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## Learning How to Search

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# ONLINE DATABASES

BY CAROL TENOPIR

## Learning How To Search

MOST INTERMEDIARIES learn how to search by attending a vendor's training course or by taking a class in a library school. In addition, some libraries offer in-house training classes where experienced searchers teach their colleagues (see my column, May 1, 1984, p. 870-871).

Even with formal opportunities available, there are still several alternatives for learning about online searching. Textbooks, videotapes, and computer-assisted instruction programs have been designed either for beginning searchers or for searchers with some experience who wish to sharpen existing online skills. Some of these will train you to conduct searches on a particular vendor's system, others will just expose you to the concepts and issues of online searching by an intermediary.

### Read all about it

The many good textbooks published in the late 1970s and early 1980s are now mostly out-of-date. Luckily, the last three years have seen a new crop of texts for intermediary searchers, plus updated editions of some old ones. The various texts do not completely duplicate each other; each book has different areas of emphasis and different strengths. Most of the texts do not attempt to train the reader in the command language of any one system; instead they instruct in the basic concepts, jargon, and issues of online searching. They can be used in conjunction with online practice by following system tutorials or with the help of a colleague.

*Online Searching: a Primer* by Carol H. Fenichel and Thomas H. Hogan (Learned Information, 1981, 2d ed., 1984) is a concise, basic introduction to online searching by intermediaries. Because it assumes no pri-

or knowledge of online searching, this text is most appropriate for the student or librarian who is not yet searching. They can use it together with online training or by itself to provide a beginning-level understanding of the field.

The strongest chapters in *Online Searching* cover management issues and the reference interview process which are of continuing importance and are fairly time-insensitive. On the other hand, some of the specific information in the chapters on databases and vendors and in the 20+ pages of appendixes is already out-of-date. Material added for the second edition discusses the role of the microcomputer. The chapter on the future mentions videodisc, but in 1984 CD-ROM was not yet an issue.

As its name implies, *Effective Online Searching: a Basic Text*, by Christine L. Borgman and others (Dekker, 1984), covers the basics, but its emphasis is on the person doing the searching and on search strategy development.

The sections on characteristics of good searchers, search strategy, the reference process, vocabulary control, and search evaluation are the strongest. Examples from DIALOG, BRS, and ORBIT searches are given, but the text does not attempt to instruct in the commands of any one system. Human-system and searcher-client interactions are stressed throughout, with the mechanics of searching given only for illustration.

Though published in 1984, almost all the items in the footnotes and bibliography of *Effective Online Searching* are from 1981 or earlier. There is no mention of microcomputers in the hardware section, so management issues resulting from their use (e.g., downloading) are missing. The best use of this text is for intermediaries who want help in refining search strategy skills or interviewing techniques. This information does not go quickly out-of-date.

*An Introduction to Online Searching* by Tze-Chung Li (Greenwood, 1985) takes a different approach by devoting two-thirds of the

book to system-specific search features and commands and attempting to teach readers how to search.

The first 85 pages introduce databases, systems, managing an online service, and the reference interview. Microcomputers are treated in a later chapter. Most of the remainder of the book is made up of chapters on specific commands for DIALOG, BRS, and ORBIT. One chapter summarizes the similarities and differences of these systems' search features. Another summarizes the search features of the end user systems CompuServe, the Source, and Dow Jones. (This book is unique among the texts aimed primarily at intermediaries in its treatment of such systems.)

The advantage of Li's approach is that the reader may be able to learn how to search a particular system or systems without using another source; the disadvantage is that the system features change frequently. Although changes usually supplement rather than replace older search commands, some of the specific system search features will be different than those in this text, and new features will have been added. The individual system manuals will still be needed for detailed information as well as for up-to-date information.

*Databases: a Primer for Retrieving Information by Computer* by Susanne M. Humphrey and Biagio John Melloni (Prentice-Hall, 1986) takes the opposite tack by discussing principles and features of online searching with as little mention of specific systems as possible. The book's audience is also broader than the other texts mentioned here, being "written for professionals and students of information science," but also "intended for anyone who feels the need for a basic understanding of retrieving information by computer."

*Databases* is a handsome book, clearly written, and includes many cartoons and illustrations. Its strengths lie in the discussions of how databases are constructed and the many possible search features. Unlike the other books mentioned, it has sections on user friendliness and artificial



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intelligence. A chapter on selecting a vendor contains useful information for beginners or experienced searchers.

Sometimes the discussions get too removed from working online systems, however. The section on Boolean operators, for example, includes many "nonstandard" operators such as XOR and NAND, which may confuse the novice. *Databases* is particularly recommended for potential producers of databases or for searchers who want to know more about how system design features influence their searching.

*Online Information Retrieval: Concepts, Principles, and Techniques* by Stephen P. Harter (Academic, 1986) transcends the features or commands of any one system. It emphasizes evaluation and search strategy and is perhaps best used by someone who knows how to search.

This book combines the broader principles and research of information storage and retrieval with that of online searching. Although it provides introductory material on systems and databases and managing an intermediary service, its particular strengths are in evaluation of databases or systems, characteristics of searchers, and search strategy. Numeric, directory, and full-text databases are treated as well as bibliographic.

The many exercises ("Problems") at the end of each chapter are especially helpful and the bibliographies are extensive. Like *Databases*, readers will find that *Online Information Retrieval* stretches their knowledge of databases and online searching. It will provide a challenge for even experienced searchers.

### Watch all about it

The videotape *Online Searching: an Introduction to Wilsonline* (H.W. Wilson, 1986) is aimed at the main audience of the Wilsonline system, the librarian. This narrowly defined target audience allows it to assume familiarity with Wilson printed indexes and to use library jargon without further definitions. The "good old card catalog format" is referred to at one point. The narrow audience also allows the videotape to use a folksy, one-librarian-talking-to-another format. Watching this video is like having an in-house meeting (but without time for questions or coffee). Viewers are reminded at the beginning and the end of the program that Wilson's primary considerations are the quality of

indexing and timeliness of access. This program uses no fancy graphics or gimmicks. Sometimes the close-ups of screen displays are cramped or fuzzy, but the overall quality is good.

This program cannot be used by itself to learn how to search Wilsonline, but it can be used to gain some familiarity with system features and databases. Some basic search instruction is given (e.g., the use of Boolean operators), but the tape must be used in conjunction with the Wilson tutorial booklet and online practice time.

The BRS training video, on the other hand, is intended to teach viewers "how to conduct an online search on the BRS system." To do this it will use several parts, each of which comes with a workbook. Viewers are asked to turn off the tape at several places throughout the program to complete exercises in the workbooks. When they complete the tapes and workbook exercises they should be able to search BRS online.

The BRS program has a more ambitious purpose than the Wilson tape. In addition to teaching viewers to search, the audience of the BRS tape is less narrowly defined. It attempts to serve anyone who wants to learn to search, calling for a more serious and careful approach.

Each BRS videotape begins with a list of things that will be learned in that tape. Definitions of terms are always included, because a librarian audience is not assumed. The corresponding workbooks are structured to follow along with the tape. How-to instruction is interwoven with background information on databases and how databases are made searchable on BRS. Exact command syntax is emphasized, with each command highlighted in letters on the screen after an online demonstration. Graphics, online searches, and a variety of other images are used with a voice-over technique rather than the chatty approach of the Wilson tape.

The BRS program appears to be well thought out and thorough. Only Parts 1 and 2 were available as of April 1987, covering basic system features from logging on to searching, printing, and logging off. Part 2 gets into some fairly advanced search strategy and refinement procedures. If it is used slowly in conjunction with the workbook exercises and interspersed with online practice, the BRS videotape should be able to teach people how to search.

Learned Information Inc. offers a general introductory video that provides information about online searching. *Going Online: an Introduction to the World of Online Information* does not feature any one online system, nor attempt to teach commands. It illustrates what online searching is and can do by using examples from several online systems and showing different potential users. It covers things such as gateway systems as well as online systems such as DIALOG.

*Going Online* is an excellent program to introduce viewers to the world of online searching. It cannot be used to teach how to search, but that is not its intent.

### Learning by computing

The missing element from textbooks or videotapes is actual controlled interactive practice. Logging on the systems for all practice can get expensive. For years some library schools have used system emulators with in-house databases to allow unlimited online practice. Microcomputer versions of some of these are now available for purchase.

Brigham Young University's program called *DIALTWIG* emulates the *DIALOG2* software. It is available for MS-DOS systems and comes with two sample databases or users can build their own. Users must devise their own training program. For more information contact Keith Sterling, Graduate School of Library and Information Science, Brigham Young University, Provo, UT 84602.

*TRAINER:DIALOG* is an MS-DOS computer-assisted instruction program from Caruso Associates Inc. Through a combination of text, exercises, and online practice *TRAINER* teaches people how to conduct *DIALOG* searches. It can be used in a group environment with supervision by an experienced searcher or for self-instruction. *TRAINER* is meant to be used by a large group (such as end users in a special library) that needs to search on a particular database. The current version focuses on the electronic Power Research Institute database using *DIALOG* commands. Other versions may be made available as needed.

*TRAINER* is an excellent idea for in-house training efforts. It has been developed by people knowledgeable in education for online searching. Contact Elaine Caruso, Caruso Assocs., Inc., 440 2d St., California, PA 15419.

