

ELECTRONIC RESOURCE STATISTICS

Wayne State University

E-Resource Statistics

- Libraries have a long history of gathering statistics to try and determine cost and service benefits. Now more than ever, librarians have an increasing appreciation that these statistics can play a more progressively important role in determining the return on investment with library dollars. Since the introduction of electronic access to materials and technology has become more advanced, the collection of the statistics has become an increasingly larger task. Like rapids, the need to keep up with how these electronic resources are used and managing the statistics they produce has become a great effort. New commercial software vendors are trying to keep up with the growing demand to create products that will take the enormous amount of statistical data and consolidate it into an easier to use and more consistent format. Also playing a key role in the development of statistics are standards such as COUNTER and SUSHI that aid in the process. This presentation describes how Wayne State University manages their electronic resource statistics including their use of SUSHI with their ERMS and how these statistics fit in their collection development process.
- We have the tools and the data, now we need to use them to the best advantage.

Agenda



- Collecting stats
- What do we need to do with the data? – Plan
- Where do we start?
- Build a more comprehensive plan
- Integration into Collection Development
- The future

Who are we?

Wayne State
University
Library
System:

Undergrad

Graduate

Science & Eng

Medical

Law

- Wayne State University is a premier institution of higher education offering more than 350 academic programs through 13 schools and colleges to more than 31,000 students.
- 5 libraries
- 130,000+ e-holdings including over 300 databases



Collecting Statistics

Gathering stats at the library

Has this worked?

Does it provide the information that we need?

- Count when re-shelving
- ILL
- Gate counts
- Reference questions
- Circulation data

Along comes E



- How do we count E?
- Very different from print
 - ▣ Impact Factors
 - ▣ Citation Analysis
- Larger amounts of data but can it tell us more?

Types of E-Resources



- Serials
- Databases
- E-Books
- Digital Documents
- Virtual visits – hits to library site

Standards



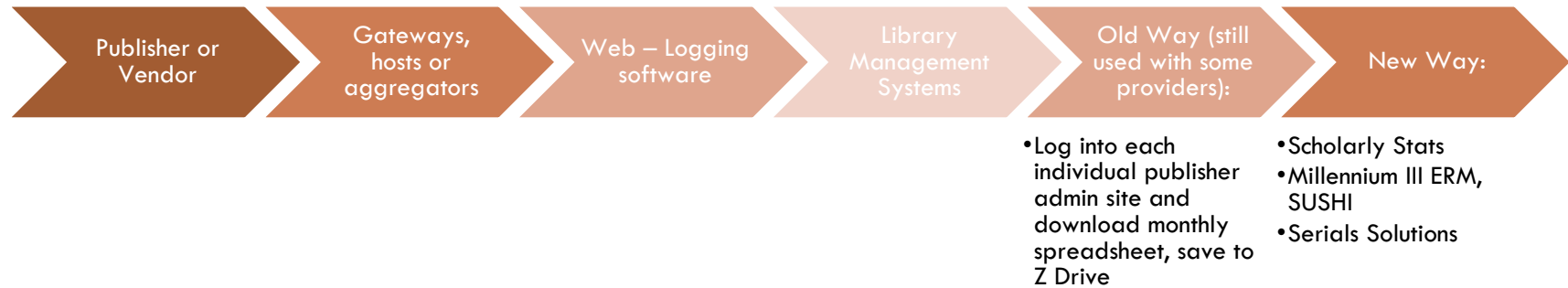
- Large amounts of raw data + many different publishers = data overload
- Industry recognizes the need for standards
- However this is all still relatively new
- Initiatives continue...

Data Collection Issues



- ❑ Inconsistent data
- ❑ “Unclean” data
- ❑ Incomplete
- ❑ Late reporting
- ❑ Skewed data (our use and Best Bets)
- ❑ Not all publishers provide COUNTER

Where do we collect the data from?






Collection Development

Why do we collect?

Performance Indicators

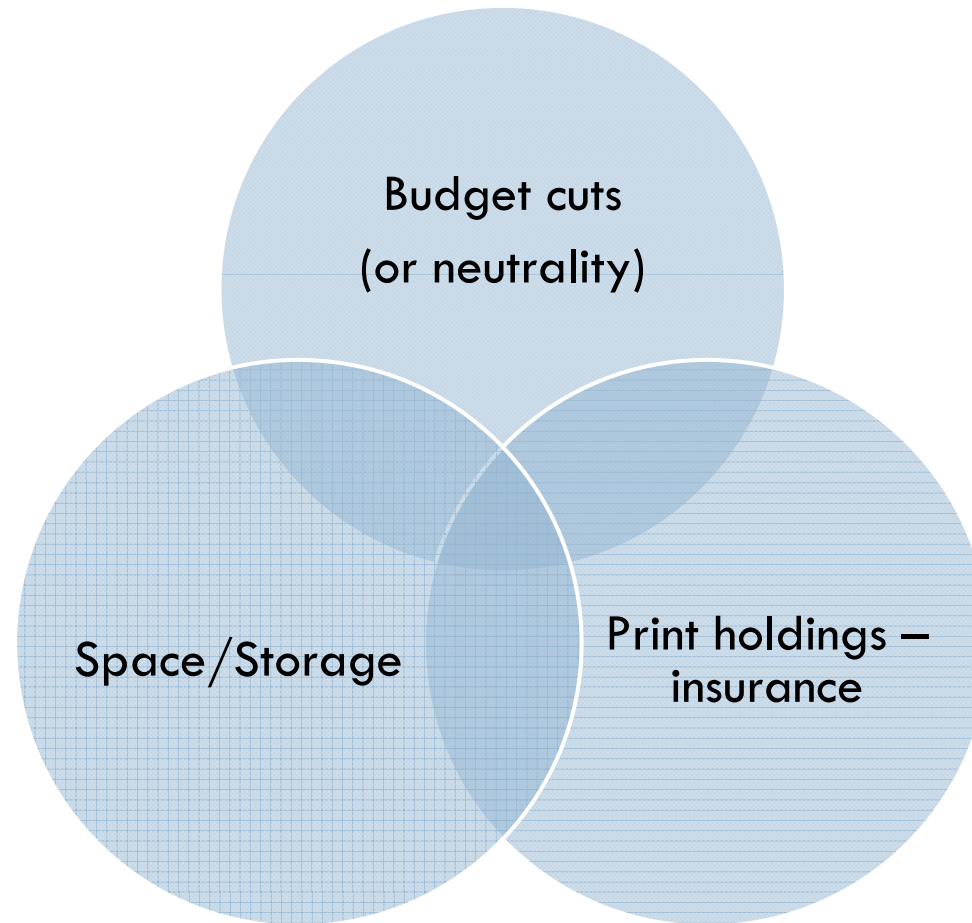
- Library promotion and publicity
 - ▣ Effective Services
- User
 - ▣ Support
 - ▣ Demand
 - ▣ satisfaction
- Renewal decisions
- Budgeting/Funding
- Benchmarking
- Contribution to the national trends (ACRL)

Questions to ask and things to think about



- Are there particular resources that aren't being used as much as expected?
- Do we need to do more promotion?
- What are the popular routes for access?
- How much is it being used?
- What are the average costs (CPU)?
- How many titles in a deal are receiving low use or none at all? Use this to compare deals.
- Justify library expenditures
- Balance of spending and use in different subject areas

More things to consider



Trends



- We can model trends in usage by looking at:
 - Cost of FT Download
 - CPU
 - What subjects cost more
 - What subjects use more
 - Use of print vs. e (and by subject)

This can determine



- Validity & Reliability
- Return on Investment
- Cost & Service Benefit

Realities



- ❑ Budgets can't handle demands
- ❑ Fund competition
- ❑ Demand for e-resources is insatiable
- ❑ Increasing need to defend purchases



@ Wayne State

Where we are right now



- Take the data that we have access to and analyze it for:
 - Subject area title and database use
 - Renewal
 - Budgeting
 - Special Projects
 - Serials Review

Plan



- Organize Statistics
 - ▣ Stats master
 - Provider
 - Platform
 - COUNTER
 - ▣ Download folder
 - Shared Drive
- Integrate them into collection development
 - ▣ Really USE them

Statistics Management



- How do we manage E-Resource Statistics?
- On demand by title
- Tools we use
 - ▣ Scholarly Stats
 - ▣ Serials Solutions
 - ▣ Innovative Interfaces Reports and
 - ▣ ILL ERM module with SUSHI (e-journals)

List of Metrics - Innovative

- learn more about your patrons' online usage patterns
- compare statistics between different resource providers
- Cost Per Use
- Analysis
- Summary Reports
 - By subject
 - By resource
- Reports
 - Limit data by access provider
 - The date range of data
 - Column to sort data
 - Ascending or Descending sort
- More Details
 - Titles Detail
 - Cost, monthly usage, CPU
 - Graph
 - Number of titles vs. number of downloads
 - Decile Analysis
 - Decile analysis of usage for resource or subject

More Metrics – Scholarly Stats

- Uses COUNTER:
- JR1 – FT Article by Title, Platform, Month
- DB1 – Searches and Session by Month and Database
- DB2 – Turnaways by Month and Database
- DB3 – Searches and Sessions by Month and Service
- BR1 – Title Requests by Book Title, Platform and Month
- BR2 – Section Requests by Book Title, Platform and Month
- Journal Dashboard reports (divides by platform)
- Total number of journal titles by platform
- Total number of FT Article downloads per platform
- Average FT Articles per platform
- Top Ten journals with the largest number of FT requests by platform
- Journals with <10 FT requests by platform
- Journals with zero FT request by platform
- Journals with <10 FT excluding zero usage by platform
- Top 50 journals with FT request by platform
- Proportional FT requests by title and platform
-
- Book Dashboard reports
- Total book titles by platform
- Total requests by platform
- Total section downloads by platform
- Average requests by platform
- Top Ten largest requested titles by platform
- All zero requests by platform

Even More Metrics- Serials Solutions

- 360 Core (AMS), 360 Link, 360 MARC Updates Usage Statistics
- Click-Through Statistics
 - ▣ Click-Through Statistics by Provider and Database
 - ▣ Click-Through Statistics by Journal and Database (Journal Holdings)
 - ▣ Click-Through Statistics by Journal and Database with Title Filter
 - ▣ Click-Through Statistics by Journal and ISSN (Journal Title)
 - ▣ Click-Through Statistics by Journal and ISSN with Title Filter
- Subject Search Report
- Session/Search Report
- Provider/Resource Activity Report
- Search Type Report

Outside Metrics*

- Total number of Titles
- Total FT downloads
- Max downloads (month)
- Min downloads (month)
- Mean downloads (year)
- PDF FT downloads
- HTML FT downloads
- PDF/HTML ratio
- Downloads per FTE user
- Total Turnaways
- Usage
 - ▣ Low Use (0-10 hits)
 - ▣ Medium Use (11-99 hits)
 - ▣ High Use (>100 hits)
- Top 20 best performing titles as % of total hits
- Costs
 - ▣ Total Package
 - ▣ Cost as % of total serials budget
 - ▣ Mean cost per title*
 - ▣ Mean cost per FTE download
 - ▣ Cost per FTE user

* Taylor-Roe

Comprehensive Plan



- Increase in E-journals with decrease in funding equals “Data-Driven Decision Making”
- Train Selectors on Statistics
- Integrating stats into Collection Development
 - ▣ Determine Criteria
 - ▣ Coincide projects with Renewals and Reviews

Empower Selectors



- Give them the tools to do their own analysis
 - Provide data in easy, comprehensive reports
 - Provide training on interpreting these tools/reports
 - Provide the above “deliberately”

Training or “InfoSessions”



- InfoSessions provided on a quarterly basis
- Follow a “brown bag” principle
- Explaining and interpreting statistics generally and building from there
- Exploding into a series!

InfoSession Information



- First Session – databases
 - ▣ Searches, Sessions and Turnaways
 - ▣ Cost Per Search
- Printed out reports
 - ▣ Serials Solutions
 - ▣ Scholarly Stats
- Definitions – NISO, COUNTER & SUSHI
- Download Schedule
- Stats location

InfoSession Example

*Definitions - Databases

- COUNTER
 - ▣ DB1 - Total Searches and Sessions by Month and Database
 - ▣ DB2 - Turnaways by Month and Database
- Searches – each *time* a user enters a search term and hits “search”. One search – multiple resources
- Sessions – the *period of time* from when the user opens a search, runs all searches then closes the application (continuous)

InfoSession Example

*Statistics Schedule-Provider Reports

- Downloaded Quarterly
 - January – March will be downloaded in April
 - April – June will be downloaded in July
 - July – September will be downloaded in October
 - October – December will downloaded in January
- Keep in mind “Lag Time” from Publisher
 - Can be anywhere from 1 week to 2 months
 - Data can be compromised causing delay

InfoSession Example

*Summary



- Today we learned:
 - ▣ Why we collect stats and some of the things they can tell us
 - ▣ How they are currently managed here
 - ▣ Examples of:
 - “Classic” stats – how much is it used and what is the cost
 - What Turnaways can tell us
 - Popular routes of access
 - Popular resources accessed

Collection Development



- Integration
 - Use with renewals
 - Serials Review
- Criteria
- General Analysis
- ERM/SUSHI Reports
- Detailed Provider Package Analysis

Criteria



- 2-3 years of usage data
- 10% inflation rate
- ILL service cost

Statistics Integration Example 1



- General Analysis
 - ▣ Looking at numbers in the COUNTER Reports
 - Is 25 uses a month a lot?
 - Each title looked at individually at renewal
- E-Books Package
 - ▣ Analyzing the value of packages vs. title

Statistics Integration Example 2



- Cost Per Use report using the ERM & SUSHI
 - ▣ The library's ERM sends the request via SOAP to the SUSHI server at the content providers site. The content provider processes the data and sends it back in XML format. The report shows up in your ERM as a spreadsheet report.
- CPU Report gives more insight about usage and makes the usage picture clearer

Cost Per Use Example

Number of Successful Full-Text Article Requests by Month and Journal

Jan-Dec 2008 CPU: \$17.23

Jan-Dec 2008 Cost: \$4,755.70

Jan-Dec 2008 Usage: 276

Title	ISSN1	Online ISSN	2008 CPU	2008 Use
Biology Letters	1744-9561	1744-957X	\$43.70	17
Notes And Records Of The Royal Society	0035-9149	1743-0178	\$181.03	3
Notes And Records Of The Royal Society Of London (1938-1996)	0035-9149	no data	\$210.96	1
Philosophical Transactions Of The Royal Society A: Mathematical Physical And Engineering Sciences	1364-503X	1471-2962	\$13.24	41
Philosophical Transactions Of The Royal Society B: Biological Sciences	0962-8436	1471-2970	\$3.77	144
Philosophical Transactions: Biological Sciences (1990-1996)	0962-8436	no data	\$543.11	0
Philosophical Transactions: Mathematical Physical And Engineering Sciences (1996)	1364-503x	no data	\$543.11	0
Proceedings Of The Royal Society A: Mathematical Physical And Engineering Sciences	1364-5021	1471-2946	\$33.94	16
Proceedings Of The Royal Society B: Biological Sciences	0962-8452	1471-2954	\$10.05	54
Proceedings: Biological Sciences (1990-1996)	0962-8452	no data	\$0.00	0
Proceedings: Mathematical Physical And Engineering Sciences (1996)	1364-5021	no data	\$0.00	0
Totals			\$17.23	276

Statistics Integration Example 3



- Provider Detailed Analysis
 - Timeframe: about 4 months
 - Why – thinking there might be overlap
 - Possible duplicate payment?
 - Cancel Packages?
 - Can we rely on our Link Resolver?
 - Spreadsheet with duplicates, subscription information, cost information, statistics

Spreadsheet #1

Serials So	Journal Title	ISSN	Sub start	Where we have access	Publisher	Is it in AGG?	Curr sub?	Price	Check	2007	2008	2008 cpu
ssj000032	AORN journal	0001-2092	1/1/1995	Journals@Ovid Nursing Collection 1	OVID		Current		Check stat	No Ovid	188	
			1/1/1995	Journals@Ovid Ovid Full Text	OVID		Current				188 (43)	2.48
			1/1/1996	Health and Wellness Resource Center (with Alte	Aggregator	Current			108			
			1/1/1998	ProQuest Research Library	Aggregator	Current			No Proque	178		
ssj000448	Diabetes care	0149-5992	1/1/1995	Journals@Ovid Biomedical Collection	OVID		Current		check stat	No Ovid		
			1/1/1995	Journals@Ovid Ovid Full Text	OVID		Current				470 (51)	2.07
			8/1/1999	Academic OneFile	Aggregator	Current	get stats	327				
			8/1/1999	Health and Wellness Resource Center (with Alte	Aggregator	Current						
			8/1/1999	Health Reference Center Academic	Aggregator	Current						
			8/1/1999	InfoTrac OneFile	Aggregator	Current						
			7/1/1996	ProQuest Research Library	Aggregator	Current			269	245		
	Diabetes (z PRINT	s	-	0149-5992	\$XXX.00							
ssj001288	Archives of internal	0003-9926	1/1/1995	Journals@Ovid Biomedical Collection	OVID		Current		OK to CA			
ssj0012887			1/1/1995	Journals@Ovid Core Biomedical Colle	OVID		Current		OK to CA			
ssj0012887			1/1/1995	Journals@Ovid Ovid Full Text	OVID		Current		OK to CA			
ssj0012887			1960	American Medical Association Journals			Current		OK to CA			
ssj0012887			1960	HighWire Press			Current		OK to CA			
ssj0012887				AMA Onlinz PRINT				0	OK to CA			
ssj000708	Nephrology nursing	1526-744X	1/1/2004	Journals@Ovid Nursing Collection 1	OVID		Current		get stats	No Ovid	71 (28)	4.45
			2/1/2000	Academic OneFile	Aggregator	Current	get stats	46				
			2/1/2000	Health and Wellness Resource Center (with Alte	Aggregator	Current						
			2/1/2000	Health Reference Center Academic	Aggregator	Current						
			2/1/2000	InfoTrac OneFile	Aggregator	Current						
			1/1/2000	ProQuest Research Library	Aggregator	Current	get stats	64	136			
	Nephroloz PRINT	s	-	1526-744X	\$XXX.20							

Spreadsheet #2

Notes	Title -- Serial Solution info in no fill rows	LWW	Current Sw	Current S	New orde	New cost	Next steps	OID Stats 2	OID Stats
	Anesthesia and analgesia	x	PRINT	250	i	?	upgrade/need quote	938	676
	Annals of surgery	x	PRINT	200	i	?	upgrade/need quote	162	220
open access after 1 year	Arteriosclerosis, thrombosis, and vascular biology	x	PRINT	250	i	?	upgrade/need quote	76	73
open access after 1 year	Circulation	x	PRINT	200	i	?	upgrade/need quote	677	706
open access after 1 year	Circulation research	x	PRINT	250	i	?	upgrade/need quote	122	116
	Clinical obstetrics and gynecology	x	PRINT	200	i	?	upgrade/need quote-single user	311	280
MD Consult/current	Critical care medicine	x	PRINT	250			ok to cancel	1,622	1242
open access after 1 year	Hypertension	x	PRINT	200	i	?	upgrade/need quote-single user	237	180
	Journal of trauma: injury, infection, and critical care	x	PRINT	250	i	?	upgrade/need quote	1,094	900
	Medicine	x	PRINT	200	i	?	upgrade/need quote	100	76
	Obstetrical & gynecological survey	x	PRINT	250	i	?	upgrade/need quote	254	179
	Pediatric research	x	PRINT	200	i	?	upgrade/need quote		
open access after 1 year	Stroke	x	PRINT	250	i	?	upgrade/need quote - 3 users	307	402

Usage By Platform Example

title	publisher	platform	ytdtot	year	Avg
American Journal of Obstetrics & Gynecology	NA	OVID	714	2006	1983.25
American Journal of Obstetrics & Gynecology		OVID	464	2007	
American Journal of Obstetrics and Gynecology	Elsevier	ScienceDirect	3527	2006	
American Journal of Obstetrics and Gynecology	Elsevier	ScienceDirect	3228	2007	
American Journal of Psychiatry	NA	OVID	426	2006	774
American Journal of Psychiatry		OVID	287	2007	
American Journal of Psychiatry	American Psychiatric A:	ProQuest	1397	2006	
American Journal of Psychiatry	American Psychiatric A:	ProQuest	986	2007	
Annals of Internal Medicine	American College of Ph	HighWire Press	2	2006	230.1667
Annals of Internal Medicine	American College of Ph	HighWire Press	0	2007	
Annals of Internal Medicine	NA	OVID	505	2006	
Annals of Internal Medicine		OVID	642	2007	
Annals of Internal Medicine	American College of Ph	ProQuest	128	2006	
Annals of Internal Medicine	American College of Ph	ProQuest	104	2007	
Archives of Disease in Childhood	British Medical Associa	Gale	24	2007	96.33333
Archives of Disease in Childhood	BMJ Publishing Group	Ingenta	0	2007	
Archives of Disease in Childhood	NA	OVID	282	2006	
Archives of Disease in Childhood		OVID	270	2007	
Archives of Disease in Childhood	British Medical Associa	ProQuest	2	2006	
Archives of Disease in Childhood	British Medical Associa	ProQuest	0	2007	
Archives of Ophthalmology	American Medical Asso	HighWire Press	878	2006	345.625
Archives of Ophthalmology	American Medical Asso	HighWire Press	878	2006	
Archives of Ophthalmology	American Medical Asso	HighWire Press	300	2007	
Archives of Ophthalmology	American Medical Asso	HighWire Press	300	2007	
Archives of Ophthalmology	NA	OVID	127	2006	
Archives of Ophthalmology		OVID	282	2007	
Archives of Ophthalmology	American Medical Asso	ProQuest	0	2006	
Archives of Ophthalmology	American Medical Asso	ProQuest	0	2007	

What we learned



- From Doing the Detailed Analysis
 - ▣ We did have significant overlap not only within collections with the same publisher but also with other publishers
 - ▣ Publisher platforms aren't necessarily used more – aggregator platforms get good use
 - ▣ Cancelling packages is an option

What we learned Cont'd



- Trends
 - Usage totals
 - Where the usage is
- Online Behavior
 - Pub vs Agg usage
 - The e-journals are being used!
- ROI
 - Using CPU – the higher the use, the less the cost and the better value the title is

The Future @ WSU



- More InfoSessions
- Use Detailed Analysis as a template
- More package analysis – big deals
- Add to our criteria

The Future of statistics



- Downloads
- Articles
- Chapters
- Pages
- Links to graphics
- Back buttons
- Pub changes data
- Links out to web information

In Summary

Budget Cuts

ROI

- Can apply e-resource stats to print performance indicators which will model e-trends
- Plan to Integrate into Collection Development
 - ▣ Train Selectors on basics
 - ▣ Create analysis – keep as your template
- Analysis revealing other things
 - ▣ Link Resolver
 - ▣ Licensing
 - ▣ Platforms

Sources



- Evidence Base

<http://www.ebase.bcu.ac.uk/index.htm>

- E Valued <http://www.evalued.bcu.ac.uk/>

- Taylor –Roe, Usage statistics in an academic library:
some practical applications

www.oxfordjournals.org/china/news/jilltaylor_usage_statistics.ppt

- ARL Statistics and Measurement <http://www.arl.org>

Additional Sources

Tucker, Cory *Usage Statistics at UNLV Libraries Collection Assessment* University of Nevada, Las Vegas Libraries XXVIII Annual Charleston Conference, Nov. 7, 2008, Charleston, SC

International Coalition of Library Consortia (ICOLC), *Revised Guidelines for Statistical Measures of Usage of Web-Based Information Resources*, October 4, 2006

Equinox <http://equinox.dcu.ie/index.html>

Luther, Judy, White Paper on *Electronic Journal Usage Statistics*, Washington, DC: Council on Library and Information Resources, 2000. 25p., *The Journal of Academic Librarianship* Volume 27, Issue 3, , May 2001, Page 241.

Duy, Joanna, Vaughan, Liwen, *Usage data for electronic resources: A comparison between locally collected and vendor-provided statistics*, *The Journal of Academic Librarianship* Volume 29, Issue 1, , January-February 2003, Pages 16-22.

Peters, Thomas A., *What's the use? The value of e-resource usage statistics* , *New Library World*; 2002; 103, 1/2; *Research Library* Pg. 39

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