

Omniture Webmetrics Report #2 (January 2006)

The number of visits to nsdl.org dipped from 13,769 in November to 9,805 in December. A likely explanation here is the school holidays. This dip was expected, and while the numbers were lower, site 'stickiness' appeared to hold up.

This report also contains a discussion of the 'long tail' distribution of nsdl.org referrals. The data suggest that compared with other NSDL projects, a relatively large number of external web sites link to nsdl.org, resulting in a significant flow of traffic. This finding appears to validate CI strategies to persuade other organizations to put links and logos for NSDL on their sites. At the same time, however, the data reviewed so far do not tell us how or why these links were created in the first place.

Finally, there is a short note concerning the limitations of some of the Omniture statistics.

Contents

1 Visits

2 Annual Fluctuations

3 Referrals to nsdl.org

- A 'long tail' analysis

- Ratio of external to internal links

- Where are these links and where do they come from?

4 Note on discrepancies in Omniture reporting

1 Visits

The number of visits to nsdl.org dipped from 13,769 in November to 9,805 in December (Chart 1). A likely explanation here is the school holidays, and December's downturn can be seen as part of a pattern of annual fluctuations in web site traffic identified by Dean X (see '2 Annual Fluctuations,' below).

The percentage of visitors that looked at two pages or more also declined, as did the percentage of people who entered through the front page and who then went on to view at least one more page on the site (what I'm going to call 'front page sticky visits'). As a *percentage* of overall traffic, however, sticky visits held almost steady in December, and as a percentage, December's figure is still high (Chart 2a).¹ I'd be more worried about a sudden decline in stickiness than a sudden decline in numbers, as the former might reflect problems with entering and navigating the site.

Front page stickiness is I suggest a useful metric for NSDL, in that it reflects the actions of people who are motivated to explore and/or use at least one page on the nsdl.org. It could however to remove from the picture visits from people who may have specific nsdl.org pages bookmarked, that they keep returning to. I'd like to be able to report on nsdl.org stats using just one or two basic metrics; so let me know if you have any opinions either way about this one.



Chart 1

¹ Another way to think of front page stickiness is as follows.

$$S (\text{stickiness}) = \frac{V (\text{Visitors who enter through the front page and visit at least one other page})}{T (\text{total visitors to front page})} \times 100$$

Here, the higher the value of V, the higher the value of S.

Sticky visits, Apr-Dec 2005

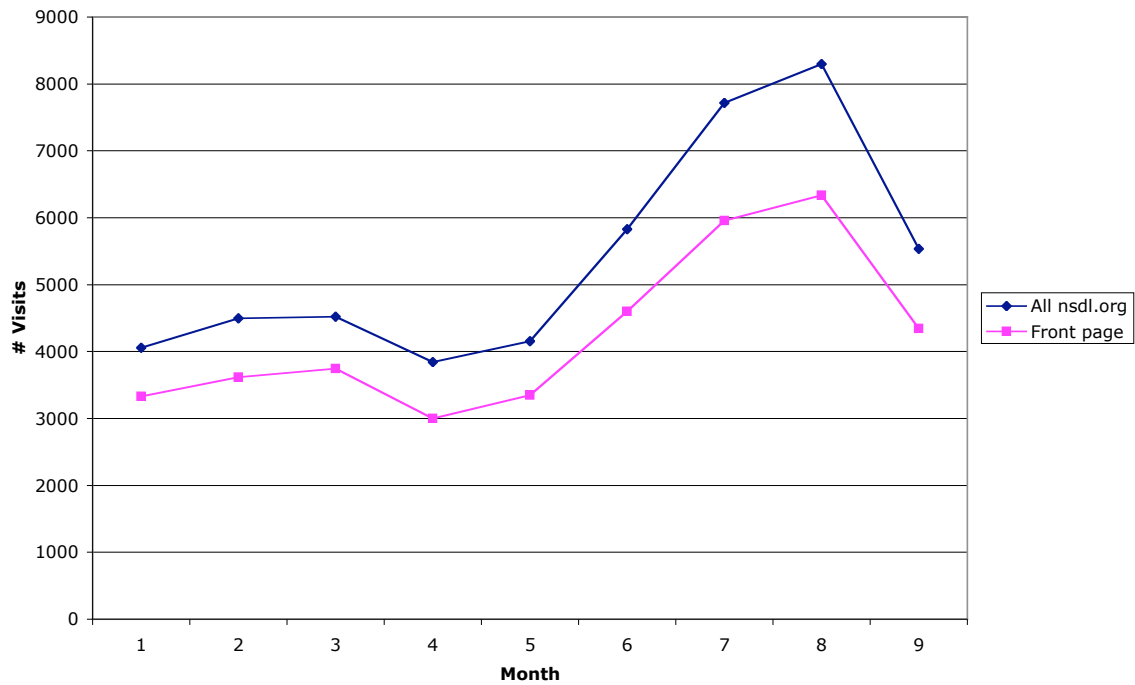


Chart 2a

% of visits that are sticky, Apr-Dec 2005

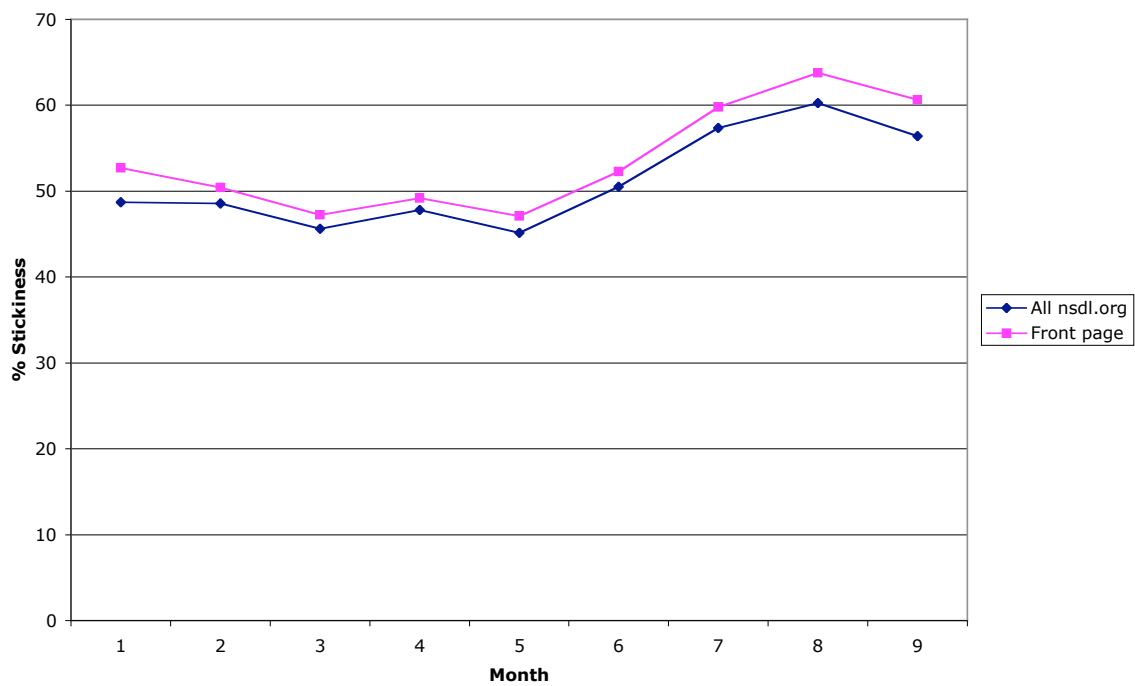


Chart 2b

2 Annual Fluctuations

In December Dean sent around 2.5 years of awstats, showing troughs in July and December, and peaks in September and March (Chart 3). Troughs appear to be explained by the end of semesters, and Dean suggests that the peaks correlate with college/university mid-semesters. I'm open to other analyses as well, including 'back to school' (September peak), and 'test preparation(?)' (March peak), as indicators of K-12 traffic. I expect nsdl.org will continue to follow this pattern in 2006; according to Omniture, we have had the expected troughs and peaks in July, September, and December of 2005 (Chart 4).

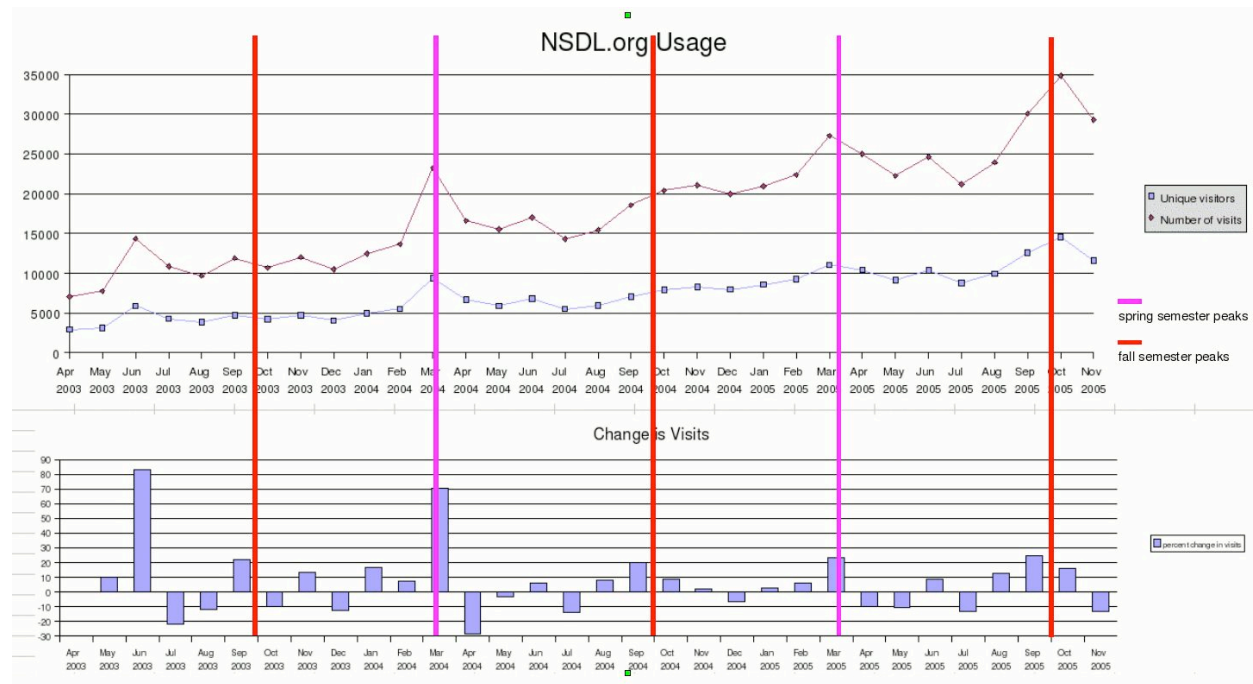
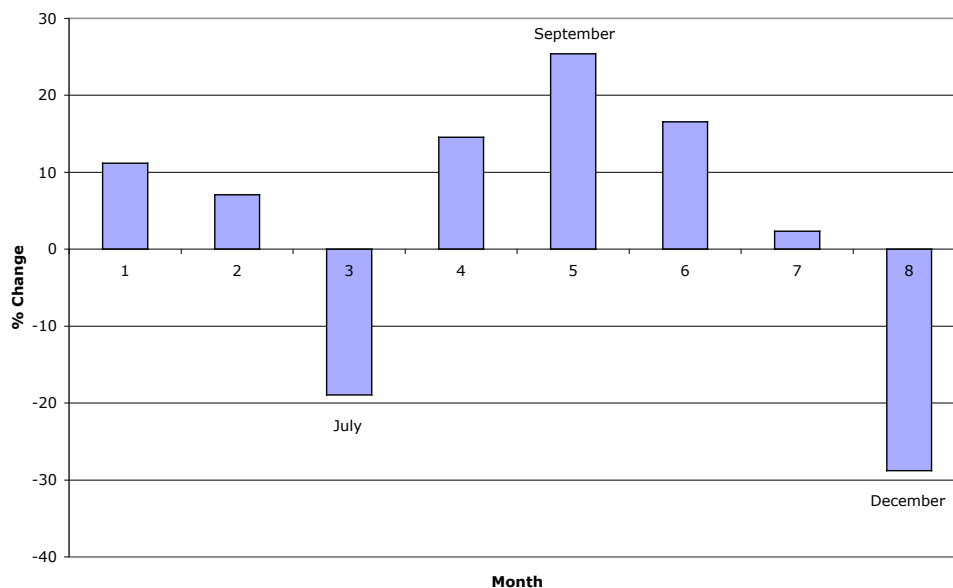


Chart 3 (above) Chart 4 (below)

Month-on-month changes, May-Dec 2005



3 Referrals to nsdl.org

3a A 'long tail' analysis

In the previous report I presented an overview of referrals to nsdl.org. To recap, Omniture defines referrers as:

Locations from which visitors to your site come. They can be Web sites with search engines or advertisements, e-mail messages, Web sites with links to your site, or a shortcut on your own computer. For example, if a visitor clicks on an ad banner or link of any kind from site A and arrives at site B, site A 'refers' you to site B. Site B's SiteCatalyst account will register site A as a referrer and log one page view for site B.

Omniture records referrals to nsdl.org from three sources: (a) links from search engine pages, (b) typed or bookmarked URLs, and (c) links from other web pages. As was noted in last month's report, 20% of referrals to nsdl.org come from search engines, 40% from typed/bookmarked URLs, and 40% from external non-search engine links. These proportions (20:40:40) have remained steady since April (Charts 5, 6), and they differ notably from those in other NSDL projects. In comparison with other NSDL projects, nsdl.org has:

- a higher proportion of referrals (35-45%) from links in web pages (Chart 7.a)
- a higher proportion of referrals (35-40%) from typed/bookmarked URLs (Chart 7.b)
- a lower proportion of referrals (20-25%) from search engines (Chart 7.c)

One conclusion to be drawn from these data is that nsdl.org has a below-average search engine presence. This possibility is noted but not explored here. Rather, it is suggested that nsdl.org has a relatively high Web presence, that is driving up referrals to nsdl.org.

The 'long tail' of nsdl.org referrals

Between April and November 2005, nsdl.org received referrals from approximately 1650 different web sites (in comparison, in November 2005, nsdl.org received referrals from approximately 665 web sites). Note that Omniture may not have recorded all referrals.²

The distribution of referrals is distinctive: a few sites each provided a large number of referrals, while many sites each provided a small number of referrals. Such a skewed distribution is a common feature of information spaces such as the Web.³ In the case of the Web as a whole, for instance, there are a few sites that are linked to many times, and many sites that are linked to just a few times or not at all.

Similarly, in the case of nsdl.org referrals, there is a very long 'tail,' and the greatest absolute number of referrals comes from this tail. While by far the most significant referrer to nsdl.org is google.x (where 'x' aggregates all google properties, such as google.com, google.co.uk, etc.), and other search engines, such as yahoo.com, also feature prominently in the referring site rankings (Chart 8a, 8b), cumulatively, many more referrals to nsdl.org come from links embedded in non-search engine pages, because even if each non-search page contributes just a few referrals, there are many more of these non-search engine pages.

Long tails are important strategic resources. According to Anderson (2004)⁴:

The theory of the Long Tail is that our culture and economy is increasingly shifting away from a focus on a relatively small number of "hits" (mainstream products and markets) at the head of the demand curve and toward a huge number of niches in the tail.

Anderson describes online retailers who derive as much revenue from low-demand products as from

² Basically – as the contract stands – Omniture does not permanently record full details of all site referrals to nsdl.org. They could do so, but we would have to pay them more.

³ Adamic, A., & B. Huberman. 2002. Zipf's law and the Internet. *Glottometrics* 3: 143-150. Attached with this report.

⁴ Anderson, C. The Long Tail. *Wired Magazine*, Vol. 12, No. 10. http://www.wired.com/wired/archive/12.10/tail_pr.html
See also: <http://www.thelongtail.com/>

best-sellers, and from large numbers of sales to small ‘niche markets,’ as from small numbers of sales of large ‘megahits.’ While nsdl.org is not a retailer in the sense that Anderson talks about, it is however in a position of having to generate a return (in the form of hits) on an investment (its development and infrastructure costs). Here, long-tail models suggest that it can do this, as in addition to pulling in large numbers of hits from a small number of high-traffic web sites such as google, it is also pulling in small numbers of hits from a large number of low-traffic web sites.

3b Ratio of external to internal links

This conclusion regarding nsdl.org’s ‘long tail’ is supported by data on the ratio of external to internal links to nsdl.org, obtained from Yahoo Site Explorer (YSE: <http://siteexplorer.search.yahoo.com/>). There are a number of different ways to count links to a domain, and results can vary widely according to tool and query.⁵ YSE was chosen as for this analysis because it easily returns both the total number of links that go to a particular domain, and the number of those links that come from outside and inside the domain. Running YSE in mid-December on nsdl.org and four other NSDL sites produced the following results:

	External Links	Internal Links	All Links	External Links as % of All Links	Ratio Ext:Int Links
nsdl.org	62238	15480	77718	80.1	4.0:1.0
Project 1	48166	32848	81014	59.5	1.5:1.0
Project 2	11063	72364	83427	13.2	0.15:1.0
Project 3	4449	9596	14045	31.7	0.46:1.0
Project 4	1355	2963	4318	31.4	0.46:1.0

Comparing the ratios of links external to a domain to links internal to a domain for each project, we can see that compared with other NSDL projects, nsdl.org has both the highest number of external links, and also the highest ratio of external to internal links, of any Omniture monitored NSDL project. This finding reinforces the finding from Omniture that, in comparison with other NSDL sites, a relatively high proportion of referrals to nsdl.org come from non-search engine web sites.

3c Where are these links and how did they get there?

These data suggest that in comparison with other NSDL projects, nsdl.org has a relatively large number of external web sites linking to it, and that this is resulting in a significant flow of traffic to nsdl.org. This finding appears to validate CI strategies to persuade other organizations to put links and logos for NSDL on their sites.

At the same time, however, the data reviewed so far do not tell us how or why these links were created in the first place, and further research is therefore needed. In the short term this will concentrate on mapping where some of these links come from, for instance in terms of high level domains. However, help will also be needed with recalling the histories of any campaigns designed to increase the web presence of nsdl.org.

Finally, attached to the e-mail that sent this report is a spreadsheet with all referring domains for April – December 2005 (the period for which there are reliable Omniture data).

⁵ As the following results for a search on “nsdl.org” in different tools show:

Search engine	Query syntax	All links	External links
Yahoo! Site Explorer	‘From all pages’ + ‘To entire site’	77,356	
Yahoo! Site Explorer	‘Except from this domain’ + ‘To entire site’		61,846
Yahoo! Search	linkdomain:nsdl.org	78,900	
Yahoo! Search	linkdomain:nsdl.org -domain:nsdl.org		72,900
Google.com	Link:nsdl.org	5220	
Google.com	link:nsdl.org -site:nsdl.org		2

Referrals April-November 2005

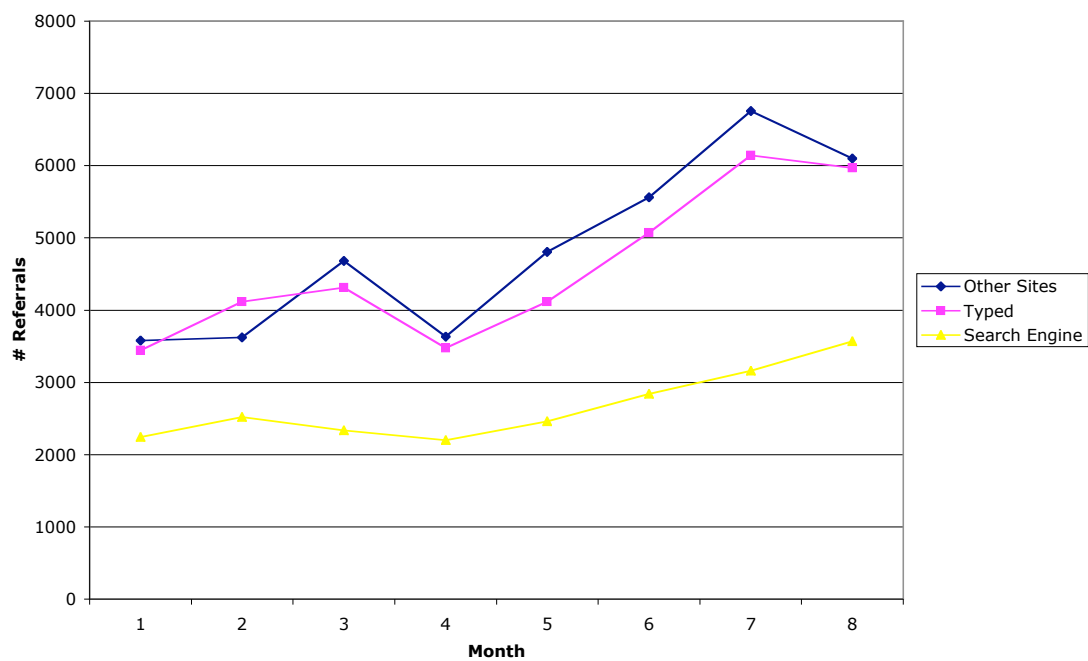


Chart 5

Referrals April-November 2005

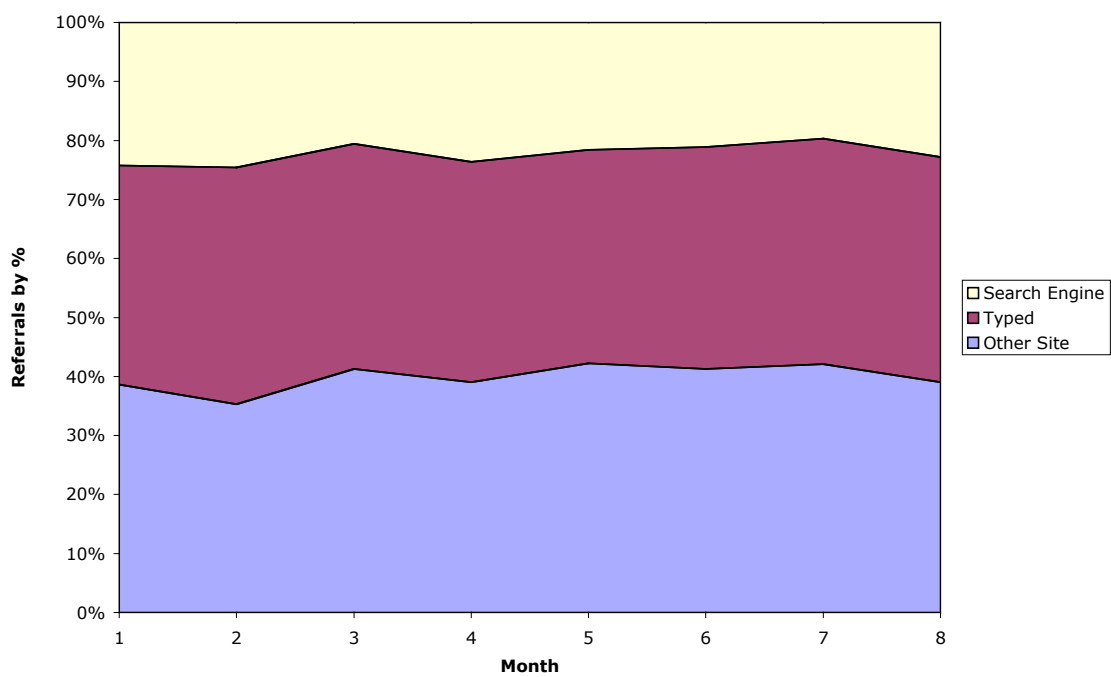


Chart 6

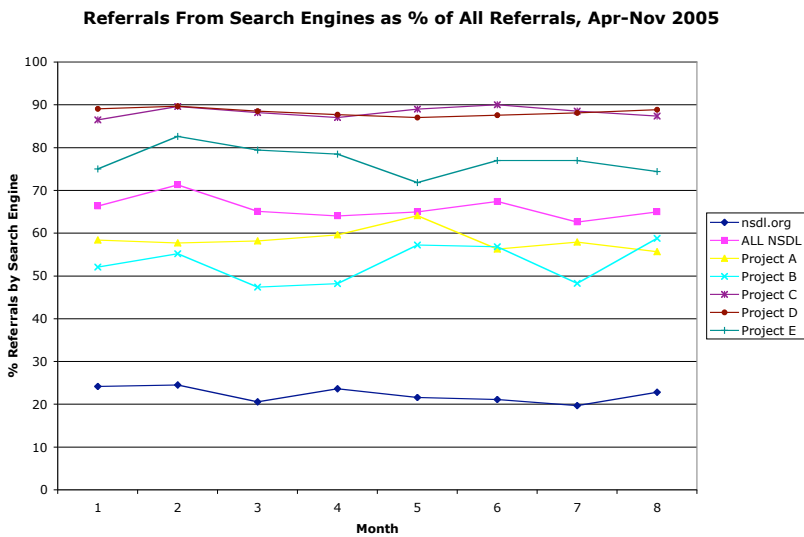
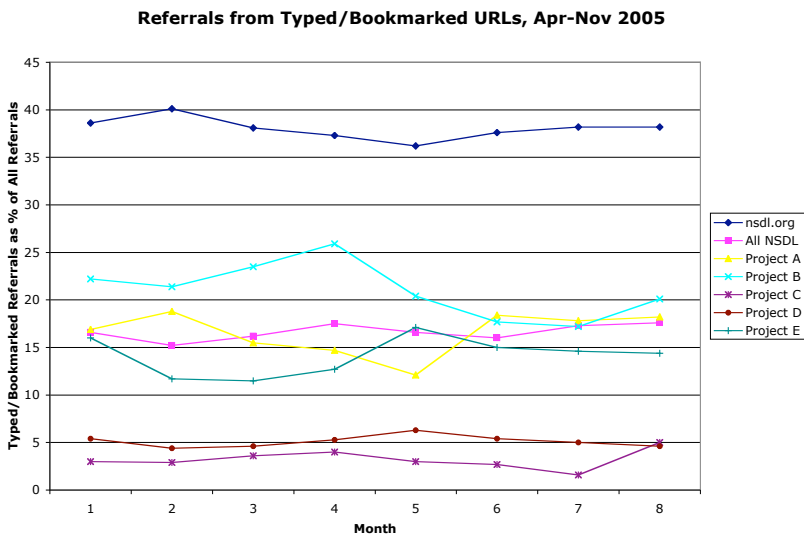
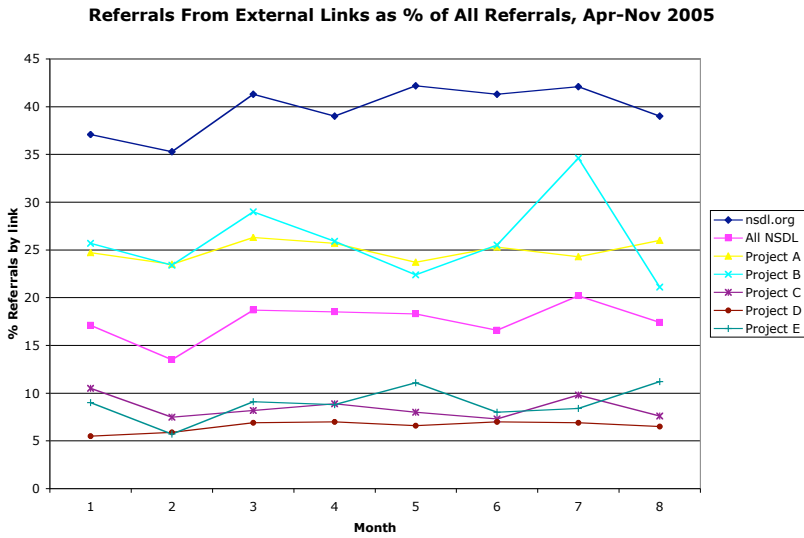


Chart 7 (a, b, c)

nsdl.org Referring Domains, Apr-Nov 2005

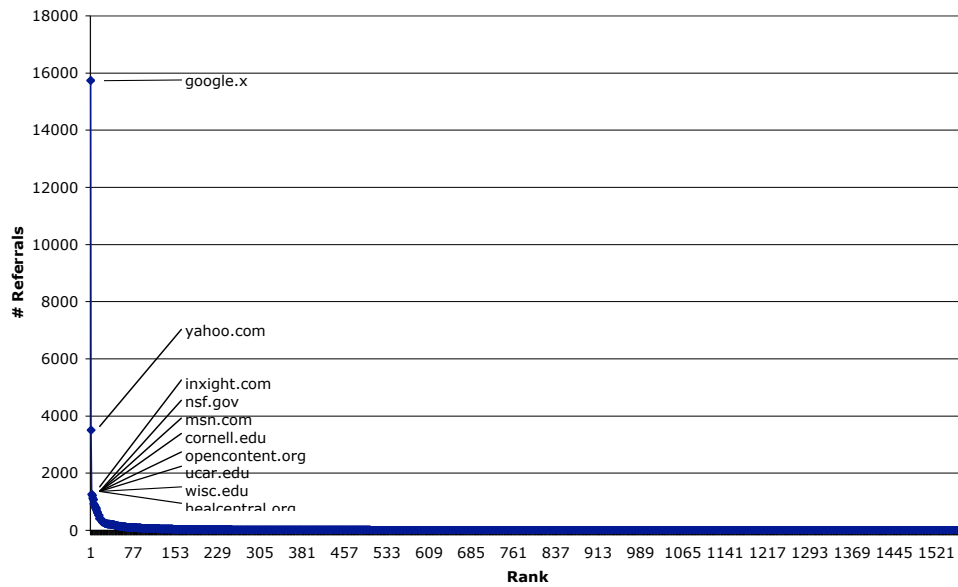


Chart 8a

nsdl.org Referring Domains, Nov 2005

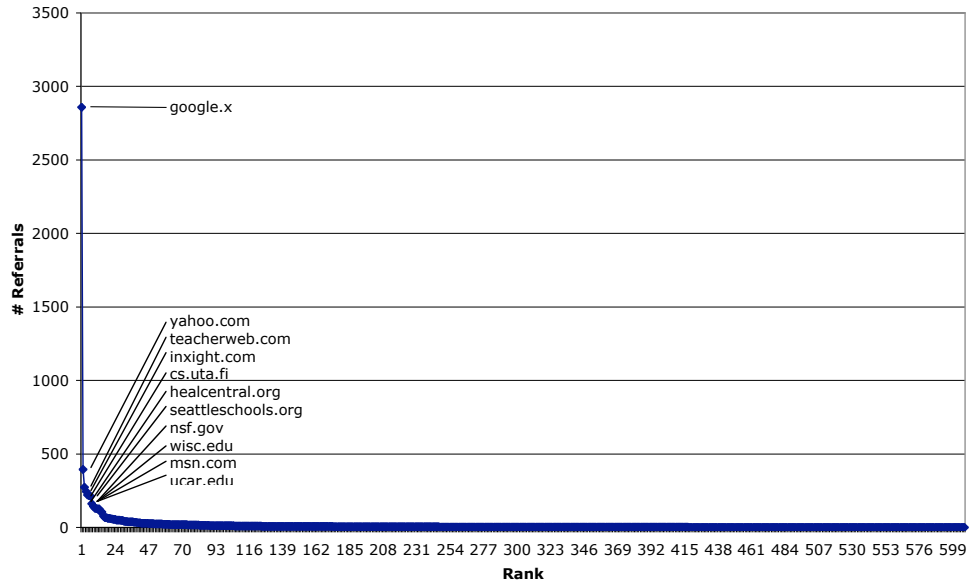


Chart 8b

4 Note on Discrepancies in Omniture Reporting

Anyone interested in examining the Omniture statistics for themselves should be aware that the reported values for a specific statistic can vary from page to page. The reasons for this include the different ways in which Omniture calculates various statistics, and also the fact that Omniture limits the amount of statistics recorded at the detailed as opposed to the summary level; and according to Omniture, the higher and more summary the level of a statistic, the more likely it is to be accurate.

The following example discrepancies that illustrate the different ways in which the same statistic – referrals from search engines – might be directly or indirectly calculated and reported.

<u>Report Name</u>	<u>Statistic</u>	<u>Description</u>	<u>Metric</u>	<u>Discrepancy</u>
Referring Domains Report	Search engine referrals	summary	3570	100.0%
Referring Domains Report	Search engine referrals	detailed	3579	100.0%
Referring Domains Report	Search engine referrals	detailed	3424	95.9%
All Search Keywords Report	Search keywords	detailed	2960	82.9%

In addition, Omniture does not keep detailed records all referrals to nsdl.org. These referrals are recorded at the aggregate level, but an unknown number of referrals at the far end of the long tail are presently not recorded in detail (e.g. in terms of referring URL).