Editor’s Message

The new digital technologies are eliding the boundaries that used to exist between text and video, between school and society, between physical and virtual space. As they do, they also elide the lines we have drawn between student and teacher, learner and mentor, and in the case of schools between teacher and librarian. In the United States today, job categories such as “library media specialist” and “technology coordinator” are in rapid flux; the lines blur even as administrators and boards of education attempt to delineate them.

These changes are played out dramatically in libraries everywhere. Their role as repositories for printed information is significantly expanding. As that role enlarges, many questions arise: What will libraries become? What do students need to learn about navigating the new library space? How is the role of librarian changing? What do these new roles and capacities imply for the relation between teacher and librarian? What do they imply about new literacies?

For this month’s column, guest author Cushla Kapitzke articulates key changes occurring around information literacy and raises issues that many are only beginning to consider. She also shows how technical and social changes cannot be separated.
Archive Fever: Libraries and “Cybraries” in New Times

Since the beginnings of recorded history, artifacts of symbolic memory have been collected and preserved in the physical space of libraries. The notion of having a secured place for information materials and knowledge resources is generally attributed to the Sumerians. Around six millennia ago, these inhabitants of small city-states in Mesopotamia combined pictorial signs with symbols to represent units of speech. This technology revolutionized communication, information, and education. Jacques Derrida (1996) claims that from the time humans discovered how to sustain meaning across time and space, they have suffered what he calls “archive fever,” or the impulse to preserve an historical and cultural past through oral tradition and literate technologies. Archaeological evidence shows, for instance, that collections of Sumerian palace and temple libraries were cataloged, arranged in order, and supervised by trained personnel. This archive instinct continues to capture our imaginations as teachers, as print literates, and, for many of us, as cybernauts.

Libraries and museums are repositories for the printed, visual, and audio artifacts deemed memorable by society. Foucault (1986) called these disciplinary cultural spaces one of society’s “heterotopic” sites because they are somewhat “other” to normal daily activity. As ordered places that users visit for short periods of time, they provide a distance, a space outside the everyday for engagement with other times, other histories, other identities, and other cultures. In this sense, they are places where, as kids, we would go to hear voices and possible worlds other than those of the schoolyard and community.

In schools, libraries are places where text, technology, and literacy converge in concentrated form. Like classrooms, libraries are private, exclusive places accessible only to student populations and those who are privy to their located languages and literacy practices. As archivist and custodian, the role of the librarian was to select, organize, mediate, and distribute society’s symbolic materials. The Dewey Decimal Classification System (DDC) and Boolean logic are two examples of the tools and terms of “librarian-speak” that long have baffled and alienated many students and library patrons. Typical textual practices of libraries included searching the card catalog and “periodical indexes,” locating materials via their “call numbers,” skim reading, and note taking. These procedures and
principles of print-based informational management, retrieval, and use remained largely unchanged for thousands of years, until two decades ago.

**New Technologies and Libraries**

Digitization and its two main derivatives, the Internet and hypertext, propelled information access and exchange into the era of cyberspace and the cyber library, or “cybrary.” (For an example, see the homepage of the cybrary at the University of Queensland, http://www.library.uq.edu.au). Networked communications technologies have transformed not only the physical space of this time-honored learning place but also the literate and textual work that takes place in it. Milestones in the “technologization” of libraries include the automation of the catalog and the installation of OPACs, the introduction of electronic materials such as stand-alone CD-ROM indexes to which librarians only had access, the adoption of online information databases, and more recently the shift to library websites and Web-based catalogs (WebPacs). In the current transitional stage, digital or hybrid libraries integrate traditional and online services. Remote access means nevertheless that the necessity of going physically to a school or university library for informational materials is reduced or, in the case of virtual libraries, eliminated.

While still located in buildings, libraries are gradually transforming into dematerialized nodes of virtual, informational space that span oral, print, and digital cultures. The cybrary is an electronic gateway for clients located anywhere to access information located everywhere. Cybraries function as electronic “portals” to information services accessed just as easily from across Australia as across the counter or the campus. Without entering the premises or speaking to a member of staff, from any computer terminal with Internet access students are able to check if a book is on the shelf, request a resource, view their loans record, and peruse the list of new acquisitions. They can read their lecture notes, course reading lists, exam papers, and university handbooks. Postgraduate students and staff can request and receive journal articles via e-mail. The library homepage has become an entry point for subject-specific databases, full-text e-journals, free downloads of certain academic software, and information about online and face-to-face information skills training.
Cybraries and the New Literacies

What then has this transformation of the library meant for the work of students and teachers? In the process of researching a topic or preparing multimedia assignments for publication on the World Wide Web, students draw from a multiplicity of splintered literacies. They might, for example, start by researching their topic on the online catalog and the electronic databases to which the library subscribes. To locate and retrieve material from the Internet, they would need to understand and apply the differential uses and search protocols of the many subject directories, search engines, and meta-indexes available to them. If using webpage design or presentation applications for their assignments, students would need to download or print information, drag and drop text, insert backgrounds, create borders, and make hyperlinks to material in the document or to other files and websites. Students have the option of importing audio files of background music and interview material, or of inserting video clips and electronically scanned photos and images from other print materials.

These tasks assume technological competence in the creation and navigation of nested folders and directories and in the creation, saving, naming, and renaming of files. Depending on the software used, publishing a webpage requires network literacy to understand the local area network (LAN) and the procedures for transferring files back and forth to the server. Students also need socioethical competence in the codes of practice for using and publishing both print and electronic material. This includes knowledge of issues concerning copyright; plagiarism; the rights and responsibilities of system access and security; and standard social conventions regarding defamatory, obscene, or offensive material.

Literacy and Information Literacy

The technologization of language and text in the Information Age has generated many new theories and models for explaining and doing literate work. Visual literacy, digital literacy, media literacy, network literacy, critical literacy, and multiliteracies are some of them. The library profession’s response to the proliferation of information was to reconfigure the library skills instruction programs of the 1960s into a research framework called “information literacy” (California Media & Library Educators Association, 1997). Most of the information science literature presents information literacy as an emerging approach rather than a fully defined, prescriptive model. Indeed, much of the literature bewails the slipperiness of the
term and the lack of a universal definition with elaborated instructional goals and methods. Information literacy is variously understood as a process, a skill, or a competence. That information literacy should not be the domain of the teacher librarian alone and that training in it should be integrated across all subject areas are two points on which the profession agrees.

As used by librarians and teachers, information literacy consists of a hierarchy of information problem-solving skills that purportedly enable independent and effective learning. Most information literacy programs focus on tasks such as the creation and transmission of information, the construction and application of a search strategy, access to information (reference sources and periodical indexes), the structures of information (e.g., subject headings and the arrangement of database records), the physical organization of information (e.g., the DDC or Library of Congress Classification systems), and the evaluation of information. One leading model espouses information literacy as a process of steps: to define an information task or problem, to select appropriate resources, to solve the problem, to locate the resources in a collection, to read the materials, to synthesize the information, and to evaluate the product and the problem-solving process (Eisenberg, 1996).

Yet, that process and those strategies have been appraised and found wanting for learning and working in the information economies and cultures of New Times (Luke & Kapitzke, 2000). The ability to use and manipulate information is necessary, yes, but students need more than an understanding of the differences between data, information, and knowledge, and between fact and fiction. The non-linearity of hypertext sequencing is fast obliterating the conventional categories of knowledge and its hierarchical organization in, for example, the DDC. Furthermore, the ephemeral and hybrid nature of digital environments tends to elide differences between the real and virtual worlds, and therefore between factual and fictional ones. Information literacy derives from a print-based culture, and its logic as it currently stands maintains distinctions between, for instance, fiction and nonfiction, and between reading for pleasure and reading for information. These distinctions and their associated practices, such as the reading of novels in time reserved for silent, sustained reading (SSR), are becoming increasingly obsolete and discriminatory. For many youth today, particularly in advanced capitalist countries, reading is no longer performed alone with a book, but is a shared activity undertaken with and around a computer screen while engaged in conversation with others who are in the room, in cyberspace, or in both (Tapscott, 1998).
Libraries are affected not only by technological change but also by social and cultural change. Considering the pivotal role that the information literacy project plays in the educational enterprise, information literacy proponents should be mindful of the recent critical turn in educational theory and practice. This turn entails moving information literacy from the confines of the library to the arenas of language use and the social lives of youth, which in advanced economies comprise wall-to-wall multimodal information. It requires a sociology of information to account for the material and political bases of language and text use in libraries and their programs. As social practices, all literacies—including information literacy—are situated responses to specific political economies of educational contexts and classrooms (Luke, 2000). Because the discursive and material resources framing library practices vary within and across institutional sites, so do their learning outcomes. Selective traditions of information usage comprising combinations of canons, genres, literacy events, and social relations generate specific outcomes for certain social groups. Furthermore, those traditions of use confer differential identities, positions, functions, and powers to individuals in proportion to their mastery of the languages and discourses valorized by the literate economy in which they operate. Different libraries instantiate different regimes of rules, rationales, procedures, and practices for textual work, which in turn are socially and economically productive or counterproductive in terms of employment options and life chances for particular students.

Information literacy is not about analytic thinking or neutral cognitive processes but about improving student opportunity and capacity to design and forge lifeworlds in a range of text-based communities and economies (Cope & Kalantzis, 2000). It may be a process and a skill, but viewing it also as a socially constructed discourse and discipline opens a space for the possibility of social transformation through the interrogation and disruption of the discourses and economies that produce and reproduce it. Librarians, cybrarians, and teachers need therefore to shift their focus from a concern for a single, dominant theory of information literacy to the social and cultural construction of its pedagogies and, in turn, their variable political and discursive outcomes.

**A Critical Information Literacy**

This kind of critical information curriculum and pedagogy reframes conventional notions of text, knowledge, and authority, and in the process changes the
traditional roles of students, teachers, and librarians. The library was the place stu-
dents went to acquire a selective tradition of information use and its application to
a curricular unit. By contrast, the cybrary must be both a place and a space not
only for learning information but also for learning how to use information (i.e., the
operational dimension of using online databases), for learning about information
(i.e., the critical and political dimension), and for learning through information
(i.e., the cultural dimension) (Lankshear, Snyder, & Green, 2000).

“Cybrarians,” for example, can coordinate print and electronic resources
between and among subject areas. With their expertise in the new information
technologies and their knowledge of the collection, cybrarians might suggest
texts that re-present a range of theoretical, ideological, and political perspec-
tives on particular curricular issues. Take, for example, the topic of globalization.
Rather than seek the facts or the truth about its negative or positive
impacts, student reading and analysis could focus on the social construction of
the discourses and practices of economic and cultural integration, which have
costs and benefits, and advantages and drawbacks, in specific local and global
contexts. In collaboration with the teacher, the cybrarian would furnish print and
electronic texts produced by unionists, transnational corporations, indigenous
peoples, feminists, environmentalists, and the World Trade Organization, all of
which would present different and often conflicting versions of “reality.”
Opportunity to analyze how these positions are materialized in language and text
would show students that the production of knowledge necessarily entails rela-
tions of power that are able to be contested and transformed. Considering the
power of information networks to connect and disconnect, and to include and
exclude (Castells, 1996), any pedagogy that ignores the political economy of in-
formation does a disservice to students, irrespective of whether they are part of
and contributing to, or disconnected from, the electronic current of the
Information Age.

A recent study in Australia (Meredyth, Russell, Blackwood, Thomas, & Wise,
1999) confirmed the digital divide along the same axes of gender, class, race,
and geographic location that existed with print literacy. In the study, data were
collected from 399 schools in all Australian states and territories. The total survey
sample was 6,213 students from Years 6 and 7 and from Year 10, which is the final
year of junior high school. The study reported that

• 85% of all students used computers outside schools;
• 50% used a computer outside school every day or almost every other day;
• a significant link existed between students’ information technology skills, their confidence, their use of computers outside school, and the level of technology resources in homes;
• nearly all the students had more than half the basic information technology skills core to the operation of computers;
• 67% had all the basic information technology skills;
• more than half the students (65%) had a sound range of advanced information technology skills, including how to connect to the Web;
• more than half could use computers to create music or sound, and send an e-mail;
• 48% could create a multimedia presentation;
• 38% could make a website or homepage;
• indigenous students and those from small schools, especially in rural and isolated areas, were the most likely to lack basic skills;
• students who reported familiarity with the most complex uses of information technology were from independent schools and single-sex schools; and
• while the basic skills of girls were on a par with boys, boys had more advanced skills.

Other Views

Books constitute capital. A library book lasts as long as a house.... It is not, then, an article of mere consumption but fairly of capital, and often in the case of professional men setting out in life, it is their only capital. (Thomas Jefferson to James Madison, September 1821, http://www.ifla.org/I/humour/subj.htm)

Libraries are a kind of monumental writing, a writing and reading space in stone. (Jay D. Bolter, 1991, p. 101)

The archive is first the law of what can be said, the system of what governs the appearance of statements as unique events. But the archive is also that which determines that all these things said do not accumulate endlessly in an amorphous mass…it defines at the outset the system of its enunciability…[and] the system of its functioning. (Michel Foucault, 1972, p. 129)
Websites of the Month

http://www.edna.edu.au/EdNA/—EdNA Online: Education Network Australia—government-funded gateway for Australian educational resources.

http://www.hi.is/~anne/iasl.html—webpage for the International Association for School Librarianship.

http://www.infolit.org—National Forum on Information Literacy—a coalition of more than 75 education, business, and government organizations working to promote awareness of the need for information literacy and encouraging activities leading to its acquisition. It provides definitions of information literacy, descriptions of successful information literacy programs, and an extensive annotated compendium of linked websites.

Glossary

**Boolean logic**: a form of logic developed by the English mathematician George Boole that allows a database searcher to combine concepts in a keywords search using three commands or “operators”: AND, OR, NOT.

**Call number**: a unique code displayed on the spine of library materials that represents the item in the library catalog and allows the user to locate the resource on the shelf.

**Copyright**: the exclusive legal right granted by a government to an author, editor, composer, playwright, publisher, or distributor to publish, produce, sell, or distribute a literary, musical, dramatic, or artistic work. Copyright law also governs the right to prepare derivative works, to reproduce a work or portions of it, and to display or perform a work in public.

**Cybrary**: an electronic gateway or portal for clients physically located anywhere to access information located everywhere.

**Dewey Decimal Classification System** (DDC): a system of classifying books and other works, was first published in 1876 by librarian Melvil Dewey, who divided human knowledge into 10 basic categories with subdivisions indicated by decimal notation.

**Discourse**: recurrent statements that constitute material and social relations of power.

**Hybrid library**: a library in which a significant proportion of the resources are available in digital format, as opposed to print or microform.

*continued*
Glossary (cont.)

Information science: a branch of knowledge that investigates the sources, development, dissemination, use, and management of information in all its forms.

Library of Congress Classification: a system of classifying books and other works devised by the Library of Congress in Washington, D.C., USA, which divides human knowledge into broad categories indicated by letters of the Roman alphabet, with further subdivisions indicated by decimal notation. Most research and academic libraries use Library of Congress Classification, whereas public and school libraries use the DDC.

Online catalog: a library catalog consisting of bibliographic records in digital format maintained on a dedicated computer that provides uninterrupted access via workstations that are in direct, continuous communication with the central computer during each transaction.

Online services: the branch of library services concerned with selecting and providing access to electronic resources such as online databases and CD-ROMs, including mediated searching, which is usually handled by an online services librarian.

Online Public Access Catalog (OPAC): a computer catalog of the materials in a library.

Virtual library: a “library without walls” in which the collection and resources are accessible only electronically and are not kept in paper, microform, or any tangible form.

WebPac: a public access online catalog with a graphical user interface (GUI) accessible via the World Wide Web, as opposed to a text-based catalog interface accessible via Telnet.

(Glossary adapted from Reitz, 2000)

REFERENCES


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