

The Electronic Library and Full-Text Titles: View From a Technical College

*by Kristine Burgart Junik
Librarian, Ivy Tech State College
Kokomo, IN*

The information superhighway, the library without walls, the electronic library, the virtual library: all are terms that librarians are familiar with and use often. Changing technology has provided librarians with more alternatives for accessing information than ever before; however, librarians must first decide what will best serve the needs of their patrons. In small academic settings, the challenge is great. How can the library stay within its budget and provide its patrons with needed materials? The options and choices utilized by one of the branches of a statewide technical college are among the topics to be discussed in this article.

At the Ivy Tech State College library in Kokomo, Indiana, one of the formats-of-choice has become the full-text CD-ROM database. Many reasons are behind the decision to go this route, among them space and money. As is true with many colleges that have fewer than 3,000 students enrolled, the library is housed in the same building in which classes are taught. In Kokomo, Ivy Tech's library is located in the Learning Resource Center (LRC) where tutoring takes place. There are twenty-one computers available for word-processing, desktop publishing, creating spreadsheets, or using CD-ROMs. To increase the collection size, something has to go. Expansion of the library is always an option, but it is not one that occurs quickly. In the short term, the goal is to provide students with access to as much information as possible without taking space away for studying. To fully understand the options available, background information is presented here on the emergence of the electronic library, full-text article databases, and the technical college.

Rising Journal Prices

At Ivy Tech, the academic focus is primarily on technology and medicine. While basic-skills (where necessary) and general-education courses are the core of all certificate and degree programs offered at Ivy Tech and other technical colleges, typically there is only one humanities or social-science class offered in each subject area. Since degrees are only granted in technical, business, or

health-related areas, most materials in the library collection are of a technical nature. As a result, skyrocketing publication prices have an even stronger effect on technical colleges than they do on universities or four-year liberal arts institutions.

As noted in a 1995 article in *Change*, "prices of books in the sciences, technology, and medicine tended to increase at a faster rate than the average, whereas the prices of books in the humanities and social sciences were considerably more stable . . . the same distinction also holds for serials."¹ The article continues, noting that the subscription prices of some science-related serials have increased five or six times in price over a twelve-year period. In general, academic journals are increasing in price at a rate of approximately 20 percent.² At present, journals published just in the area of science and technology number more than 60,000. Institutions of higher education are recognizing the impracticality of providing students access to hard-copy versions of all periodicals. With such increases in price and number, it is nearly impossible for the two-year technical college to provide all the materials necessary for its students. Even now, publishers and telecommunications companies are clamoring to grab a section of a market being created: a virtual library that can be visited by anyone, anywhere. All that will be needed is a computer and a modem. Until the virtual library has arrived, post-secondary educational institutions will have to learn how to effectively utilize what is available now.

Interlibrary Loan

While interlibrary loan is a viable option for obtaining access to materials not owned by the borrowing library, ethical questions are raised when information needs are met by excessive borrowing from other libraries. In addition, information needs are met in a more timely fashion when immediate access to information can be provided on site. By working with other libraries in a geographical area, collections can be developed cooperatively; for example, if one area library carries issues of *Time* magazine for the years 1945 to 1969 and 1975 to present, then one of the other area libraries should consider carrying the missing years (1970 to 1974). Although such collaboration still relies on another's library collections, it is an arrangement which will benefit both libraries and patrons. An alternative to interlibrary loan is to provide modem access to other libraries within driving distance of the college.

The collections at Indiana University-Kokomo and Kokomo-Howard County Public Library are both searchable via modem at the Ivy Tech library. However, only a few (perhaps ten each year, representing about .1 percent of the total student population) patrons take advantage of the modem access. The

main reason cited for not using modem access (when provided) is lack of time to go to another location to obtain materials. As students continue to discover what they can find via modem, it is anticipated that their attitudes will change. Until then, students will continue to prefer using what is readily available on-site.

Although statistics are not available, reference interactions indicate that at least 40 percent of all Kokomo Ivy Tech students are primary breadwinners for their families; of those, perhaps 50 percent are heads of single-parent households. The majority are from Kokomo, but a percentage come from nearby cities or towns. Time available to attend class, do homework, and conduct research, is often quite limited. In Kokomo, 45 percent of the 196 students taking the Ivy Tech entrance-assessment examination during the Spring 1995 school year said they definitely would be attending college as full-time students. In addition, 69 percent of those said that they would be working more than sixteen hours per week while attending classes. About 66 percent are under thirty years old.³

Drinking From a Firehose

Full-text databases are of particular benefit to the above-identified students, because a large amount of information is readily available for immediate printout or downloading to disk. The task of going to paper indexes to find references to articles that may or may not be available is becoming a thing of the past, thanks to full-text databases. Looking just at the number of full-text journal titles available from three different on-line vendors (IAC's *TRADE & INDUSTRY ASAP*, UMI's *Business Dateline*, and *DIALOG*), the total number of titles available jumped from 675 in 1987 to 3,623 in 1993.⁴ They continue to increase as more retrospective scanning of articles takes place. However, there is a danger of encouraging full-text use without providing adequate bibliographic instruction. A bibliographer at Virginia Tech said, "those who don't mind drinking from a firehose will find it will be possible to call up just about any lame idea or poorly done study."⁵

Along with providing increased access to information is the responsibility of training users how to conduct searches that will result in finding information that is relevant to their topic. Always present is the inherent danger of overwhelming the student with so much information that the more pertinent materials are overlooked in the process. Herbert S. White at Indiana University raised the question, "are we communicating a flood of information that we measure in quantity rather than quality?"⁶ Students must be trained to prioritize information that is found and perhaps how to reformat their original

search for better results.

While discussing library education centers at the University of Arizona (UA), the assistant dean of Library Information Systems emphasized the need for universities to establish the library as the foundation for all undergraduate education, as a way to make sure that the necessary skills are taught. The same applies to the technical college. With effective instruction in how to use the electronic library, "skills needed by students to compete effectively in the global, information-based economy of the twenty-first century are developed effectively."⁷ Such is the reason that in the past five years, Ivy Tech-Kokomo has added twenty CD-ROM titles to its collection and the faculty have incorporated library assignments into much of the curricula. Among the most heavily used resources are three full-text CD-ROM databases: *InfoTrac Health Reference Center*, *EBSCO Academic Abstracts Full Text Elite*, and *SIRS (Social Issues Resource Series) Researcher*, which are the primary focus of this article. (These databases will be referred to as *Infotracc*, *EBSCO*, and *SIRS* in the discussion that follows).

Medical Full-Text Database

The *InfoTrac*, which allows subject searching of more than 130 full-text journal articles, was determined by the Ivy Tech librarian in Kokomo to best meet the needs of both the nursing students and other students pursuing degrees or certificates in the medical field. Students taking general-education courses find *InfoTrac* of some use as well. *InfoTrac* was originally developed for use in hospitals to provide information to patients who wanted information about a disease or disorder of which they had been recently diagnosed. It includes full-text of articles from publications such as *Journal of the American Medical Association*, *RN*, *Lancet*, and *New England Journal of Medicine*. *InfoTrac* also includes articles from 500 other journals, pamphlets, and dictionaries that have been abstracted or indexed by subject heading.

Dictionary and reference book definitions are provided for a wide variety of topics and disorders. Citations sometimes go back as far as six years. Pamphlets are on *InfoTrac* in full-text format, but they too, are sometimes a bit old. However, in general, information in *InfoTrac* is less than three years old. Nothing can replace pictures, charts, and other visuals available in the paper version of a journal, and this is where inter-library loan plays a useful role. Journals not available on site that are frequently requested (five to ten times per year) are noted and considered for purchase. Since most of the nursing-oriented articles available on *InfoTrac* are only abstracted or indexed (as opposed to being full-text), students have found they can save some time by using *InfoTrac* to identify

articles.

Although keyword searching is available on *InfoTrac*, keywords are assigned by article authors, and are not necessarily based on words from the text. Its producers anticipate a change in the format within the next year, whereby keyword searching from the text will be made available. In addition, *InfoTrac* began adding more nursing and allied-health journals to the database last year that better meet the needs of technical colleges with such programs.

Academic Full-Text Database

EBSCO allows author, title, subject, and keyword searching of 180 full-text journal articles and 800 abstracted journal articles. It allows keyword searching of the entire text, and searches can be field-specific as well. Its name implies an academic focus, but most of the full-text articles come from popular magazines which would not be identified as academic. Virtually no computer-oriented journals are available in full-text. The primary focus of *EBSCO* appears to be humanities and social-science related, at least in full-text format. Since *EBSCO* anticipates being comprised entirely of full-text articles within the next year, it will be interesting to see if their emphasis changes. Examples of a few of its full-text journals are: *Compute*, *Ebony*, *Forbes*, *Kiplinger's Financial Report*, *Men's Health*, *Sports Illustrated*, and *Time*. It is updated monthly and provides CD-ROM access to articles dating back as far as ten years; however, full-text is not as readily available for articles older than five years.

Social Issues Full-Text Database

SIRS, unlike the other two databases, is comprised entirely of full-text information from more than 800 domestic and foreign magazines, newspapers, journals, and US government documents. Although it allows author, title, subject, and keyword searching, the keyword searching feature has good and bad points. Its truncation feature is one of its good points because a list of words available with the truncation symbol pops up to allow the user to select which words to include in the search. Unfortunately, words cannot be truncated if the user wants the word to appear in proximity to another word. The order in which words can be searched affects the outcome of the search. Still, screen prompts and help screens make *SIRS* among the most user-friendly CD-ROMs. Many local high school libraries are using *SIRS* because of its relative ease of searching and its feature of containing all full-text articles.

Since social issues are the focus of the titles on *SIRS*, students doing research for basic-skills or general-education classes find its ease of use particularly attractive. Recently, it began offering graphics that, while often difficult to

create in readable printout form, often include useful information not necessarily found in the text of the article or document. Some of the material is not as recent as that found on the two CD-ROMs discussed earlier, as it is updated only twice a year. Information contained goes back approximately seven years.

All full-text information found on the above three CD-ROMs can either be saved directly to disk (in ASCII format) or printed on a printer. Of the three, only *SIRS* provides the user with the option of saving to either drive A or drive B; the others, *EBSCO* and *InfoTrac*, require that the library computer programmer select one of the two drives as a default. For computers with dual 5.25 inch and 3.5 inch drives, the most frequently used drive is the best one to select as the default — and hope that no one wants to download to the other drive. *EBSCO* has an administrative feature where the disk drive selection can be easily changed, but it entails exiting out of the library patron's search to do so. Unfortunately, information that is not on *EBSCO* in full-text format must be sent to a printer and cannot be downloaded. For computers without printer attachments, sheets of scrap paper should be kept close by!

Since all of the CD-ROMs discussed above rely on scanning for much of their text, users must be warned in advance to watch for possible errors. For example, an "e" can sometimes scan improperly and become an "o", "rn" can run together and be scanned as an "m." Also be advised that these CD-ROM products discussed are constantly changing, and for up-to-date information on the journals available, vendors should be contacted directly (all have 800 numbers).

Conclusion

As discussed previously, making CD-ROMs available to students is not enough. Students must also be taught how to evaluate, prioritize, and interpret the information that they find. Without necessary critical thinking skills, bibliographic tools cannot be used effectively. Students graduating with the skill to access, interpret, and utilize information are the ones that will successfully comprise the workforce of tomorrow.

Endnotes

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Automated Resources at Hamdani Medical Library

Abstract
The Hamdani Medical Library, located in the Department of Health, Education and Family Welfare, Government of Bangladesh, has been automated since 1988. The library has a collection of 150,000 books, 10,000 journals, and 50,000 microfiche cards. The library is a member of the Bangladesh Library Association and the International Association of Agricultural Librarians and Documentalists. The library has been recognized as a National Reference Library by the Government of Bangladesh. The library has a staff of 150 persons, including 100 librarians and 50 support staff. The library has a budget of 10 million Taka per year. The library has a computer system consisting of 10 PCs and 10 servers. The library has a network of 100 workstations. The library has a database of 100,000 records. The library has a collection of 10,000 books, 10,000 journals, and 50,000 microfiche cards. The library has a collection of 10,000 books, 10,000 journals, and 50,000 microfiche cards. The library has a collection of 10,000 books, 10,000 journals, and 50,000 microfiche cards.