

# Electronic Resources Usage Statistics

## How Valuable Are Vendor-Supplied Data?

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## E-Metrics

*E-metrics may be loosely defined as any effort to measure electronic and networked resources.*

- E-metrics data can come from:
  - Vendor supplied statistics
  - Web server logs
  - Scripts in OPAC links
  - Proxy server logs
  - EJMS providers

Source: Bertot, J. C., McClure, C.R., Davis, D.M., & Ryan, J. (2004). Capture usage with e-metrics. *Library Journal*, 129, 30-32.

## Issues Affecting E-Metrics Data

- Federated searching
- Different time-out settings
- Double-clicks
- Duplicate searches by the same user
- Automatic full-text display
- Zero-hit searches
- Multiple full-text formats
- OpenURL link resolver results
- Search strings from other sources
- Vendor or local technical problems
- Public PCs with multiple users

## E-Metrics Standards Efforts

- COUNTER Code of Practice for Journals and Databases (2002 to date)
  - Release 1 (December 2002)
  - Release 2 (April 2005)
- COUNTER Code of Practice for Books and Reference Works (2005 to date)
  - Draft Release 1 (published for comments January 2005)
- ICOLC (1998, revised 2001)
- ARL E-Metrics Project (2000 to date)

## COUNTER Usage Elements

- **Sessions** (a successful request of an online service)
- **Searches** (a specific intellectual query, typically equated to submitting the search form of an online service to the server)
- **Turnaways** (an unsuccessful log-in to an electronic service due to exceeding the simultaneous user limit allowed by the license)
- **Full-Text Articles** (the complete text of an article, including all references, figures and tables, plus links to any supplementary material published with it)

*E-metrics will only give us a general indicator of use, not actual usage.*

Source: The COUNTER Code of Practice, *Journals and Databases: Release 2*, published April 2005, <http://www.projectcounter.org>.

## COUNTER Reports

### *COUNTER Level 1 Reports*

- JR1** Successful full-text article requests by journal
- JR2** Turnaways by journal
- DB1** Total searches and sessions by database
- DB2** Turnaways by database
- DB3** Total searches and sessions by service

### *COUNTER Level 2 Reports*

- JR3** Successful item requests and turnaways by journal and page type
- JR4** Total searches by month and service

NOTE: All COUNTER reports show data by month and cumulative total for the calendar year. Per Release 2 of the Code, only Level 1 reports are required for compliance.

## COUNTER-Compliant Vendors

- As of August 2005, there were 45 certified COUNTER-compliant vendors/publishers, with several major vendors becoming compliant in 2004.
  - Most have JR1, only 9 have JR 2.
  - Only 3 have all Level 1 Reports.
  - About one-third have at least one DB report, but few have all DB reports.

*A 2001 study at North Carolina State University comparing internally collected statistics with vendor statistics for 28 products found some differences but similar patterns.*

## ERM Standards

- Most current ERM (Electronic Resource Management) products do not provide adequate management of usage statistics.
- The Digital Library Federation's *Electronic Resource Management Initiative* (ERMI) report of August 2004 makes some reference to usage statistics in the workflow and functional requirements but does not include capture of usage statistics in the system data structure.

## Longwood E-Metrics Efforts

- 170+ active electronic resource products from 68 different vendors
- Over one-third are purchased by Longwood
- Two-thirds (45) of vendors offer some kind of statistics for over three-fourths of products
- 42% (19) of vendors with statistics are COUNTER-compliant, including CSA, Gale, Project Muse, Proquest and WilsonWeb

## Longwood Database Layout

A Microsoft Access database was developed in fall 2003 to track basic database information and record product-level usage statistics for the 4 basic COUNTER usage elements.

<b>Publisher</b>	<b>Product</b>	<b>Statistics</b>
<ul style="list-style-type: none"><li>■ Login, password and URL to admin and statistics interfaces</li><li>■ COUNTER-compliant status</li><li>■ Cheat sheet report of logins and notes</li></ul>	<ul style="list-style-type: none"><li>■ Link to publisher code</li><li>■ Type of product</li><li>■ Source (Longwood/VIVA)</li><li>■ Price (if purchased)</li><li>■ Max users</li><li>■ Fund code assigned to all products</li><li>■ Assorted order information</li></ul>	<ul style="list-style-type: none"><li>■ Link to product code</li><li>■ Date</li><li>■ Searches</li><li>■ Sessions</li><li>■ Turnaways</li><li>■ Articles</li></ul>

## Longwood Usage Data Entry Form

Microsoft Access  
File Edit View Insert Format Records Tools Window Help  
MS Sans Serif

frm\_ory\_pubswthstats Main Entry Form

Publisher: Proquest Pub Code: Proquest

Select a product:

Prod_Name	Source
ABI/Inform	Proquest
PCI Full Text	Proquest
Proquest Historical Newspapers - New York Times	Proquest

Enter statistics for selected product

ID	Inst	Date	Searches	Sessions	Articles	Turnaways	Prod_Code
3222	LU	Sep-04	181		128		ABI Inform
2690	LU	Aug-04	55		71		ABI Inform
2684	LU	Jul-04	41		170		ABI Inform
2868	LU	Jun-04	30		129		ABI Inform
2726	LU	May-04	36		95		ABI Inform
2640	LU	Apr-04	304		272		ABI Inform

State Notes: JRI, DB1, DB3 scheduled for monthly email as of 11/03. PCI stats are on a different server - pct.chadock.com - click Librarian's Resources then  
View from other IP on Intranet/INTE.html

## Longwood Data Entry Workflow

- It takes about 8 hours once a month to check all vendor sites and record the 4 elements.
- No effort has been made to import COUNTER-compliant CSV files directly.
- Developing meaningful reports is the most time-consuming.

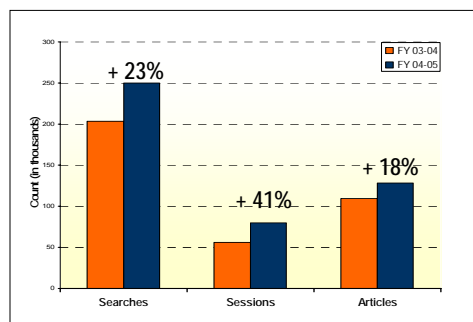
## Results Overview

- Longwood data reported here:
  - Includes 41 vendors with a total of 97 products.
  - Includes COUNTER-compliant statistics for over half of the products from one-third of the vendors for part or all of the time period.
  - Does not account for journal-specific data.
  - Includes searches for almost all products with statistics.
  - Includes only databases with data for all semesters in academic year comparisons.

## Results Trend Analysis

Look for changes over time that may correlate with other major events or changes in the library.

- Significant increases in academic year 04/05 compared to 03/04 correlate with Fall 2004 opening of 48-PC Information Center and redesigned library website
- What will be the impact of implementing a link resolver in Fall 2005?



## Results Trend Analysis

Look for changes over time that may correlate with other major events or changes in the library.

- 15 of 78 databases had greater than 30% **decrease** (at least 100 count) in searches from 03/04 to 04/05
  - 9 were at the top of at least one subject web page on the old 03/04 website
  - 3 others were full-text journal sources
  - 1 signaled questions about why usage dropped

## Results Trend Analysis

Look for changes over time that may correlate with other major events or changes in the library.

- 31 of 78 databases had greater than 30% **increase** (at least 100 count) in searches from 03/04 to 04/05
  - 4 are at the top of at least one subject page on the new 04/05 website
  - 16 had increases of between 100% and 267%
  - 11 had increases greater than 300%

## Results Limited User Licenses

Monitor turnaways and sessions per month to determine whether to increase or decrease users.

- Database A started with 1 user, had 11 turnaways in first month and switched to 2-4 users.
- Database B started with 2-4 users, first 12 months had no turnaways and average 4.5 sessions per month, switched to 1 user.
- Database C had only 4 turnaways in 18 months with 2-4 users and never more than 2 simultaneous sessions, switched to 1 user
- Turnaways focused in only 1 or 2 months for several databases were considered anomalies.
- Database D began showing high turnaways, call to vendor resulted in review of license with update to unlimited usage.

## Results Cost Analysis

Calculate cost per search and article to share with faculty.

- Cost per search / article
  - Cost per search runs from \$.55 to \$36.30 for 15 purchased databases with statistics
  - Cost per article runs from \$.43 to \$65.27 for 8 purchased full-text databases with statistics

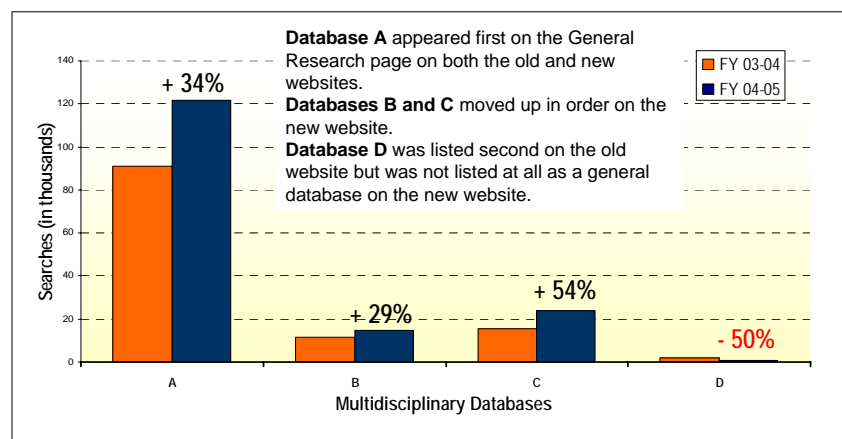
## Results Journal Subscriptions

High turnaways for unsubscribed journals can indicate errors in EJMS configuration, provide input for new title considerations, or indicate need for user instruction.

- Major distributor of academic and professional journals online → 49,366 turnaways in 30 months
  - Are students using Ingenta as a database?
- Publisher full-text package → 42 turnaways in 22 months
  - Should we subscribe to some of the embargoed titles?
- Distributor of scholarly journals in humanities and social sciences → 44 turnaways in 22 months
  - Is EJMS access correct? Should 10-user limit be increased?

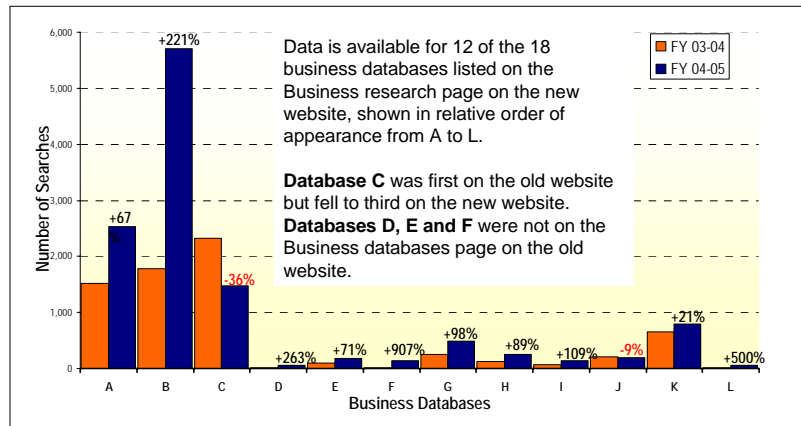
## Results Multidisciplinary Databases

Compare use of multidisciplinary databases.



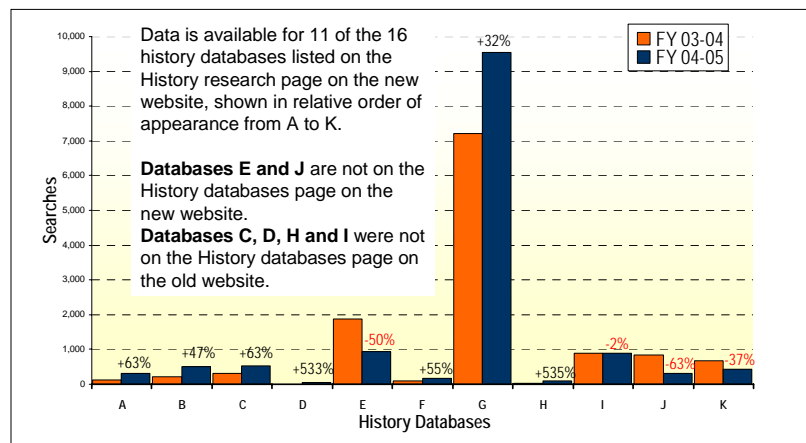
## Results Discipline-Specific Databases

Compare use of databases in a specific discipline.



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## Caveats

- Not all products have vendor-supplied usage statistics.
- Until all vendors are COUNTER-compliant, it's not apples to apples.
- Assume 1-2% inflation from library staff use and testing.
- Look for increases or decreases of 20% or more and consider what may account for it:
  - Major change or redesign in library space or services
  - Change in placement on website
  - High use in a course offered infrequently
  - Instruction focused on a product

## Challenges

- Incorporate the COUNTER Release 2 report data elements into the next ERMI standards for ERM data structure.
- Encourage ERM vendors and open source developers to provide a means to record the 4 basic COUNTER usage elements at database and journal level, with filters to import COUNTER files directly.

In the meantime, are one-off efforts such as Longwood's worth the time or merely a luxury?

## Contact Information

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