



Library Connect
Partnering with the Library Community

What Counts and What Doesn't: An Insider's Guide to Usage Reports

CONTENTS

- Page 2* Introductory Comments
- Page 3* Usage Statistics and How We're Using Them:
The Example of Glasgow University
- Pages 4-5* Usage Statistics at Hong Kong University:
From Fun to Fundamental in Just a Few Years
- Page 6* COUNTER Data: Expanding Horizons for
Librarians and Users
- Page 7* How Elsevier Uses Usage Information:
The Inside Scoop
- Pages 8-9* How COUNTER Continues to Help Librarians
and Vendors Make Sense of Usage Reports
- Pages 10-11* How Elsevier Usage Reports Have Progressed:
From First Practice to Best Practice
- Pages 12-13* Why Librarians Love and Loathe Usage Statistics;
Results of Interviews with University Librarians
- Page 14* Referrers, or Where Do Users Come from
When Entering ScienceDirect?
- Page 15* Most Frequently Asked Questions About
Elsevier Usage Reports
- Page 16* Additional Resources

Guest Editor

MARTHYN BORGHUIS

Senior Manager, Elsevier Usage Research Department

Produced by

**Library Connect, in Collaboration with
the Elsevier Usage Research Department**

2005

Library Connect Editorial Office

ELSEVIER

525 B Street, Suite 1900

San Diego, CA 92101, USA

Phone: +1.619.699.6379

libraryconnect@elsevier.com



Marthyn Borghuis

Dear Colleagues,

Usage reports, like many aspects of how we collectively make available scholarly information, remain a hot topic. They also offer a success story – one of rapid progress and improvement, and one demonstrating how collaboration and technology can yield positive results.

The early 1980s brought establishment of arXiv, the physics and mathematics preprint archives conducting consistent usage analysis of electronically published articles. At Elsevier, the first e-journal usage analyses date back to 1995-1996 as part of the TULIP project. TULIP was set up in such a way that users could be distinguished by type (faculty, library staff and (under)graduates), which was really a luxury and provided insight into variations in behavior of these user groups. More on TULIP appears at www.elsevier.com/locate/tulip

Since then, librarians and publishers have come a long way. Though at moments or from a certain perspective it may seem as if real impacts of usage analysis on key library functions remain in an early phase of development, we can see definitive progress.

Librarians are starting to set up systems that can handle detailed usage data from various vendors. Since the advent of COUNTER, librarians may be relying more on the comparability of usage data and usage reports provided by vendors. Today there is less inconsistency among usage reports provided by vendors, and more confidence that we're keeping straight our apples and oranges. A growing number of librarians complement vendor-provided usage reports with usage data gathered locally from library systems and OPACs and so optimize knowledge about collections and their use.

Publishers apply usage data to meet librarians' and researchers' needs quickly and well, and to improve business. Usage has gained an established reputation amidst other journal performance indicators such as manuscript inflow, citations and revenues. Marketing most-used research articles is appreciated by the research community. Understanding usage across a customer's journal collection can help sales representatives provide informed consultations, to ensure a customer's real needs are met. Usage analysis can also inform understanding of effectiveness of a publisher's e-journal platform, and assist developers seeking to improve the platform. Because usage reports offer real value to various parties, vendors continue to invest in better and faster usage-analysis systems and reports.

Now, for the first time in history, librarians and publishers are able to share the same usage information. What is more, both parties are better equipped to agree on the relevance and attractiveness of e-resource collections they subscribe to or produce.

This brief publication presents snapshots of how librarians and publishers are using electronic usage reports. These stories may inspire or inform you, as you seek to apply usage reports within your library or institute.

As you browse this pamphlet, you will find stories by librarians as well as by Elsevier representatives. Library staff may already be familiar with ScienceDirect and Scopus usage reports, provided by Elsevier and discussed in this pamphlet. These reports – reflecting holdings of particular institutes – are available to representatives of licensed institutes. If you would like to learn more about Elsevier's customer usage reports, please contact an Elsevier account manager or account development manager – or visit the Elsevier customer usage reporting site at <http://usagereports.elsevier.com>

I wish you happy reading!

Regards,

Marthyn Borghuis, Senior Manager, Elsevier Usage Research Department, Elsevier, Amsterdam, The Netherlands

Marthyn Borghuis serves as a senior manager for the Elsevier Usage Research Department, which he founded in 1999. His research specialties are performance measurement, user navigation analysis and library usage research. He has represented Elsevier on the COUNTER Executive Committee since the start of COUNTER in March 2002. Before joining Elsevier in 1989, Borghuis worked as a subject librarian in the Faculty of Social Sciences at the State University Groningen, in the Netherlands. Borghuis earned his master's degree in social sciences at the same university.

Usage Statistics and How We're Using Them: The Example of Glasgow University

By Tony Kidd, Head of Finance/Serials/Document Delivery,
Glasgow University Library, Glasgow, UK

The provision of usage statistics for electronic journals is potentially revolutionizing collection management practices within research libraries worldwide. Until recently, the absence of any international standards, or even conventions, on how to measure usage or how to present such statistics as are available has presented a serious barrier to sustained analysis of comparative statistics. This has acted as a major disincentive to library staff to invest the large amount of time necessary to obtain the most benefit from comparative statistics. The growing adoption of COUNTER standards is rapidly changing this situation. [For more on COUNTER, see pages 8 and 9.]

What We're Doing Now, and Challenges Before Us

Locally, at Glasgow University Library we now systematically collect and retain e-journal statistics from as many publishers as possible. Our aim is to use the information we collate to influence collection management decisions, but this is not as simple or straightforward as might first appear to be the case. At Glasgow, we allocate funds to each faculty (e.g., medicine or social sciences), which is then responsible for its own journal subscriptions. Faculties vary as to how much they wish to take account of hard statistical evidence presented to them, as opposed to the academics' "gut feelings" on which journals are essential to their research and teaching.

Even after taking account of different numbers of staff and students, usage also varies considerably from one subject area to another. If we took account of nothing but raw statistics, we would subscribe to a great many biomedical and life science journals, and relatively few in the wide variety of other fields covered at Glasgow. Table 1 shows comparative usage by faculty for the calendar year 2004.

Faculty	2004 E-access
Arts	3.3%
Biomedical & Life Sciences	29.3%
Clinical Medicine	24.8%
Dental	1.0%
Education	0.2%
Engineering	6.1%
Information & Math Sciences	3.4%
Law & Financial Studies	2.4%
Physical Sciences	13.9%
Social Sciences	10.3%
Veterinary Medicine	5.3%

Table 1: E-journal Use by Faculty, University of Glasgow

There is also a difference in reliance on online as opposed to print access. Staff and students in engineering or physics, for example, rely almost entirely on

e-journals, while on the arts side there is still considerable consultation of print journals (where use is of course almost impossible to measure).

Another factor is variation in use for particular journals year by year. This is partly a natural reflection of changes in research and teaching (and therefore useful information), but there also appears to be a more random element. So we try to have at least three years of data available for decision making, unless we know that for instance a particular department is closing down.

Finally, we would very much like to know more about patterns of use, in particular whether usage concentrates on articles from the last six or twelve months, or is spread more widely. Very few publishers provide this level of detail, and it is not (yet) part of COUNTER standards. However this level of detail is very relevant when considering subscriptions where for example there is free access after six or twelve months, and also when considering whether backfile purchase would be a suitable investment.

What We'd Really Prefer to Do, and the Way Ahead

There is of course a theoretical question as to the "quality" of use represented by a full-text article download. What we really would like to measure is the impact of journal subscriptions, and that is beginning to be examined – but the number of full-text article downloads must be regarded as at least an initial proxy for this. It is also relevant whether a few individual



Shona Russell (front) and Laura Galloway at Glasgow University Library work with usage statistics. Photo by Tony Kidd.

articles are accessed many times, or whether use is more diffuse – and some publishers can provide, e.g., the number of unique articles accessed. But again overall use is the most important figure.

Having obtained usage figures, and taking due account of different levels of use in different

subject areas, we then look at the costs involved, whether overall costs for package deals or individual subscriptions, to try to obtain some cost-benefit evidence. We are now doing this much more systematically, and beginning to present the results to Faculty Library Committees. Although this is only one factor to be taken into account, we are starting to base more of our decisions, given limited resources, on hard evidence of this nature. It does emphasize again differences between "big deals" and individual subscriptions; perhaps we are getting closer to the stage where we have enough evidence to think more closely once more about moving away from packages back towards more individual subscriptions.

Why Staff Structures Are Important

A final point that I wish to mention here is the implication of usage statistics on staff structures within the library. The management of e-journals, in its various aspects, has of course been absorbing more, and more senior (and expensive), staff time within libraries, and usage information is an integral and important part of this. On the one hand, there is far more information now requiring much time to analyze; on the other hand, the adoption of COUNTER standards will make this easier. At Glasgow, there is now a staff member at senior library assistant level who spends a large proportion of her time collecting and assembling usage statistics. In the medium term, there will not be so much analysis work by high-level staff, but decisions based on this analysis will still of course be a professional matter.

In sum, usage statistics are now an integral part of our professional life, and will continue to grow more important as they become both ubiquitous and standardized. ■

QUICK LINKS

- Glasgow University Library: www.lib.gla.ac.uk
- Kollöffel, J., & Kaandorp, A. (2003). Developing a cost/benefit financial model for hybrid libraries. *Serials*, 16(1), 41-49: www.info.sciencedirect.com/licensing_options/library_costbenefit.pdf

Usage Statistics at Hong Kong University: From Fun to Fundamental in Just a Few Years

By Dr. Anthony Ferguson, University Librarian, and Gayle Rosemary Y. C. Chan, Collection Development Librarian, University of Hong Kong Libraries (HKUL), Hong Kong

Have e-resource usage reports affected budgeting, staffing and marketing decisions at the University of Hong Kong Libraries? The simple answer is: yes and no.

If the question is “Do e-resources themselves affect our budgeting, staffing and marketing decisions?” the answer is a resounding YES. Why the difference?

The Early Role for Usage Statistics at HKUL

In the past, prior to 2002, due to our patrons’ overwhelming desire for digital resources, the focus of our efforts was to create a critical mass of digital materials. Usage statistics were not used for budget or staffing purposes but were largely used to help guide marketing the continued buildup of our digital collections.

Nonetheless, our collection development department occasionally did use the data for other purposes. These included the following:

- Monitoring user acceptance by looking at session and search statistics.
- Proposing database cancellations or promotion based upon the same statistics.
- Reviewing the need for previously unsubscribed titles included in “big deals.”
- Talking about how costs – based on use – could be shared among members of our local consortium.
- Looking at what netLibrary books were used and so figuring out what else to buy.

“The point is, what certain usage statistics mean is not all that clear, and the use of these statistics is still an art more than a science.”

Comparisons of Usage Statistics at HKUL

Because of past doubts in the reliability of usage statistics, our use of them for budgetary or staffing purposes has continued to be limited. This doubt has come from the variance between our own data and statistics supplied by vendors. The table below gives a snapshot of such variance during 2003 and 2004. The acronyms (e.g., JR1) in the COUNTER-compliant row refer to COUNTER-defined usage reports.

A lack of consistent definition is perhaps one reason for wide discrepancies that can result between locally generated and vendor-supplied data for numbers of sessions or searches. In other words, how are vendors and our library defining “session” or “search”? The fact that our users not only use our library website to find what they want, but also go to a particular resource through its direct URL or via other links or sites, explains the sometimes wide differences between local and vendor-supplied usage reports. Variance of as much as over 200%, such as we encountered in the cases of ISI Web of Knowledge and Synergy, can have significant implication on the cost per login. If our goal were to demonstrate increased user demand or acceptance and lower cost per login, then a higher session count for ISI would be desirable. Though it’s difficult to decide which set of data to go by, we will certainly be inclined to use the data discretely to our advantage.

A further challenge is that even if differences in session statistics could be resolved, it is not clear what these statistics really mean. If our users only downloaded 187 items from ebrary, does that mean ebrary is a failure? What does it mean if the 1.4 session-to-download ratio for Academic Search Premier (ASP) is lower than ScienceDirect’s 3.4? Does it really mean ScienceDirect is twice as good as ASP? When the sizes of databases are radically different, can we compare such ratios without taking time to adjust statistics to account for volume of database contents?

(Continued on page 5)

Table 1: E-resources Usage Statistics Sampling – Local Versus Vendor

	E-RESOURCES	LOCAL	VENDORS			
	Usage Period: July 2003 to June 2004	Sessions	Sessions	Searches	Turnaways	FT Downloads
Primary Publishers	COUNTER-COMPLIANT		(DB3)**	(DB3/JR4)**	(JR2)**	(JR1)**
	ACS Online	14,235		29,593		102,926
	Emerald Fulltext	25,920	36,715			19,896
	Oxford Journals	12,658		12,660		46,868
	ScienceDirect	123,748	195,897	121,558		418,110
	Synergy	21,417	52,140	27,117		83,893
	NON-COUNTER-COMPLIANT					
	CSA	79,960	45,624	59,153		
Aggregator Databases	COUNTER-COMPLIANT		(DB1)**	(DB1)**	(DB2)**	(JR1)**
	Academic Search Premier	133,897		226,228	17	189,524
	ISI Web of Knowledge	37,739	82,929		588	
	ProQuest	173,857	229,182	5,479,407		364,191
	NON-COUNTER-COMPLIANT					
	ebrary	25,920	36,715			19,896
	JSTOR	42,688		30,790		42,093
Ovid	84,703	167,573	284,611		105,714	

The above sampling was selected from 141 e-resources (40% of the library’s 350 subscribed) for which usage statistics are provided by vendors, including 31 COUNTER-compliant ones. Our library currently tracks local usage for about 100 e-resources only.

** COUNTER-compliant statistics are extracted from vendor-provided usage reports prescribed by the COUNTER Code of Practice.

The acronyms (e.g., DB3 and JR1) refer to COUNTER-defined usage reports (www.projectcounter.org/code_practice.html).

Examination of Usage Statistics at HKUL

One helpful measure of use is the number of full-text downloads from which we may derive the cost per article. COUNTER recognizes full-text download as mandatory for electronic-journal reporting in its Code of Practice.¹ However, there are still relatively few COUNTER-compliant vendors; 48 are listed currently.² It is hoped COUNTER will work with more vendors to increase vendor-generated usage statistics. At the University of Hong Kong Libraries, we have conducted a study showing that of our 350 subscribed electronic resources, only 141 entail vendor-provided usage statistics – and that of these 141 vendors, only 31 are COUNTER-compliant. If our library could rely on more vendors for usage statistics conforming to some standards, such as the COUNTER Code of Practice, we could make renewal decisions based on consistent comparison across all e-resources. Nevertheless, other than quantitative usage statistics, our library would also need to consider other qualitative measures for assessment, such as faculty's perception of the research value of the resources.

A Maturing Role for Usage Statistics at HKUL

Because of funding cuts and the need to show accountability for expenditures, our university is experiencing a growing need for quantitative usage statistics. With overlapping e-journal subscriptions in multiple packages, with thousands of e-books in our collections, with the consolidation of our electronic-resource funds into a single shared budget overseen by a faculty advisory committee, and with flat budgets at best and cuts at worst staring us in the face, usage statistics are becoming more important to us.

To reduce expenses, we need to eliminate duplication wherever possible and we need to decide for which subjects we need duplicate print and online monographs. Add to these two needs for usage statistics our requirement to demonstrate to our faculty committee what they are getting for their investment, and it's apparent why statistics are increasingly important. While the initial e-resource collection-building motto might have been "Build it and they will come," now our watchword is becoming "Unless it is used, consider cutting it." Consequently, we have assigned a clerk to gather these statistics and our digital resources coordinator spends quite a bit of her time examining them.

To summarize, in the past usage statistics only minimally affected our budgeting, staffing and marketing decisions. Now, however, because we need this data to help us make better informed decisions about our resources and to convey the benefits of dollars invested in these resources, usage statistics are increasingly performing a role in driving collection development and service decisions. ■

Notes

¹ COUNTER, 2002, "Release 1 of the COUNTER Code of Practice," www.projectcounter.org/codeofpractice.pdf;
COUNTER, 2004, "Release 2 of the COUNTER Code of Practice (Draft)," www.projectcounter.org/code_of_practice_release_2.pdf

² COUNTER, 2004, "Register of vendors providing COUNTER-compliant usage reports," www.projectcounter.org/articles.html

READERS

Readers Who Like This Pamphlet May Like These ScienceDirect Articles, Too

- Brown, L. A. (2003). Useful or useless use statistics? A summary of conference presentations on usage data from the 22nd Annual Charleston Conference, issues in book and serial acquisition. *Serials Review*, 29(2), 145-150. DOI: 10.1016/S0098-7913(03)00048-0
- Enssle, H. R., & Wilde, M. L. (2002). So you have to cancel journals? Statistics that help. *Library Collections, Acquisitions, & Technical Services*, 26(3), 259-281. DOI: 10.1016/S1464-9055(02)00254-3
- Foster, C., Okerson, A., Dorn, K., Jones, D., Klemperer, K., & Tonkery, D. (2003). International Coalition of Library Consortia statement of current perspective and preferred practices for the selection and purchase of electronic information: "Update No. 1" and reactions from the scholarly community. *Serials Review*, 29(1), 3-4. DOI: 10.1016/S0098-7913(02)00257-5
- Ginanni, K., & Keene, C. (2004). SR visits: Bringing electronic access to the Census Bureau Library. *Serials Review*, 30(4), 371-373. DOI: 10.1016/j.serrev.2004.08.001
- Langston, M. (2003). The California State University E-book Pilot Project: Implications for cooperative collection development. *Library Collections, Acquisitions, & Technical Services*, 27(1), 19-32. DOI: 10.1016/S1464-9055(02)00305-6
- Samson, S., Derry, S., & Eggleston, H. (2004). Networked resources, assessment and collection development. *The Journal of Academic Librarianship*, 30(6), 476-481. DOI: 10.1016/j.acalib.2004.07.005
- Sennyey, P., Ellern, G. D., & Newsome, N. (2002). Collection development and a long-term periodical use study: Methodology and implications. *Serials Review*, 28(1), 38-44. DOI: 10.1016/S0098-7913(01)00168-X
- Wu, C., Lee, T., & Kao, S. (2004). Knowledge discovery applied to material acquisitions for libraries. *Information Processing & Management*, 40(4), 709-725. DOI: 10.1016/j.ipm.2003.08.010
- Xin, W. (2004). Research and usage of collection level metadata in Chinese digital libraries. *The International Information & Library Review*, 36(4), 291-295. DOI: 10.1016/j.iilr.2003.10.014
- Yue, P. W., & Syring, M. L. (2004). Usage of electronic journals and their effect on interlibrary loan: A case study at the University of Nevada, Reno. *Library Collections, Acquisitions, & Technical Services*, 28(4), 420-432. DOI: 10.1016/j.lcats.2004.08.002

QUICK LINK

- Accessing Content on ScienceDirect: www.info.sciencedirect.com

info.sciencedirect.com

COUNTER Data: Expanding Horizons for Librarians and Users

By Elizabeth R. Lorbeer, Collection Development Manager, Library of Rush University Medical Center, Chicago, Illinois, USA



Elizabeth R. Lorbeer. Photo by Anthony Seaman.

A journal collection should be based on user needs and not on perceived usage or an academic ideal. Now is the time for libraries to revise or even depart from traditional collection practices and refocus on their clientele's real-time use of electronic resources.

COUNTER data can help librarians focus on how clients are using online resources. Incorporating COUNTER data into management of electronic subscriptions

can serve as an important tool in collection development. COUNTER data is non-evasive, and provides empirical evidence of journal usage and insight into how a collection may be further developed.

Building Collections Based on Actual Use

At the Library of Rush University Medical Center, in Chicago, 74% of our subscribed full-text journal collection is only available electronically. With a majority of our entire journal collection being solely online, it is vital to have access to accurate usage data.

The virtual library has developed into an established and accomplished arm of academia. But trying to understand which journals to acquire and maintain subscriptions to can be difficult in the digital world. Link-resolving software and DOI linking have expanded the possibilities for users to locate endless amounts of full-text documents. Our users annually request "more electronic journals," yet they do not voice particulars on titles. With publishers offering COUNTER-compliant data, libraries can build collections based on real-time use, justify costs and obtain usage on unsubscribed resources.

Publishers who reveal usage of unsubscribed titles provide insight on which potential subscriptions a library may want to add to its collections. In the past two years, our library has added more than 500 new journals through institutional subscriptions and bundles. Our decision to add a majority of new titles was mainly driven by non-subscribed usage data provided by COUNTER-compliant publishers.

Comparing Data Before COUNTER

Prior to Project COUNTER, comparing statistical data from various publishers was a nightmare. Each publisher measured website usage differently, often not distinguishing between abstract and full-text downloads. The library could not estimate how many times our users successfully downloaded full-text articles from subscribed journals. At that time, the library built a homegrown Oracle system to track how many times the link for a particular journal was selected from our web page. However it was unclear how our users interacted at the journal's website. Were our users opening full-text articles, reading abstracts or scanning tables of contents?

Benefiting from COUNTER

In early 2003, large commercial publishers, such as Blackwell, Elsevier, Kluwer Academic Publishers and Nature Publishing Group, began incorporating the COUNTER Code of Practice for reporting electronic journal usage. This was the first time our library was able to compare standardized

usage data of electronic resources from different publishers. By incorporating COUNTER's guidelines and practices, a growing number of publishers offered to institutional customers reliable reporting tools to assist in monitoring collection utilization. For the first time, our library was able to accurately learn how many HTML and PDF articles were viewed. We began to fully understand how our users interacted with journal home pages and publisher websites.

For purposes of assessment and reporting, the Library of Rush University Medical Center focuses on COUNTER's Journal Report 1 (JR1). This report provides a breakdown of monthly use, showing us when a collection is most heavily used and providing insight on which journals receive the greatest full-text downloads from our users. We have established some internal triggers warranting further investigation. In particular, when we see usage of 12 or under on the JR1 report, we investigate the situation and consider whether to retain the journal in question. In most cases, the reason for low usage is the journal title wasn't added to our library's OPAC, our online A to Z list of journal titles or our link-resolving software. Once such an omission is corrected, online usage normally increases. The JR1 report is also a significant component in the library's annual serials cost-per-use study.

An advantage delivered by COUNTER's JR1 report is its inclusion of non-subscribed journal usage data. This data has revealed areas of our e-journal collection possibly needing development. Based on analysis of non-subscribed data, our library has increased our e-journal collection by 20% through acquisition of "new" or previously unsubscribed titles.

Making Evidence-based Decisions

The library is in the process of examining usage and using the findings to rebuild our journal collection. Since most major publishers and aggregators now offer COUNTER-compliant data, the library is able to compare journals in the same subject areas without publisher bias. Thus usage reports – especially COUNTER-compliant usage reports – are providing unbiased evidence and helping our library reshape our collection.

Of note, we have recently cancelled journals requiring passwords for online access or only available in print. Of the 70 journals the library cancelled for 2005, only three were provided by publishers participating in CrossRef and COUNTER.

Decisions we are making illustrate how important it is for publishers to make their journals as visible and accessible as possible in the virtual world. Incorporating DOI linking into business models is one key tactic publishers can utilize.

By participation in standards and initiatives such as OpenURL, CrossRef and COUNTER, publishers can reap benefits of a more fully linked world – and can help make sure their publications find the best use by researchers and libraries. ■

"A journal collection should be based on user needs and not on perceived usage or an academic ideal. Now is the time for libraries to revise or even depart from traditional collection practices and refocus on their clientele's real-time use of electronic resources."

How Elsevier Uses Usage Information: The Inside Scoop

By Dirk de Heer, Usage Research Manager, Elsevier Usage Research Department, Elsevier, Amsterdam, The Netherlands

Analysis of ScienceDirect and Scopus usage data is not only of interest for Elsevier customers, but also for Elsevier itself. The data contains a wealth of information about the information seeking and using behavior of users accessing Elsevier platforms. The usage data allows us to evaluate and improve both the content and functionality of our online products.

What exactly do I mean? Following appear brief explanations of how Elsevier uses usage analysis for various purposes.

Elsevier Uses Data to Assess Publications

Until recently, ISI Impact Factors and article citation data were the most important quantitative indicators regarding the relevance of published content. However, these indicators strongly focus on author behavior and it is questionable whether readers always show the same behavior as authors. In some fields, authors and readers comprise more or less the same group whilst in other fields the majority of readers does not publish articles.

In the past qualitative research was needed to find out how readers appreciated published articles. Today, since the online availability of serials, usage data offers complementary insight to help answer this question, with one big advantage: Usage data is instantly available.

Publishers are now able to use usage data to provide particular indicators more quickly to editorial boards and affiliated societies. Usage data can be used to provide information regarding:

- Geographical distribution of readership.
- Interest in special issues versus regular issues.
- Interest in review articles versus regular articles.
- Emerging fields of interest.

Together with information from traditional sources, such knowledge can be used to improve editorial policy for specific serials.

Elsevier Incorporates Data in Product Development

Next to the quality of the content of Elsevier publications, usability of our platforms is very important. At Elsevier, we strive to make our platforms as user-friendly as possible – meaning users can easily find what they need without having to click through too many pages.

Path analysis – looking at entry and exit points and all user actions in between – and usage figures for specific product features give a wealth of information on how ScienceDirect and Scopus are being accessed and used by researchers. Together with the results from extensive usability testing, this information is used to develop new product features or improve existing features.

Referrer analysis tells us which particular services are most effective in pointing users to ScienceDirect and Scopus. Understanding the importance

of referring sites leads Elsevier colleagues to find new ways to ensure our content can easily flow from those sites and ways to help those sites keep our content visible. We have for some time offered libraries shortcut links to put in place permanent, deep links to favorite ScienceDirect content, and we ensure our content is based on metadata and formats compatible with diverse library automation systems.

Elsevier Uses Data to Inform Marketing

To complement librarians' efforts to disclose electronic resources to their users, Elsevier marketing teams run campaigns to make users aware of the available content and functionality of our e-products. The effectiveness of these campaigns can partly be measured by looking at usage statistics before and after each campaign.

A recent email campaign in Malaysia highlighted ScienceDirect journal titles and articles of particular interest to business and management faculty at an institute licensed to ScienceDirect. Presenting the availability of specific and relevant ScienceDirect content to faculty members had a direct impact on usage of ScienceDirect journals in the field of business and management. Use of the highlighted content increased so much that six additional business titles appeared

in the institute's list of the top 100 most-used journals for ScienceDirect that month.

Furthermore, results from usage analysis itself can be used in marketing campaigns. Librarians or colleagues considering marketing campaigns may want to take advantage of Elsevier's recently launched service, Top 25 Hottest Articles on ScienceDirect.com (<http://top25.sciencedirect.com>). This service provides usage analysis for all journals on ScienceDirect or just a subset – journals in a specific field. There are 24 fields for which the site offers usage analysis. This service, freely available to all, has generated quite some interest among users and traffic to ScienceDirect.

Elsevier Uses Data to Inform Sales and Account Development

Keeping a close watch on usage figures of their customers is par for the course for Elsevier sales and account development teams. It's in the mutual benefit of customers as well as Elsevier for usage to be sufficiently high compared to a customer's spend. If usage of one of our products is low at one institute as compared to its peers, our sales or account development representatives provide advice about how to promote effective use of the online resources. And our representatives can, when warranted, provide more extensive usage analysis and consultation – to make sure our e-products are meeting well the needs of a specific customer.

Hanneke Steuten, Elsevier's General Manager of Usage Research, summed up the importance and role of usage reports for our company: "Just like our library customers, we at Elsevier are continuing to discover the real-life benefits of evaluating usage. Usage information provides immediate feedback about what our customers and end users like about our content and product interfaces and it makes our industry much more fast-paced. We look forward to an interesting future indeed." ■



This screenshot shows Elsevier's recently launched service "Top 25 Hottest Articles on ScienceDirect.com," available at <http://top25.sciencedirect.com>

How COUNTER Continues to Help Librarians and Vendors Make Sense of Usage Reports

Library Connect's **Marthyn Borghuis**, Senior Manager, Elsevier Usage Research Department, interviews **Peter Shepherd**, COUNTER Project Director

COUNTER

In March 2002, COUNTER was formally launched, with an international Steering Group, a project director and a set of clear objectives.

As a member of the Steering Group, I've been involved in COUNTER from the beginning. By the end of 2002, COUNTER had achieved its first major objective: delivery of Release 1 of the Code of Practice. By the middle of 2004, COUNTER-compliant vendors accounted for more than 50% of the annual output of STM full-text articles and database abstracts. Today 41 STM vendors provide COUNTER-compliant reports. COUNTER continues to make strides in helping libraries and vendors agree on the best way forward for usage reports.

Recently I had a chance to catch up with Dr. Shepherd. His reflections follow.



Marthyn Borghuis (on the left) and Peter Shepherd. Photo by Charlotte Dewhurst.

LC: COUNTER has achieved balanced representation from librarians and vendors on COUNTER's Board of Directors, Executive Committee and International Advisory Board. Please can you tell us how you've ensured such balanced representation?

Dr. Shepherd: From the outset COUNTER was set up as a joint effort between librarians and vendors; consequently we ensured that from Day 1 there was balanced representation of both constituencies on the Executive Committee and Board of Directors, the two COUNTER decision-making bodies. We also strive for a good geographical spread so that no one country dominates. COUNTER is a truly international effort.

LC: Readers may be interested in how COUNTER builds on and cooperates with other organizations and initiatives such as the ARL New Measures Initiatives, the ICOLC Guidelines for Statistical Measures of Usage of Web-based Information Resources and NISO Standard Z39.7. Can you say a few words about how COUNTER liaises with these groups?

Dr. Shepherd: Representatives of each of these groups are included on the International Advisory Board of COUNTER and are kept informed via bulletins about developments. We also hold regular meetings with representatives of these groups to identify areas of common interest and exchange information on future plans.

LC: You've said that when it comes to COUNTER reports, compatibility is the goal, not sophistication. What do you mean?

Dr. Shepherd: By this we mean that the requirements for compliance with the COUNTER Codes of Practice should not be so demanding that only a handful of advanced online vendors can meet them. We keep the requirements for COUNTER compliance rather basic so the majority of online vendors is capable of meeting them. Librarians want compatible usage reports from different vendors, and COUNTER would be of little value if only a few vendors could comply with our standards.

LC: A growing concern for Elsevier, and possibly other vendors represented in COUNTER, is that the group stay focused on the goal of producing and sustaining usage report standards. Can you speak to this issue?

Dr. Shepherd: The members of the COUNTER Board and Executive Committee are alive to the dangers of "mission creep" and we are careful not to stray beyond our core goal, which you have described. For example, there is considerable demand from librarians for a toolkit that would allow them to consolidate more easily COUNTER usage reports from different vendors. COUNTER will not develop such a toolkit, but encourages other organizations to do so. COUNTER will not develop software or hardware, but will stick to defining the standards for online usage reports.

LC: Elsevier has proposed that COUNTER make explicit what particular information needs exist among librarians and how proposed new reports would meet these. Can you speak about the need to further improve on the COUNTER report definition process?

Dr. Shepherd: When we began this process there was literally no code of practice and no standards available. Now that we have seen how Release 1 works, we appreciate that we need to make certain aspects more precise. This we are now doing and we have welcomed Elsevier's proposal for improving the process for defining and implementing new usage reports. The Executive Committee unanimously adopted this proposal at its last meeting. I have no doubt there will be room for further improvements in the future, and we shall always be open to suggestions.

LC: Currently there is discussion about a new COUNTER report on PDF/HTML usage. What are the pros and cons of such a new report? And how will it be implemented?

Dr. Shepherd: Librarians have clearly stated that they want to have information on PDF and HTML usage, but not necessarily at the same frequency as for other data. At its last meeting, the Executive Committee agreed to a modification in Release 2 to the existing Journal Report 1 that will provide HTML and PDF usage data. Librarians and vendors on the Executive

Committee were happy with this outcome and there was unanimous support for this.

LC: How is COUNTER measuring usage of its own usage reports?

Dr. Shepherd: Apart from organizing a few librarian focus groups, we have not yet started doing this systematically ourselves. Our first objective has been to promote widespread compliance with COUNTER. We have already cooperated with JISC on one UK usage study that used COUNTER data.

(Continued on page 9)

As the body of COUNTER data grows we anticipate participating in more such studies, as well as doing our own monitoring of COUNTER implementation via librarian and vendor focus groups. Vendors are able to keep track of the usage of the COUNTER reports as offered to customers. Vendors in the Executive Committee and beyond will be asked to share this data with COUNTER on a regular basis.

LC: *What do you see as COUNTER's biggest achievements to date?*

Dr. Shepherd: Our work has given librarians confidence in the quality of the data. We've done this by setting standards for auditing that result in credible data without placing an undue burden on vendors. Procedures and guidelines for independent auditing of vendor-supplied COUNTER-compliant usage reports were agreed and published on the COUNTER website near the end of 2004. Another important achievement has been developing a business model to support COUNTER while not placing a heavy financial burden on libraries or vendors.

LC: *What's the latest news with COUNTER?*

Dr. Shepherd: We have just released the first draft Code of Practice for online books and reference works. More generally, we've decided to slow down the pace of development and implementation of future releases of the Code of Practice – thus allowing vendors and librarians more time to accommodate each existing release.

LC: *What do you see in the future for COUNTER?*



Dr. Shepherd: It has become clear that neither librarians nor vendors want COUNTER to develop an ever more complex set of standards and procedures for measuring online usage statistics. Therefore COUNTER's main goal for the future will be to develop and maintain a set of relatively simple usage reports, that can be implemented by most vendors, for all the major online content categories purchased by libraries: journals, databases, reference works and books. We want to do this in a way that is cost-effective for the industry as a whole. In terms of COUNTER membership, most vendor and library members are in North America or the UK. COUNTER is global and we would like to see more members from other parts of the world. ■

QUICK LINKS

- COUNTER (Counting Online Usage of Networked Electronic Resources): www.projectcounter.org
- ARL (Association of Research Libraries) New Measures Initiatives: www.arl.org/stats/newmeas/index.html
- ICOLC (International Coalition of Library Consortia) Guidelines for Statistical Measures of Usage of Web-based Information Resources: www.library.yale.edu/consortia/webstats.html
- JISC (Joint Information Systems Committee): www.jisc.ac.uk
- NISO (National Information Standards Organization) Standard Z39.7: www.niso.org/emetrics

Which Elsevier Usage Reports Prove Popular? A Snapshot

Top Five Most Accessed ScienceDirect Usage Reports in 2004*

1. Report 1A: Number of Successful Full-Text Article Requests by Month and Journal	
2. Report 1B: Number of Successful Full-Text Article Requests by Entitlement, Month and Journal	
3. Report 2A: General Overview	
4. Report 4A: Total Searches and Sessions by Month	
5. Report 3A: Document by File Type	

*Ranking is based on the number of times a report was accessed from Elsevier's usage reporting site.

The table above gives a snapshot of which ScienceDirect usage reports proved most popular from January to December 2004. The Elsevier Usage Research Department tracks the most popular reports and so gains data helping guide future developments for Elsevier's usage reports and usage reporting process.

Elsevier offers three COUNTER-compliant ScienceDirect reports. The third, "4B: Total Searches and Sessions by Month and Database," though not listed above has followed closely in terms of usage, ranking from January to December 2004 as the ninth most-accessed ScienceDirect usage report. In the table above, the COUNTER symbol indicates COUNTER-compliant reports.

Customers can sign up to receive alerts as new reports become available on Elsevier's usage reporting site. Elsevier's data indicates customers receiving alerts access more usage reports and do so more frequently than customers not receiving such alerts. ■

QUICK LINK

- Elsevier Customer Usage Reporting Site: <http://usagereports.elsevier.com>

How Elsevier Usage Reports Have Progressed: From First Practice to Best Practice

By Sonja Lendi, Usage Research Manager, Elsevier Usage Research Department, Elsevier, Amsterdam, The Netherlands

Usage Reports Offered Value from the Beginning

Elsevier launched a web database of its journals in 1998, and so became among the first commercial STM publishers to put journals online. With this product, named ScienceDirect, came the possibility of tracking usage of included journals and their articles.

Starting from the launch of ScienceDirect, our customers were supplied with usage reports. In the beginning, we provided monthly Word documents with the top-100 most used journals per month. Today we provide web-based reports showing the usage of all licensed journals over a multi-month period. This has been quite an evolution!

In December 2000, Elsevier launched the first online version of ScienceDirect usage reports. This version suffered from typical start-up problems such as regular downtime and long production times. Although the problems decreased over time, a more permanent solution was found in an improved release, launched in April 2003. Downtimes were reduced considerably, as was the production time, by improving the data model and the processes, and by duplicating the usage database on a separate server. The latter action meant one server can be used for production purposes, while the other is available for reporting. This opened the road to Elsevier's COUNTER compliancy, announced in October 2003.

Since Elsevier began offering usage reports, they have delivered valuable information for our customers and our company. As a publisher, Elsevier uses such reports to assess the performance of our journals and find emerging research fields. Customers use such reports as a tool to assist with collection management as well as for other purposes. From the beginning, it was natural for Elsevier to seek to improve our usage reports and so strengthen their value.

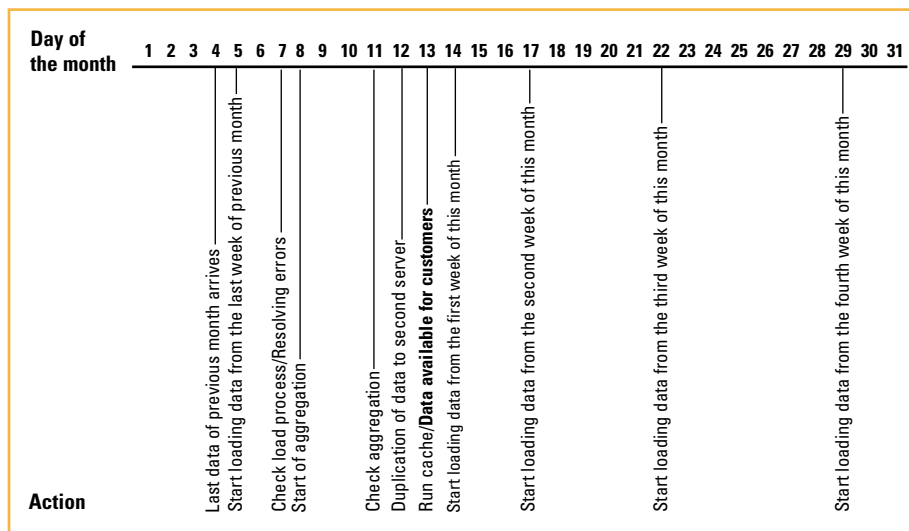
Production is a Long and Winding Road

The road from logfiles to usage reports is long and consists of various steps at various locations. At the end of each week, the ScienceDirect and Scopus logfiles are produced at Reed Elsevier's offices in Dayton, Ohio. The first step in the process is removal of invalid records and double clicks. After this cleaning, the logfiles are loaded into a data warehouse from which reports are generated. To make the reports run more efficiently, key data, like article downloads and searches per database, is aggregated to different levels.

Since the information in the logfiles is coded, reference data needs to be sent along. The size of the zipped files for one week is around 140 MB for the logs and around 200 MB for the reference files. Currently all customers together are responsible for 90 million hits on ScienceDirect each month. This means 90 million individual log records to be loaded each month, of which 28 million concern full text and abstracts.

Once the reports covering one month are available to our customers, the loading of the new data is started. Loading a week's data takes about two

days. By the end of the month all that remains to be loaded is data for the last few days of that month. When all data is loaded, it is validated against and enriched with the reference data. Various checks take place and possible errors in the loading process are identified and resolved. When the results are correct, the data can be aggregated, which takes around three days. Another check is performed after aggregation. Then the data is duplicated on the second server. The heaviest reports are cached to improve performance, and then the data can be made available to customers.



This graphic shows the timeline of the process used to produce ScienceDirect and Scopus usage reports.

Above is a timeline of the process. Please note it does not take into account delays due to weekends. Although some processes, like the actual load and aggregation, can run over a weekend, others cannot (e.g., the checks), and therefore actual dates can be one or two days later than indicated in the timeline. Because the loading of a week's data takes less than a week, there is room to catch up with any delays. In general, data for each month becomes available well before the COUNTER deadline of the 28th day of the following month, but usually data does not become available before the 15th of the following month.

In months with a major ScienceDirect or Scopus release, the timeline above does not apply. In these months the data is usually available toward the 28th day of the month.

Elsevier's Usage Reports Prove Popular

The ScienceDirect and Scopus usage reporting site is available at <http://usagereports.elsevier.com> – shown in a screenshot on the next page.

At this site, customers can find three COUNTER-compliant reports and 19 other reports for ScienceDirect, and one COUNTER-compliant report and several other reports for Scopus. The COUNTER symbol indicates compliant reports.

ScienceDirect usage reports compliant with COUNTER's first release are:

- Report 1A: Number of Successful Full-Text Article Requests by Month and Journal
- Report 4A: Total Searches and Sessions by Month
- Report 4B: Total Searches and Sessions by Month and Database

(Continued on page 11)



This screenshot shows the Elsevier usage reporting site at <http://usagereports.elsevier.com>

Advances Help Usage Reports Stay in Fine Form

Elsevier's usage reports keep changing, because our products and customers' needs keep changing.

As new ScienceDirect features are released, we adjust our usage reports to reflect the new features. Recent examples are the Quick Search feature and search-within-search feature; both features may now be tracked via ScienceDirect usage reports. Also, when new content types, like book series and handbooks, become available on ScienceDirect, we expand our usage reports to provide tracking of the new content.

As readers of this article and Elsevier customers likely have already noticed, Elsevier's usage reports now encompass Scopus as well as ScienceDirect. Usage reports for the two products are now integrated. A customer affiliated with an institute licensed to ScienceDirect and Scopus can now access usage reports for both products by visiting Elsevier's usage reports website and entering one username and password. Elsevier's Usage Research Department regards such expansion and integration of our usage reports as a

way to help our customers and keep our company competitive. Everyone today understands the need to conduct business quickly and efficiently.

Since full text is not available in Scopus, the only relevant COUNTER report is "Total Searches and Sessions by Month for Scopus."

Usage of Elsevier-provided reports is tracked and, needless to say, the COUNTER reports are very popular. Our customers most often request the COUNTER Report 1A addressing full-text article usage by journal.

Second on the favorites list though is Elsevier's special report, not required by COUNTER, on usage by journal and entitlement. This report, called "Report 1B" and shown below, reflects the different options providing access to ScienceDirect content. With this report librarians can see whether certain packages (e.g., backfiles) are being used well or whether non-licensed content is being accessed by users at a particular institute. (Note non-licensed content can be downloaded through credit card purchases or other transactional access.)

Report 1B is closely followed in popularity by the General Overview report, another report not required by COUNTER. This report provides graphical representation of full-text usage and searches over a 13-month period. (For more information on Elsevier's most accessed ScienceDirect usage reports, see page 9.)

All of our customers aren't using all usage reports available from Elsevier, but each of our reports is seeing some use.

To improve our reports and reporting system, we are doing more than evaluating data and workflows. Recently we conducted interviews with a subset of ScienceDirect customers. These interviews provided insights into what Elsevier customers do with usage reports and our customers' current and future needs. In general the customers were quite satisfied with Elsevier-provided reports. (More on the outcomes of the interviews appears on pages 12 and 13.) Input gained during the interviews is helping steer development of our reports and our reporting site. For example, during the interviews automatic downloading of the reports was suggested. This would facilitate use of the reports, and thus will be added to the list of possible improvements to our reporting processes.

When it comes to usage reports, what constitutes best practice can be a matter of perspective. We at Elsevier are delighted to be participating with COUNTER and providing COUNTER-compliant reports. We also are happy to have opportunities to introduce pioneering usage reports and then see how they fare. Above all, we realize that to earn recognition as a provider of high-quality and "best practice" usage reports, we must strive continually to improve our reporting system and the reports themselves. ■

"Second on the favorites list though is Elsevier's special report, not required by COUNTER, on usage by journal and entitlement."

Journal	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
total	2803	2083	2083	2083	2083	2083	2083	2083	2083	2083	2083	2083	2083
0003066x American Psychologist	3	8	10	2	0	2	5						
07357044 Behavioral Neuroscience	4	17	4	8	0	3	15						
009400x Canadian Journal of Behavioural Science	3	0	2	0	0	0	0						
11961961 Canadian Journal of Experimental Psychology	1	0	0	0	0	0	0						
07085591 Canadian Psychology	0	0	0	3	2	0	1						
10614087 Consulting Psychology Journal: Practice and Research	0	0	0	0	0	0	0						
02275918 Crisis: The Journal of Crisis	0	0	0	0	0	0	0						

This graphic shows Elsevier's report "1B." This report is the second most requested among all usage reports Elsevier provides.

Why Librarians Love and Loathe Usage Statistics; Results of Interviews with University Librarians

By Maurits van der Graaf, Pleiade Management & Consultancy, Amsterdam, The Netherlands



Maurits van der Graaf

"Actually, you are coming one year too early!" This remark was heard as staff of Pleiade Management & Consultancy recently interviewed 12 European and US librarians about the monitoring of usage of digital information sources.

Librarians interviewed were affiliated with one UK institute – the University of Aberdeen; one Belgian institute – the University of Liege; three Dutch institutes – the University of Amsterdam, University of Wageningen and University of Utrecht; and six US institutes – the University of Texas, University

of North Carolina, University of Tennessee, Columbia University, MIT and Boston University. During the course of the interviews, which were conducted in 2004 on behalf of Elsevier, it emerged that various academic libraries are only now setting up systems for monitoring usage figures.

Besides learning that some libraries are just getting going with tracking usage of e-resources, much more was learned. This article presents the main findings.

What's Happening Today?

What are the reasons for monitoring usage statistics? All respondents mentioned the evaluation of a collection as the main reason. One respondent stated, "Usage statistics are appreciated because they help to do cost benefit assessments for justification of the expenditure." Another respondent observed, "We maintain the usage statistics and evaluate them in order to help groups and individuals to make decisions on what to buy and what to cancel." Some respondents also mentioned annual reporting as an additional reason for monitoring.

In collecting and analyzing usage data, the respondents encountered problems including the following.

- Not all publishers are yet COUNTER-compliant. Thus different publishers still use different definitions of various usage statistics.
- Publishers continue to deliver usage statistics in varying formats and with varying frequency.
- Distinctions between user groups are needed. A number of respondents indicated interest in distinguishing between user groups such as students and researchers and distinguishing between faculties.

With regard to challenges faced, one respondent remarked that there is still limited experience with usage data of electronic resources. That respondent stated, "How long are we doing this? Only since 2002!"

What Key Indicator Do Librarians See?

All respondents mentioned the number of articles downloaded per journal title as a key indicator. The majority thinks this is the key indicator to measure usage of full-text databases. However, there is general doubt on the exact meaning of this figure. To wit, one respondent commented, "There is only so much any individual can actually read; high usage counts do not necessarily mean that information is actually used! High usage is therefore not the same as high value." This comment was echoed by all other respondents.

What Trends and Developments Do Librarians See?

All respondents mentioned a high increase in usage of digital information over the last few years. Many respondents have been surprised by the strong growth. One comment was, "The usage increases enormously. When we started with ScienceDirect, every year we were thinking: we will reach a point at which it will not be increasing. That has not happened yet. However, we believe that at some point we will reach a saturation level. This year it is the first time that in one month the usage figures were somewhat lower than last year, but it is the first time we had that in years. Nevertheless, in the last two years the increase has been very steady. And yet it's still increasing."

What are the reasons for the strong growth rate? The respondents mentioned reasons including the following.

- *Electronic full text is becoming the standard.* To illustrate this, one respondent told the following anecdote. "A user filed a complaint at the library. This person wanted a certain article that was not electronically available, but was available in the printed collection. She filed a complaint, because in her view leaving the computer, going to the shelves and making a photocopy interrupted her work." Another respondent related, "We agreed with a certain group of researchers to keep a number of journals also in printed form. However, our library made a mistake and accidentally cancelled the printed subscriptions. This was found out after several months. When the group [of] researchers was contacted to explain this error, it was not a problem at all anymore."
- *Infrastructure is improving.* The infrastructure of the digital library is becoming better and better. Especially the linking of bibliographic databases toward electronic full text with link resolvers is helping increase usage.
- *More scientific information is electronically available.* As one respondent said, "We see a doubling of the usage of digital journal information with regard to last year. We think the main reason is that the library offers more electronic sources."
- *New generations are more information literate.* One respondent remarked, "New generations of users are added every year who already have many of the skills to use digital information."
- *Users' skills are improving.* Yet another respondent stated, "The level of skill in using electronic resources keeps increasing among the traditional users."

The growth rate is seen as a positive development and something that will probably continue in the coming years. Supporting this conclusion are the following comments made by respondents.

- "The general growth in use of electronic data will continue. It may plateau out at some point, but not as long as there are new users, new material keeps being added and new degree programs keep emerging."
- "The usage of electronic information so far is high and it is expected that it will continue to grow."
- "Productivity of the users has risen tremendously because of the availability of electronic information. This has freed up time to do more research and possibly therefore also to use more data. The library is now showering users with information. The main concern is human capacity. There is only so much one can read. However, since productivity has gone up this may not have reached a plateau yet."

(Continued on page 13)

What Impacts Are Usage Statistics Having?

All 12 respondents stated that usage is simply one of various factors playing roles in acquisition decisions – and not the most important factor. For example, one respondent reported, “Usage statistics will be in the third or fourth place of importance as comes to decision-making.”

Another respondent enumerated the following criteria as guiding acquisition:

- Scientific quality – measured by faculty members’ expert opinions, and supported by research into citations and articles published at one’s own institute.
- Price.
- Usage.

Overall, when it comes to analyzing usage figures of full-text databases and making key decisions – to acquire, to cancel or to renew, librarians appear to be dealing with murky and challenging situations. As one respondent put it, “For full-text databases the relationship between low usage and potential cancellation is less clear. If we have a brilliant researcher, whose research is based on an expensive but less-used journal, such a journal stays in the collection!”

What Other Factors Are Important?

Meeting users’ needs may fairly often mean librarians must put down usage statistics and consult with colleagues. According to one respondent, “A lesser-used journal will become a case for discussion with researchers. We will analyze the citations and the number of publications of authors from our university in that journal. With those figures in hand we will start discussions with the scientists involved.”

Usage figures may not immediately or directly lead to cancellation of a particular e-resource. In the words of one respondent, “A low usage is kind of [a] red light. We will look into why the usage is so low. Next, all kind of actions will be taken in order to increase the usage. If – after a few years – the usage does not increase, then the file will be cancelled.”

“A low usage is kind of [a] red light. We will look into why the usage is so low. Next, all kind of actions will be taken in order to increase the usage. If – after a few years – the usage does not increase, then the file will be cancelled.”

Indeed, sometimes key decisions are only made when there is financial pressure. Said one respondent, “Overlap and sheer financial pressure are the only reasons to consider cancellations. Libraries do not want to cancel!”

What Conclusions Can Be Made?

The interviews showed librarians are using Elsevier-provided usage statistics to:

- Evaluate collections.
- Help make decisions on what to buy or cancel.
- Produce cost-benefit assessments to justify expenditures.
- Produce annual reports.

As the importance and applications of usage statistics continue to grow, publishers such as Elsevier will continue to assess customers’ use of such statistics and attitudes towards them. The recent interviews provided valuable insights, helping identify ways Elsevier can improve its usage reports and usage-reporting process. Thanks go to all interviewees and their institutes for having participated. ■

QUICK LINK

- Pleiade Management & Consultancy: www.pleiade.nl

Readers Who Like This Pamphlet May Like Other Library Connect Pamphlets, Too

BACK ISSUES

Usage reports reflect librarians' hard work in several areas. Those in the know appreciate all the effort leading up to usage statistics – the numbers of times patrons access specific resources. Three previous Library Connect pamphlets offer practical assistance regarding how to lay groundwork so users can easily access e-resources and so libraries can maximize investments in these resources.



“15 Ways to Promote Effective Use of Online Resources,” updated in 2004, reports on results of research commissioned by Elsevier in 2002 – research which delivered findings valuable even today. The pamphlet’s eight pages offer expert advice regarding connecting users with e-resources.



“How to Design Library Web Sites to Maximize Usability” was edited by Chris Jasek – the head of Elsevier’s User Centered Design Group. This publication covers topics including consistency of design throughout a site, the importance of matching a system and user activities, and accessibility.



“How Libraries Are Training Users on E-resources: Best Practices” offers examples of how libraries are helping users benefit from online resources. This pamphlet includes Rachel Daniels’ top training tips – delivering suggestions to help connect users with e-resources.

The three pamphlets cited here cover how to ensure e-resources receive adequate attention within a library website and within a community, how to design a library website so it’s user-friendly, and how to ensure users are information literate. Each pamphlet further features a bibliography, citations of additional relevant resources – produced by Elsevier or other providers.

All Library Connect pamphlets are freely available in PDF at www.elsevier.com/librarians. If you’d like printed copies of any of the pamphlets, please specify the title and number needed and your complete mailing address and send a note to libraryconnect@elsevier.com

Referrers, or Where Do Users Come from When Entering ScienceDirect?

By Dirk de Heer, Usage Research Manager, and Marthyn Borghuis, Senior Manager, Elsevier Usage Research Department, Elsevier, Amsterdam, The Netherlands

Referrer analysis identifies Internet sites users come from, when they enter a platform like ScienceDirect and start a session.

Most users are referred to ScienceDirect via external article links (e.g., DOI links) or direct links to journals (e.g., www.sciencedirect.com/science/journal/14649055).

Leading ScienceDirect Referring Sites

About 95% of all referrals to ScienceDirect in 2004 were generated by a combination of sites as shown in the graph below. A breakdown of the most important ones follows.

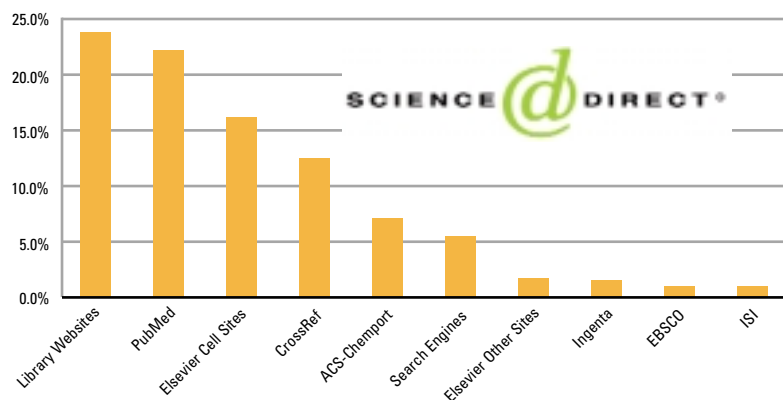
- Although the contribution of each individual library website may have been small, library websites in total generated 24% of the user sessions. Due to the increased implementation of link-resolving software and direct links from library websites to journal pages on publisher platforms, library websites are emerging as one of the leading sources of ScienceDirect referrals.
- PubMed generated 22% of the user sessions. This freely available A&I service covers biomedical sciences, an area in which ScienceDirect offers a good number of well-known journals.
- Various Elsevier websites, such as Cell Press and Engineering Village sites, bring users to ScienceDirect. Cell Press sites generated 16% of the ScienceDirect sessions.
- CrossRef generated about 13% of the ScienceDirect sessions. Many publisher platforms and A&I databases link to ScienceDirect via CrossRef.
- The American Chemical Society's Chemport platform appeared among the most important referrers to ScienceDirect in 2004.
- Internet search engines (e.g., Yahoo, Google and MSN) referred 6.5%.
- The Ingenta, EBSCO and ISI journal websites also ranked last year among leading ScienceDirect referrers. These sites cover a multitude of scientific and scholarly disciplines. ■



The Elsevier Usage Research Team, based in Amsterdam. From left to right: Hanneke Steuten (General Manager), Ale de Vries, Sonja Lendi, Dirk de Heer, Marthyn Borghuis and Peter Berkvens. Thijs Willems is not pictured. Photo by Ria Timmerman.

QUICK LINKS

- CrossRef: www.crossref.org
- Quick Reference Guide for Elsevier Customer Usage Reports: www.info.sciencedirect.com/librarian_help/usage_reports/usagereports_qrg.pdf
- Setting Up ScienceDirect Shortcut Links: www.info.sciencedirect.com/librarian_help/link_journal_pages/index.shtml
- Davis, P. M. (2004). Information-seeking behavior of chemists: A transaction log analysis of referral URLs. *Journal of the American Society for Information Science & Technology*, 55(4), 326-332.



This graph shows the ten most important sources referring users to ScienceDirect through direct journal or article links in 2004.

Most Frequently Asked Questions About Elsevier Usage Reports

Answered by Sonja Lendi, Usage Research Manager, Elsevier Usage Research Department, Elsevier, Amsterdam, The Netherlands

Q: Who can access customer usage reports provided by Elsevier?

A: Elsevier's customer usage reports are available to licensed institutes' designated account administrators. If you're affiliated with an institute licensed to ScienceDirect or Scopus and would like more information about Elsevier's customer usage reports, please speak with your library's designated account administrator or your Elsevier account manager or account development manager.

Q: I'm an administrator for my account but my ScienceDirect username does not give access to the usage reports. How do I get access?

A: The functionality that will enable you to log in to the usage reports with your ScienceDirect username is not in place yet. We hope to make this available in the second half of 2005. In the meantime, a separate username is required. This can be requested from your account development manager.

Q: Where can I find more information about the content of the usage reports?

A: Detailed information about usage reports including report descriptions and navigation guides is available on the ScienceDirect INFO site. See Quick Links section below for specific URLs.

Q: Which report shows backfile usage?

A: Backfile usage per journal title is shown in Report 1B: Number of Successful Full-Text Article Requests by Entitlement, Month and Journal. Open the report and select the entitlement "Publication years prior to 1995" from the drop-down menu box. [See page 11 for a screenshot of Report 1B.] If you are interested in total numbers (including book series and reference works), please refer to Report 3B: Document Usage per Entitlement.

Q: What does "Subject Package IDEAL" refer to?

A: When IDEAL journal titles were moved to the ScienceDirect platform, the quickest way to give former IDEAL customers access to all their IDEAL journals on ScienceDirect was to group these journals into a package and give the customers access to that package. The disadvantage of this approach is that now the usage for former IDEAL journals appears under the "Subject Collection" header.

Q: Where can I find the usage on reference works?

A: Usage for reference works is given in Report 1F: Number of Successful Requests for Full-Text Chapters by Month and Reference Work.

Q: I have licenses to a number of abstracting & indexing databases on ScienceDirect. Does Elsevier provide usage reports for these?

A: Yes, the official COUNTER-compliant report, Report 4B: Number of Searches and Sessions by Month and Database, provides the total searches and sessions for each of the databases to which you have a license. Databases hosted on ScienceDirect include EMBASE, EconLit, GEOBASE, MEDLINE and PsycINFO.

Q: I want to know how many users at our institute use ScienceDirect. Where can I find this information?

A: Report 2B: Users, IPs and Sessions, presents a graph and table showing the number of active users (based on user cookies), active IPs and sessions (based on session machine cookies) by month.

Q: Why can't we distinguish actual subscribed titles versus what we access from a Unique Title List?

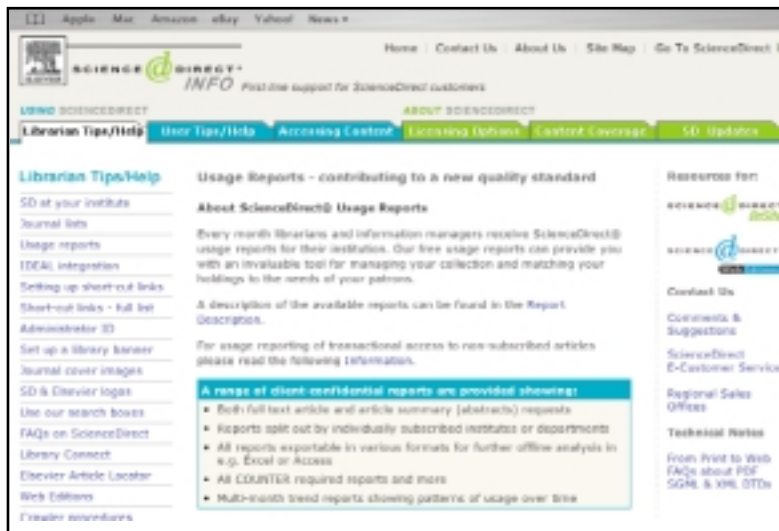
A: The usage system has no direct way of registering which titles are part of a UTL deal. This information is stored in the contract register, but there is no link between this system and the usage reports. Reporting on UTL usage will therefore be a manual exercise of matching data from the two systems. This exercise can be carried out by our Sales Support teams. A report can be requested through your account manager.

Q: Why is there no way to see how many personal profiles are registered on campus?

A: The registration of personal profiles is not registered in the log files, but is done in a different system. The usage reports do not report on data registered in that system. Thus they only show the number of personal profiles that were actually used.

Q: Why does it take so long to publish usage statistics?

A: There are advantages to being a big publisher, but there are also disadvantages. Being big means that the log files are also big and loading all that data takes time. For more information on how usage reports are generated, see the article on pages 10 and 11 of this pamphlet. ■



This screenshot shows the ScienceDirect INFO site, where more information about Elsevier usage reports appears at www.info.sciencedirect.com/librarian_help/usage_reports/index.shtml

QUICK LINKS

- Elsevier Customer Usage Reporting Site:
<http://usagereports.elsevier.com>
- Elsevier Customer Usage Report Descriptions:
www.info.sciencedirect.com/librarian_help/usage_reports/sd_report_description.pdf
- Elsevier Customer Usage Reports Navigation Guide:
www.info.sciencedirect.com/librarian_help/usage_reports/sd_report_guide.pdf
- FAQs for Elsevier Customer Usage Reports:
www.info.sciencedirect.com/librarian_help/usage_reports/faqs.shtml
- Quick Reference Guide for Elsevier Customer Usage Reports:
www.info.sciencedirect.com/librarian_help/usage_reports/usagereports_qrg.shtml

Additional Resources

- Bertot, J. C., McClure, C. R., Davis, D. M., & Ryan, J. (2004, May 1). Capture usage with metrics. *Library Journal*.
- Blake, J. C., & Schleper, S. P. (2004). From data to decisions: Using surveys and statistics to make collection management decisions. *Library Collections, Acquisitions, & Technical Services*, 28(4), 460-464. DOI: 10.1016/j.lcats.2004.09.002
- Borghuis, M. (2002). What to count and what not? A white paper on the filters to be applied to raw usage data before usage-analysis can start. www.info.sciencedirect.com/librarian_help/usage_reports/sd_white_paper_2004_02.pdf
- Duy, J., & Vaughan, L. (2003). Usage data for electronic resources: A comparison between locally collected and vendor-provided statistics. *The Journal of Academic Librarianship*, 29(1), 16-22. DOI: 10.1016/S0099-1333(02)00400-7
- King, D. W., Boyce, P. B., Montgomery, C. H., & Tenopir, C. (2003). Library economic metrics: Examples of the comparison of electronic and print journal collections and collection services. *Library Trends*, 51(3), 376-400.
- Miller-Francisco, E. (2003). Managing electronic resources in a time of shrinking budgets. *Library Collections, Acquisitions & Technical Services*, 27(4), 507-512. DOI: 10.1016/j.lcats.2003.09.004



- Nicholas, D., Huntington, P., Williams P., & Dobrowski, T. (2004). Re-appraising information seeking behaviour in a digital environment: Bouncers, checkers, returnees and the like. *Journal of Documentation*, 60(1), 24-39. DOI: 10.1108/00220410410516635
- Pesch, O. (2004). Usage statistics: Taking e-metrics to the next level. *The Serials Librarian*, 46(1-2), 143-154. DOI: 10.1300/J123v46n01_15
- Rous, B. (Ed.). (2004). *Online usage: A publisher's guide*. New York: Association of American Publishers, Inc.

WWW.
sciencedirect
.com



"The General Motors' library organization feels that the ScienceDirect usage reports are among the finest reports of this type available from information providers."

– **Barbara Kunkel**, Technical Director, Information Research,
General Motors Corporation, Warren, Michigan, USA

CONTACT INFORMATION

ELSEVIER

Library Connect Pamphlets
Daria DeCooman
Global Account Development &
Channel Marketing Manager
525 B Street, Suite 1900
San Diego, CA 92101, USA
libraryconnect@elsevier.com

ELSEVIER

Elsevier Usage Research Department
Marthyn Borghuis
Senior Manager
Radarweg 29
Amsterdam 1043 NX
The Netherlands
m.borghuis@elsevier.com

Library & Information Science Journals

Published by Elsevier

- *Government Information Quarterly*
- *Information Processing & Management*
- *Information & Organization*
- *International Information & Library Review*
- *International Journal of Information Management*
- *Journal of Academic Librarianship*
- *Journal of Strategic Information Systems*
- *Library and Information Science Research*
- *Library Collections, Acquisitions, & Technical Services*
- *Research Strategies*
- *Serials Review*
- *Telecommunications Policy*
- *World Patent Information*

QUICK LINK

- More Information on Elsevier's LIS Journals:
www.elsevier.com/wps/find/S06_347.cws_home/journals_sd