



# Academic Library Home Pages: Link Location and Database Provision

Xue-Ming Bao

**This article reports the findings of a survey of 143 home pages of academe and their library home pages. Librarians should advocate for a library home page link on the first page of their parent institution's home page and provide online databases and free Internet resources through the library's home page.**

**I**ncreasingly, universities and colleges are creating World Wide Web (Web) sites as a means of outreach to their students, faculty, staff, and alumni. For example, the Web Central of the University of Texas (UT) at Austin maintains a site at [www.utexas.edu/world/univ](http://www.utexas.edu/world/univ), with links to 1,461 regionally accredited universities in the United States, as of August 12, 1999. The list exceeds the 1,402 baccalaureate and graduate universities and colleges listed in *A Classification of Institutions of Higher Education* by the Carnegie Foundation for the Advancement of Teaching in 1994.<sup>1</sup> Web sites have become a new medium for promoting products and services, for providing data and information, and for processing business transactions.<sup>2</sup>

In a recent study on academic library Web sites, Laura B. Cohen and Julie M. Still stated that "An academic library functions within the context of its parent institution. This has great implications for what can and cannot be accomplished by a library wishing to sponsor a Web site."<sup>3</sup> In competing for attention along with a variety of institutional information resources on the Web, the location of the library home page link on its parent institution's home page, and whether or not the library provides online databases, becomes a problem that will affect how the faculty and students access and use library resources.

The purpose of this study was to analyze the link location of academic library home pages on the parent institution's home pages and to investigate the provision of commercial online databases through the library's home page. The study attempted to find answers to the following questions:

- How does the university or college home page link to its library home page?
- Under what category is the library home page classified if the library home page link is not identified on the first level (or first page) of the university home page?
- Does the academic library home page provide access to commercial online databases, such as Bell & Howell's *ProQuest* or *Lexis-Nexis*, among others?
- Are academic subscription databases accessible remotely (i.e., from off campus) through the Web?
- If academic databases are available for remote access, does their use require a password?

The significance of the study is that it addressed the strategic issue of developing academic library home pages. This study examined the following two hypotheses:

H1: If a library is perceived as being very important by its parent institution, the link location of the library home page will be on the first level of its institution's home page.

H2: If the library home page link is on the first level of its parent institution's home page, the library home page is more likely to provide commercial online databases and off-campus remote access to commercial online databases.

## REVIEW OF THE LITERATURE

### Web-Link Location and the Role of Academic Libraries

A body of literature on home page development and evaluation is rapidly emerging. The studies touch on the design, content, criteria, principles, and

Xue-Ming Bao is Assistant Professor/Librarian, University Libraries, Seton Hall University, 400 South Orange Ave., South Orange, New Jersey 07079-2671 <[baoxuemi@shu.edu](mailto:baoxuemi@shu.edu)>.

**Table 1**  
**Six Institutional Strata**

Carnegie Category	Number of Institutions	Sample	% of Each Category
1. Doctorate-Granting Public (DPU)	151	16	11.2
2. Doctorate-Granting Private (DPR)	85	9	6.3
3. Master's Universities Public (MPU)	275	28	19.6
4. Master's Universities Private (MPR)	254	26	18.2
5. Baccalaureate Colleges Public (BPU)	86	9	6.3
6. Baccalaureate Colleges Private (BPR)	551	55	38.4
Total	1402	143	100.0

evaluation of home pages.<sup>4</sup> In offering Web design hints, Ray E. Metz and Gail Union-Metz wrote, "Design each page so that people see the three most essential pieces of information first."<sup>5</sup> Pieter A. van Brakel, Cerina Roeloffze, and Amanda van Heerden advised, "All links must clearly show where they are leading . . . by adding an explanatory note in brackets next to the word or words representing the link."<sup>6</sup> Gwen Gregory and M. Marlo Brown suggested, "Use first page as a gateway with links to the rest of the home page. First page contains only information that will be useful to most or all users."<sup>7</sup>

The literature shows that the academic library home page link should be placed on the first page of the institution's home page. In *Academic Libraries: 2000 and Beyond*, James G. Neal predicted, "The Library will play a central role in the development of the campus information environment. Rather than being told what technology to adopt, library staff will be integral in determining what the next innovations will be."<sup>8</sup> The role of the library remains the acquisition, organization, and dissemination of recorded knowledge and information for students, faculty, and community users, but the means are ever more powerful, and the possibilities far-reaching.<sup>9</sup>

#### Commercial Online Databases

Carol Tenopir and her colleagues tracked changes of print and online resources by surveying reference librarians at academic research libraries in the United States and Canada three times in the past decade, in 1991, 1994, and 1997. They concluded, "The popularity of all of these services in academic libraries shows clearly that the time for commercial end-user services through the library is

here."<sup>10</sup> The demand for documents provides a strong impetus for the growth of commercial online services. The proliferation of full-text databases over the last decade was driven by the persistent demand of end-users for completed searches—all the way to the document.<sup>11</sup>

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#### PROCEDURES

The universe of this study was 1,402 institutions of higher education, ranging from doctorate-granting universities to baccalaureate colleges, that are listed in *A Classification of Institutions of Higher*.<sup>12</sup> The population was stratified by three institutional groups and six institutional strata, according to Carnegie Classification:

- Doctorate-Granting Universities: These institutions offer a full range of baccalaureate programs and are committed to graduate education through the doctorate.<sup>13</sup>
- Master's Colleges and Universities: These institutions offer a full range of baccalaureate programs and are committed to graduate education through the master's degree.
- Baccalaureate (Liberal Arts) Colleges: These institutions are primarily undergraduate colleges with major emphasis on baccalaureate degree programs.

As shown in Table 1, these three institutional groups were divided into six

strata according to whether they are publicly or privately funded institutions.

Every 10th institution in each stratum was selected, and 143 institutions were included in this study. In *Descriptive Statistical Techniques for Librarians*, Arthur W. Häfner stated:

Sample size is important, because a sample has to include a sufficient number of elements to reflect the population as a whole. . . . as a general rule, if a librarian's sample includes 100 elements, the survey findings usually will yield reasonable results about the target population.<sup>14</sup>

The method of proportional allocation,<sup>15</sup> combined with systematic sampling,<sup>16</sup> was applied in selecting the number of institutions to be sampled from each stratum.

I accessed a sample of university and college home pages and "virtually" visited each institution's library home page between December 1998 and March 1999. This study was limited to the direct observation of library home pages and the parent institutions' home pages. I did not contact the people who created or maintain individual sites. Also, I was not able to tally the number of commercial online databases because some library home pages listed all the subdatabase titles (e.g., *WorldCat* and *PsycInfo*) from a major database vendor such as OCLC's *FirstSearch*, whereas others listed links only to major databases (e.g., *FirstSearch*, *ProQuest*, or *InfoTrac*), which might include various subdatabases.

#### FINDINGS

##### Link Location of Library Home Pages on The Parent Institution's Home Pages

Table 2 shows that, of the 143 institutions surveyed, 82 (57.3%) placed their li-

**Table 2**  
**Level of Library Home Page (HP) on Its Institution's Home Page**

	DPU N = 16		DPR N = 9		MPU N = 28		MRP N = 26		BPU N = 9		BPR N = 55		Total N = 143	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%
First Level	13	81.3	6	66.7	23	82.1	16	61.5	5	55.6	19	34.5	82	57.3
Second Level	2	12.5	3	33.3	3	10.7	6	23.1	1	11.1	20	36.4	35	24.5
Third Level	1	25.0			1	3.6	1	3.8	1	11.1			4	2.8
No Link to Library HP							2	7.7			12	21.8	14	9.8
No Institution Home Page					1	3.6	1	3.8	2	22.2	4	7.3	8	5.6

Notes: DPU = Doctorate-granting public universities, DPR = Doctorate-granting private universities, MPU = Master's public universities, MPR = Master's private universities, BPU = Baccalaureate public colleges, and BPR = Baccalaureate private colleges.

library home page links on the first level of the institution's home page, 35 (24.5%) on the second level, and 4 (2.8%) on the third level. Fourteen (9.8%) institutions provided no link to their library's home page. Eight (5.6%) institutions could not be located on the Web. When studying the institution's home page in each category, more public (funded), doctorate-granting universities (81.3%) and public, master's colleges (82.1%) located their library home page at the first level than did private (funded), doctorate-granting universities (66.7%) and private, master's colleges (61.5%). Fewer public baccalaureate colleges (55.6%) and

private baccalaureate colleges (34.5%) located their library home page link on the first level of the institution's main home page.

Thirty-nine (of 143, or 27.3%) library home page links were found on the second or third levels of their parent institution's home page (see Table 3). They were placed under link categories such as "Academic" (61.5), "Academic Support" (2.6%), "Campus Information" (5.1%), "Student Resources" (7.7%), or "Services" (7.7%). Six (15.4%) library home page links were classified in other categories, including "Office and Depart-

ments," "Sitemap," "Academic Life," "Learning Resources," and "University Life."

#### Commercial Online Databases

Table 4 shows that, of the 143 institutions surveyed, 109 (76.2%) provided links to commercial online databases through the library home page. All public and private, doctorate-granting universities provided commercial online databases. More public, master's colleges (85.7%) provided commercial online databases than did public, baccalaureate (77.8%) colleges; more private, master's

**Table 3**  
**Categories under Which Library Home Pages Are Classified on the Second and Third Levels**

	DPU N = 3		DPR N = 3		MPU N = 4		MRP N = 7		BPU N = 2		BPR N = 20		Total N = 39	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Academic	2	66.7	2	66.7	2	50.0	3	42.8	2	100.0	13	65.0	24	61.5
Academic Support							1	14.3					1	2.6
Campus Info											2	10.0	2	5.1
Student Resources	1	33.3									2	10.0	3	7.7
Services			1	33.3	1	25.0	1	14.3					3	7.7
Other					1	25.0	2	28.6			3	15.0	6	15.4

Notes: DPU = Doctorate-granting public universities, DPR = Doctorate-granting private universities, MPU = Master's public universities, MPR = Master's private universities, BPU = Baccalaureate public colleges, and BPR = Baccalaureate private colleges.

**Table 4**  
**Commercial Online Databases Provided through Academic Library Home Pages**

	DPU N = 16		DPR N = 9		MPU N = 28		MRP N = 26		BPU N = 9		BPR N = 55		Total N = 143	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Yes	16	100	9	100	24	85.7	19	73.1	7	77.8	34	61.8	109	76.2
No					3	10.7	4	15.4			5	9.1	12	8.4

Notes: Doctorate-granting public universities, DPR = Doctorate-granting private universities, MPU = Master's public universities, MPR = Master's private universities, BPU = Baccalaureate public colleges, and BPR = Baccalaureate private colleges.

**Table 5**  
**Commercial Online Databases Accessible Off Campus**

	DPU N = 16		DPR N = 9		MPU N = 28		MRP N = 26		BPU N = 9		BPR N = 55		Total N = 143	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Yes	12	75.0	9	100	17	60.7	11	42.3	4	44.4	10	18.2	63	44.1
No	4	25.0			7	25.0	8	30.8	3	33.3	24	43.6	46	32.2

*Notes:* DPU = Doctorate-granting public universities, DPR = Doctorate-granting private universities, MPU = Master's public universities, MPR = Master's private universities, BPU = Baccalaureate public colleges, BPR = Baccalaureate private colleges.

(73.1%) colleges provided commercial online databases than did private, baccalaureate colleges (61.8%).

Of the 121 libraries offering home pages, 109 (90.1%) provided access to commercial online databases. Table 5 shows of the 109 library home pages, 63 (57.8%) provided off-campus access to some of the databases. More doctorate-granting universities (public and private) provided off-campus access to commercial online databases than did master's- and baccalaureate-granting colleges (public and private). More private, doctorate-granting universities provided off-campus access than did public, doctorate-granting universities. However, more public, master's and baccalaureate colleges provided off-campus access than did private, master's and baccalaureate colleges.

Table 6 identifies the number of institutions that provided off-campus access to commercial online databases that required passwords. These institutions generally provided instructions on the library home pages clarifying how users could obtain passwords or set up browsers for off-campus access. If no instructions were provided, a dialog box for the user's library card number or identification generally appeared when clicking on the links to the commercial online databases.

### DISCUSSION

#### The Relationship between Academic Libraries and Their Parent Institutions

Home pages are becoming an integral part of the services offered by libraries and

their parent institutions. The data show that only 5.6% (8/143) of the institutions could not be identified as hosting a home page. A little more than half (57.3%, or 82/143) of the library home page links were located on the first level of their parent institution's home page. Judging by the criterion stated in hypothesis H1, only 57.3% of the academic libraries are perceived to be very important by their parent institutions. If the library is to play a central role in the development of campus information resources, it would seem that more libraries should advocate for first level location of the library home page link on their parent institution's home page. Librarians in private, doctorate-granting and master's universities/colleges and librarians in both public and private, baccalaureate colleges need to pay special attention to this strategic problem.

In visiting sites, I found it difficult to locate library home page links when they were not placed at the first level of the parent institution's home page. Nonetheless, when a library home page link was not located on the first level of its institution's home page, the library was largely identified as a part of the institution's academic resources. The study showed that 61.5% (24/39) of the library home page links that were not at the first level were categorized under the "Academic" link group. The study also revealed that libraries were categorized in many different ways by their parent institution, ranging from "Student Resources," and "Learning Resources" to "Academic Support," "University Life," and "Sitemap" (illustrated in Table 3).

### Commercial Online Databases

A majority of libraries (76.2%, or 109/143) provided access to commercial online databases through their home page. Commercial online databases are important resources for research and academic studies. All doctorate-granting universities subscribe to commercial online databases. The percentage of the institutions subscribing to commercial online databases gradually dropped from master's to baccalaureate institutions. This phenomenon does not seem to correspond to hypothesis H2, which states that, if the library home page link is on the first level of its parent institution's home page, the library home page is more likely to provide commercial online databases and off-campus remote access to commercial online databases. On the contrary, the provision of commercial online databases seems to relate to the level of degrees offered by an institution. The higher the level of degrees offered by an institution, the more likely it is that the library home page will provide commercial online databases.

**"The higher the level of degrees offered by an institution, the more likely it is that the library home page will provide commercial online databases."**

**Table 6**  
**Commercial Online Databases Accessible Off-Campus Requiring Password**

	DPU N = 16		DPR N = 9		MPU N = 28		MRP N = 26		BPU N = 9		BPR N = 55		Total N = 143	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Yes	12	75.0	9	100	17	60.7	11	42.3	4	44.4	10	18.2	63	44.1

*Notes:* DPU = Doctorate-granting public universities, DPR = Doctorate-granting private universities, MPU = Master's public universities, MPR = Master's private universities, BPU = Baccalaureate public colleges, and BPR = Baccalaureate private colleges.

The provision of off-campus access to commercial online databases needs to be further developed. Only 63 (57.8%) of 109 libraries provided off-campus access. The methods of provision included setting-up a proxy server, providing instructions on how to make special configurations of the browser on the user's home computer, or providing instructions on how to receive database identifications and passwords through the library's reference desks. The data show that all of the off-campus access to commercial online databases required identifications and/or passwords. The major reason for this is likely that the library has to be in compliance with contractual agreements in providing remote access. In achieving remote access, database vendors need to work with libraries to enable and facilitate easy off-campus access to their databases. This will result in added-value service from the library and increased subscriptions and profit for the vendor.

### Suggestions for Further Studies

Additional research is needed to contact the people who maintain library home pages and people who maintain their parent institution's home pages. Such a study may reveal findings on home page design strategies, problems in providing off-campus access to commercial online databases, and views about selecting free Internet resources. These findings will help further improve the development of library home pages.

### CONCLUSION

Library home pages are playing an important role in the provision of information resources for students, faculty, staff, and alumni. The library's home page represents a new platform for the delivery of library

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**"The library's home page represents a new platform for the delivery of library services."**

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services. Librarians should seek first level access on their parent institution's home page. The location of a library home page link on its parent institution's home page will determine the visibility of a library and will affect the effective use of the library's online, Web-based resources. Li-

brarians should actively encourage database vendors, and their institution's department of computing services, to provide easy remote access to Web-based databases. Demands for, and the number of libraries providing off-campus access to commercial online databases, will likely increase as Web-based delivery of academic databases improves and becomes less costly. Librarians have an opportunity to select high quality, free Internet resources, categorize them, and make them available through links and gateways on the library home page. The provision of commercial online databases and high quality, free Internet resources will enable the library to expand resources for supporting students and faculty in their learning and research.

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The technique is popular and effective and is used frequently by librarians. . . . Beginning from any place in the sampling frame, select every *k*-th item. That is, elements are identified by systematically proceeding down the list and selecting elements at the predetermined, regular interval of *k* . . . If selection is begun toward the bottom of the population and the bottom is reached before the sample is complete, then selection continues from the top of the sample and goes on until all sample items are identified. (pp. 244-245)