20 "snapshot" visits to classrooms. The records are synchronized to one database so that the data can be used to generate reports for use in formative evaluation and planning for professional development.

MANAGEMENT SYSTEM
Computer-based system used to track, record, and report student progress on a particular application or set of applications. Management systems can also provide appropriate interventions that meet the individual needs of a student.

MANIPULATIVES
Hands-on learning materials that help students understand concepts.

MARC (MACHINE-READABLE CATALOGING)
Uniform standard for the electronic cataloging of materials developed by the Library of Congress.

MICROFORM READER
Device used to read printed matter on microfiche or microfilm.

MIDIS
Acronym for musical instrument digital interface, a standard adopted by the electronic music industry for controlling devices, such as synthesizers and sound cards, that emit music.

DATA PROJECTION DEVICE
Device connected to a computer or other multimedia equipment (e.g., a VCR or DVD player) in order to project an enlarged display of the computer screen or other multimedia input.

THE NORTH CAROLINA CHILDREN'S BOOK AWARD
Award sponsored by NCSLMA and the Children's Services' and School Librarian sections of the North Carolina Library Association designed to encourage elementary students to read the works of excellent writers for children, to promote a love of reading, and to recognize the books and authors that children enjoy reading. There are two award categories: picture book and junior book.

NCLB (NO CHILD LEFT BEHIND)
Federal education funding legislation enacted in 2001 that replaces ESEA (Elementary and Secondary Education Act).

NC WISE
North Carolina Window of Information for Student Education (NC WISE) is the computer-based system that tracks data such as student attendance and grade reporting for public schools. NC WISE replaces the SIMS system.

NC WISEOWL
The state's K-12 curriculum portal of free and subscription Web sites provided free of charge to all North Carolina public school students, teachers, and parents. It is developed and maintained by the NCDPI's Instructional Technology Division.

ONE-TO-ONE COMPUTING
Providing one computing device for each student to support learning activities. Devices used in One-to-One Computing include handheld computers, portable keyboards, and laptops.

ONLINE CATALOG
An electronic catalog of the school's collection of materials maintained by the school library media center staff. It features a search interface and is accessible through a local or wide area network.

OPAC (ONLINE PUBLIC ACCESS CATALOG)
Electronic catalog of the school's collection of materials that features a search interface and is accessible through a local or wide area network. The term is sometimes used to refer to the computer workstation in a media center that accesses the online catalog.

PARAPROFESSIONALS
Staff who are appropriately trained to perform duties to assist the school library media coordinator or technology facilitator. Paraprofessionals work along with professionals to provide support for program and administrative duties, including direct or indirect services for students, teachers, and parents. These positions may include: media assistant, technology assistant, and distance learning facilitator.

PERIPHERAL
Any external device attached to a computer such as a printer or scanner.

PORTABLE TEXT DEVICES
Electronic keyboards that enable users to input, edit, and store text that can be uploaded to a computer or printed (e.g., DreamWriter and AlphaSmart).

PROBEWARE
Devices that are connected directly to a computing device allowing data to be entered directly into a software program. These devices are typically used to take measurements or readings for math and science instructional applications.

QUIZ BOWL
Competition for grades 9-12 sponsored by the State Library of North Carolina. Two teams of four students, coached by a teacher/media coordinator, compete against each other, answering questions geared to the curriculum and general knowledge. Winning teams may compete at the local, regional, and state levels.

REALIA
Real objects such as seashells, rocks, feathers, etc. that can be handled by students to aid learning.

RESOURCE TEACHER/SPECIAL AREA TEACHER
Broad range of teachers who provide instruction in non-core curriculum areas.

RETROSPECTIVE CONVERSION
Conversion of the print catalog of records for the media center's collection to an electronic database in MARC (machine-readable) format.

ROUTER
Device that connects any number of networks.

RUBRICS
Authentic scoring mechanism for the evaluation of a learning activity or project that provides assessment guidelines and a rating scale for determining levels of quality. Rubrics are based on criteria for completing a task.

SCHOOL IMPROVEMENT PLAN
Annual plan correlated to the ABCs of Public Education and based on the analysis of student test scores and input from surveys of teachers, parents, and students. The plan outlines strategies for improving student performance and/or addressing ABCs goals.

SCHOOL IMPROVEMENT TEAM (SIT)
Sometimes called the school leadership team, it is a representative body that aids in site-based management. This group is responsible for drafting and implementing the school improvement plan.

SELECTION POLICY
Policy that outlines the principles that guide professionals in the development of a collection to support teaching and learning. It also describes techniques for maintaining the collection through collection mapping, weeding, and inventory, as well as the process for dealing with challenges to materials in the total instructional program.

SOFTWARE LICENSE
A legal agreement between an individual or organization and the owner of a software program that allows use of the program.

SPEECH SYNTHESIS SOFTWARE
Also known as Text-to-Speech: Computer software that translates text into audio format. More sophisticated versions of this type of software produce natural sounding speech with a choice of male or female voices.

SUMMATIVE EVALUATION
Provides information about results of the program that is often used to determine whether to expand or improve the program.

SWITCH
A switch is a device that filters and directs data to their appropriate destination on the network (LAN) within a building.

TCO (TOTAL COST OF OWNERSHIP)
Model for calculating all of the expenses associated with deploying, maintaining, and troubleshooting technology in the workplace or educational setting. Strategic decisions on how to implement and control costs of technology can be made with this information. In education, these costs include professional development, support, connectivity, software, replacement costs, and retrofitting.

TECHNOLOGY USER GROUP
Group of individuals with similar interest or similar positions in the area of technology. These individuals come together at regular meetings, or use a LISTSERV via email, to share ideas, offer solutions to each other's problems, or to provide other forms of support. Such groups afford excellent opportunities for training and awareness sessions to be offered on special topics of interest to the entire group.

TELECOMMUNICATION
Refers to the exchange of voice, video, or data through digital or analog electronic signals (e.g., radio, telephone, television, facsimile).

TERM CONTRACT
Agreement between an organization and a vendor that stabilizes prices for the procurement of resources from the vendor for a stated period of time. Term contracts usually contain service agreements for the purchased resources and stipulations of penalties if the vendor does not uphold conditions of the contract.

TOUCH SCREEN
Hardware device enabling students to provide input by touching areas of the screen (such as pictures or words) rather than using a keyboard or mouse.

UNION CATALOG
Electronic catalog of the combined collections of multiple schools or an entire school system.

VIDEO STREAMING
Video with synchronized sound sent in compressed form over the Internet. A special program called a “player” is needed to decompress and view streamed data.

VIRUS
Computer program that destroys data, unnecessarily ties up resources, or otherwise damages a system. Viruses are often able to replicate themselves and can therefore be passed from one computer or network to another via file transfers (analogous to how a biological virus is passed from one host to the next).

VIRUS PROTECTION
Software program used to detect, diagnose, and destroy computer viruses.

VOICE-RECOGNITION TECHNOLOGIES

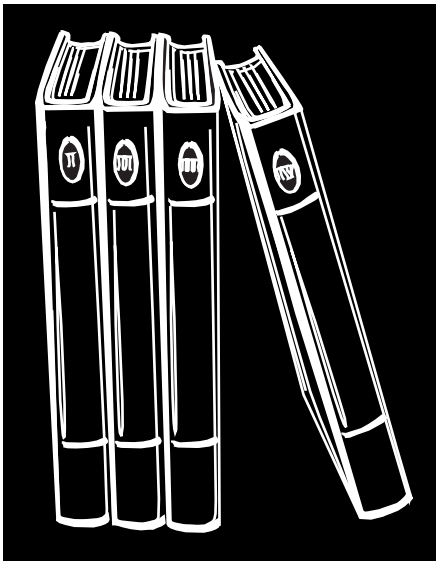
Software and hardware that enables a computer to recognize and carry out voice commands.

WAN (WIDE AREA NETWORK)

Interconnected system of computers and networks (including local area networks) that surpasses local area networks in scope (e.g., WANs can span building to building, city to city, nationally, and internationally). These data communications linkages (e.g., dedicated lines and radio waves) are designed to allow large numbers of users to communicate and access information.

WEEDING

Essential component of collection development where materials that are no longer accurate, relevant to the curriculum, or in usable condition are identified and discarded.



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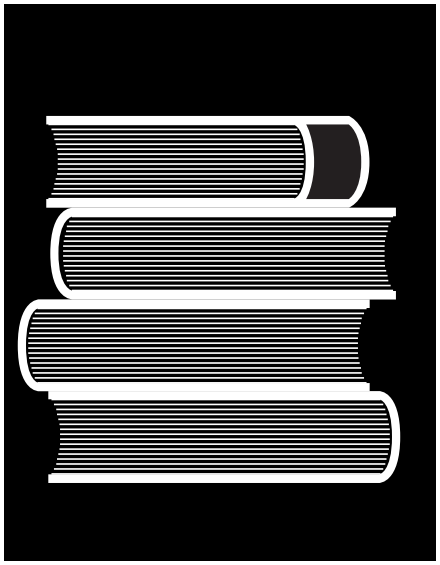

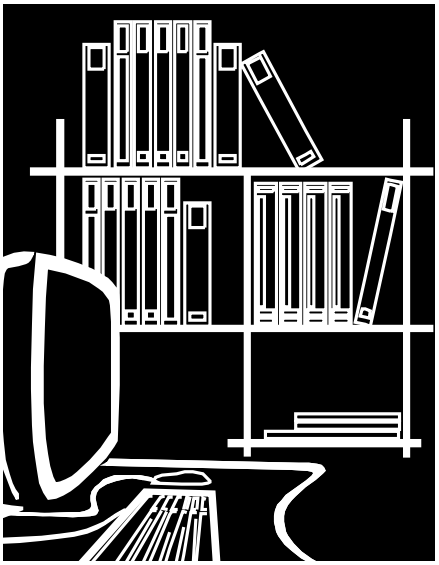

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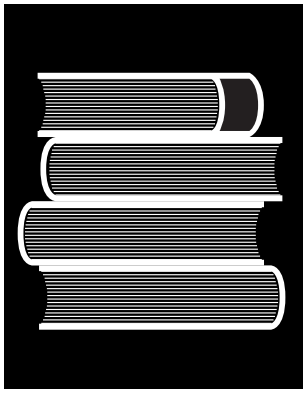

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