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UNDERGRADUATE FULL TEXT DATABASES: *BELL AND HOWELL MEDICAL COMPLETE* AND *INFOTRAC HEALTH REFERENCE CENTER – ACADEMIC*

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Abstract

This study compares and contrasts **InfoTrac** and **ProQuest** primarily as full-text resources to supplement retrieval of references contained in the **CINAHL** database. These databases are analyzed by examining their scope in terms of the number and types of serials covered within specific areas using *Ulrich's* subject headings. Another important aspect of this study relates to the effectiveness of the two search engines for end-user retrieval and collection development.

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Background

In 1997 the University of Arkansas Libraries applied for and were awarded a grant from the Walton Family Charitable Trust Foundation to support a three-year Electronic Texts Project. The major emphasis was to provide undergraduates with remote access to the full-text of journal articles, and to provide business students with remote access to online full-text reference and journal resources. During the early phase of this project, we compared *Bell and Howell PA Research II database* and *WilsonSelect* on FirstSearch, primarily as full-text resources appropriate to support a large proportion of the undergraduate teaching, studying, and research needs. We found that the journal titles covered in these two databases were adequate for most areas, but failed to meet the content needs required to support nursing and the allied health disciplines.

The University of Arkansas Eleanor Mann School of Nursing prepares students to enter the professional practice of nursing and/or pursue graduate-level nursing education. The curriculum provides the student with a theoretical base to practice professional nursing. Students are guided to develop the ability to use critical thinking to integrate eclectic knowledge with current nursing theory and research-based practice. In support of the nursing curriculum leading to the Bachelor of Science in Nursing (B.S.N.), the library provides current information for professional practice and research and the appropriate materials in nursing theory. A subject specialist assigned to the discipline of nursing conducts bibliographic instruction for nursing classes. Current students in the program number 60, with 140 graduating between 1996 and 2000. While the total population of students served is small compared to some other programs, the intensity of use and special nature of the literature requires special efforts by the library to serve them well.

The University of Arkansas, Fayetteville is about three hours away from the University of Arkansas for Medical Sciences that provides medical, nursing, and allied health education. Reciprocal borrowing of materials between our library and the health sciences library on that campus has allowed us to eliminate duplication in collections. Consequently, the collections available on-site to support the nursing collection are limited in scope. The *Cumulative Index to Nursing and Allied Health Literature* (**CINAHL**) is one of the main secondary information resources provided to nursing students from remote locations and in the library. Since students routinely have to request materials cited in the database through interlibrary loan, they get frustrated waiting for the articles or books to arrive. Even though the turnaround times for most article requests can be hours and book requests can be days, students do not want to wait at all and get frustrated when their friends in other disciplines are able to print out articles from full-text in their disciplines.

Through our participation in the State Library Full-Text Project, the *InfoTrac Health Reference Center – Academic* (**InfoTrac**) with remote, unlimited simultaneous access became available to our users. At the same time, the State Library also secured a trial of the *Bell and Howell Medical Complete Database* (**ProQuest**) using the **ProQuest** interface for libraries within Arkansas. When this latter database became available on trial, we undertook a detailed study of these two databases to determine if they represented a viable option to provide full-text articles to nursing students.

This study compares and contrasts **InfoTrac** and **ProQuest** primarily as full-text resources to supplement retrieval of references contained in the **CINAHL** database. These databases are analyzed by examining their scope in terms of the number and types of serials covered within specific areas using *Ulrich's* subject headings. Another important aspect of this study relates to the effectiveness of the two search engines for end-user retrieval and collection development.

Objectives

The major objectives of this study are:

1. To analyze each database in order to determine which product provides the highest degree of full-text coverage of periodical titles indexed in **CINAHL** database.

2. To identify the number of peer-reviewed titles indexed in each database.

3. To analyze the content of each database by serial type (academic, trade, consumer, government, newsletter and other).

4. To identify which of these two databases would best serve as the most complete full-text supplement to the **CINAHL** database, and

5. To determine the effectiveness of the two search engines for end-user retrieval and collection development.

The Databases

Bell and Howell Medical Complete (**ProQuest)** uses the **ProQuest** interface and is accessible on the World Wide Web (http://www.umi.com/pqdauto) to a designated user population through IP recognition. It currently (April 1999) indexes 414 serials. Of this total, 348, or 84 percent, are full-text. Full-image is represented by 337, or 82 percent, of the titles and citation and abstracts by only 66 titles. While update frequency varies with each publication, newspapers are typically updated within 24 hours from the time they are received. Similarly, while full-text coverage begins in 1987 for most titles, coverage dates may vary for individual periodicals. This database is available through subscription for individual libraries at an annual cost

of $25,070 for full-image, or $14,820 for full-text only. This cost includes a 15 percent multi-database discount for a university with a 12,358 Full Time Equivalent student enrollment. This represents an annual cost of $74.40 per full-image title, or $38.80 per full-text title. Consortial pricing can also be negotiated.

The **Gale Group's InfoTrac Health Reference Center - Academic** (**InfoTrac**) is also accessible on the World Wide Web (http://infotrac.galegroup.com/) through IP recognition and to unlimited simultaneous users. It currently (April 1999) indexes 229 serials, with full-text represented by 150, or 66 percent, of the titles. In addition, selective indexing of articles in over 1500 general interest titles and 6 medical reference books is provided. Full indexing for over 500 medical and health-related pamphlets and 26 allied health journals is also included. Full-text coverage begins in 1995 for most titles, and coverage dates vary for individual periodicals. This database is available through annual subscription for individual libraries at a cost of $29,155 per year, resulting in a cost of $194.36 per full-text title. Consortial pricing can also be negotiated.

Methodology

In order to conduct this study, we downloaded the title listings of journals covered by **ProQuest**, **InfoTrac** and **CINAHL** in April 1999. These lists were color coded and merged into an Excel file for manipulation. Color coding allowed us to identify the coverage of the same serial quickly in all three databases. Journals were checked against the *Ulrich's International Periodicals Directory* to identify the subject classification, serial type assigned, and peer-reviewed designation. About ten percent of the journal titles included in **ProQuest** and five percent from **InfoTrac** could not be verified in this source, so we used three supplementary sources to gather this information: *Magazines for Libraries, Gale Directory of Publications and Broadcast Media,* and *The Standard Periodicals Directory*.

Results and Discussions

Content Comparison

Table 1 provides a summary of the serials covered in the three databases. **ProQuest** indexes 414 serials, of which 348 are full-text. Of the full-text serials, 198, or 57 percent, of the titles are peer-reviewed. **InfoTrac** indexes 229 serials, of which over 150 are full-text. 58 titles or 39 percent of the full-text serials in **InfoTrac** are peer-reviewed. **InfoTrac** also includes selective indexing of articles in over 1500 general interest titles and full indexing of 26 allied health journals, 500 pamphlets and 6 reference books. **CINAHL** provides full indexing for 1063 titles of which 841 or 79 percent are peer-reviewed. If the

focus is only on the amount of full-text titles and the percent of full-text that is peer-reviewed, then **ProQuest** comes out ahead. It has 84 percent full-text titles with 57 percent of these being peer-reviewed in contrast to 65 percent full-text in **InfoTrac** and 39 percent of those in the peer-reviewed category.

Table 1
General Information

ProQuest Medical Complete

Full-text Coverage	**1987 to present (Starting dates vary)**
Periodicals Indexed	**414**
Periodicals Full-text	**348**
Periodicals Full-text /Peer-reviewed	**198 (57%)**

Additional Advertised Features
Medline Indexing

InfoTrac Health Reference Center - Academic

Full-text Coverage	**1990 to present (Starting dates vary)**
Periodicals Indexed	**229**
Periodicals Full-text	**Over 150**
Pamphlets	**500**
Periodicals Full-text /Peer-reviewed	**58 (39%)**

Additional Advertised Features
Selective indexing of articles in over 1500
general interest titles. Indexing of 26 allied
health journals and 6 reference books.

CINAHL

Total Number of Titles	**1063**
Number of Peer-reviewed Titles	**841 79%**

* Title listings of journals indexed by **ProQuest**, **InfoTrac** and **CINAHL** were downloaded in April 1999.

Tables 2a shows the duplication of titles in **ProQuest** and **InfoTrac** with the titles covered in **CINAHL**. Of the 348 full-text titles in **ProQuest**, 114, or 32.8 percent, of them are indexed in **CINAHL**, accounting for 10.72 percent of the titles in this database. Academic titles are represented by 60.66 percent, trade by 16.39 percent, newsletters by 3.28 percent, government publications by 3.28 percent, consumer by 4.10 percent, and miscellaneous by 12.30. The distribution by publication types is shown in table 2b.

InfoTrac contains 68 full-text titles that are also indexed in **CINAHL.** This represents 6.40 percent of the titles in this database. The distribution of publications types in **InfoTrac** includes 51.43 percent academic, 15.71 percent trade, 8.57 percent newsletters, 4.29 percent government publications, 4.29 percent consumer, and 15.71 percent miscellaneous.

Table 2a

Full-text Title Duplication between CINAHL, ProQuest and InfoTrac

Total Number of Titles in **CINAHL**	**1063**	
Title in **ProQuest** Available in Full-text	**114**	**10.72%**
Total Number of Titles in **CINAHL**	**1063**	
Title in **InfoTrac** Available in Full-text	**68**	**6.40%**

Table 2b

Type of Material Duplicated
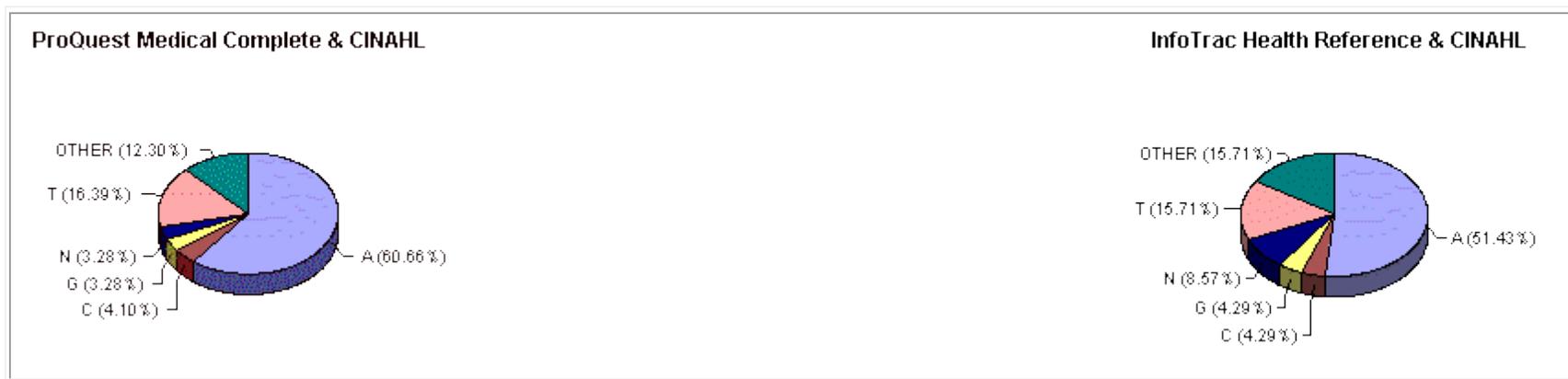
Key: Academic (A), Trade (T), Consumer (C), Government (G), Newsletter (N)

Serials by Type

As indicated in Table 3, 240 (68.97 percent) of the full-text titles in **ProQuest** are academic, 45 (12.93 percent) trade, 15 (4.31 percent) consumer, 11 (3.16 percent) government, 13 (3.74 percent) newsletter, and 35 (10.06 percent) other (includes newspapers and other materials). In **InfoTrac**, 78 (52.00 percent) of the full-text titles are academic, 23 (15.33 percent) are trade, 19 (12.67 percent) are consumer, 8 (5.33 percent) are government, and 35 (23.33 percent) are newsletters.

Table 3

Full-Text Analysis by Serial Type*

Serial Type	ProQuest Medical Complete		InfoTrac Health Reference	
	No.	% of full-text titles (348)	No.	% of full-text titles (150)
Academic (A)	240	68.97	78	52.00
Trade (T)	45	12.93	23	15.33
Consumer (C)	15	4.31	19	12.67
Government (G)	11	3.16	8	5.33
Newsletter (N)	13	3.74	35	23.33
Other**	35	10.06		

*Some titles are classed in more than one serial-type category resulting in some titles being counted more than once.
** Includes newspapers and other materials

Title listings of journals indexed by **ProQuest**, **InfoTrac** and **CINAHL** were downloaded in April 1999.

Subject Depth of Serials using *Ulrich's* Subject Headings

Tables 4a-b compare the number of serials indexed by *Ulrich's* subject headings in these two databases. According to our analysis, of all the periodicals **ProQuest** contains, we found the largest number under the following *Ulrich's* subject headings: medical sciences - general, followed by nurses and nursing, psychiatry and neurology, hospitals, public health and safety, nutrition and dietetics, gerontology and geriatrics, and psychology. Of all the periodicals **InfoTrac** contains, we found the highest number of titles under the following subject headings: nurses and nursing, medical sciences - general, nutrition and dietetics, drug abuse and alcoholism, physical fitness and hygiene, and public health and safety.

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Table 4a

ProQuest Medical Complete

Ulrich's Subject Headings
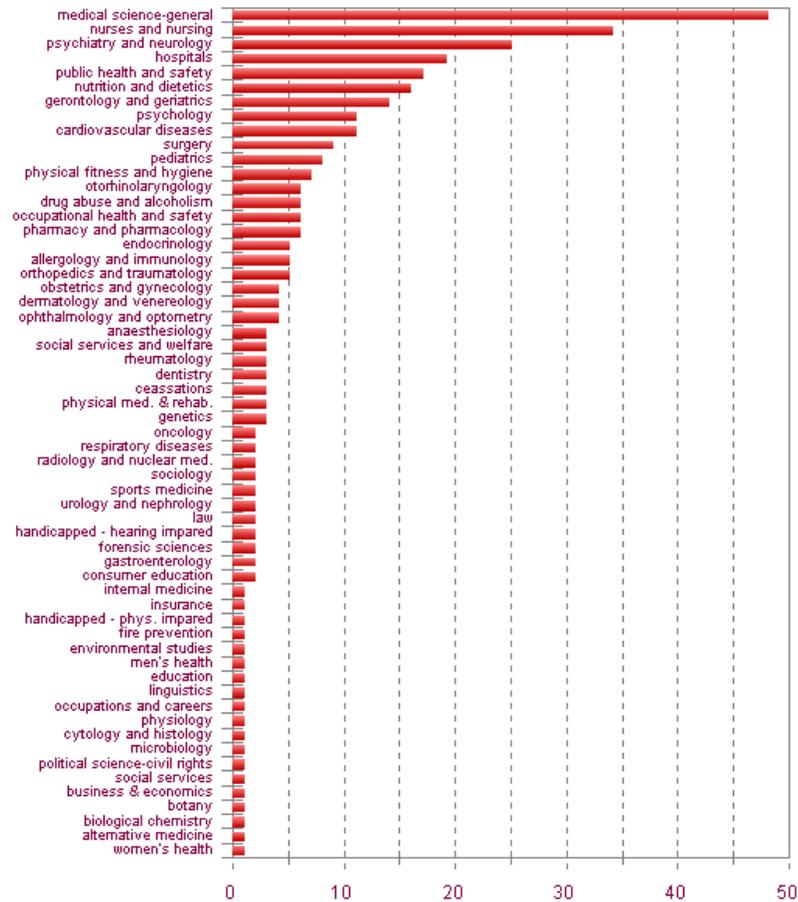
Table 4b

InfoTrac Health Reference - Academic

Ulrich's Subject Headings
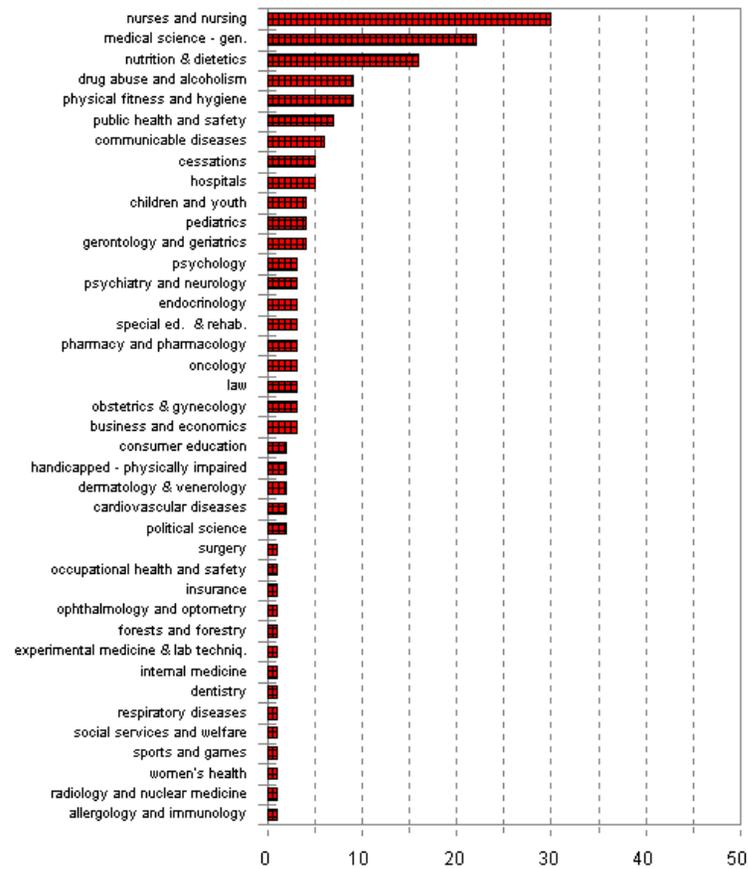
End-User Searching and Collection Development Issues

ProQuest offers a durable links feature, which provides the capability of linking directly to a particular journal in the packages either through an online catalog or anywhere from a library's homepage. Since our patrons are accustomed to finding journals through the library's online catalog, this capability to link journal titles in the catalog to the full-text found in the database increases the use of the database and expands user access. In a web catalog, the ability of patrons to launch directly to an electronic journal and print out or read the article is indeed empowering. Libraries could, for example, catalog individual titles in the database that are frequently requested through Interlibrary Loan or those titles that supplement the users' research and teaching programs. While questions related to permanency of journal titles still remain unanswered, institutions that make this resource available to their users through their online catalogs will gain valuable information about the use of these journals.

While both **ProQuest** and **InfoTrac** offer the capability of searching by journal title, only **ProQuest** provides the added advantage of allowing users to browse publications by issue. This feature is very useful for users who have found references in other citation databases or bibliographies and are required to retrieve the full-text of the article, or for users who want to browse the contents page and full-text of a particular journal on a regular basis. When users choose the search by publication option from the main menu, there are two ways to find a journal. The first allows them to browse the list of publications alphabetically. The other option allows them to search for a publication by title/title keywords. Precise retrieval is obtained depending on how much of the title is known. However, a patron searching for the journal *Science* would retrieve every serial that has the word *science* in its title. A user must then browse this list to find the relevant title. Once the title is selected, the issues of this journal covered in the database are then displayed for the period selected. However, once a particular issue is selected, the contents can be listed either in alphabetical or by page order. In the case of full-text journals, a page image of the table of contents is also included as the second item on the screen. This arrangement makes it very easy for a user either to browse the contents of a journal or to find the full-text of a specific known article.

There is no way to browse publications in **InfoTrac** easily. It is possible to search for a journal in the **Keyword** and **Relevance Search** because the citation field is indexed there, but the outcome of the search is far from predictable. For example, if *new england journal of medicine* is entered in either of these search modes, several articles are retrieved for which this journal is not the source title. The articles are retrieved because the words appear in the enriched title or in an abstract. However, if *jama* is used, the results are more precise and it is possible to browse the contents of *Jama* for a specified period.

It is easy to identify a reference by combining elements of the record, e.g., words in the title and source title or journal in both databases.

Conclusion

The requirements for each library will of course, differ based on individual curriculum and research needs. Appendix 1 provides a detailed comparison of the user-oriented features of these two databases. We found the strengths of **ProQuest** to be the following: UMI controlled vocabulary; varied output formats, especially its text + graphics and page image; the ability to create durable links to add individual journals to the library's catalog and to browse easily by journal title; the capability to set preferences during a session (such as automatic inclusion of plurals and related terminology); and the ability to select several databases to search simultaneously. In terms of functionality, it may not be obvious to a user what fields are being searched in the basic index, nor, even that the capability is available to perform command searching. However, the average user will probably be satisfied with the basic and advanced searching features.

The greatest strength of the **InfoTrac** database is in its ability to provide a **Subject Guide**. This feature provides users with the information necessary to formulate a proper search. In most subject searches, the retrieval supplies an overview of a term searched, a dictionary definition, reference book excerpts, periodical references, and subject subdivisions. Thus it emulates a one- stop approach that enables the user to understand the topic better and to identify the proper subject terms (broader, narrower and see also references) for use in further searching for precise and useful retrieval. For example, a search for *Alzheimer's disease* in a **Subject Guide** allows someone to find all relevant subject headings and articles available in the database by showing a listing of the subjects that contain these words. A search in this index for *Alzheimer's disease* retrieved the following information:

Subjects containing the words: alzheimer's disease
  Alzheimer's Disease
   View 4 Overviews
   View 9 Reference Book excerpts
   View 6 Pamphlets
   View 1171 Periodical references
   See also 58 Subdivisions
   View 9 Directory references
  Alzheimer's Disease (Ad)
   View 1 Dictionary Definition
  Alzheimer's Disease and Related Disorders Association
   View 1 Periodical reference
  Alzheimer's Disease Education and Referral Center
   View 1 Directory reference
  Alzheimer's Disease: A Multidisciplinary Challenge
   View 1 Periodical reference

A successful search will locate relevant references in addition to links to related articles containing similar words.

In **InfoTrac**, the limiting feature (to full-text articles, refereed publications, academic publications, professional and general publications, by date and journal) on each search screen was found to be an excellent feature for users.

InfoMark is also an attractive feature in **InfoTrac** for users who want to save a search strategy, a document, or a set of retrieved documents, for later use. InfoMark at the top of any page indicates that the URL of the page persists even when the session is over. Persistent URLs can be bookmarked for future reference or copied into an electronic mail message or onto a Web page. Another useful application for InfoMarks is to create a predefined search. Any combination of searching and limiting that produces citations can be saved. A predefined search could be as narrow as a specific search or as broad as, for example, all articles from a particular journal. Each time the saved link is selected, the search will be run anew, so the results are always fresh.

This ability to save a search strategy, a document, or a set of retrieved documents is also available in the **ProQuest** database through UMI Sitebuilder, but at an additional charge.

In terms of functionality, we found that the many search modes available in **InfoTrac** may be confusing for the user. A user needs to spend some time up front figuring out what each search mode does and which one to use in a particular situation. For example, a user learns that **Relevance Search** differs from **Keyword Search** only because the results are ranked. It would have been useful if the Relevance search feature was just another limiting feature and not an entirely different search mode. This would leave only two search modes (**Keyword Search** and **Advanced Search**) and the **Subject Guide** for the users to learn. It would also be more convenient if an easier and a more predictable way to browse the journal and other resources that are indexed in the **InfoTrac** database were available.

In terms of content, in our own situation, we do not feel that either of these two aggregator databases would significantly satisfy or enhance enough of the current information needs of the curriculum for nursing and other health-related disciplines at our institution. **ProQuest** has only 114 full-text journals that are indexed in **CINAHL** accounting for just 10.72 percent of the titles. **InfoTrac** has a mere 68 full-text titles, representing 6.40 percent of titles in the **CINAHL** database.

While the number of titles from the **CINAHL** database that are represented in full-text format in these two databases is very low, the searching features offered might make them attractive to some libraries. In our case, however, we could not justify adding either of these databases in addition to **CINAHL** due to overall budgetary considerations and the current availability of some of these resources from University of Arkansas for Medical Sciences in Little Rock

We found the use of subject headings to evaluate and assess the content of these full-text databases was effective in focusing the analysis on specific subject areas and on the actual content of these databases.

References

Gale Directory of Publications and Broadcast Media, 132nd ed. (Detroit, MI: Gale Research, 2000).

Katz, Williams. *Magazines for Libraries*, 9th ed. (New York: Bowker, 1998).

The Standard Periodicals Directory, 22nd ed. (New York: Oxbridge Communications, 1999).

Ulrich's International Periodicals Directory, 38th ed. (New Providence: Bowker, 2000).

Appendix 1

Comparison of User-Oriented Features

Properties	Proquest Medical Complete	InfoTrac Health Reference - Academic
Searching modes	**Basic**, **Advanced**, **Search Wizard** and **Command** modes **Search by Word - Basic** allows a very simple search or a very sophisticated search in **Command** mode. **Search by Word - Advanced** provides drop -down menus and entry boxes to build searches. The drop-down menus provide immediate access to operators, fields, and date restrictors. **Search Wizard** - use this method of searching to create a new search or to add to your current search. May be used more than once to add precision to the same search. **Command** searching is not so obvious but good examples are provided in Help. Training may be required.	**Subject Guide**, **Keyword Search**, **Relevance Search** and **Advanced Search** modes **Subject Guide** search finds articles by topics and lets you browse listing of subjects, people, products, locations and organizations that contain the words you entered. A **Subject Guide** page appears after a successful **Subject Guide** search. It lists all subjects in which the word(s) you searched for occur(s) and the number of references found for each. If no exact matches are found, the search system goes through a series of fall-back steps to try to get you results. **Keyword Search** finds articles by matching words in titles, citations, and abstracts or in the entire text. Latest records are displayed first. **Relevance Search** finds articles by matching words in the titles, citations and abstracts, or in the entire text. Records are displayed starting with the best matches according to how and where the words occur in the articles. **Advanced Search**, which functions more like Expert Searching, finds articles by using any of several indexes, alone or in combination. **Advanced** searching is also possible from the **Keyword** and **Relevance Search** screens if field tags are known.
Titles and years of coverage	414 serials, 348 full text. 198 (57%) full text/peer reviewed. Full text coverage begins in 1987-current (starting dates vary)	229 periodicals, 150 full text, 500 pamphlets, 58 (39%) full text/peer reviewed. Full text coverage begins in 1990.
Thesaurus/Subject Headings	**Subject List** is the UMI's Controlled Vocabulary and is available to users online. This is a listing of cross-	The **Subject Guide** functions as a starting point to formulate a search from what seems to be a list of controlled terms.

	referenced subject headings used to index articles. Provides Broader, Narrower, Related and Use For terms. If a subject term is not in the subject listing an alphabetical list of possible alternatives is displayed. Very useful, in particular to remote users to formulate a good search strategy for comprehensive or precise retrieval. It is not possible to select the **Broader term** and retrieve documents with all the **Narrower terms** (i.e. the tree) in one search. However, one may set this option under the **Preferences - Settings** to include **RelatedTerminology** in a search. For example, searching for "employment" also finds " job" and "work."	The **Subject Guide's** thesaurus associates phrases that are not actually indexed as subjects with subject headings, so that even if a word that is typed is not in the database, equivalent entries are shown. For example, if one enters the word "Chernobyl", the subject heading "Chernobyl nuclear accident" will be near the top of the list. "Disabilities" will find "Americans with Disabilities Act 1990," although any entries that begin with "Disabilities" will be first on the list.
Help and Quick Guides	Provides a handy **Quickstart Guide** to help users get started. Context sensitive help is available with extensive examples on all key concepts from all screens. Help is also provided for searching in **Basic**, **Advanced** and in using the **Search Wizard**.	Context-specific help is available from all screens. General as well as specific help is provided for searching in all search modes.
Truncation and Wildcard	Truncation is ? and is used to search for words containing a common word root, with any number or combination of characters following the root. Wildcard is *. Use one * for each character that you are unsure of. For example, wom*n will find articles containing: woman, women, and womyn. If **Spelling Variants** is set under **Preferences**, plurals and spelling variations are automatically included in a search retrieval.	Truncation is * and is used to search for words containing a common word root, with any number or combination of characters following the root. ? is used for exactly one character. Use one ? for each character that you are unsure of. For example defen?e will find articles on defense or defence.
Boolean Operators	**and, or, and not**	**and**, **or**, or **not**

	and looks for occurrences of both search terms in any of the nine search fields. In full text searching, **and** finds articles containing both terms in the same paragraph of the text, in the title or in the abstract. To look for a title that contains the word **and** or **and not**, include these words in quotation marks. For example, to search for a title containing *war and peace*, type war "and" peace. You can search on a two-word phrase by itself, or combined with other terms as part of a search statement e.g. internet protocol Phrases longer than two words must be placed in quotation marks, otherwise an **and** relationship is assumed between all of the words that are typed. The results will list articles that contain all the words within the same paragraph. The Pre/n operator may be used instead of quotation marks. For example, world pre/3 web.	To include phrases containing the Boolean connectors, use either quotation marks or the proximity operator. For example, to search for a title containing *war and peace*, type war "and" peace or war w1 peace. If two words are entered in the **Keyword** and **Relevance** searching modes with only a space between them the search is processed as if an **and** were between them.
Proximity Operators	w/n (within), e.g. internet w/3 schools not w/n (not within), e.g., football not w/20 elementary school? pre/n (precede by), e.g., catcher pre/3 rye w/doc (within doc), e.g., gambling w/doc state?	Use **w** between two words to specify that records found contain both words, in the order typed, with no other words between them. Type **w** and a number between two words to specify that records found contain both words, in the order typed, with no more than that number of other words between them. Use **n** between two words to specify that records found contain both words, in any order, with no other words between them. Type **n** and a number between two words to specify that records found contain both words, in any order, with no more than that number of other words between them. In the **Relevance Search**, double quotes are used to match exact words. For example "civil war" will match "civil war" or "war civil" exactly.

Limit Searches and Document types	**Document types** are searchable in a search statement as **dtype** (type of document) in the **Basic Search**. Types of document include commentary, editorial, feature, interview, poetry, recipe, speech, statistics, all reviews, art/exhibit reviews, book review, movie review, performance review and product review. **Document types** and **Publication types** may be selected from a pull-down menu but only in **Advanced Search**.	A search may be limited or refined by any **one** of the following using all searching modes: articles with text, refereed publications, academic publications, professional publications, general publications, by date and journal.
Searchable fields from main menus	Search for articles by selecting either **Search by Word - Basic,** (which searches the following fields: Author, Abstract, Article Title, Company Name, Geographical Name Personal Name, Product Name, Subject Terms, and Source (publication title); **Search for Publication**, or **Search by Topic**. Each search method is accessible from the navigation bar at the top of the screen. **Search Wizard** provides automated help by inserting operators, date restrictors and fields into a search statement. The **Advanced Search** allows for combining fields selected from a drop-down menu in searching.	**Subject Guide** finds articles by topics and lets you browse listing of subjects, people, products, locations and organizations that contain words you entered. **Keyword Search** finds articles by matching words in titles, citations, and abstracts or in the entire text. Latest records are displayed first. **Relevance Search** finds articles by matching words in the titles, citations and abstracts, or in the entire text. Records are displayed starting with the best matches according to how and where the words occur in the articles. **Advanced Search,** which functions more like command searching, finds articles by using any of several indexes, alone or in combination. **Advanced** searching is also possible from the **Keyword** and **Relevance Search** screens if field tags are known.
Search History	**Your Recent Searches** screen displays a list of the most recent searches (up to twenty-five) for the current session. For each search, the list displays the number of articles found. It is possible to click a search to view its corresponding results list and to combine one or more of the recent searches with other keywords for further searching. **Your Recent Searches** list is not saved between sessions.	**History**, displayed at the bottom of the search screen, displays a list of the most recent searches for the current session. For each search, the list displays the number of articles found. It is possible to click a search to view its corresponding results list in all searching modes. Only in **Advanced Search,** one or more of the recent searches could be combined with other keywords for further searching. **History** is not saved between sessions but **InfoMarks** may be used to create a predefined search to be saved. Any combination of searching and limiting that produces citations can be saved. A predefined search could be as narrow as a specific search or as broad as, for example, all articles from

		a particular journal. Each time the saved link is selected, the search will be run anew, so the results are always fresh.
Sorting of Search Results	Automatic sorting of references by date, and in descending order.	Automatic sorting of references by date, and in descending order in **Keyword** and **Advanced** search modes.
Relevance Ranking	None	Relevance Search retrieves references with the best matches first according to how and where the words occur in articles.
Lateral Searching	Authors and Descriptors are hot linked for further searching from the cite/abstract display. Useful for refining searches.	Individual Authors and Descriptors are not hot linked for further searching from the detailed record screen. However, most articles retrieved have a **View other articles linked to these subjects** at the bottom of the screen. Further subject searching is possible from here.
Spelling Variants	If **Spelling Variants** is selected from the **Preferences** page, all searches will be expanded to find plural and spelling variants of the search terms entered.	Spelling Variants may be selected by the use of wildcards, truncation or by using Boolean logic.
Search Statement Visibility	Search statement is listed at the bottom of the results screen and may be modified as necessary for further searching. The search statement is not included on printouts or other delivery methods.	Search statement displays at the top of the retrieval screen in **Keyword** and **Relevance Search.**
Results Lists	Each record on the short record displays includes enough information to find the citation plus the total number of pages. The records could be e-mailed, printed or saved to disk. Only one full text record at a time could be e-mailed, printed or saved to a disk.	A list of records retrieved on the first screen after a search is executed in **Keyword** and **Relevance Search** identifies the search strategy and number of records. In **Advanced Search**, the results are listed at the bottom of the screen and need a further click to retrieve. Records from the results list could be browsed in either the short format or the abstract and/or full text from this screen. The short records, which contain the citation (but only the beginning page number, and the total number of pages taken from the printed journal), may be browsed,tagged and printed, e-mailed or saved from this screen. The full text article has the citation attached to the record but with only the beginning page.

		An **InfoMark** at the top of any page indicates that the URL of the page persists even when the session is over. Persistent URLs can be bookmarked for future reference or copied into an electronic mail message or onto a Web page.
Results - Display formats	Three fixed display formats are available: short, citation/abstract and full text (which includes text + graphics, page image, ASCII full text). User selected fields not possible.	Two fixed display formats are available: short and abstract and/or full text. User-selected fields not available.
Formats	Text+Graphics, Page Image, ASCII Full Text and Citation/Abstract. It is possible to update a list of retrieved records to include only articles for which the full text is available by clicking on the **View only Full Text** link at the bottom of the results list. It is possible to search the full text of articles but the Results List may still contain articles not available through ProQuest Direct in a full text format since publisher copyright agreements can prevent its online distribution. Proximity operators may be used to restrict search words for meaningful retrieval in the full text field but this is not obvious to the untrained user.	ASCII Full Text and Text with Graphics It is possible to search the full text of articles from all the search modes. Proximity operators may be used to restrict search words for meaningful retrieval in the full text field but this is not obvious to the untrained user.
Updates	Updates vary by journal. Newspapers are updated within 24 hours of receipt.	Updates vary by journal.