September 2005

ATG Special Report -- Collection Assessment at Eastern Michigan University

Rachel Cheng

Eastern Michigan University, rachel.cheng@emich.edu

Mary Meernik

Eastern Michigan University, mmeernik@emich.edu

Follow this and additional works at: <https://docs.lib.purdue.edu/atg>

Part of the [Library and Information Science Commons](#)

Recommended Citation

Cheng, Rachel and Meernik, Mary (2005) "ATG Special Report -- Collection Assessment at Eastern Michigan University," *Against the Grain*: Vol. 17: Iss. 4, Article 11.

DOI: <https://doi.org/10.7771/2380-176X.4514>

This document has been made available through Purdue e-Pubs, a service of the Purdue University Libraries. Please contact epubs@purdue.edu for additional information.

ATG Special Report — Collection Assessment at Eastern Michigan University

by **Rachel Cheng** (University Librarian, Eastern Michigan University) <rachel.cheng@emich.edu>

and **Mary Meernik** (Assessment Librarian, Eastern Michigan University) <mmeernik@emich.edu>

Like all academic libraries, the mission of **Eastern Michigan University Library** is to support the teaching, learning and research needs of the university. Three major outside factors greatly influence our ability to provide the resources to meet those needs.

The average annual price increase in periodicals has been 9.2% over the past decade. Our library currently subscribes to approximately 3000 journals that cost around \$1,000,000 annually. As serials subscriptions consume more and more of the acquisitions budget, the money available for monograph purchases steadily erodes; currently 53% of our acquisitions budget goes to journals and databases and 23% to books. For the 2003/2004 fiscal year, this inflationary increase alone would have consumed nearly 4% of the entire acquisitions budget.

Since 2000, EMU has added hundreds of new courses and many new programs without adding additional collection support. For eight new graduate courses, the library owned 55% of the books and 53% of the core journals required for the courses. For seven new undergraduate courses, the library owned 54% of the books and 79% of the journals. On average,

the library needs to spend an additional \$2,600 per course to purchase just the books required. With declining state budget support and high inflation, we do not have the funds to maintain our current core collections let alone build and support the collections necessary for new academic courses and programs.

Our buying power has also been affected by the rapid proliferation of print and electronic materials. We are now spending nearly 20% of the acquisitions budget on electronic resources that were nonexistent just 15 years ago. If the university is to stay competitive with its peers, the library has no choice but to acquire recently published materials that have become the new standard, "must have" resources of particular disciplines.

It is imperative that we spend our acquisitions dollars wisely to achieve the maximum cost/benefit ratio for our purchases. We must be more cognizant of the ways in which the resource needs of our users vary by academic department. Do students and faculty in a particular discipline rely more on monographs or serials for their work? Do they rely on older books or want only the most up-to-date infor-

mation? Can preferences for format type — electronic versus print — also be identified among user groups (undergraduates, graduate students, faculty) and academic departments? Which journals and databases do particular disciplines rely on most heavily and which are seldom used?

Collection usage statistics are integral to finding the answers to these questions. This article will detail our ambitious efforts during the past two years to collect and analyze monograph, journal and database usage statistics.

Background

Even though we have always collected circulation statistics and limited data about the in-house use of materials, we typically only reported the raw numbers and did minimal, if any, analysis. In fact, using their own discretion, library staff gathered usage statistics for different purposes, employing a variety of methods, manual and automated, that proved over time to be incomplete and unreliable. In order to bring some rationality, structure, and control over the collection of statistics, we reassigned one faculty member to be the assessment librarian.

continued on page 89

Figure 1: Monograph Usage Statistics Using LC Class Letters

Book Acquisitions and Circulation Statistics for 1998-2002

Department	LC Classes Funding Responsibility	Number of Titles Purchased	Total Checkouts	Unique Checkouts	% of Titles Never Circulated
Accounting and Finance	HA, HD-HJ	5,612	9,111	3,146	43.94%
African American Studies	DT, E, F, HT, LC, PS	8,200	10,120	4,092	50.09%
Art	AM, N-NX, TR, TS	2,707	3,587	1,460	46.06%
Associated Health Professions	QM, QP, R-RS, RV-RZ	4,628	6,720	2,622	43.34%
Biology	QH-QL, QP, QR, SB-SH	2,216	2,366	1,051	52.57%
Business and Technology Education	HF, KF-KFV	2,962	5,294	1,755	40.74%
Chemistry	QD, RA, TP	1,389	1,773	718	48.30%
Communication and Theater Arts	P, PN	2,282	2,698	1,134	50.30%
Computer Information Systems	HF, QA, TK	5,752	13,146	3,355	41.67%
Computer Science	HF, Q, QA, T, TK	6,823	14,324	3,860	43.42%
Economics	HB-HF, HN	5,835	8,814	3,180	45.50%

ian in August 2003 and began to develop a comprehensive infrastructure to systematically collect and analyze library information.

Monographs Usage Statistics

Our first project examined the number of books purchased and their circulation histories from 1998, the year the library moved into the new building, to 2002. We wanted to get a sense of how many books were purchased for each department and, more importantly, how often they were used to determine if we needed to reallocate monograph funds.

The data — numbers of new acquisitions, circulation numbers, unique titles circulated, and percent of titles never circulated — was grouped by **Library of Congress** class letters (Figure 1). While this arrangement permits some basic subject analysis (i.e., HG = Finance, BF = Psychology), it does not align suitably with our academic disciplines. With input from the Collection Development librarian, the Assessment librarian developed rudimentary correlations between **LC** class letters and academic departments. Due to staffing and time constraints, it was not feasible to also include **LC** class numbers and break them down with sufficient granularity to truly represent specific departments. Where there was a close correlation between **LC** class letter and the discipline (i.e., M = Music, N = Art), the data is a relatively accurate reflection of collection usage by department. Reliability declines as more **LC** class letters are needed to represent a subject discipline. Because many class letters are used for several disciplines, significant overlapping and thus skewing of data occurs. And in areas such as Women's Studies, where books conceivably could be classified in every **LC** schedule, the numbers we came up with were so inflated as to be meaningless.

At the beginning of 2005, the Assessment librarian developed an alternative method utilizing our acquisition fund names, which more closely approximate the academic departments. The acquisitions budget is divided into funds (i.e., Computer Science, History, Women's Studies) and books are assigned funds when ordered. Each academic department was paired with one or more of these subject funds. Further delineation by **LC** class letters was required for funds that were too general. For example, the Technology fund was restricted to class letters T, TN, TP, TR, TT, and TX to represent the Technology Studies department. The Business fund not only required this type of class letter breakout, but some letters such as HF also required specificity down to the class number in order to separate data for the Accounting and Finance, Management, Marketing and Law, and Technology Studies departments. Books that are interdisciplinary in scope present a particular challenge, because the fund structure does not accommodate more than one fund per title. The new method was used to analyze usage statistics for books purchased from 2000 to 2004 (Figure 2).

The usefulness of the data generated by both methods was limited by the exclusion of infor-

mation about the in-house use of books. Although the Circulation department kept shelving statistics, no distinction was made among new books, circulated books, and books used on the premises. This situation will be remedied as of the 2005 spring semester. Circulation staff, using a patron group ID specifically created for this purpose, will charge and then immediately discharge all books used in-house. Future analyses will now more accurately reflect the usage of our print book collection.

We also provide access to electronic books through **NetLibrary** and **Safari** and obtain usage statistics from those vendors. Approximately 20,000 **NetLibrary** titles are offered through the **Michigan Library Consortium**. Although we have no control over which titles are in this collection and have not included information about their usage in formal reports, we do monitor the statistics and purchase print copies of titles that are heavily used. We also purchase access to over 100 titles through **Safari** and track their usage to determine whether to continue funding for the next fiscal year.

According to the first monograph usage study, the "% of Titles Never Circulated" varied from 34% to 68% among the academic departments. With the second usage study revealing an even broader gap ranging from 22% to 65%, it was clear that reallocation of monograph funds was necessary. We needed to increase monies for departments with very high percentages of circulated titles and to determine whether we are buying too many books or not the right books for disciplines with low percentages of circulated titles. Further communication with teaching faculty and in-depth analysis of course offerings against books purchased will help us make these determinations.

Journal Usage Statistics

Our print journals do not circulate and prior to 2003, we did not track their usage. At the beginning of that year, as bound volumes in the open stacks were used, serials staff barcoded them, created item records in **Voyager**, and scanned the barcodes into a standalone Access database using a form that automatically supplied the date. Each month, this data was imported into the **Voyager Access Reports** database and linked to bibliographic information in the **Voyager** tables. A standalone database was also created for Circulation staff who scanned the barcodes of bound volumes retrieved for in-house use from the automated storage collection (all items in this collection already have barcodes and item records). It was a cumbersome process to pull the data off these computers every month in order to obtain monthly statistics and to avoid data loss or corruption.

In summer 2004, we devised a different process to collect usage statistics for microform journals, but this method also proved to be time-consuming. An item record with barcode was created for each title after it was used by a patron and the barcode itself was placed on an index card carrying title information. Using the **Voyager** circulation module, serials staff scanned in the barcode and then discharged the item using the browse function. Unfortunately, the **Voyager** system does not retain the discharge date in its circulation transaction tables; the

browse count for each journal is merely incremented with each discharge. This requires that the count be recorded every month and subtracted from the previous month's count to obtain statistics on a monthly basis. Because of the work involved with the existing methods of tracking in-house usage of both print and microform titles, we decided in March 2005 to utilize the charge/discharge method that we will be implementing to track the in-house usage of books.

Although it may appear that the work of collecting usage data for these two journal formats was challenging, it cannot begin to compare with the problems we encountered with electronic journals. Collecting information on the usage of electronic resources, which now make up the majority of our journal collection, is an extremely complex and laborious process.

YES...
all **APS**
journals are in
LOCKSS

15 Journals of the **American Physiological Society**
www.the-aps.org

Libraries must retrieve the usage statistics from individual publishers/vendors who assemble and package the data using conflicting terminology, differing presentation methods, and few or no options to manipulate the data by time periods. **Counting Online Usage of Networked Electronic Resources (COUNTER)**, an international initiative designed to facilitate the recording and exchange of online usage statistics, will hopefully alleviate such problems. While some publishers/vendors have implemented the new standard, many others are not yet in compliance. We are starting to reconfigure access to our electronic resources through **SFX**, so that we can eventually use its statistics mod-

continued on page 90

ule instead of having to go to each vendor's Website.

During May and June 2004, the Assessment librarian collected print and electronic journal usage statistics for the previous 12 months and

loaded the data into a table in the **Voyager Access Reports** database. For electronic journals, we either counted what vendors reported as full-text access as defined by **COUNTER** or else the closest approximation to it that could be made using the vendor's own terminology. We did not gather statistics for e-journals that are part of large aggregators' packages, such as **Lexis/Nexis**, where full-text access varies and

we have no control over the titles offered. Subject headings for print and electronic journals were also extracted from **Voyager** tables and all the information — ISSN, journal name, print usage count, electronic usage count, total usage count, and subject headings — were exported into an **Excel** spreadsheet.

To properly link individual journals to aca-

continued on page 91

Figure 2: Monographic Usage Statistics Using Fund Names

Halle Library LC Collection — Acquisition and Circulation Information by Academic Department — 2000-2004

Department	Titles Purchased	Total Circulations	Total Renewals	Unique Circulations	% of Titles Never Circulated
Accounting and Finance	1,372	2,979	1,851	881	35.79%
African American Studies	1,469	2,608	822	895	39.07%
Art	1,684	2,440	978	936	44.42%
Biology	1,517	1,628	785	716	52.80%
Chemistry	426	612	356	227	46.71%
Communication and Theater Arts	1,179	1,693	749	610	48.26%
Computer Information Systems	1,331	5,246	5,049	1,034	22.31%
Computer Science	1,331	5,246	5,049	1,034	22.31%
Economics	1,874	2,219	1,739	865	53.84%
Engineering Technology	1,070	1,449	858	589	44.95%
English Language and Literature	6,218	7,092	3,469	2,993	51.87%
Foreign Languages and Bilingual Studies	791	543	211	289	63.46%
Health Promotion and Human Performance	863	1,785	764	588	31.87%
Health Sciences	2,424	3,539	1,755	1,382	42.99%
History and Philosophy	8,730	10,694	4,562	4,685	46.33%
Management	2,694	5,149	3,230	1,654	38.60%
Marketing and Law	2,273	4,087	2,392	1,338	41.14%
Mathematics	1,206	1,402	1,217	500	58.54%
Military Science	301	254	85	135	55.15%
Music & Dance	768	996	347	390	49.22%
Nursing	1,145	1,665	1,015	671	41.40%
Physics and Astronomy	2,767	1,965	866	967	65.05%
Political Science	2,478	2,177	930	1,087	56.13%
Psychology	2,629	5,162	2,309	1,714	34.80%
Social Work	396	479	242	214	45.96%
Sociology, Criminology, Anthropology	4,675	7,761	3,332	2,762	40.92%
Special Education	259	559	313	200	22.78%
Teacher Education	4,332	7,212	4,728	2,723	37.14%
Technology Studies	4,764	7,380	4,053	2,681	43.72%
Women's Studies	1,369	2,093	978	826	39.66%

demic departments, librarians assigned one to four departments to each journal based on its subject matter. Assigning multiple departments to a journal title was feasible, where it obviously was not for monographs, because the process only needed to be done once. During fall 2004, this data was exported to a **mySQL** database and a user interface was created with PHP scripting language (Figure 3). The database is available for library staff to search and view journal usage by title or academic department. We can now identify high and low journal usage by discipline,

compute cost/benefit ratios, and determine whether users prefer print or electronic format. The journal usage statistics for each discipline were distributed to the respective academic department for review. Modifications based on departmental feedback are added to the database. As we begin to plan our strategy for canceling or adding journal titles for 2006, we will also utilize **Ulrich's Serials Analysis System** to evaluate the strengths and weakness of our serials collection.

Indexes and Databases Usage

In the past, we selectively monitored the usage of our electronic databases and indexes. When subscriptions, particularly for expensive, specialized products come up for re-

newal, we analyze vendor provided statistics to determine how much each search is costing us. In 2003, we created a simple tracking system to log the number of times users click on links to initiate searches to indexes and databases listed on the library's Web site (Figure 4). The system does not provide us with information about patron activity within the resources themselves and obviously cannot track connections users initiate through bookmarks.

We hope to start a project within the next year to systematically obtain usage statistics from database vendors, and those numbers will help us determine whether we should continue to subscribe to particular databases.

continued on page 92

Figure 3: Journal Usage Statistics for department of Management — sorted by total usage number

List of Journals by department of: **Management**
Total records: 288

Journal Title	Print Usage	Electronic Usage	Total Usage	Direct Subscription
Academy of Management Journal	60	508	568	Yes
Administrative Science Quarterly	8	522	530	Yes
Economic Geography	0	430	430	Yes
Cornell Hotel and Restaurant Administration Quarterly	20	406	426	Yes
Academy of Management Review	24	324	348	Yes
Journal of Business Research	4	314	318	Yes
Journal of Human Resources	14	254	268	Yes
International Journal of Hospitality Management	12	208	220	Yes
Business Week	192	0	192	Yes
Organization Science	0	120	120	No
Management Science	18	102	120	Yes
Strategic Management Journal	2	114	116	No
Fortune	110	0	110	Yes
Journal of the Textile Institute	94	0	94	No
Journal of International Business Studies	0	94	94	Yes
Journal of Vocational Behavior	22	68	90	No
Health Services Research	58	16	74	No
Forbes	60	0	60	Yes
Management Communication Quarterly	14	46	60	Yes
Human Resource Planning: HR	58	0	58	Yes
Compensation and Benefits Review	56	2	58	Yes
Business Process Management Journal	0	56	56	No
Journal of Labor Economics	0	53	53	No
Journal of Organizational Behavior	0	49	49	No
Organizational Behavior and Human Decision Processes	2	42	44	No
Canadian Textile Journal	44	0	44	Yes
Journal of International Entrepreneurship	0	37	37	No
Business Insurance	35	0	35	Yes

By comparing the statistics collected through our own tracking system to those provided by the vendors, we can determine whether patrons use the library's Web site as their primary gateway or rely on other ways (i.e., bookmarks) to access library resources. Depending on the findings, we may need to modify our marketing efforts when introducing new electronic resources to the campus or to particular disciplines.

Impact of Collection Usage Statistics

Librarians have been collecting statistics for as long as there have been libraries. The need to initiate change rather than reacting to it is at the heart of our approach to collect-

ing usage information. We are good at acquiring, organizing and managing library resources; however, we firmly believe that it is the teaching faculty who have the greater ability to impact collection usage. By providing them with monograph, journal and database statistics, we can work together to determine if the mix of usage is appropriate for their subjects. Teaching faculty can also ascertain whether their students are relying too heavily on less significant journals and if so, work with librarians to educate students about the scholarly, core

materials in their disciplines.

Closer communication and the sharing of usage information between librarians and teaching faculty also changes the way academic departments look at library services and operations. They are beginning to recognize our collection development efforts by stressing the importance of library resources in their Academic Program Reviews. Regular sharing of usage information with our constituencies will ultimately make it much easier for the library to select resources that most benefit the teaching, learning, and research needs of the university.

Figure 4: Example of Indexes and Database Usage from library homepage — sorted by total number of usage
EMU Halle Library Databases Usage Report 2004/2005

Database title	July 2004	Aug. 2004	Sept. 2004	Oct. 2004	Nov. 2004	Dec. 2004	Jan. 2005	Feb. 2005	March 2005	April 2005	May 2005	June 2005	total of the year
ERIC	103	292	2138	3236	3772	1082	2009	3687	4603	0	0	0	20922
Wilson Select Plus	52	445	2113	3783	3408	1417	1792	3805	3081	0	0	0	19896
PsycINFO	73	678	2493	2701	2129	1317	1122	1882	2137	0	0	0	14532
ABI/INFORM Global	48	374	1400	1642	1969	1129	1213	1426	1995	0	0	0	11196
America: History and Life	15	52	569	392	396	168	376	3687	4603	0	0	0	10258
America Journey Online	18	33	213	210	243	116	195	3687	4603	0	0	0	9318
InfoTrac OneFile	11	108	866	2381	1503	464	566	1823	1505	0	0	0	9227
Chemistry Journals (American Chemical Society [ACS])	9	65	216	159	130	123	91	3687	4603	0	0	0	9083
LexisNexis Academic	24	317	1016	1387	1571	675	846	1324	1743	0	0	0	8903
JSTOR	24	243	832	1309	1342	875	1065	1262	1497	0	0	0	8449
Worldcat	18	295	655	832	744	385	672	891	848	0	0	0	5340
PsycARTICLES	36	232	703	834	728	543	385	620	806	0	0	0	4887
CINAHL (via FirstSearch)	10	82	605	1261	984	243	286	597	814	0	0	0	4882
ArticleFirst	10	112	482	685	727	340	415	730	803	0	0	0	4304
MEDLINE (via FirstSearch)	12	160	450	782	665	271	346	604	756	0	0	0	4046
CINAHL (via ProQuest)	18	79	440	858	767	210	202	468	605	0	0	0	3647
Education Abstracts	19	89	356	492	658	251	332	498	881	0	0	0	3576
MLA Bibliography	13	107	384	586	582	358	348	384	523	0	0	0	3285
BasicBIOSIS	6	30	707	688	368	192	323	381	335	0	0	0	3030
AncestryPlus	21	247	286	304	347	254	382	371	489	0	0	0	2701
Nursing Journals Full-Text (via ProQuest)	6	45	263	699	543	183	164	303	428	0	0	0	2634
Health & Wellness Resource Center	8	62	335	535	439	207	161	399	465	0	0	0	2611
Web of Science	18	91	506	476	335	171	319	345	348	0	0	0	2609