

# Web-Based OPACs: A Leap of Faith?

*Norm Medeiros, James Beattie, and Carol Wu*

## *Abstract*

A three-month study explored and evaluated user satisfaction with the Web version versus the character-based telnet version of Ehrman Medical Library's online catalog, MEDCat. Methodologies included analyzing responses from a questionnaire, monitoring system statistics, and recording observations by Circulation and Information Services staff working one-on-one with users. The results will be utilized to gain insight into user needs, expectations, and satisfaction with the Web-based OPAC.

### **Introduction**

The World Wide Web has permeated many aspects of academic reference services. The Web's presumed ease of use and computer platform independence are supplanting telnet- and CD-ROM- based resources. Consequently, academic libraries and system vendors are scrambling to provide Web-based OPACs (WEBPACs) to a browser-oriented clientele. In our haste, traditional character-based OPAC features are often sacrificed in order to provide the point-and-click interface users have come to expect. Although WEBPACs offer features distinct from their character-based counterparts, the assumption that they will be embraced with the same enthusiasm as other Web-based products needs to be investigated.

In January 1998, the Ehrman Medical Library (EML) of New York University School of Medicine released the Web version of its online catalog, MEDCat.

In the following month, a "digital premiere" showcased new electronic products and services available through EML. MEDCat via the Web was officially unveiled at the premiere and established as the default OPAC interface in the Main Reading Room. In mid-March, a "Lunch-n-Learn" session was held for the NYU Medical Center community to demonstrate features of the Web version of MEDCat. By the end of April, based on informal feedback and staff observations, the need to evaluate the visibility and performance of this interface was apparent.

### **Review of Literature**

In the literature there are no similar projects aimed at determining user search habits and satisfaction with telnet versus Web-based online catalogs. However, a number of articles explore overall design of WEBPACs.

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*Norm Medeiros is technical services librarian, James Beattie is educational services librarian, and Carol Wu is information services/electronic resource librarian, New York University School of Medicine.*

Green and Head<sup>1</sup> examine the Web catalogs of Stanford University and the University of California at Berkeley. Their research promotes the Web catalog as making "one-stop shopping possible." Although their work studies the difference in search patterns between command-line searching and the use of pull-down menus, it does not pair the telnet and Web-based catalogs in a way that provides for direct comparison. Instead, the emphasis rests with WEBPAC design principles.

Cherry<sup>2</sup> discusses the bibliographic display differences between telnet and Web-based catalogs. Issues such as telnet's "screen" versus a Web "page" are addressed. However, this paper does not give a comparison of user satisfaction between the competing interfaces for a specific OPAC.

Dennis, Carter, and Bordeianu<sup>3</sup> address immediate concerns of migration from a character- to Web-based online catalog. This work highlights advantages of WEBPAC such as the common gateway to electronic resources and the graphical user interface. The authors extend beyond a mere checklist of tangible WEBPAC benefits, and refer to the "fundamental change" resulting from such a migration. Additionally, one-to-one comparisons between the different access methods highlight features sacrificed in the WEBPAC in order to achieve the "holistic computing environment" users demand. However, a qualitative analysis of user satisfaction is not examined.

### **Environment and Methods**

NYU School of Medicine is the academic component of NYU Medical Center, a large urban health care facility. EML serves the School of Medicine, the Medical Center, the larger NYU community, and a number of affiliated hospitals.

This paper reports a three-prong approach to data collection that took place from September to November 1998. The first method employed a questionnaire (Appendix I) aimed at gaining a perspective on the MEDCat search interface used and preferred by EML users. The questionnaire was made available within EML for one week in each of the three months. Additionally, 837 full-time compensated faculty received a direct mailing of the questionnaire in October 1998, and 634 MD and MD/Ph.D. students received a similar mailing in November 1998.

The second approach to this study gathered search statistics generated by MEDCat. These statistics were

examined on a weekly basis. Principally targeted were the telnet and Web searches performed on the catalog by those outside EML. These data supplied concrete evidence of interface access.

The third and final approach to the study analyzed anecdotal evidence gathered from both informal interactions by EML staff with users using MEDCat within the library, as well as feedback which was requested on the questionnaire.

### **Results**

#### ***Section A: Questionnaire.***

Table 1 represents distribution and rate of return. Table 2 represents the responses to completed questionnaires distributed within EML, and those mailed directly to faculty and students. The questionnaire consists of five questions. The authors considered a completed questionnaire to include answers to the first two questions (1. Status; 2. Where do you use MEDCat) and part one of the third question (3. Which version of MEDCat do you use). Table 2 also includes responses that are not necessary criteria for a completed questionnaire, but that provide useful information regarding user preference.

#### ***Section B: Search Statistics***

Graph 1 demonstrates the percent of searches performed on MEDCat from September through November 1998. Public searches performed via telnet steadily declined each month (Sept.=36.77%; Oct.=33.83%; Nov.=29.23%). Searches performed via the Web interface steadily grew during the same period (Sept.=33.11%; Oct.=34.59%; Nov.=37.20%). Web usage exceeded telnet usage for the first time in October 1998.

#### ***Section C: Anecdotal Evidence***

Staff observations and comments from returned questionnaires indicate that there is a wide spectrum in the use and knowledge of MEDCat. A number of users did not know or were not familiar with the purpose or capabilities of MEDCat. Another group of users could not distinguish the difference between telnet and Web, while some more experienced Web/computer users requested more integration between MEDCat and other online databases. Additional comments included suggestions for additions to EML print and electronic collections.

### **Discussion**

When this study began in September 1998, the Web ver-

	September	October	November	Faculty Direct Mailing	Student Direct Mailing
Total # Distributed	150	130	75	837	634
# of Surveys Returned	63	66	8	72	13
Rate of Return	42.00%	50.77%	10.67%	8.60%	2.05%
# of Completes	58	60	7	61	13
# of Incompletes	4	6	1	11	0

Status	Faculty	Student	Staff	Resident	Fellow	Nursing	Admin	Other	Totals
	80	66	22	15	10	2	1	3	199
<b>Where do you use MEDCat?</b>									
Office/Lab	64	8	6	3	6	0	1	1	89
Home	31	21	2	3	4	0	0	0	61
Ehrman Medical Library	47	57	18	13	7	2	1	2	147
Other Libraries	2	4	0	0	1	0	0	0	7
Other	1	2	0	1	0	0	0	0	4
<b>Which version do you use?</b>									
Telnet access	13	6	5	4	0	0	0	0	28
Web access	37	39	11	6	7	2	1	3	106
Both	30	21	6	5	3	0	0	0	65
<b>If Web access, how did you find out about it?</b>									
Digital Library Premiere	4	1	0	2	0	0	0	0	7
Lunch-n-Learns	2	0	0	0	0	0	0	0	0
Library staff	22	18	12	5	2	1	0	0	60
Library Web site	29	18	6	0	3	0	0	3	59
Using it in the library	12	31	6	3	5	1	1	0	59
Other	5	2	0	1	0	0	0	0	8
<b>Preference</b>									
Telnet	15	9	3	5	1	1	0	0	34
Web	40	35	10	5	8	1	0	2	102
Both/Neither	2	2	2	0	0	0	0	0	6

sion of MEDCat was already established as the default interface within EML. This in effect created a “force feed” situation. Except for two dumb terminals, users were forced to use the Web version of MEDCat that was available from the various PC and Macintosh stations located throughout EML.

### Section A: Questionnaire

The MEDCat questionnaire was used to collect data about who was searching the online catalog, where they were doing their searching from, and which interface they employed. Data collected from the 199 complete surveys provided useful demographic information about MEDCat usage and a framework within which to increase awareness of Web MEDCat.

Of interest is the percent of all respondents (14%) who said that they used telnet access to MEDCat (Figure 1). While this is considerably less than the actual percent of telnet sessions logged by the system (Section B), it is higher than expected given the WEBPAC “force feed” situation within EML. This indicates that a dedicated segment of our user population has not fully embraced the Web as a means of accessing MEDCat.

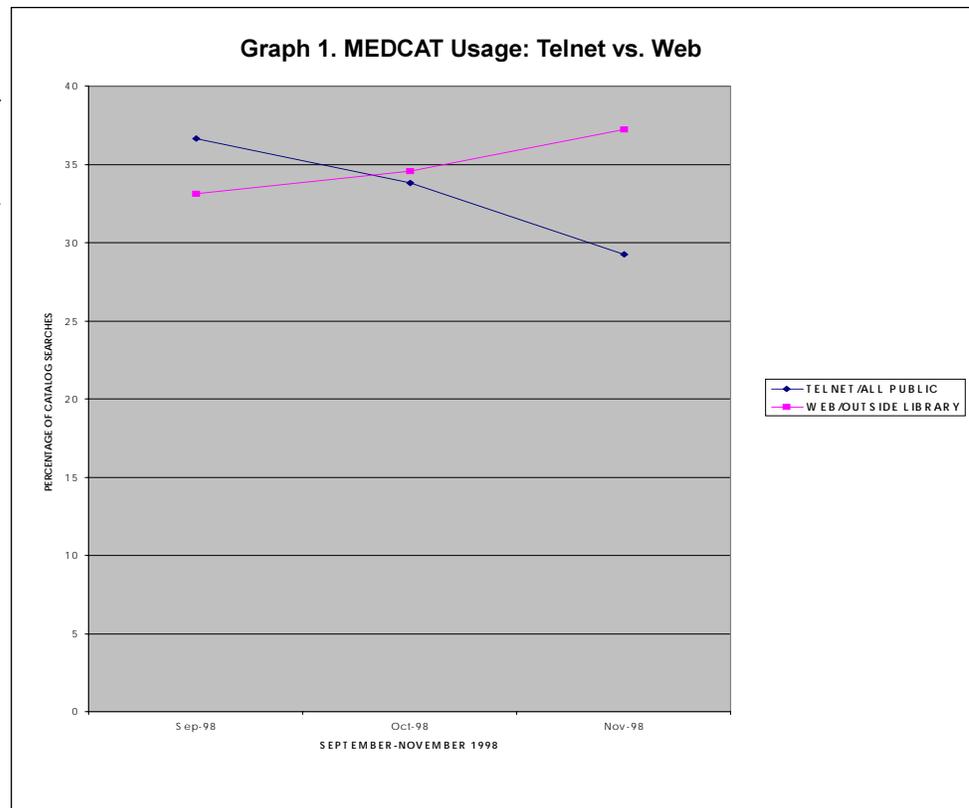
A reliance on telnet is further supported by 33% of all respondents who claim to use both telnet and Web interfaces. Unfortunately, it is impossible to know if “both” means that a respondent used one or the other of the interfaces once, or if they employed both on a regular basis. The response of “both” may point to several other factors influencing how our users access MEDCat. The NYU Medical Center community may be used to the character-based interface, senior faculty and research staff may lack the computing and technological skills necessary to navigate in a Web environment, and remote users may still use telnet sessions to access MEDCat for increased speed. Alternatively,

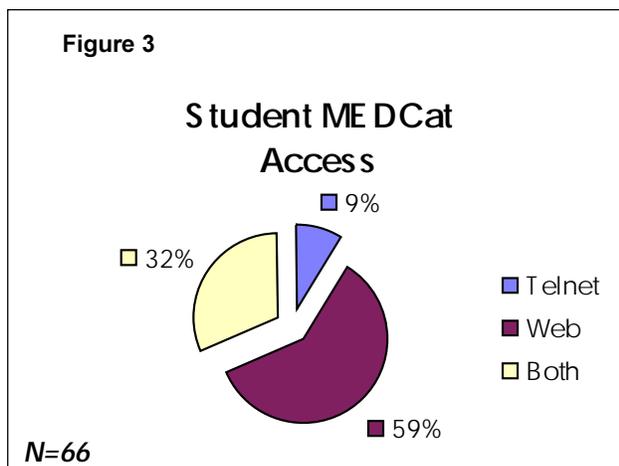
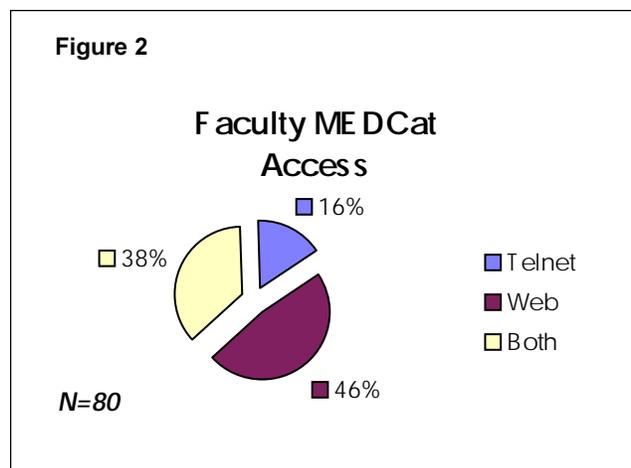
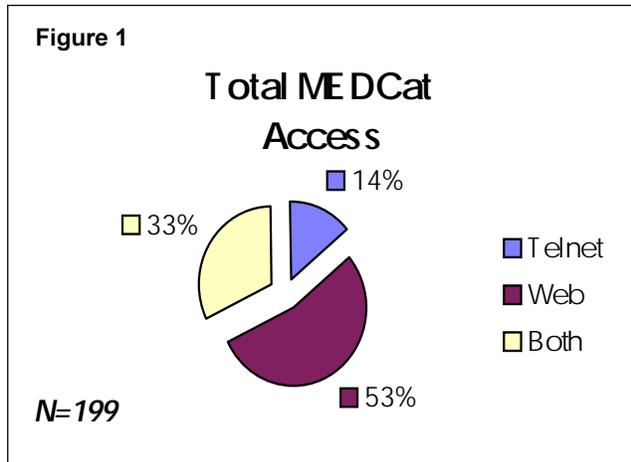
users unfamiliar with MEDCat may have checked both to avoid appearing ignorant.

A comparison of faculty and student reported usage of telnet versus WEBPAC (Figures 2 and 3) is interesting for several reasons. The comparison indicates that faculty may rely more upon the telnet interface because it is what they are used to, or they are unaware of the Web interface given their library use habits. A significant number of respondents (Table 2) to the questionnaire noted that they learned of the WEBPAC in the library or from library staff. The fact that students spend considerably more time in the library than faculty may explain a higher percent of them using and being aware of the WEBPAC. This difference may also be explained by a greater sophistication in computing and technological skills that many students possess when compared to faculty.

### Section B: Search Statistics

The Web interface to MEDCat is an Innovative Interfaces Incorporated product. In addition to creating on-the-fly conversion of MARC bibliographic data to HTML pages, the server software allows libraries to examine particular groups of users based on IP ranges.





This method of examination allowed the authors to monitor certain areas of WEBPAC usage and compare it to the telnet searches being performed on the catalog. It was decided that the most pertinent statistics in regard to tracking preference would be to compare Web

connections from outside EML to all telnet searches. Statistics were gathered weekly during the study. The percent of searches performed on MEDCat via telnet versus Web was noted. As demonstrated in Graph 1, telnet access steadily declined as Web usage increased. In October 1998, Web connections exceeded telnet connections. The numbers for November 1998 showed an even greater percent of Web connections.

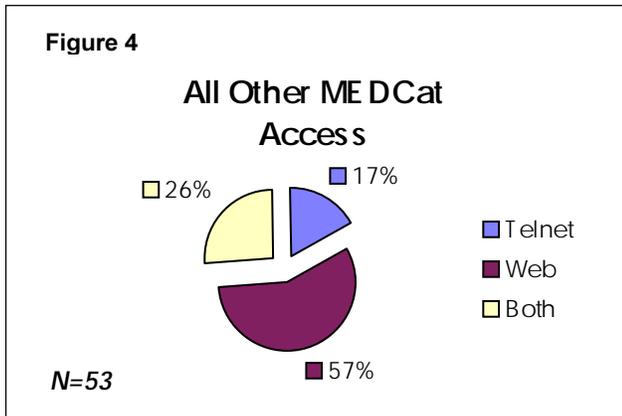
Of interest are the questionnaire results from those who noted a preference for a particular interface. By a three to one ratio, respondents preferred the WEBPAC (Figure 5). The relatively high number of searches still being performed on the catalog via telnet (29%) surprised the authors. Clearly the expectation was that the Web-to-telnet ratio would mirror the three to one found on the questionnaire. Furthermore, the prominent marketing of the Web version of MEDCat within EML may not have made as much difference to users as was previously considered. A large number of faculty and staff accustomed to accessing the character-based catalog for the past eight years no doubt contributed to telnet's strong numbers. Yet the combination of prominence within EML, marketing, and the continued integration of services into the framework of the Web medium, should help enlarge WEBPAC usage in the years ahead.

**Section C: Anecdotal Evidence**

It was a learning experience to gather anecdotal information on the use of MEDCat. Interestingly, most comments did not correlate much to the original intent of the survey.

Several conclusions may be drawn:

- An overwhelming number of users preferred Web access. They found the Web to be easier to use, faster, and more user friendly. In several cases, Web is the only way users know how to access MEDCat. This could also be an indication that Web dominates how users seek information, as the Web provides a more graphical and visual interface.
- Those who still prefer telnet cited the same reasons as those preferring Web. These users believed telnet provides faster and "easier" access.
- A number of users did not have an interface preference. These users may be more flexible and responsive to different computing systems.
- Several respondents indicated that they did not know what MEDCat was or what it could be used for.

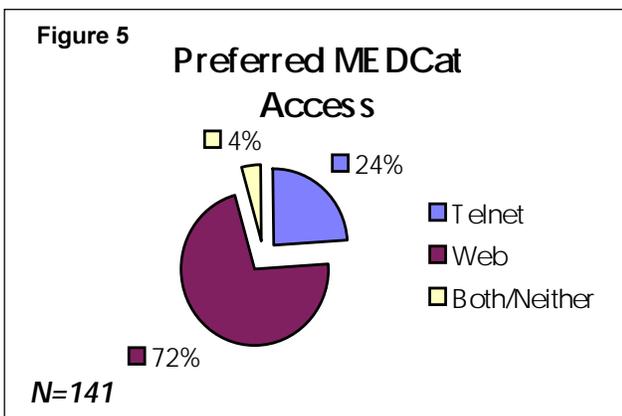


Those who did not know about MEDCat suggested that EML should provide more marketing and publicity. This led us to wonder what purpose the online catalog serves these users.

- MEDCat displays information on e-journals EML subscribes to, and in the Web version offers direct links to them. However, some users clearly did not understand how to interpret the information displayed. More user education is certainly required.

- Some users have confused MEDCat with databases such as Medline and asked that articles be placed in MEDCat. Users also did not understand that different databases may utilize different types of subject headings, and are created by different vendors. Perhaps a uniform search engine for online catalog and bibliographic databases could be useful in the future.

- Many users did not understand the type of restrictions (e.g. IP addresses) or licensing agreements libraries enter with publishers. Several requested integration with the NYU main campus library (which uses a different online catalog) or abandoning password protection when accessing from outside the library or re-



motely from home. The issue here would be how to educate general library users about licensing.

- It was also evident that a number of users disregarded print sources and would prefer to obtain electronic versions. One user even suggested an improvement to MEDCat would be “if it included all complete texts!” Is it a library’s mission to replace all print with electronic materials?

- Many respondents used this survey to lobby for additions to the library’s print and journal collection. Requests ranged from specific titles to entire subject areas.

- MEDCat is open to the public to browse on the Web. However, there are users who do not have complete grasp on how the Internet functions and have requested that the library open access to MEDCat via commercial Internet Service Providers or provide modem pools. Is it the responsibility of libraries, commercial ISPs, or users’ parent institutions to educate about general Web access?

- Finally, several comments indicated a need for better tutorials and online help. We will need to explore different venues to educate our users.

## Conclusion

As expected, the majority of searches performed on MEDCat were via the Web interface. However, system statistics and questionnaire responses demonstrate greater than expected telnet usage by certain segments of the NYU community. Given the defined samples, these data have significant implications for marketing, bibliographic instruction, and overall display and design issues. This study has raised unanticipated questions that are in need of further examination. Nevertheless, WEBPAC has been accepted, is the preferred interface, and has become the gateway to the EML digital library.

## Works Cited

- Green, Elisabeth and Alison J. Head. “Web-Based Catalogs: Is Their Design Language Anything to Talk About?” *Online*, 22:4 (July/Aug. 1998).
- Cherry, Joan M. “Bibliographic Displays in OPACs and Web Catalogs: How Well Do They Comply with Display Guidelines?” *Information Technology & Libraries*, 17:3 (Sept. 1998)
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**Appendix I**  
Ehrman Medical Library  
New York University School of Medicine  
MEDCat Questionnaire

**Objective**

In an effort to improve MEDCat, *the library's online catalog*, please complete the following questionnaire and return it to the library. Your comments will help us in our ongoing effort to deliver the best possible library services to the New York University community.

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1. Are you:

- Faculty
- Student
- NursingResident
- Staff
- Administration
- Fellow
- Other (specify) \_\_\_\_\_

2. Where do you use MEDCat? (Check all that apply)

- Office / Lab
- Home
- Ehrman Medical Library
- Other Libraries
- Other (specify) \_\_\_\_\_

3. Which version of MEDCat do you use to locate library materials?

- Telnet access
- Web access
- Both

If Web access, how did you find out about it?

- Lunch-n-Learns
- Library staff
- Library Web site
- Using it in the library
- Other (specify) \_\_\_\_\_

4. If you have used both versions of MEDCat, which do you prefer?

- Telnet access
  - Web access
- Why?

5. How do you feel MEDCat could be improved?

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