

Core Journal Titles in Full Text Databases

Jo Ann Carr and Amy Wolfe

Abstract

This paper describes a study initiated by the authors for a report to the Collection Development Committee of the Council of University of Wisconsin Libraries. The purpose of the study was to evaluate the content of four full text journal databases by identifying the coverage of core journals in specific disciplines. The databases studied were: *Academic Search Full Text* from Ebscohost; *Expanded Academic ASAP* from IAC; *Periodical Abstracts Research II Full Text* from ProQuest; and *Wilson Select Full Text*.

The Council of University of Wisconsin Libraries is comprised of the libraries of the University of Wisconsin-System. Beginning in 1997, the U.W. System allocated funds to libraries for cooperative collection development of full text electronic products. The U.W. System negotiated with full text vendors, selecting *Academic Search Full Text* from Ebscohost as a full text journal database for use by all libraries in the University of Wisconsin System. This allocation was intended to support a trial of a full text electronic journal product. As a part of this trial, the Collection Development Committee (CDC), comprised of collection development officers from the libraries of the U.W. system, wanted to supplement evaluations of the interface with an evaluation of the content of Ebscohost versus other full text journal databases.

Introduction

One of the legacies of the growth of the Internet and of the Web is that individuals are no longer content with computer services which only direct them to information. Rather they want computer services to provide indexing and abstracting of resources as well as the full

content. This need was succinctly stated on the web site for the Electronic Library Network.

The continuing growth in the area of distributed learning requires libraries to revisit their current ability to serve students working from home, faculty working from their office, etc. Also, library users want full text

Jo Ann Carr is library director, and Amy Wolfe is a student research assistant, University of Wisconsin, Madison.

access. Increasingly, our professional literature reflects this trend. Users more often prefer electronic resources to print, and have become accustomed to information being accessible on demand, whether by E-mail, Internet or fax.

As databases have moved beyond indexing and abstracting resources based on print equivalents to include full text materials, librarians have been challenged to assess both interface issues, traditionally the domain of reference and information services librarians, and content issues which are the focus of those involved in collection development. This challenge has been exacerbated because of "the almost complete lack of empirical research proving or disproving vendor claims regarding content and capabilities". Because the cost of these full text products is often perceived as prohibitively expensive for a single institution (which still must sustain the costs of print equivalents because of unanswered questions regarding long term access and archiving issues) libraries are forming consortia which seek group pricing and access for full text database products. The development of these consortia means that collection development cannot simply be seen as the process of meeting a single library's current and future clientele needs, but must be based on a broad understanding of the basic information needs of specific disciplines. An example of this trend is demonstrated by the University of Wisconsin System. Beginning in the 1997-98 biennium the University of Wisconsin System provided funds to the Council of University of Wisconsin Libraries (CUWL) for System wide access to full text electronic products. CUWL is comprised of the libraries of the University of Wisconsin-System which includes doctoral campuses in Madison and Milwaukee; comprehensive universities at Eau Claire, Green Bay, LaCrosse, Menomonie (UW Stout), Oshkosh, Parkside, Platteville, River Falls, Stevens Point, Superior and Whitewater; and two year colleges at Baraboo/Sauk County, Barron, Fond du Lac, Fox Valley, Manitowoc County, Marathon County, Marinette County, Marshfield/Wood County, Richland County, Rock County, Sheboygan County, Washington County and Waukesha County. The allocation of funds was intended to support a trial of full text journal databases. After negotiating with full text vendors, the University of Wisconsin System selected *Academic Search Full Text* from Ebscohost as the full text database for use by all the libraries in the System.

In the fall of 1997 Jo Ann Carr, co-author of this study, proposed that a content analysis of full text journal databases be conducted in order to assess the content of full text journal databases. The databases selected to be a part of this study include *Academic Search Full Text* from Ebscohost; *Expanded Academic ASAP* from IAC; *Periodical Abstracts Research II Full Text* from ProQuest; and *Wilson Select Full Text*. This content review as originally proposed had five objectives:

- 1) A review of current studies of full text databases.
 - 2) Vendor definitions of full text coverage.
 - 3) Comparison of journal titles in the discipline areas of the biological sciences, education,
- social sciences, business, humanities and the physical sciences against the titles indexed and provided in full text by each vendor.
- 4) The number and percentage of peer-reviewed core titles covered by each database.
 - 5) The number of regional titles in each database.

Due to a number of factors not all of these objectives were met. The mutability of the market provided challenges in obtaining and verifying definitions of full text as well as titles and years of coverage for the selected databases. Core journals were identified in only two of the identified fields-the biological sciences and education. Assistance in identifying core journals in the biological sciences was provided by Judy Wurtzler of the University of Wisconsin-Platteville library based on lists included in *Magazines for Libraries* (New York: Bowker, 1997) and *Using the Biological Literature: A Practical Guide* (New York: M Dekker, 1995). Three hundred thirty five titles are included on this list.

Core journals in education were identified by Jo Ann Carr using two widely acclaimed titles: Patricia Potter Wilson's *The Professional Collection for Elementary Educators* [New York: H.W. Wilson, 1996] and Nancy Patricia O'Brien and Emily Fabiano's *Core List of Books and Journals in Education* [Phoenix: Oryx, 1991]. The combined list compiled from these two sources is 255 titles.

The study of the inclusion of core titles in the biological sciences and education included a literature review to determine if others were asking the same questions about full text database content. Database vendors descriptions of their databases and definitions of coverage, title changes and full text were also requested. *Ullrich's Plus 1998* was used to determine the number of core-reviewed journals in our core lists. Title lists for the four databases were acquired from the vendor's web

sites or by contacting the vendors in March and early April of 1998. Excel spreadsheets were then constructed to compare between the core lists of journals in education and the biological sciences and the content of the four full text products.

Descriptions of the databases studied

In comparing the coverage of these four databases a review of how these databases are developed and described by their publisher is important.

Academic Search FullTEXT Elite provides "access to information from a wide range of academic areas including business, social sciences, humanities, general academic, general science, education and multi-cultural. This comprehensive database features full text for over 1,200 journals and abstracts and indexing for over 3,000 scholarly journals. It also includes coverage of over 1,700 peer-reviewed journals" Many titles are included back to 1990. Titles are identified as peer-reviewed titles by asking the publisher, checking serials directories or looking for information in the journal. Title changes are counted as separate journals with links to previous titles for ease in searching. Ceased titles and title changes are closely monitored with an indication of the stop date included in the journal authority file. Full text is defined as the complete text of articles including reviews and columns with indexing and abstracting. Selected illustrations are included as compound documents, and additional illustrations as PDF files. The indexing process includes the number of illustrations that are found in the article.

Expanded Academic ASAP from IAC (now part of the Gale Group) is described as offering "balanced, full text coverage of every academic concentration—from advertising and microbiology to history, political science, and art history. It also incorporates many interdisciplinary journals, national news magazines, and *The New York Times*. The IAC SearchBank includes 900+ full text titles as well as indexing for 1896 titles. The IAC SearchBank backfile provides coverage as far back as 1980. Articles selected for *Expanded Academic ASAP* must "contain substantive information on a field of study", be "one-half of a page or about 400 words in standard-sized journals, one-quarter of a page in tabloid journals, or one-half of a column in newsletters". Reviews from select journals are included as well as reviews from other publications which are one-quarter to one-half page. In addition to articles and reviews, the content criteria for

Expanded Academic ASAP includes editorials, follow-up articles, letters to the editor from "authors who are prominent in their field", speeches, obituaries, product announcements, directories, bibliographies, and statistical compilations.

Periodicals Abstract Research II Full Text was the Proquest database used in this study. However, it should be noted that this product has been replaced by *Proquest Direct®*, "UMI's premier online information service...[which] provide[s] powerful, convenient search and retrieval, right from your desktop, to one of the world's largest collections of information, including summaries of articles from over 5,000 publications, with many in full text, full image format.

Wilson Select FullText databases included in this study were *Education Abstracts Full Text* and *General Science Abstracts Full Text*. *Education Abstracts Full Text* contains the full text of more than 133 periodicals plus comprehensive indexing and abstracting for all of the periodicals covered in *Education Index*. These databases that cite every article of at least one column in length in 582 English-language periodicals and yearbooks published in the United States and elsewhere. English-language books related to education published in 1995 or later are also indexed. *General Science Abstracts Full-text* includes coverage of 40 periodicals back to January 1995 as well as indexing and abstracting for 167 popular and professional English-language science periodicals and the Science section of the *New York Times*.

Review of the literature

Our literature review indicated that "despite the recency of their development, a number of studies have been conducted which review...databases." Much of the research has focused on issues of access, design, user interface and cost, however there are also studies that looked at content issues.

Anna Grzeszkiewicz and A. Craig Hawbaker conducted a study at the University of the Pacific Library on 130 titles in Business Index ASAP from IAC. Although this database was not included in our study, this paper did consider issues relevant to the definitions of full text including problems with missing articles, missing issues, inconsistent availability of formats within titles and even issues, incorrect citations, and typographical errors. They also commented on the problem of editorial inconsistency in deciding what portions of journals should be included in the database.

Carol J. Richter and Thresa L. Wesley conducted a comparison study of UMI's *Periodical Abstracts Research II* (ProQuest CD-ROM stand alone stations) and IAC's *Expanded Academic Index* via Search Bank. This study was very useful in that it compared two of our four databases and produced some very good statistical information. They found that while UMI indexed approximately 11% more journal titles than IAC, IAC offered 15% more titles in the full text format. However, UMI offered more historical coverage of journals in the full text format than IAC (1988 average start date versus 1992 average start date). They also found UMI to have more journals the authors classified as recreational reading material than IAC. UMI had 112 recreational reading journals as compared to 22 for IAC.

Another useful aspect of this study was that the authors compared IAC and UMI in terms of subject emphasis (see tables 1 and 2). The study also focused on the number of titles included from ethnic and minority fields. IAC was found to contain significantly more full text titles (31) in these fields than UMI (14).

The information on subject emphasis provided by the authors was very helpful because it supplied us with an overview of the types of subjects covered in these two databases. The authors work in reviewing subject coverage differed from ours because they were not assessing the inclusion of specific core journals. Instead, the authors used Wilson subject indexes and *Ulrich's International Periodical Directory* (1995) to determine the subject classification of the titles covered.

A third study which focused on content rather than interface issues was conducted by Carol Franck and Holly Chambers of the State University of New York at Potsdam. Their study examined the inclusion of types of content (e.g. editorials, book reviews, articles), for completeness of text (e.g. author's affiliation, footnotes), the inclusion of graphics and of non standard text forms such as dialogue. This study concluded that none of the

databases reproduced the paper issues in entirety with advertisements, classified ads and backcovers almost always excluded from coverage in the full -text databases. According to Franck and Chambers, UMI came closest to full content, followed by IAC, Ebsco and Wilson.

Another study which looked at the comparable content of print journals and their electronic full text equivalents was conducted by Laurie A.. Preston and Corinne M. Ebbs looking at IAC's *Expanded Academic Index ASAP*. Two print issues from seventy titles from the James Madison University library collection, evenly divided among the sciences, social sciences and humanities, were compared for coverage with the electronic full text of those same journal issues. Only nine of the seventy five titles had an equal number of items covered in both the print and electronic versions of the journals, with the electronic versions lacking editorial policies, publisher's information, illustrations, reviews, editorials, sidebars etc. The authors noted "Whereas the editor decides what is included in the print version, the editor or publisher makes that decision for electronic full text access".

David Majka conducted a study comparing three database products: EBSCOHost, IAC InfoTrac SearchBank, and UMI ProQuest Direct. His study includes descriptions of the databases, and an enumeration of the challenges of a study of these products. His study provides an exploration of evaluation and implementation issues, user interface issues, and control issues as well as a comparison of the titles in these products against the holdings of the Robert Morris College Library.

Studies that are available on the Internet and which have been undertaken by specific colleges or consortia were also valuable to this project. Two studies (Electronic Library Network's <http://www.ola.bc.ca.eln/pands/descrip.htm> and St. Norbert and Edgewood Colleges Library's <http://222.snc.edu/~drewich/online.htm>) compared

Table 1. Subject Distribution of Journal Indexed

Subject	IAC	UMI
Social Sciences	543	539
Sciences	339	314
Humanities	428	477
Business	110	147
Education	79	105

Table 2. Subject Distribution of Full Text Journals

Subject	IAC	UMI
Social Sciences	176	123
Sciences	82	51
Humanities	161	82
Business	50	41
Education	29	43

and provided descriptive information on the coverage provided by Ebsco *Academic Search*, IAC and ProQuest. According to the studies, *Academic Search* indexes 3,100 titles with 31% available in the full text format; IAC indexes 1,580 titles with 21% available in the full text format; and ProQuest indexes 1,800 titles with 25% available in full text. These studies also revealed that Ebscohost, IAC and ProQuest are updated on a daily basis. While these studies provided useful information they too lacked the aspect of evaluating the databases in terms of whether they included specific journal titles.

After conducting the literature review, it became apparent that our research methodology was unique. The use of core journal title comparisons as a method of content analysis had not been done before.

Preliminary Findings:

We have chosen to label the results of our study as preliminary finding in recognition of the fact that no single study can provide a complete picture of all aspects of full text journal databases. The lists used for our study are almost a year old and in a market where content changes on a monthly basis, these lists can only be regarded as a snapshot in time. In addition, the identification of core titles is only one way of determining what titles are most important to the each library or consortia. Given those caveats, we hope that our preliminary findings will serve to contribute to a growing picture of the comparative strengths of these four products.

Our results first provide information on the percentage of core journal titles indexed as well as an analysis of the percentage of peer reviewed core journal titles in each of the four databases in the fields of education and biology. Of the 255 core journal titles which we identified in the field of education the number of titles indexed ranged from 61 to 200 and the number

of peer reviewed core journals titles ranged from 27 to 103 (see table 3).

The indexing of core titles in the biological sciences was much less extensive than in the field of education with less of a differential between the four vendors. Of the three hundred thirty five titles identified, the indexing of core titles ranged only from 30 to 43 and the indexing of peer reviewed core journals ranged from 30 to 36 (see table 4).

A second result of our study was an identification of the percentage of full text core journal titles as well as an analysis of the percentage of refereed core journal titles available in full text. The number of core titles available in full-text varied from 24 to 63 with peer reviewed core journals titles availability in full-text ranging from 13 to 34 (see table 5). There also appears to be differences in the effort to provide full-text for indexed titles with core journals that are both indexed and in full-text ranging from 31.5% to 77.0% and peer-reviewed core journals that are both indexed and in full-text ranging from 19.8% to 81.5%. This wide variance warrants further study to determine if some vendors regard their products primarily as indexes with full-text availability for selected titles while others regard their role as primarily full-text journal vendors.

Again the coverage in the biological sciences was much less than in education with only three to ten (1% to 2.98%) core journals being available in full-text and only three to nine (<1% to 2.7%) peer-reviewed titles being available in full text (see table 6).

The third item of information in our study was a determination (based on vendor's lists) of the average year of initial full text coverage of journals in these databases. For the field of education the initial year of full text coverage is shown in table 7. For the biological sciences the initial year of full-text coverage is shown in table 8.

Table 3

Education	#Core journal indexed	%Core journals indexed	#Peer reviewed core journals indexed	%Peer reviewed core journals indexed
Ebscohost	126	49.4%	66	25.9%
IAC	62	24.3%	32	12.5%
Proquest	61	23.9%	27	10.6%
Wilson	200	78.4%	103	40.5%

Table 4

Biological Sciences	#Core journal indexed	%Core journals indexed	#Peer reviewed core journals indexed	%Peer reviewed core journals indexed
Ebscohost	43	12.8%	36	10.7%
IAC	37	11.0%	31	9.25%
Proquest	30	8.9%	36	7.8%
Wilson	38	11.3%	30	8.9%

Conclusions and Next Steps:

As noted above this study provides just a portion of the total picture needed for each library or consortia to make determinations regarding the best full text database product for their needs. The limited number of other studies conducted to date do provide other pieces of information needed to make this decision. If a fuller profile of the content of these databases is to be developed more frequent studies which attempt to keep pace with the changing title lists of these databases will need to be conducted. Jo Ann Carr, one of the authors of this study, is currently reviewing these same four databases coverage of the most frequently cited titles cited in *Journal Citation Reports*. In addition to studies reviewing core list in other disciplines or analyses comparing the holding of a specific library against the holdings of full text database, the products of other vendors which provide this full text journal titles must also be reviewed.

More complete analysis of the content of pre-packaged full text journal databases is one avenue as we provide access to the best resources for our clients. A second approach is that which has been developed by California State University. The CSU system has submitted a request for proposals for the development of a customized database for the university's twenty three campuses. This request would require the vendor to provide access to more than 1,250 journals selected by li-

brarians in the CSU system. The similarity in the campuses and the fact that CSU was able to agree on the core list reflecting those titles held by at least twenty three campuses contributed to the development of this proposal by CSU. Their proposal also addresses archiving issues as its requires that the database include two print copies of each title, to be housed in the southern and northern halves of the state. Whether this proposal will allow CSU libraries to "break the mold" and find information providers who are capable of meeting [CSU's] requirements...rather than specify what they may want to sell..." remains to be seen. However, the fact that UMI's SiteBuilder, and the Gale Group's Infotrac Web now offers custom databases indicate that another option in providing full text access to journals is on the horizon.

Notes

1. Electronic Library Network. "Fulltext database initiative-project overview" Accessed at: <http://www.ola/bc/ca/eln/pands/overview.htm> on April 4, 1998.
2. Majak, David R. Remote host databases: issue and content" *Reference Services Review* 25 (3-4) fall/winter 1997. 23-35.
3. EbscoHost. "Academic Search Full Text Elite: About the Database" Accessed at <http://gw5.epnet.com/ehost.asp?key=VKdt780&site=ehost>, February 28, 1999.
4. Voltero, Kimberly. Personal Correspondence with

Table 5

Education	#Core jrls. in full-text	%Core jrls. in full-text	%Indexed titles in full-text	#Peer reviewed core jrls. in full-text	%Peer reviewed core jrls. in full text	%Indexed peer-rev. core jrls. in full text
Ebscohost	41	16.1%	32.5%	25	9.8%	19.8%
IAC	24	9.4%	38.7%	13	5.0%	40.6%
Proquest	47	18.4%	77.0%	22	8.6%	81.5%
Wilson	63	24.3%	31.5%	34	13.0%	33.3%

Table 6

Biological Sciences	#Core jrls. in full-text	%Core jrls. in full-text	#Peer reviewed core jrls. in full-text	%Peer reviewed core jrls. in full text
Ebscohost	3	<1%	3	<1%
IAC	8	2.4%	6	1.8%
Proquest	10	2.9%	9	2.7%
Wilson	5	1.5%	4	1.2%

Jo Ann Carr. February 17, 1999.

5. Information Access Company. "InfoTrac Products Expanded Academic ASAP[TM]. Accessed at <http://library.iacnet.com/html/eai.html> on February 28, 1999.
 6. Duval, Beverly and Linda Main. "Microcomputer applications in the library" *Library Software Review* 17 (3) September 1998, 183-206.

7. University Microfilms International. "Proquest Direct". Accessed at <http://www.umi.com/proquest/> on February 28, 1999.

8. H.W. Wilson Database Description. *Education Index, Education Abstracts, Education Abstracts Full Text*. Accessed at <http://www.hwwilson.com/DDescriptions/EDI.HTM> on March 1, 1999.

9. H.W. Wilson Database Description. *General Science Index, General Science and General Science Abstracts Full Text*. Accessed at <http://www.hwwilson.com/DDescriptions/EDI.HTM> on March 1, 1999.

10. Carr, Jo Ann. "Council of Wisconsin Libraries Collection Development Committee comparative study of full-text databases" (Paper presented at the Meeting of the Council of Wisconsin Libraries Collection De-

velopment Committee, Green Bay, Wisconsin, April 22 1998).

11. For example Duval, Beverly K. and Linda Main, "ProQuest Direct" and "EbscoHost's new face" *Library Software Review* 17 (2), June 1998 and Karp, Rashelle. "Comparing Three Full-Text Journal Services" *Booklist* 94 (18), May 15, 1998.

12. Grzeszkeiwics, Anna

and A. Craig Hawbaker. "Investigating a full-text journal database: A case of detection" *Database Magazine* 19 (6) December 1996.

13. Richter, Carole J. and Threasa L. Wesley. "IAC and UMI go head-to head on full-text" *Database* 19 (4) Aug./Sept. 1996

14. Franck, Carol and Holly Chambers. "How full is the full in full-text? A comparative study of paper periodicals with their web-based equivalents in the Ebsco, Information Access Company (IAC) UMI, and Wilson databases." A poster session presented at the ALA Annual Conference, Washington, D.C., June 27, 1998.

15. Preston, Laurie A. and Corinne M. Ebbs. "Full-text access evaluation: Are we getting the real thing?" *The Serials Librarian* 34 (4) 1998, 301-5.

16. Ibid., 303.

17. Majka. "Remote host databases, 23-35.

18. Guernsey, Lisa. "In a turnabout, California State U. calls for bids from data-base companies" *The Chronicle: information technology news*: 12/18/98. Accessed at <http://chronicle.com/daily/98/12/9812801t.htm> on December 29, 1998.

Table 7

First Year FT available	Ebscohost	IAC	Proquest	Wilson
1989	0	3	0	0
1990	16	0	0	0
1991	0	1	0	0
1992	1	10	3	1
1993	0	5	0	0
1994	11	1	23	6
1995	0	1	9	1
1996	12	2	9	45
1997	1	1	3	4
1998	0	0	0	6

Table 8

First Year FT available	Ebscohost	IAC	Proquest	Wilson
1989	0	2	0	0
1990	0	0	0	0
1991	0	0	0	0
1992	1	3	2	0
1993	0	2	0	0
1994	0	1	1	4
1995	0	0	2	0
1996	2	0	1	0
1997	0	0	3	1
1998	0	0	1	0