



E-Metrics: Lessons Learned from the ARL E-Metrics Project, Challenges and Opportunities

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226th American Chemical Society National Meeting

CINF Section B, Jacob K. Javits Convention Center, Room 1E20

September 8, 2003 • New York, NY



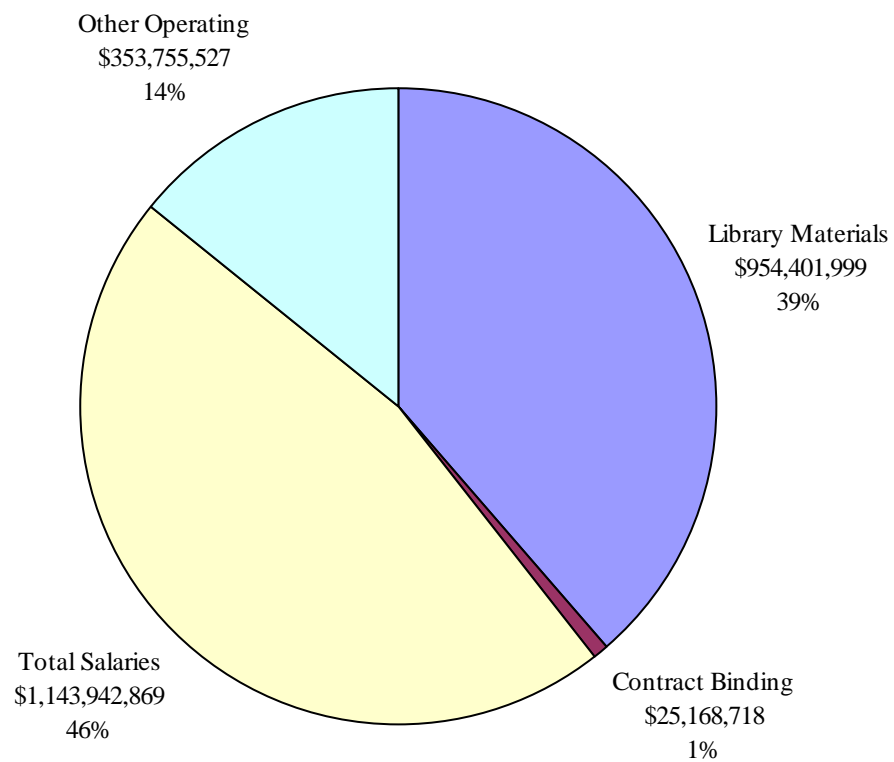
Association of Research Libraries

- Mission: Shaping and influencing factors affecting the future of Research Libraries in the process of scholarly communication
- Members: 124 major research libraries in North America
- Users: More than 3 million students and faculty served
- Service measures: 75 million circulations
17 million reference transactions
- 42,000 FTE staff employed
- Members' total expenditures are over \$3.2 billion



ARL Library Expenditures 2001-02

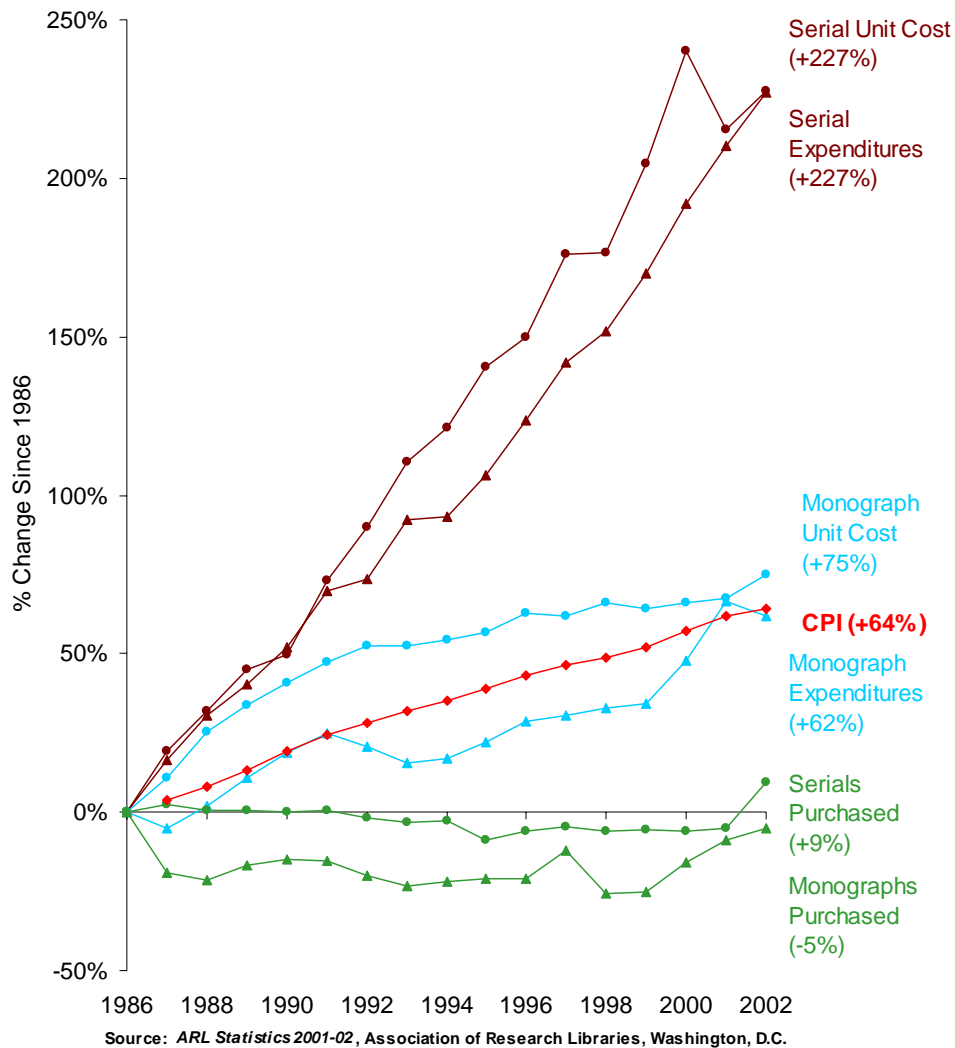
114 ARL University Libraries





Graph 2
 Monograph and Serial Costs
 in ARL Libraries, 1986-2002

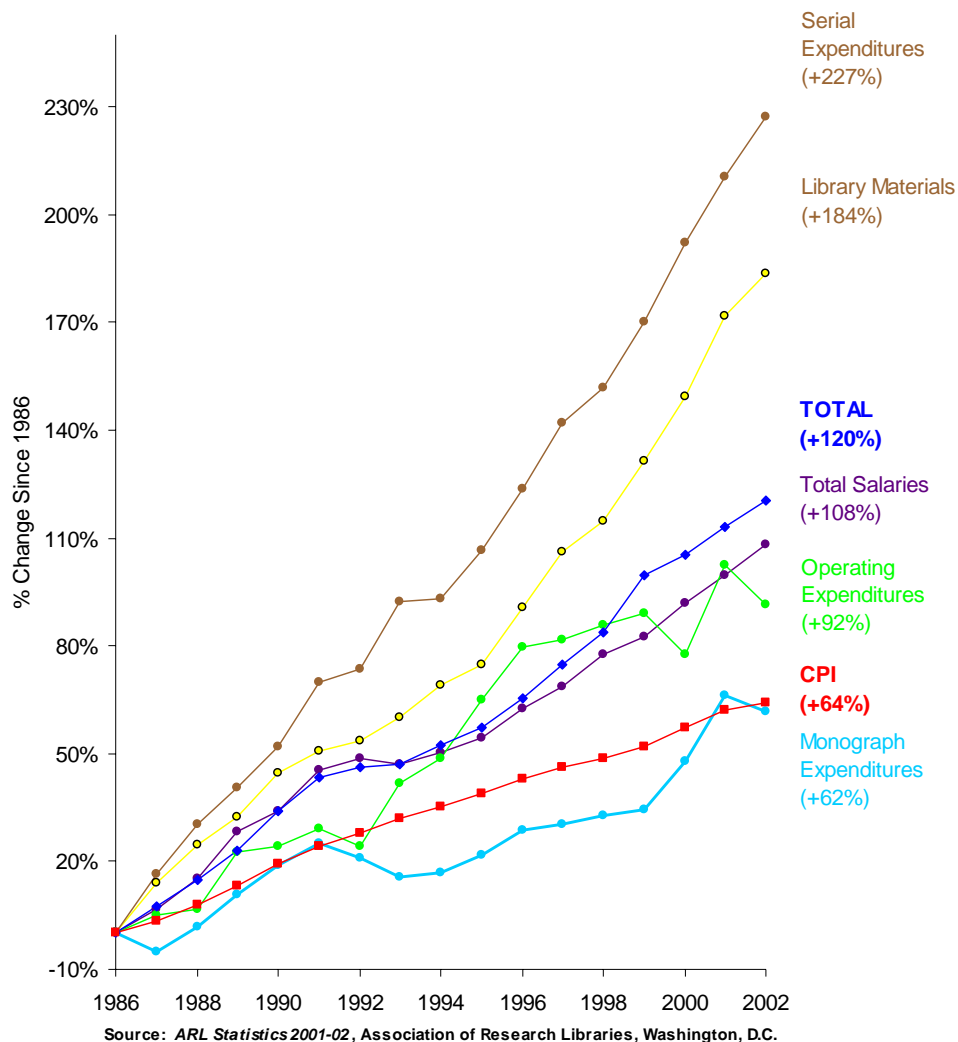
	Avg. Annual % Change
Serial Unit Cost	7.7%
Serial Expenditures	7.7%
Serials Purchased	0.6%
Monograph Unit Cost	3.6%
Monograph Expenditures	3.1%
Monographs Purchased	-0.3%
CPI	3.2%





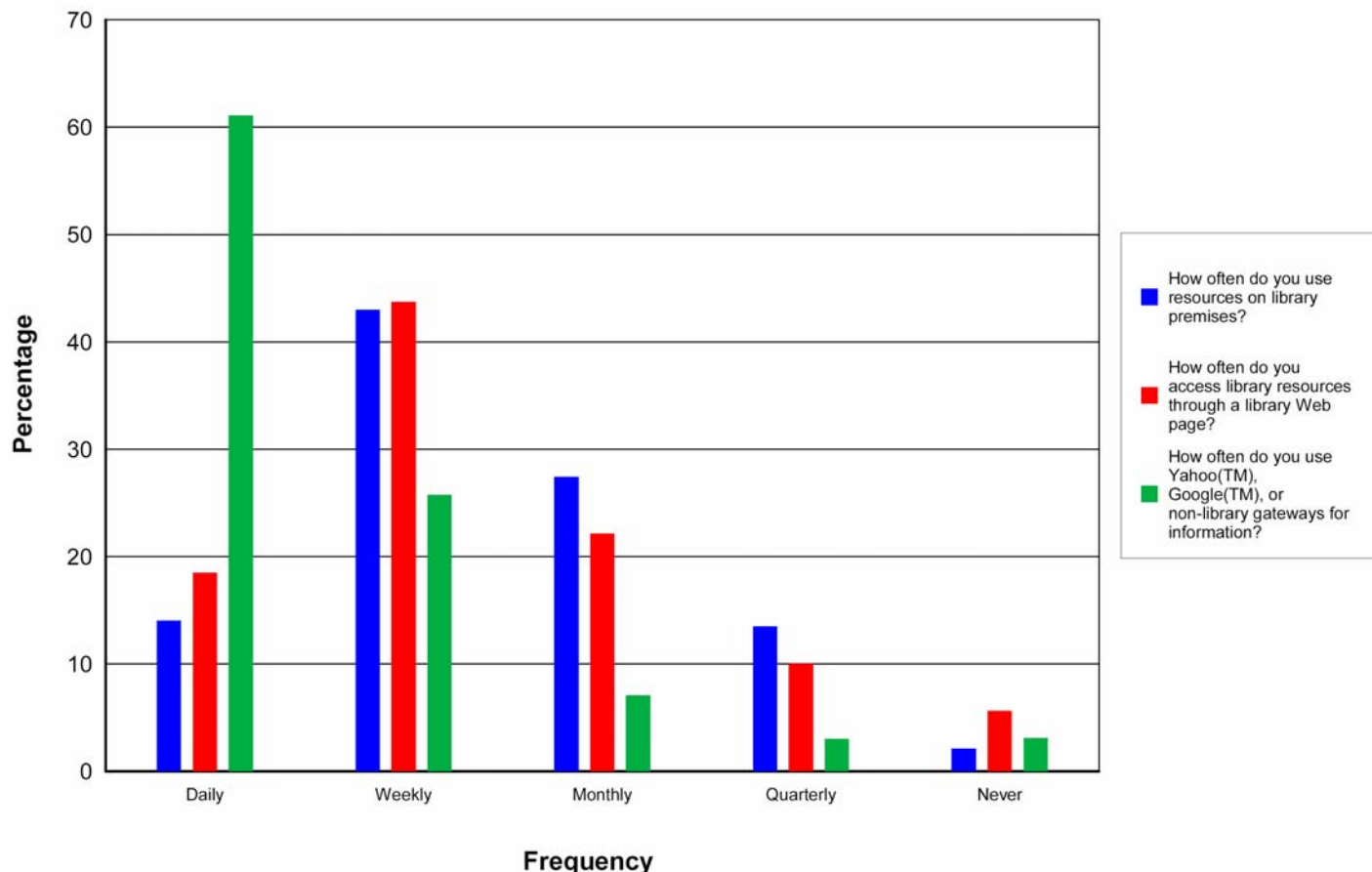
Graph 4
**Expenditure Trends
 in ARL Libraries, 1986-2002**

	Avg. Annual % Change
Serial Expenditures	7.7%
Monograph Expenditures	3.1%
Total Materials Expenditures	6.7%
Total Salary Expenditures	4.7%
Operating Expenditures	4.2%
Total Library Expenditures	5.1%
CPI	3.2%





LibQUAL+™ 2003 Colleges or Universities – Library Use





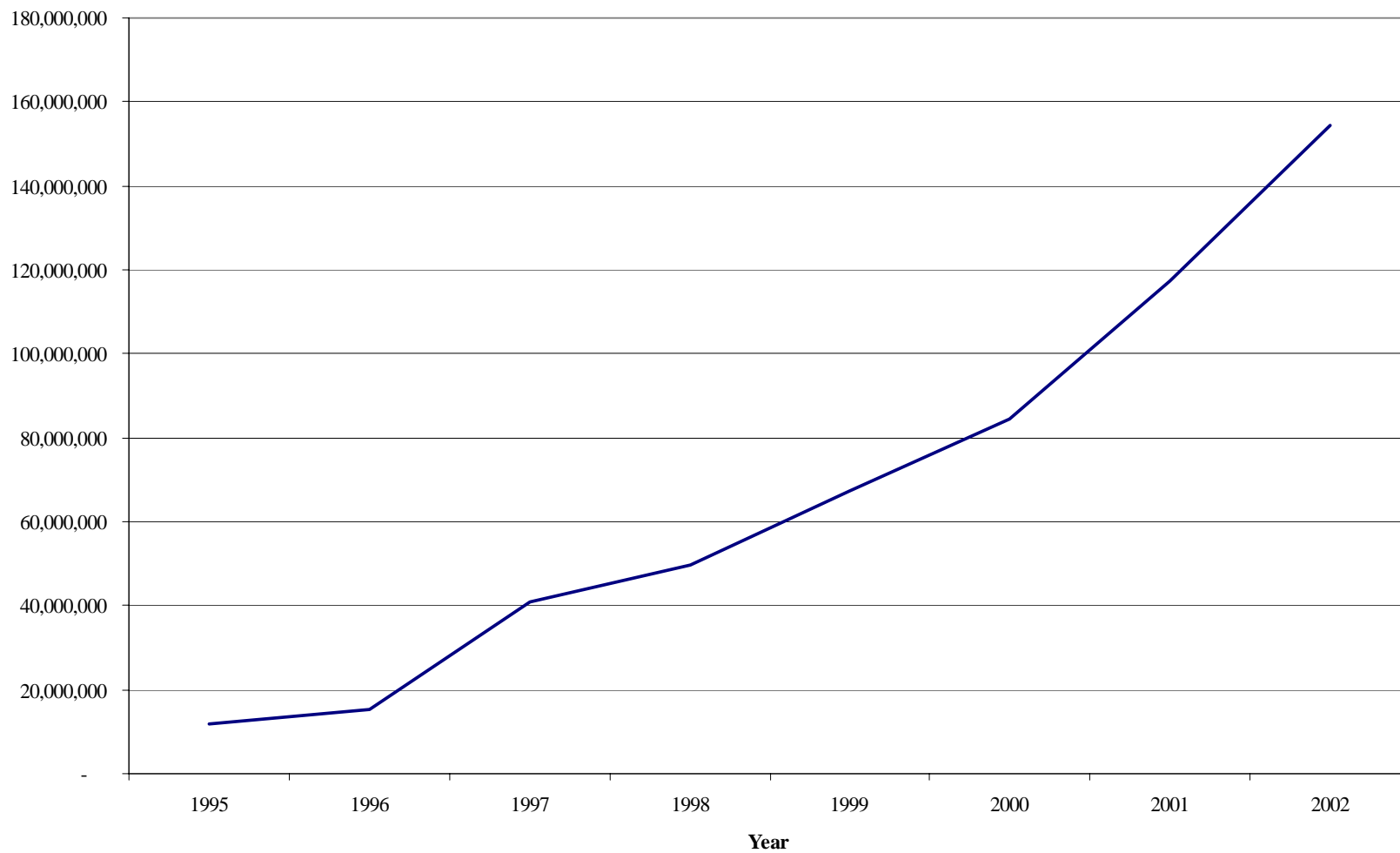
Expenditures for Electronic Resources

19.54%

of the library materials budget

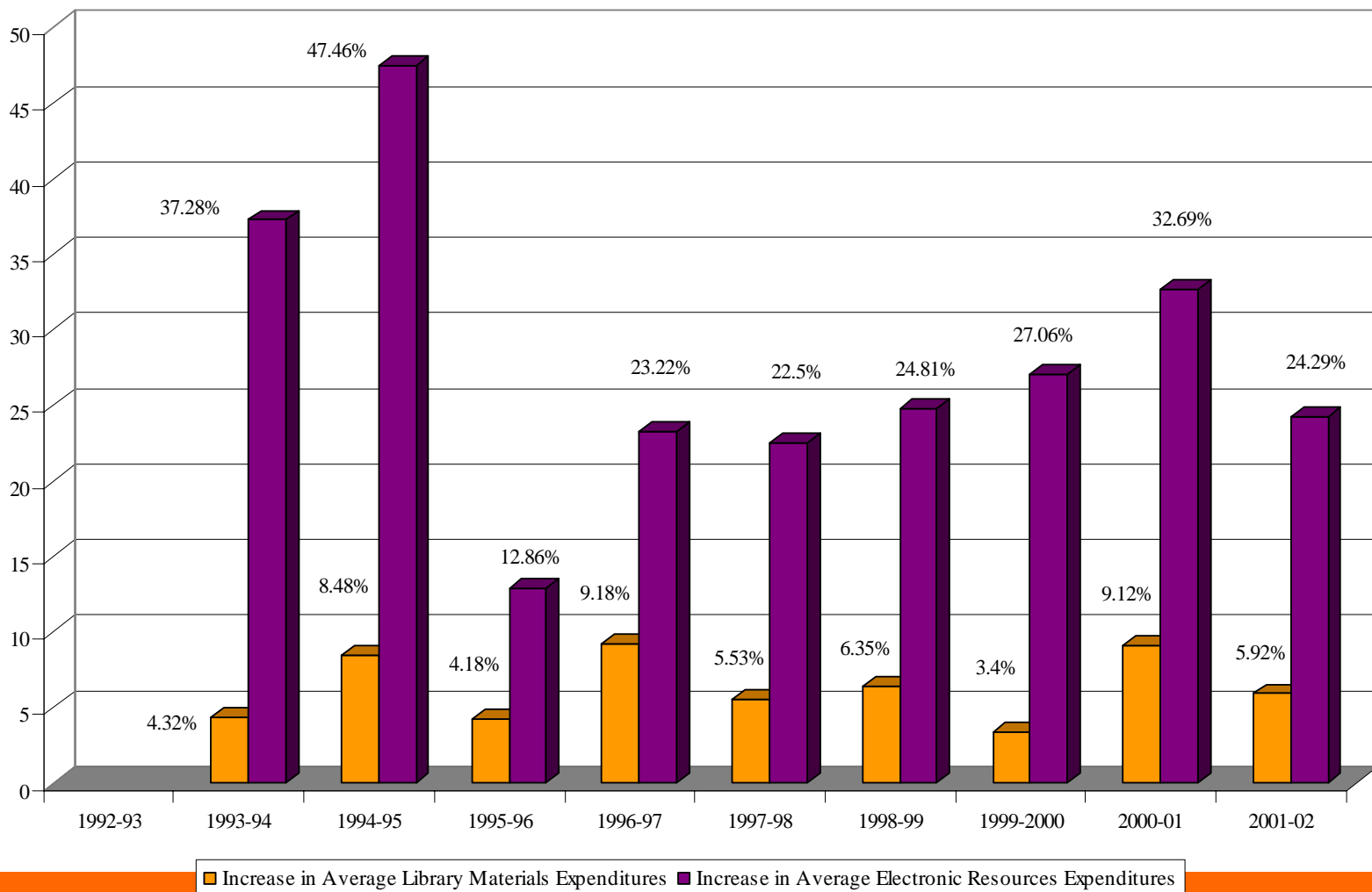


Total Electronic Serials Expenditures, 1995-2002





Yearly Increases in Average Electronic Resources and Total Library Materials Expenditures



■ Increase in Average Library Materials Expenditures ■ Increase in Average Electronic Resources Expenditures



Developing measures and evaluation techniques for networked services will take time, effort, and on-going learning on everyone's part – but we must begin now.

***(Carla Stoffle,
University of Arizona)***

We not only need to measure things in new ways but we also need to measure new things.

***(Sherrie Schmidt, Arizona
State University)***



Data Collection

- **How/What to Collect – Sources of Data**
 - **Systems Based – OPAC, Web, Vendor Data (Canned Reports, Other Reports)**
 - **Electronic/Web Resource (costs & use)**
 - **Non-Systems (manual) Library Counts**
 - Reference Activities
 - ILL Transactions
 - Document Delivery
 - Turnstile Counts
 - Other Manual Counts
 - **Qualitative Data Sources (Surveys, Focus Groups, Process Analysis)**



Data Examples

ERL Statistics - November 2001 - Logins & Rejected Logins

Logins & Rejected Logins by Database Family ID and ERL User Group

db	Data	Total	UG	UW	WLU	Other	
BI	Logins	1854	1854	0	0	0	Biological Abs., 1998-
	Rejected Logins	2	2	0	0	0	
BN	Logins	314	0	153	161	0	Bibl. of Native North Americans
	Rejected Logins	0	0	0	0	0	
BP	Logins	3174	1720	637	817	0	CBCA FT Business
	Rejected Logins	0	0	0	0	0	
BX	Logins	3025	3025	0	0	0	Biological Abs., 1980-97
	Rejected Logins	9	9	0	0	0	
CB	Logins	3429	1685	825	919	0	CBCA FT Reference
	Rejected Logins	0	0	0	0	0	
FS	Logins	651	649	0	0	2	FSTA Abs.
	Rejected Logins	6	6	0	0	0	
GG	Logins	4097	2197	976	924	0	Geography
	Rejected Logins	367	151	84	132	0	
HG	Logins	5330	2962	1194	1174	0	Humanities Abs.
	Rejected Logins	600	342	120	138	0	
J0	Logins	135	0	135	0	0	Criminal Justice Abs.
	Rejected Logins	20	0	20	0	0	
M9	Logins	3369	2095	653	621	0	Canadian Research Index
	Rejected Logins	73	48	15	10	0	
MB	Logins	3354	1700	890	764	0	MLA Bibl.
	Rejected Logins	105	80	17	8	0	
MLAD	Logins	1764	1035	429	300	0	MLA Bibl. Directory of Periodicals
	Rejected Logins	37	24	8	5	0	
PHIL	Logins	1291	973	318	0	0	Philosopher's Index
	Rejected Logins	22	22	0	0	0	
SA	Logins	397	0	0	397	0	General Science Abs.
	Rejected Logins	3	0	0	3	0	
SP	Logins	705	0	351	354	0	Sport Discus
	Rejected Logins	20	0	7	13	0	
TQ	Logins	436	0	348	88	0	TourCD
	Rejected Logins	0	0	0	0	0	
W6	Logins	1207	1207	0	0	0	Readers' Guide Abs.
	Rejected Logins	56	56	0	0	0	
WX	Logins	2048	1316	368	364	0	Art Index
	Rejected Logins	332	225	48	61	0	
X2	Logins	7931	4222	1668	2043	0	Social Science Abs.
	Rejected Logins	46	24	10	12	0	
YB	Logins	532	314	104	114	0	Mental Measurements Yearbook
	Rejected Logins	3	2	0	1	0	
Z0	Logins	748	748	0	0	0	Zoological Record
	Rejected Logins	4	4	0	0	0	
Total Logins		45791	27702	9047	9040	2	
Total Rejected Logins		1705	995	327	383	0	

Source: TUG (Tri-University Group of Libraries - University of Guelph, Wilfrid Laurier University & University of Waterloo) SilverPlatter ERL (Electronic Reference Library) Usage Statistics



Data Examples

Example – Consortia CSA Database Use Data

Network Databases 1999/2000 - TUG CSA Use											
Vendor	Database	Searches - UG	% UG	Searches - UW	% UW	Searches - WLU	% WLU	Searches - Remote	% Remote	CSA Total	% Total Use
Biological Sciences											
CSA	Biological Sciences	206,318	78.1%	46,398	17.6%	2,691	1.0%	8,701	3.3%	264,108	21.7%
CSA	Biological Digest	134,607	80.2%	26,175	15.6%	2,019	1.2%	5,021	3.0%	167,822	13.8%
CSA	MEDLINE	112,601	72.3%	32,489	20.9%	3,812	2.4%	6,814	4.4%	155,716	12.8%
CSA	Plant Science	46,245	76.8%	11,230	18.6%	907	1.5%	1,871	3.1%	60,253	4.9%
CSA	Recent References Related to Your Search (New)	213,480	74.7%	58,422	20.4%	5,310	1.9%	8,663	3.0%	285,875	23.4%
CSA	Web Resources Related to Your Search (New)	213,578	74.7%	58,533	20.5%	5,317	1.9%	8,667	3.0%	286,095	23.5%
	Total	926,829	76.0%	233,247	19.1%	20,056	1.6%	39,737	3.3%	1,219,869	64.8%
Environmental Sciences & Pollution Mgmt. Collection											
CSA	Conference Papers Index	35,616	71.7%	11,241	22.6%	801	1.6%	2,000	4.0%	49,658	16.8%
CSA	Environmental Engineering Abstracts	17	60.7%	2	7.1%	0	0.0%	9	32.1%	28	0.0%
CSA	Environmental Sciences & Pollution Mgmt.	123,006	67.4%	49,744	27.3%	2,572	1.4%	7,214	4.0%	182,536	61.7%
CSA	Risk Abstracts	0	0.0%	1	14.3%	0	0.0%	6	85.7%	7	0.0%
CSA	TOXLINE	47,809	75.0%	13,240	20.8%	728	1.1%	1,953	3.1%	63,730	21.5%
	Total	206,448	69.8%	74,228	25.1%	4,101	1.4%	11,182	3.8%	295,959	15.7%
Sociological Abstracts Collection											
CSA	ERIC	37,085	72.4%	10,361	20.2%	2,128	4.2%	1,678	3.3%	51,252	13.9%
CSA	Sociological Abstracts	36,169	59.6%	15,095	24.9%	7,408	12.2%	2,030	3.3%	60,702	16.5%
CSA	Social Services Abstracts	57,075	73.4%	8,954	11.5%	8,479	10.9%	3,285	4.2%	77,793	21.2%
CSA	Recent References Related to the Social Sciences (New)	57,075	64.1%	20,148	22.6%	8,479	9.5%	3,285	3.7%	88,987	24.2%
CSA	Web Resources Related to the Social Sciences (New)	57,075	64.1%	20,148	22.6%	8,479	9.5%	3,285	3.7%	88,987	24.2%
	Total	244,479	66.5%	74,706	20.3%	34,973	9.5%	13,563	3.7%	367,721	19.5%
CSA	Grand Total	1,377,756	73.1%	382,181	20.3%	59,130	3.1%	64,482	3.4%	1,883,549	

Source: TUG (Tri-University Group of Libraries - University of Guelph, Wilfrid Laurier University & University of Waterloo) CSA (Cambridge Scientific Abstracts) Usage Statistics



Recommended Statistics & Measures

- **Patron Accessible Electronic Resources (R1-3)**
- **Use of Networked Resources & Services (U1-5)**
- **Expenditures for Networked Resources & Related Infrastructure (C1-3)**
- **Library Digitization Activities (D1-3)**



Patron Accessible Electronic Resources

- **R1 – Number of electronic full-text journals**
- **R2 – Number of electronic reference sources**
- **R3 – Number of electronic books**



Use of Networked Resources & Related Infrastructure

- **U1 – Number of electronic reference transactions**
- **U2 – Number of logins (sessions) to electronic databases**
- **U3 – Number of queries (searches) in electronic databases**
- **U4 – Items requested in electronic databases**
- **U5 – Virtual visits to library's website and catalog**



Expenditures for Networked Resources & Related Infrastructure

- **C1 – Cost of electronic full-text journals**
- **C2 – Cost of electronic reference sources**
- **C3 – Cost of electronic books**
- **C4 – Library expenditures for bibliographic utilities, networks & consortia**
- **C5 – External expenditures for bibliographic utilities, networks & consortia**



Library Digitization Activities

- **D1 – Size of library digital collection**
- **D2 – Use of library digital collection**
- **D3 – Cost of digital collection construction & management**

(Collecting these data requires staff familiar with the digital environment.)

The E-Metrics Assessment Implementation Loop





**Preparation for Assessing
Network Services is as
Important as the
Assessment Itself !**



Mind the Gap

Mine the Gap



Thank you
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