
The Internet Comes to School

by Judy LeCroy

Media coordinators in school library media centers fight the same battle that taps the energies of many librarians — there is never enough money to go around. Each department in the school, each grade level, each teacher has resource needs that are valid but cannot be met because of financial limitations. The wise media coordinator enlists the help of a Media Advisory Committee when deciding how to spend funds, but frustration is inevitable. I believe that Internet access can be an answer to some of this frustration.

Resources on the Internet are so comprehensive that any school with good access effectively enlarges its collection of curriculum support materials. In addition, the capability of contacting experts in particular fields of study via Internet e-mail provides a new avenue for schools to access primary sources of information.

Of course, this rosy picture of Internet use in schools is not without its prickles. All educators and parents realize the potential difficulties presented by the entry of this powerful medium into the confines of the school building. While schools have used television resources for some time to tap current information, the ongoing revolution in computer technology now provides opportunities for *interactivity* with world resources that heretofore have

been unknown. Educators must assure that even as all materials in a school library media center have the valid educational purpose of supporting the curriculum, so should the sites accessed via the school's Internet account serve the same purpose. Even though some commercial telecommunication services such as *America Online* and the *Scholastic Network* may offer features that limit student access to questionable information, all schools, regardless of their Internet provider, must develop an Acceptable Use Policy. The North Carolina Department of Public Instruction has developed guidelines toward the formulation of such a policy.¹

Another issue to be reckoned with is the *cost* of gaining Internet access. This expense remains a roadblock to many schools' entry into the realm of the World Wide Web. The most fortunate schools are those with T1 or 56K lines that provide direct access. Here teachers and students can use the Internet wherever there are networked computers without the bother of modems and without the limi-

tations presented when there is only one telephone line. This direct access remains financially out of reach for most North Carolina schools at this time.

Dial-up access becomes the next best alternative. To secure dial-up access, schools must connect via modem to an Internet service provider, requesting either a SLIP or PPP account. PPP is the preferable configuration because of the standards now being adopted by the telecommunications industry. To the end user there is virtually no difference between SLIP and PPP service.

As of March 1, 1995, the twenty-six Davidson County schools gained Internet access through dial-up connections. Getting to this point was not easy because five telephone companies and two area codes were involved. A contract has been implemented for Lexington Telephone Company to provide six "lines" into the Internet, twenty-four hours per day, seven days per week for a set fee. In the fall of 1995, these "lines" will be expanded to twelve. Just a few months of access already have proven the role that the Internet will play in providing needed curricular resources. Already, both teachers and students are turning to the Internet for the most up-to-date information on news events, legislation, scientific data, geographic information, and myriad other topics.

Assuming that someone has already jumped the hurdles necessary to get Internet access in a school, and assuming that the matters related to an

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Acceptable Use Policy are under advisement, what must be done in order to maximize use of the Internet in a school?

1) Train a few.

While it may be wise to preview resources on the World Wide Web at a faculty meeting to pique interest, it is impractical to plan a training program that will involve every teacher. While the Internet does offer information in every subject area, not every teacher will choose to be in the first wave of users. Also, if a school is using a dial-up connection, the number of concurrent users at the school will be limited to the number of available telephone lines. Choose a few staff members for training. As these teachers master telecommunication techniques and discover information, they will be able to spread the expertise among others who are interested. Naturally, the media coordinator and any technology personnel should be included in the

training. Several classroom teachers who are open to integrating technology into the curriculum also should be trained. In the end, the teachers likely are the ones who will be most effective in recruiting their colleagues to Internet use.

Training itself becomes a problem in schools with dial-up access because of the limited telephone lines. A lab situation where many users can be online concurrently is ideal, but not many schools have the benefit of such a setting. It might be worth checking with a nearby college or university to see if a networked lab is available for this training.

Training should focus on the simple use of e-mail (which likely will become the most popular use of the Internet for teachers) and a general introduction to *Netscape*. *Netscape* is a graphical menuing program which allows easy navigation of the Internet. If teachers and other staff members are shown how to open a location for the first time and then how to bookmark that site for future reference, they can start exploring the world with *Netscape*. They will begin to notice World Wide Web sites in books, magazines, and newspapers that they will want to "visit."

Six Internet courses sponsored by Davidson County Schools provided training during the 1994-95 school year to approximately one hundred teachers and assistants throughout the county. In addition, DCS media coordinators have

had several other opportunities for training. There is at least one newly-knowledgeable Internet contact person in every school.

2) Be sure that hardware for connecting to the Internet is accessible.

If teachers have to transport or send students to one particular place in the school in order to use the Internet, they are less likely to do so. If a LAN is not in place, however, there will be no choice except to establish Internet stations in convenient locations such as the me-

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dia center and the computer lab. One telephone line can suffice for both sites if a line use indicator is installed to prevent disruption of connections. With a LAN in place, a networked modem will allow Internet use by any workstation on the LAN. A teacher who can use the Internet to find pertinent information without leaving his/her own classroom will become a quick convert to online searching.

In Davidson County, a telephone line is dedicated to telecommunication in every media center and in most computer labs. Those schools that have large LANs already in place will work toward implementation of a networkable modem during the 1995-96 school year so that Internet resources can be accessed from any workstation on the LAN.

As mentioned earlier, ideally all networked computers in a school would have constant Internet access with no modems involved. School personnel at all levels should work toward this goal.

3) Provide necessary Internet software in a convenient form.

In Davidson County, a technology educator downloaded the most up-to-date versions of necessary Macintosh software from the Internet and packaged it all on two high density disks. Every school was given these two disks along with some simple print instructions for

getting started with the software. In the Macintosh world, all required software is free to educators except *Mac TCP/IP Connection* which is included on a disk that comes with the book *The Internet Starter Kit*.² This book was provided to each school, both because it contains the necessary software and also because it serves as an excellent introduction to the whole art of using Internet resources. Schools requiring Windows software were required to download *Netscape*, but the other necessary programs were furnished by the Internet service provider. *Netscape* is free to educators.

Schools using Macintoshes to connect to the Internet need the free program *MacPPP*. Other useful Macintosh programs that are classified as either public domain or shareware include *Eudora* (for e-mail), *NCSA Telnet*, *TurboGopher*, *FTP*, *SoundMachine*, *Blue Skies* (for online weather), *Stuffit Expander*, *JPEGView*, and *InterNews*. Windows-based computers use *Trumpet Winsock* to connect to the Internet. Other Windows applications include *Eudora*, *Gopher*, *FTP*, *NewsReader*, *Telnet*, *LView*, and *PKunzip*. The majority of this software can be downloaded from a variety of Internet sites.

4) Provide some print resources to help staff members gain skills and find Internet addresses of interest.

As mentioned above, in Davidson County we secured a copy of *The Internet Starter Kit* for each school. This book is available for either Macintosh or Windows environments and contains a computer disk with helper applications. There are also many other good guidebooks to consider. A media coordinator will find these titles to be very popular ones when the Internet has become available at school. They are also good choices for the district's professional library.

A number of magazines can be helpful in the school setting. *Classroom Connect*, subtitled "The K-12 educator's practical guide to using the Internet and commercial online services," is an excellent resource.³ It contains lesson plans, articles to help hone surfing skills, and listings of educational World Wide Web sites, as well as an annual index for easy retrieval of information.

Publications for the commercial market such as *NetGuide* can prove helpful in locating good World Wide Web sites, particularly in the areas of science and social studies.⁴ Additionally, two free ERIC Digests list education-related Internet addresses plus bibliographic information of interest on this topic.⁵

With the advent of Internet use in the school, what role does the school's media coordinator play? Although it may not yet be clearly defined, the role certainly will be critical to the ultimate success of this technology as it pertains to education. More than ever before, the competent services of a trained professional are required in order to meet the challenges set forth in *Information Power, Guidelines for School Library Media Programs*, the ALA/AECT publication which defines current standards for excellence.⁶ Judicious use of the Internet can help to meet these challenges.

Challenge 1: *To provide intellectual and physical access to information and ideas for a diverse population whose needs are changing rapidly.* Information on the Internet reflects change in society. Minute-by-minute there are new sources, new data, new mind-sets to explore. The capable media coordinator will recognize the importance of this rapidly changing information while questioning its authenticity and applicability for the school setting.

In many schools, unless the media coordinator takes the initiative to secure Internet access, it is unlikely to get done. Once available in the building, the media coordinator must make every effort to ensure that access is as convenient as possible for both teachers and students.

Challenge 2: *To ensure equity and freedom of access to information and ideas, unimpeded by social, cultural, economic, geographic, or technologic constraints.* In times of limited budgets, the Internet can be an effective means of providing a school with diverse viewpoints on many subjects. One oft-touted benefit of communication via the Internet is its blindness to stereotypes. Whatever the clientele, the media coordinator can help students reach out to the world in a way that is bound to expand their perspectives and enrich their experiences. As this challenge addresses the dangers of censorship, the media coordinator must play a key role in determining the school's Internet Acceptable Use Policy.

Equitable access to information has become even more of an issue with the possibilities afforded via the Internet. Ironic as it may seem, the schools that already have more opportunities to broaden their world view are the very ones most likely to have easy access to the Internet. An example would be public schools located near universities. The equity issue will not be resolved successfully until all schools are fully connected to the Internet.

Challenge 3: *To promote literacy and the enjoyment of reading, viewing, and listening for young people at all ages and stages of development.* While school Internet use may

Some particularly helpful Internet sites for school library media centers in North Carolina are listed below. Please remember that World Wide Web addresses change often.

- *Books On-Line*
<http://www.cs.cmu.edu/web/booktitles.html>
The user can find the texts of hundreds of books by accessing this site.
- *Copyright Clearance Center Online*
<http://www.openmarket.com/copyright/html/lawinfo.html>
Here one connects with the U. S. Copyright Office as well as many other sources of copyright information.
- *DPI InfoWeb*
<http://www.dpi.state.nc.us>
North Carolinians should be proud of this service provided by the Department of Public Instruction. Here teachers can access the total curriculum and use a hyperlinked matrix to find support materials that complement teaching objectives. *InfoWeb* also serves as a gateway to educational Internet resources throughout the world.
- *EdWeb K-12*
<http://k12.cnidr.org:90/>
This site presents the world of educational computing and networking in a single, easy-to-use guide.
- *The Internet Public Library*
<http://ipl.sils.umich.edu/>
Organized like an actual library facility, this resource even offers a reference desk where the user can submit questions.
- *Library of Congress*
<http://www.loc.gov/>
This is one of the most comprehensive Internet sites available to schools. Such jewels as the Walt Whitman Home Page allow the browser to see original manuscripts. The Exhibits area is especially intriguing.
- *Newspapers on the Net*
<http://www.give.com/papers.html>
Here one can access U. S. and foreign newspapers that are online.
- *Raleigh News & Observer*
<http://www.nando.net>
Up-to-date news reports plus many extra features make this one of the best newspaper sites on the World Wide Web.
- *Reference Shelf*
<http://www.nova.edu/Inter-Links/reference.html>
This goldmine includes everything from area and zip codes to Bartlett's *Familiar Quotations* and *Roget's Thesaurus*.
- *State Library of North Carolina*
<http://hal.dcr.state.nc.us/ncslhome.html>
Among other interesting links, this site contains the *North Carolina Encyclopedia*, a valuable resource for information on North Carolina counties.
- *State of North Carolina — Public Information*
<http://www.sips.state.nc.us/>
Fourth- and eighth-grade classes will especially benefit from this WWW page which leads to a plethora of data about the state.
- *Thomas*
<http://thomas.loc.gov>
Here you will find information about the status of federal legislation and the full *Congressional Record*.
- *TimesFax*
<http://nytimesfax.com/>
Downloading and printing this resource daily will provide schools with an eight-page copy of the *New York Times*. *Acrobat Reader*, a free program from Adobe, is required.
- *U. S. Department of Education*
<http://www.ed.gov>
The National Library of Education can be accessed here.
- *Yahoo Education*
<http://www.yahoo.com/education>
This address provides an extensive menu of education-related sites.

not as directly impact this challenge as some others, it is still pertinent. The volume of accessible data provides the media coordinator with an opportunity to teach discretionary skills to students. Perhaps some of the most useful capabilities that a school can develop are those of critical reading, viewing, and listening. As the world bombards us all with more information than we can digest, the educated person must cultivate the ability to evaluate carefully and to recognize what is excellent.

Challenge 4: *To provide leadership and expertise in the use of information and instructional technologies.* Who in the school will be the expert regarding Internet use if not the media coordinator? While no wise media coordinator wants to be the fount of all knowledge on every subject, someone in the school must investigate new information technologies and initiate their use when advisable. Regarding Internet use, the media coordinator is the logical initiator. *Leadership* is the operative word. A good leader doesn't do it all; a good leader helps empower others to do for themselves. The media coordinator is that key player who can lead the entire team to the goal of curriculum enrichment that produces student success.

Challenge 5: *To participate in networks that enhance access to resources located outside the school*⁶. With the Internet's arrival at a school's door, the walls of that building effectively become transparent. Students and teachers can see and hear the world for themselves rather than being bound as in the past by the relatively few print and AV resources that have been available. In providing guidance in using this network of networks, the media coordinator is cultivating necessary lifelong skills. High school graduates not only need the ability to access, evaluate, and use online information, they also need sufficient technological know-how to make it work in their personal and professional lives.

Embracing the evolving Internet presents new challenges for media personnel in schools. After all, the job of school librarian/media coordinator was a full-time one long before the first computer entered the door. Capable media coordinators will view this new technology not as a burden, however, but as another powerful way to help equip patrons for the next century. While the obstacles to total use are very real indeed, the ultimate end is worth the fight. The world awaits North Carolina's students. Their most quali-

fied Internet tour guides should be school media coordinators.

References

¹ See *North Carolina Libraries* 53 (Summer 1995): 58, for text of policy as reprinted from DPI InfoWeb.

² Adam C. Engst, *The Internet Starter Kit for the Macintosh*. 2d ed. (Indianapolis: Hayden Books, 1994). Also available in Windows version

³ *Classroom Connect*, Wentworth Worldwide Media, Inc., P. O. Box 10488, Lancaster, PA 17605-0488.

⁴ *NetGuide*, 600 Community Drive, Manhasset, NY 11030.

⁵ Morgan, Nancy A. "An Introduction to Internet Resources for K-12 Educators, Part 1: Information Resources," *ERIC Digest* EDO-IR-94-3 (May 1994); Part II: Question Answering, Listservs, Discussion Groups," *ERIC Digest* EDO-IR94-4 (May 1994).

⁶ American Association of School Librarians and Association for Educational Communications and Technology, *Information Power, Guidelines for School Library Media Programs* (Chicago: American Library Association and Washington: Association for Educational Communications and Technology, 1988).

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