

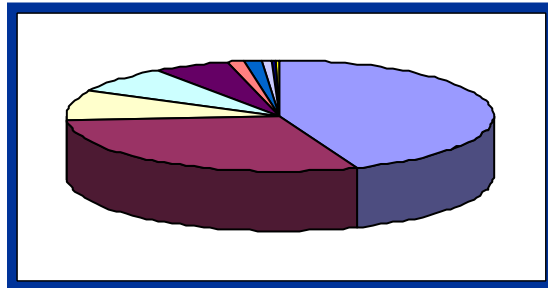
Kelvin Smith Library

Electronic Resources Unit

2006-2007 Annual Report

Information Discovery ► Information Access ► Information Usage

Resource Discovery and Usage Statistics



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Electronic Resources Unit

2006—2007 Annual Report

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Electronic Resources Unit Annual Report—2006-2007

Electronic Resources Portal: <http://library.case.edu/ksl/research/eresources.html>

About this Report

The Electronic Resources Unit (ERU) reports on the acquisition, access, and usage of electronic resources as they relate to collection management activities at the Kelvin Smith Library (KSL). KSL's electronic resources include research databases, electronic journals (or ejournals), electronic books (or ebooks), data files, and rapidly growing collections of digital media—images, videos, maps, audio, and other non-text materials. This report incorporates statistics that were both captured by the ERU and supplied by information vendors. Starting this year, usage data by vendor and individual title is published in a supplementary report.¹

To help frame this year's report, the Electronic Resources Librarian incorporated findings from a user survey conducted during the 2005-2006 Fall Semester.² Survey results substantiate evidence that Case students and faculty consider the electronic delivery of scholarly information essential for their success. Electronic delivery options provide the Case community with greater information choices and greater flexibility in managing information. Ultimately, these resources extend the boundaries of the Kelvin Smith Library so that researchers may 'use the library' regardless of place, time, or space.

The report consists of three parts. Part I summarizes the Case Readership Survey developed and administered by Dr. Carol Tenopir and colleagues. The survey collected data on student and faculty journal reading patterns and is part of an ongoing study of usage data collection and analysis. Part II reports on current trends in communication and considers the impact these trends may have on KSL resource usage. Part III examines usage statistics by resource type and coverage. The report concludes with suggestions for marketing library resources and providing researchers with better information discovery experiences.

Part I

— User-Centered Focus —

Scholarly Reading at Case: How Usage, Culture, and Need Dictate Investments in Electronic Resources

The Kelvin Smith Library makes significant investments in digital resources and in the time and effort it takes to manage these resources. Librarians constantly evaluate and cost-justify materials as they struggle (with shrinking budgets) to provide the best resources for the Case community. Usage data is essential in this process and librarians collect and analyze statistics of all types. These numbers help quantify resource usage. However, numbers alone do not adequately reflect quality of user experience. To flesh-out these details, the Case libraries participated in a survey of Case Western Reserve University faculty and student reading patterns.³ We collected feedback on key service metrics including:

- Who uses our resources >>
- Why they use them >>
- How, when, and where they use them >>
- How well their needs are being met >>

After completing the survey, students and faculty were invited to make open-ended comments. These comments have allowed the ERU to ‘put a face to the numbers’ and help interpret the statistical data associated with electronic resource access and usage. Although most of the findings validate librarians’ assumptions, there are several implications, including the following, that merit closer observation.

- Against the trend?—Students assert that free Internet search engines (Google, Ask.com, Yahoo, etc.) are *not* their primary source for information when they begin a research project, paper, or report. Students rely on the Case libraries for authoritative, scholarly, premium materials. This challenges the widely held perception that students mainly surf the Web for research content.
- The largest percentage of faculty response, nearly 50%, was from the health/medical sciences community. In contrast, the engineering faculty response rate, 7%, was much lower than expected.
- The Case libraries’ role as disseminators of information to the campus community is vaguely recognized and applauded. At best, this is passive marketing. The libraries need better, “up-in-your-face,” branding on all information sources to educate the campus community about the pivotal role libraries play in research and learning. Otherwise, as more licensed materials become accessible from the Web (e.g., OLinks on Google), the libraries’ role as information providers may become even more obscure.

Following are excerpts from the survey report.⁴

Summary I:

Case Western Reserve University Student Readership Survey

"I cannot say enough how much I appreciate the library resources, specifically the online resources which can be utilized out of the library. It made a grueling last semester much easier."

Student comment, "Readership Survey," p. 55

Profile of Student Respondents

The survey was emailed to a sample of 9,095 students—3,516 undergraduate and 5,579 graduate and professional students. In total 1,536 students responded to at least one question for an overall response rate of 16.9%. Students were allowed to exit the questionnaire at any time or to skip questions, so the response rate for individual questions is less. Fewer students gave their academic level, but for those that did, the response rate for graduate and professional students was 13.5% (752 of 5579) and the undergraduate response rate was 16.4% (576 of 3516). An additional 63 respondents gave an "other" grade level.

Academic Level of Student Respondents

		Frequency	Percentage of Responses
Undergraduate	First year	136	9.8
	Second year	107	7.7
	Third year	157	11.3
	Fourth year	176	12.7
Subtotal		576	41.4
Graduate	Masters student	275	19.8
	Ph.D. student	477	34.3
Subtotal		752	54.1
Other		63	4.5
Total		1391	100.0

Aggregated Disciplines of Student Respondents

Students were asked to select their area of study from a comprehensive drop-down list of majors offered at Case. To facilitate analysis, these responses were aggregated into the categories below.

Discipline	Frequency	Percent
Social Sciences	401	28.8
Engineering/Technology	327	23.5
Medical/Health	320	23.0
Sciences	222	15.9
Humanities	89	6.4
Others	34	2.4
Total	1393	100.0

Students' Scholarly Journal Article Reading

"I have dramatically increased the number of journal articles I have read in order to complete class work as well as my research. I have transitioned from mainly recommended articles to those that I have searched for myself".

Student comment, "Readership Survey," p. 50

To help focus answers, respondents were asked about a specific journal article reading that had occurred during the previous 30 days.⁵

▪ **Amount of Reading**

As expected, there is a wide range of responses. Students reported reading anywhere from zero articles up to 200 in the thirty-day period specified in the survey. Case students, on average, read between 13.7 and 15.5 articles per month. Extrapolated to 12 months (recognizing that reading by students is not usually spread evenly throughout the calendar year), Case students read between 164 and 186 articles per year. For graduate students, the average amount of article reading per year is 251, an amount close to or exceeding the average number of readings by faculty at many universities.

▪ **Time Spent Reading**

The mean length of reading per article was 36.72 minutes (SD=35.621). We can say with 95% confidence that Case students spend between 34.7 and 38.8 minutes per reading. Reading duration can be affected by length or complexity of the article, or the purpose of the reading. Given that this sample is skewed toward graduate students, it is likely that these respondents may be reading longer, more complicated articles, or may need to read them more thoroughly, so the reading duration may be longer than if the sample had contained more undergraduates.

▪ **Purpose of Reading**

Purpose	Frequency	Percent
Help complete a course assignment.	422	35.4
Required reading in a course.	243	20.4
For my thesis or dissertation.	223	18.7
Keep up with the literature.	150	12.6
Personal interest	88	7.4
Other	67	5.6
Total	1193	100.0

▪ **Information Discovery**

We next asked students how they learned about the article read most recently. There is a strong association between the method used to locate the article and the purpose of the reading. After instructor/course related motivations, the most common methods of finding the target article were searching an indexing/abstracting database, searching online journal collections, and browsing a library electronic subscription. However, not all electronic sources played a significant role in the provision of these target articles; very few readings were located by browsing department or school e-subscriptions (4.5%), or browsing personal e-subscriptions (1.1%). Interestingly, the Internet was not a meaningful source of these focus articles; very few articles were found by using Web search engines (3.2%) or browsing the Web (1.8%). This finding stands in contradiction to the commonly-voiced concern that students often use only the Internet for their research, rather than library collections.

Article Reading and Method of Discovery

		Way of Finding Article			Total
		Browsing	Searching	Other	
Purpose	Required reading in a course	19 7.9%	11 4.5%	212 87.6%	242
	Help complete a course assignment	135 32.1%	185 43.9%	101 24.0%	421
	For my thesis or dissertation	34 15.4%	101 45.7%	86 38.9%	221
	Keep up with the literature	48 32.2%	47 31.5%	54 36.2%	149
	Personal interest	42 47.7%	14 15.9%	32 36.4%	88
	Other	14 20.9%	27 40.3%	26 38.8%	67
Total		292	385	511	1188

▪ Information Access

By a ratio of almost 3-to-1, students obtained their most recently read article in an electronic (71.6%) rather than print (28.1%) format. The Case libraries' journal subscriptions were the most frequently consulted source for both format types, although the electronic subscriptions (41.5%) were the source of many more readings than the print subscriptions (9.5%).

▪ Article Reading—Print vs. Online

Pros and cons about online article reading are frequently discussed in research literature. The assumption is that most users scan information online and then print or save selected documents. The Case Readership Survey provided a unique opportunity for students themselves to state their reading preferences. Although students *found* the majority of their readings online, most articles were *read* as printed copies (63.8%) rather than on a computer screen (36.1%). Most articles that were read on paper had been downloaded and then printed out, such as with a PDF file (41.8%). In comparison, the most frequently-employed option for reading in an electronic format was to open and read a file (an HTML version for example) (26.9%). To a much smaller extent, students also download and saved articles (9.2%) prior to reading them.

A statistically significant association was found between the purpose for reading the article and the format of the reading ($X^2 = 65.184, p < .0001$). For all six purposes listed in the table above, a larger number of students said that they *read* the article in an electronic rather than print version. The difference was particularly pronounced for readings that were conducted to complete a course assignment (82.2% electronic versus 17.8% print), for keeping up with the literature (75.2% electronic versus 24.8% print), and for thesis or dissertation work (73.6% electronic versus 26.4% print). About 22% of the articles that were read in a print version did not originate as an electronic document; these articles were either read directly from a printed journal (11.3%) or they were read as photocopies of a printed original (10.5%).

Although reading on a screen is less common than printing an article on paper prior to reading, it is still more common among Case students than it is among faculty. In faculty surveys in research universities, typically only about 12-15% of readings are read on screen—less than half of that reported by Case students.

Reading Format—Electronic vs. Print

		Frequency	Percent
Print	Print article in a print journal	134	11.3
	Photocopy	125	10.5
	Facsimile copy	2	.2
	Downloaded and printed (e.g., printed PDF)	495	41.8
Subtotal		756	63.8
Electronic	Online computer screen (e.g., HTML version)	319	26.9
	Previously downloaded/saved and read, on computer screen	109	9.2
Subtotal		428	36.1
Other		1	.1
Total		1185	100.0

Way of Finding Articles and Reading Format

		Source		Total
		Print	Electronic	
Way of Finding Articles	Browsing	69 23.8%	221 76.2%	290
	Searching	66 17.2%	318 82.8%	384
	Other	200 39.1%	311 60.9%	511
Total		335	850	1185

Conclusion

The project administrator summarizes:

“Electronic journal access is very important for the support of the scholarly activities of both undergraduate and graduate students, including their coursework, research, academic employment, and dissertations and theses. Students generally appreciate the convenient and comprehensive access to electronic journal contents, particularly full text versions of articles. While they recognize that access and coverage have improved, students’ expectations about the performance of electronic journal collections are also increasing, leading them to express their continuing desires for e-access to even more journal titles, in a wider assortment of subject areas, and to older issues of existing titles.”⁶

“I like the ability to have a vast amount of scholarly material at my hands and be able to search for it online on databases, instead of through stacks of books, and all for no charge to the student.”

Student comment, Readership Survey, p. 57

Summary II:

Case Western Reserve University Faculty Readership Survey

“Electronic access to scientific journal articles has dramatically expedited the access to information central to my research and review of the literature. As a result more information can be reviewed in the same amount of time, and I am more likely to review the appropriate literature.”

Faculty comment, “Readership Survey,” p. 35

Profile of Faculty Respondents

The survey was emailed to 2,207 Case faculty members. We received 414 total usable responses for an 18.8% response rate. Since respondents were allowed to exit the questionnaire at any time, skip any questions they chose, or were timed out automatically if they began the questionnaire and did not complete it, most individual questions have a lower number of responses.

Academic Disciplines of Case Faculty Respondents

	Frequency	Percent
Medical/Health	172	47.9
Sciences	67	18.7
Social Sciences	64	17.8
Humanities	27	7.5
Engineering/Technology	25	7.0
Others	4	1.1
Total	359	100.0

Of the 359 respondents who answered this question, nearly half (47.9%), were from medical or health disciplines, while another 40 percent were split between Social Sciences (17.8%) and Sciences (18.7%). This question used an open-ended text box; responses were collapsed into broad disciplines to aid analysis.

Faculty’s Scholarly Journal Article Reading

To help focus answers, respondents were asked about a specific reading that had occurred during the previous 30 days.⁷ The following extracts are based on that reading.

▪ **Amount of Reading**

The average amount of scholarly reading for the survey period was 31 articles/month (SD =32.918, mode =20). There is a wide range in this reading, from 0 to 255 articles read in the last month. Although the mean is nearly 31 (30.8), the median is only 20. Extrapolated to an entire year, the average number of articles read by Case faculty across all disciplines was 372, with all outliers included. In terms of time spent reading, Case faculty report spending an average of approximately one-half hour (29.63 minutes) per article reading (SD = 25.561), an amount of time consistent with other recent faculty surveys. We have 95 percent confidence that Case faculty on average spend between 27 to 32.25 minutes per reading.

▪ **Purpose of Reading**

We asked faculty to describe one principal purpose for which “you have used, or do you plan to use, the information obtained from the article you last read?”

Article Reading Purpose

Purpose	Frequency	Percent
Research	178	49.6
Teaching	62	17.3
Writing proposals, reports, articles, etc.	48	13.4
Current awareness/keeping up	28	7.8
Consulting, advising others	14	3.9
Continuing education for self	11	3.1
Internal or external presentations	9	2.5
Other (please specify)	9	2.5
Total	359	100.1*

*Due to rounding

▪ **Information Discovery**

We next asked, “How did you initially find out about the last article you read?”

Method of Finding Information

	Frequency	Percent
Browsing	92	25.1 (100.0)
1. Print: Personal subscription	33	(39.8)
2. Electronic: Library subscription	29	(34.9)
3. Electronic: Personal subscription	7	(8.4)
4. Free web	6	(7.2)
5. Print: Library subscription	5	(6.0)
6. Electronic: School, department etc. subscription	3	(3.6)
Searching	109	29.7 (100.0)
1. Indexing/abstracting database	57	(61.3)
2. Online journal collection	15	(16.1)
3. Web search engine	13	(14.0)
4. Electronic: other	4	(4.3)
5. Print index or abstract	2	(2.2)
6. Print: other	2	(2.2)
Other	166	45.2 (100.0)
1. Another person told me about it	90	(54.2)
2. Cited in another publication	53	(31.9)
3. Sent to me as a part of alerting service	11	(6.6)
4. Don't know or other	12	(7.3)
Total	367	100.0

▪ **Information Access and the Role of the Library**

Faculty selected from three basic categories to describe how they obtained the most recently read article: library-provided, personal subscription, and other. For our survey, these categories were significantly

associated with principal purpose of reading ($\chi^2 = 45.984, p < 0.0001$). Case faculty members rely on library-provided resources for over half their readings (58.6%). These library-provided readings are principally used for research. Personal subscriptions are more likely to be used for teaching and current awareness.

Since 1977 faculty have relied more on library provided articles and less on personal subscriptions, and faculty rely on libraries particularly for research-related readings. Faculty emphasize that there is a growing tendency to make greater use of electronic resources to access scholarly materials due largely to ease and increased efficiency.

How Faculty Obtained Last Article

Source	Frequency	Percent
Library-provided	218	58.6
Personal subscriptions	73	19.6
Others	81	21.8
Total	372	100.0

Subject discipline is closely associated with the way faculty members obtain information. Humanities respondents were equally split between library-provided resources and personal subscription (42.3% each). In contrast, faculty from other subject disciplines read most often from library-provided resources, ranging from 53.5% to 68%. Science faculty respondents were distinct for their very low rate of reading from personal subscriptions, only 4.5%.

Subject Discipline of Faculty Respondents and Method of Obtaining Articles

		Access			Total
		Library-Provided	Personal Subscriptions	Other	
Subject Discipline	Social Sciences	37 57.8%	12 18.8%	15 23.4%	64
	Humanities	11 42.3%	11 42.3%	4 15.4%	26
	Medical/Health	92 53.5%	42 24.4%	38 22.1%	172
	Engineering/ Technology	17 68.0%	3 12.0%	5 20.0%	25
	Sciences	48 71.6%	3 4.5%	16 23.9%	67
Total	205	71	78	354	

▪ **Print vs. Online Reading**

Only 85 of 360 (23.6%) readings reported by Case faculty were actually read on screen—all the rest were either obtained from a print journal or downloaded and printed on paper. Print-on-paper is still considered more convenient for reading. Yet, 23.6% is a larger percentage of online reading than has been noted in earlier faculty surveys. Many libraries have observed that faculty rarely read in the physical library, even though their use of a library's virtual collection may be substantial. This is true of Case faculty members. The vast majority of their article readings are from home or offices (91.4%, $n = 338$).

Reading Format—Electronic vs. Print

Article	Frequency	Percent
1. Downloaded and printed on paper	175	48.6
2. Print article in a print journal	66	18.3
3. Online computer screen	60	16.7
4. Photocopy	33	9.2
5. Previously downloaded/saved and read, on computer screen	25	6.9
6. Facsimile copy	1	.3
Total	360	100

▪ **Value of Information**

Finally, we asked faculty members to rank the importance of their last reading to the principal purpose of the reading on a 3-point scale of 1 (not important), 2 (somewhat important), and 3 (absolutely essential). On the whole, readings were rated important ($M = 2.40$), a finding consistent with past faculty surveys. Nearly 60 percent of readings were rated “somewhat important” (59.6%, 212 of 356), with the majority of the remaining readings (39.3%, $n = 140$) rated as “absolutely essential.” In addition to rating the value of the reading to the purpose, we asked faculty to choose from a list of outcomes the one(s) that best described the outcome of this last reading. Most often the readings “improved the result” or “inspired new thinking.”

Outcome of Reading for Faculty Respondents

Outcome	Frequency	Percent
Inspired new thinking	180	50.4
Improved the result	140	39.2
Narrowed/broadened/changed the focus	93	26.1
Resolved technical problems	39	10.9
Saved time or resources	38	10.6
Others	36	10.1
Resulted in faster completion	29	8.1
Resulted in collaboration/joint research	21	5.9
Total	357	

▪ **Conclusion**

By and large, faculty comments show a “growing tendency to make greater use of electronic resources to access scholarly materials due largely to ease and increased efficiency. Many respondents also noted that scholarly journals have moved almost exclusively to online resources, greatly reducing their physical presence in the library.”⁸

“If the administration really wants a superlative learning experience they need to be willing to pay for a superlative library and this includes electronic sources.”

Faculty comment, Readership Survey, p. 39

Part II—Research Trends

Each year, communication trends affect electronic resource usage. As survey results indicate, the Web as a medium of participation continues to grow in popularity. Participatory sites and tools allow users to move from being passive information consumers to co-creators and publishers. *Social bookmarking* and *social networking* are examples of this type of activity.

Research trends & social networking

College students in particular have made social networking sites trendy places to ‘hang-out.’ Sites such as *Facebook*, *MySpace*, *Flickr*, *YouTube*, etc., connect members through chat, photos, videos, email, blogs, messaging, etc. Information posted on these sites can appeal to audiences not attracted by traditional library outreach services. Following are links to two library-sponsored videos on *YouTube* that introduce students to bibliographic software.

- Arizona State University students created, *Refworks: The Ultimate Tool for Bibliographies*. This entertaining production is presented in infomercial style: <http://www.youtube.com/watch?v=0MFTvX5PqQ8>
- The University Libraries of Notre Dame produced, *RefWorks Citation Cop*. This creative video parodies the popular *Cops* reality TV show: www.youtube.com/watch?v=lwrOX9KNQEc

Research trends & social bookmarking

Social bookmarking tools include *del.icio.us*, *Google Bookmarks*, *Connotea*, *Digg*, *reddit*, *Spurl*, and *Windows Live*. These tools can be useful in the research process. OhioLINK’s Electronic Journal Center (EJC) allows users to bookmark articles to their accounts from an icon on the abstract page of any article in the EJC. Other facilities include (<http://olc7.OhioLINK.edu/whatsnew/>):

- *My Articles*—users may save articles to a page created in the EJC
- *My EJC*—users may create a list of favorite journals and be notified when new issues are published
- *My Searches*—saves searches and sets times for the system to automatically execute and e-mail results
- Journal alerts—current awareness tool via RSS feed (Really Simple Syndication) for OhioLINK titles

The popularity of these and other participatory sites (*Web 2.0*, *Second Life*, etc.) illustrate the fact that students are discovering or creating new learning environments. Through strategic marketing, libraries can establish a presence in these communities and have new avenues of outreach.

Part III: Electronic Resource Usage Statistics

“The online subscriptions are the most convenient resource that the library has to offer. They are especially useful for writing research papers and other writing assignments.”

Student Comment, “Readership Survey”, p. 57

Overview & Scope

Access to electronic resources is one of the most visible and quantifiable services that the Case libraries provide. The libraries purchase, license and/or subscribe to a host of online resources from multiple information suppliers. These resources are delivered to the Case libraries via diverse contractual arrangements including “bundled packages,” individual titles, and consortium ‘pay-to-play’ subscriptions (see Glossary for definitions). Obtaining usage data from such varied sources can be challenging and time consuming. In addition, statistics reporting for online access and usage is still evolving. To help with this process, librarians and publishers have developed *Project Counter*, an international set of standards and protocols governing the recording and exchange of online usage data (see <http://www.projectcounter.org/>).

Each year, more information suppliers become ‘counter compliant’ as they provide data that conforms to the *Counter Code of Practice*. However, *Counter* only partially addresses the complex issues associated with online usage data. Many e-book vendors, for example, devise their own measures for usage. This practice gives rise to questions such as: in a networked environment where people may be looking for specific pieces of information rather than a total reading experience, what should be counted?—number of pages viewed?; chapters viewed?; text downloads, etc.? Other issues include:

- scope of coverage (e.g. full-text article retrieval as a single number versus separate numbers for full-text HTML views, full-text PDF views; or article retrievals viewed vs. printed vs. e-mailed, etc.)
- types of measures (i.e. [how] do/can you compare/measure accesses to citations/abstracts, datasets, books, book chapters, book pages, etc.)
- temporal increments of measures (e.g. hourly, daily, weekly, monthly, quarterly)
- the fundamental incomparability of data across different providers and resources, which prevents useful local analysis (by cost centers or other functional groupings).⁹

Thus, depending on the purpose, reporting types of usage can be similar to comparing apples and oranges.¹⁰ With this in mind, it cannot be emphasized enough that the data in this report are not conclusive but rather meant to convey a sense of the impressive quality, quantity, and diversity of information that KSL and the Case libraries provide.

It should also be noted that this report focuses on *electronic resource usage* only and does not include statistics for other types of research materials or activities, e.g., online catalog searches, course reserves, printed journal usage, books circulated or purchased, etc. It also does not examine statistics for hits on the Kelvin Smith Library web site, reported to be **4,125,112** for FY2006-07.¹¹

Resource Type and Usage

"I've become aware of the world outside Google."

Student comment, "Readership Survey," p. 50

The summaries on the following pages represent approximately 80% of usage activity. Resources include scholarly journals, bibliographic citation databases, full text article databases, popular magazines, newspapers, e-books, e-references (e.g., encyclopedias, dictionaries, directories), data sets, digital media, etc. However, not all vendors provide statistics and not all statistics are reported at the same time. In addition, this report focuses on *selected* resources. The Electronic Resources Unit's supplementary report includes all usage data by resource title and vendor/publisher.¹²

I. Holdings/Subscriptions Overview

Table 1—Types of Resources: Selected Subscriptions/Holdings

	2004/05	2005/06	2006/07
Research Databases	322	325	331
Electronic Journals			
*Unique Titles Access	31,000	33,016	35,908
**Total Holdings Access		49,300	51,211
Electronic Books (title access)		242,150	347,268
Newspapers—title access		4,431	5,517

*Journal holdings available in only one database

**Journal holdings available in more than one database, but which do not overlap in coverage dates.

II. Types of Usage: Searches/Sessions/Downloads

Typically, resource usage is reported as searches, sessions, and/or downloads. Definitions for these and other terms may be found in the Glossary. Overall, electronic resource usage increased by approximately 20%.

Table 2—Selected Searches/Sessions/Downloads

	2004/05	2005/06	2006/07
Research Databases	909,966	1,019,687	1,244,131
Electronic Journals			
Downloads	427,671	412,404	412,577
Searches	189,235	213,766	310,530
Digital Media			5068
Total	1,526,872	1,645,857	1,972,306
			19.8% increase

Research Databases

<http://library.case.edu/databases/rdbindex.aspx>

"I began using KSL's Research Database service to search for and print articles related to my subject matter. I frequently use these when composing research papers or even shorter academic essays".
Student comment," Readership Survey," p. 39

Research databases are the primary discovery tools for scholarly information. As a member of the OhioLINK Consortium, Case is able to provide the campus community with access to many resources that would not otherwise be available. However, in addition to consortium titles, the Case libraries subscribe to many proprietary databases deemed *critical* by Case faculty and students. *JSTOR*, *SciFinder Scholar*, *IEEE XPLore*, and *Ethnic NewsWatch* are just a few.

Number of databases—331
Selected searches/sessions/downloads —1,244,131

Increasingly, database usage reflects the growing interdisciplinary nature of scholarly information and communication. Users consistently indicate that in today's information environment, cross-disciplinary search tools are essential. Databases that offer multiple subject coverage are popular. *Academic Search Complete* is one of the most popular databases at Case. It is a multidisciplinary full-text database with more than 5,300 full-text periodicals, including 4,400 peer-reviewed journals. In addition to full text, the database offers indexing and abstracts for more than 9,300 journals and a total of 10,900 publications including monographs, reports, conference proceedings, etc. *Academic Search Complete* provides coverage of information in many areas of academic study including: archaeology, area studies, astronomy, biology, chemistry, civil engineering, electrical engineering, ethnic and multicultural studies, food science and technology, general science, geography, geology, law, mathematics, mechanical engineering, music, physics, psychology, religion and theology, and women's studies.

JSTOR is another popular and essential database. Historically, publishing initiatives in the humanities and social sciences have lagged behind those in science and technology. We are beginning to see significant improvement and *JSTOR* is helping to close the gap. *JSTOR* provides full text access to the back files of approximately 670 scholarly periodicals in a variety of disciplines in the humanities, arts and sciences, social sciences, and business. *JSTOR* is funded solely by the Case libraries.

Databases and Subject Coverage

“Use of journal articles through resources such as J-Stor have been amazingly helpful. Overall, I’m thrilled with the ease of searching for various titles & topics.”

Student comment, Readership Survey, p. 38

Using the aggregated disciplines of the *Case Readership Survey*, Tables 3a and 3b illustrate how campus information environments are served by library resources.

Table 3a—Aggregated Disciplines of Survey Respondents

Discipline	Percent
Social Sciences	28.8
Engineering/Technology	23.5
*Medical/Health	23.0
Sciences	15.9
Humanities	6.4
Others	2.4
Total	100.0

*Not primarily managed by KSL

Usage in the sample list below broadly reflects activity in those subject areas managed by KSL/University Library.

Table 3b—Resource Usage by Subject Area (Sample-only)

Resource	Searches	Article Requests	Subject Coverage
A	44444	120235	Arts & Sciences/Social Sciences
B	106623	80822	Multidisciplinary
C	84363	*(Index)	Sciences/Social Sciences/ Multidisciplinary
D	56162	23478	Business/Social Sciences
E	20091	450	Social Sciences/Gender/Multidisciplinary
F	19276	15706	Engineering
G	36129	21097	Business/Social Sciences
H	20032	391	Ethnic Studies/Social Sciences
I	18844	24	Humanities/Religion
J	16818	*(Index)	Science/Technology
K	18846	3681	Arts & Sciences/Multidisciplinary
L	1075	609	Humanities/First Year Studies
M	4534	34	Humanities (English/Literature)
N	8392	3697	Social Sciences/Psychology/Health
O	10412	*(Index)	Music/Humanities
P	9922	1996	Social Sciences
Q	6084	*(Index)	Science

*Not a full text resource

Table 4—Searches by Selected Resource

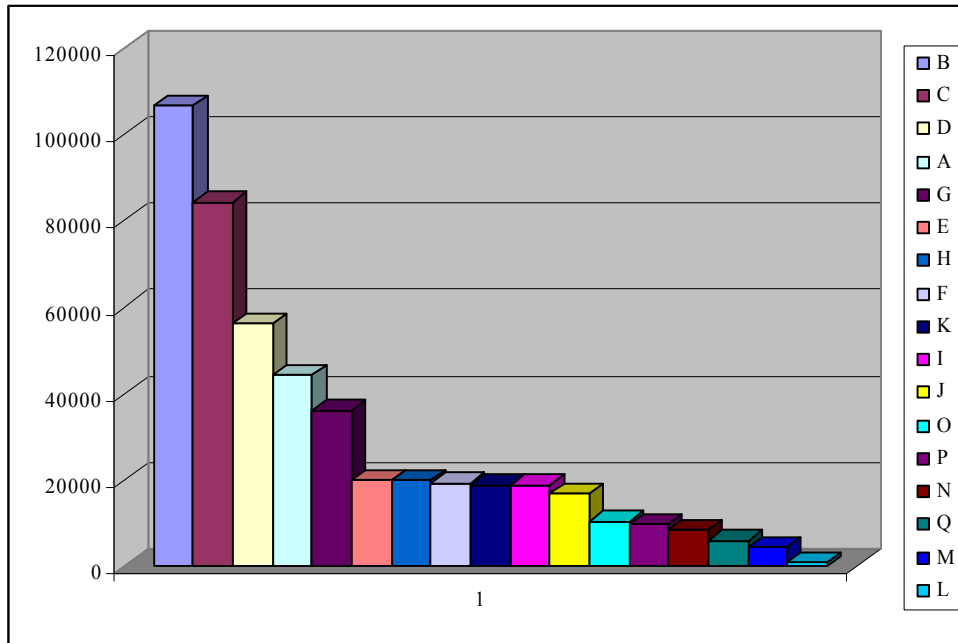
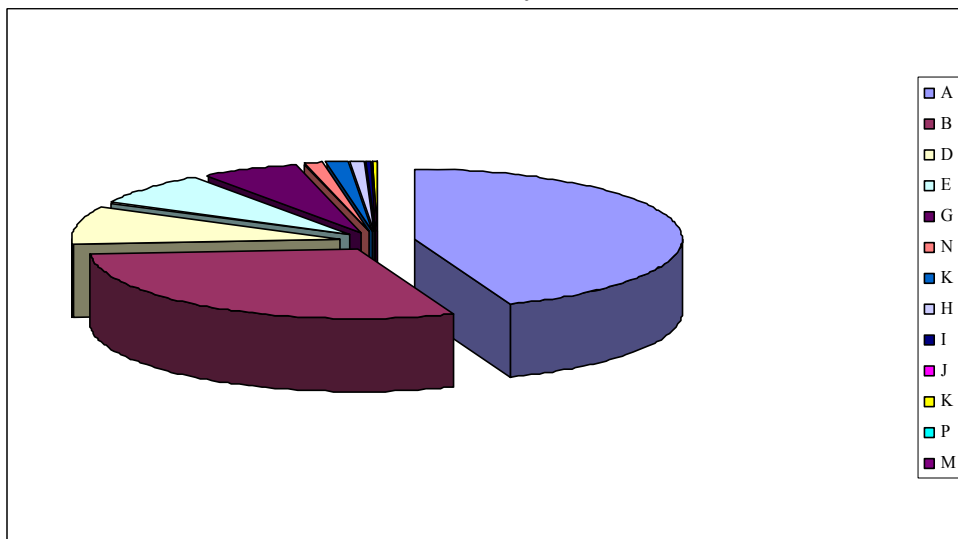


Table 5—Article Downloads by Selected Resource



Electronic Journals

KSL eJournal Portal

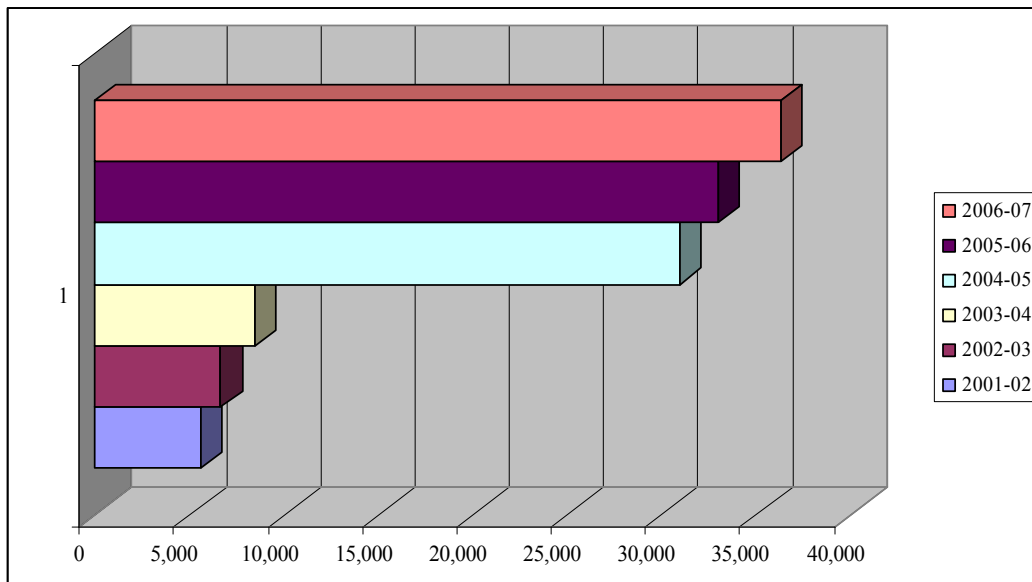
<http://lu4ld3lr5v.search.serialssolutions.com/>

I now turn to journals as primary sources of information including tabulated data, experimental procedures, interesting topics, and material related to coursework, most of the time before I even turn to a textbook. Before two years ago, I had never read a journal article.

Student comment, "Readership Survey," p. 48

Electronic journal articles are among the most requested and downloaded items at the Case libraries. Access to digitized journals has increased journal usage exponentially, especially compared to print-only titles. In 2001, KSL/OhioLINK provided access to approximately 5,600 electronic journals. Today, Case users may select from a growing list of over 50,000 titles. This growth can be directly attributed to the fact that aggregators provide access to *bundled* journal articles through research databases.¹³ As with research databases, the Case libraries provide access to journals not available through OhioLINK.

Table 6—Comparison of KSL E-Journal Title Holdings by Year (2001-2007)



2001-02	5,638
2002-03	6,663
2003-04	8,472
2004-05	31,000
2005-06	33,016
2006-07	35,908

eBooks

<http://library.case.edu/ksl/research/ebooks.html>

Selected Title Access—347,268

“In the last year I have used scholarly materials on a weekly basis. While just a couple of years ago I used scholarly materials less than a third of the year.”

Student comment, “Readership Survey,” p. 37

KSL’s ebook collection is carefully developed to meet the needs of Case’s diverse scholarly communities. Collections include but are not limited to the following.

Major Reference Works—Selected Titles

[Early American Imprints, Series I: Evans, 1639-1800](#) (KSL subscription)

Consists of more than 37,000 books, pamphlets, and broadsides.

[Early American Imprints, Series II: Shaw-Shoemaker, 1801-1819](#) (KSL subscription)

Provides full text access to the 36,000 American books, pamphlets and broadsides published in the first nineteen years of the nineteenth century.

[Eighteenth Century Collections Online](#) (KSL subscription)

A comprehensive digital edition of *The Eighteenth Century*, the world’s largest library of the printed book on microfilm. The collection contains nearly 150,000 English-language titles and editions published between 1701 and 1800.

★ [Early English Books Online \(EEBO\)](#) (KSL subscription)

New this year, KSL has acquired access to *Early English Books Online* (EEBO). This collection contains about 100,000 of over 125,000 titles listed in Pollard & Redgrave's Short-Title Catalogue (1475-1640) and Wing's Short-Title Catalogue (1641-1700) and their revised editions, as well as the Thomason Tracts (1640-1661) collection and the Early English Books Tract Supplement. *EEBO* offers digital facsimile page images of virtually every work printed in England, Ireland, Scotland, Wales and British North America and works in English printed elsewhere from 1473-1700.

[Electronic Reference Books Collection](#) (KSL/OhioLINK subscription)

Electronic Reference Books (ABC-CLIO) is a collection of over 500 reference books – encyclopedias, handbooks, biographical collections, guides – on many specialized topics, primarily in the humanities and social sciences. Books are published by ABC-CLIO, an educational reference publisher.

[Encyclopedia of Polymer Science and Technology Online](#) (KSL subscription)

A collection of articles covering all aspects of polymer science.

[netLibrary](#) (KSL/OhioLINK subscription)

KSL has access to over 17,300 electronic books covering various academic subjects.

[Oxford Scholarship Online](#) (KSL/OhioLINK subscription)

OSO Contains 1,200 books in the areas of economics and finance, philosophy, political science, and religion

[Safari Tech Books Online](#) (KSL/OhioLINK subscription)

Safari Tech provides access to over 4700 books in computer science, information technology, and related fields.

Selected Collections of Poetry & Plays

(KSL/OhioLINK subscriptions)

[African-American Poetry](#)

3,000 poems by African-American poets in the late 18th and early 19th centuries

[American Poetry](#)

40,000 poems of American writers from the 17th to the early 20th century

[Editions and Adaptations of Shakespeare](#)

Full text of **11** major editions of Shakespeare's works plus related works.

[Eighteenth Century Fiction](#)

Full text of **96** works of prose fiction written in the British Isles, 1700-1780

[English Poetry](#)

Full text of over **160,000** poems written in English 600-1900

[English Prose Drama](#)

Full text of over **1,800** plays written in prose for the stage, from the Renaissance to the end of the 19th century.

[English Verse Drama](#)

Full text of over **2,200** works of poetry intended for the stage.

Selected Newspaper Collections

[Historical Wall Street Journal](#) (KSL subscription)

Covers 1889-1985.

[Times Digital Archives \(London\), 1785-1985](#) (KSL subscription)

The entire newspaper is captured, with all articles, advertisements and illustrations/photos divided into categories to facilitate searching.

[The Historical New York Times, 1851-2000](#) (KSL subscription)

The Historical New York Times is a full-image archive that contains the entire historical run of The New York Times from 1851-2000.

[NewsBank Newspapers](#) (KSL/OhioLINK subscription)

Includes **19** Ohio newspapers and other major national papers.

[Newspaper Source](#) (KSL/OhioLINK subscription)

Contains selected full text for **245** regional U.S. newspapers, 18 international newspapers, 6 newswires, 9 newspaper columns, and cover-to-cover full text for *The Christian Science Monitor* and *The Los Angeles Times*.

[Ethnic NewsWatch](#) (KSL subscription)

Indexes and provides full text of over **250** leading periodicals and newspapers published by the ethnic and minority presses.

[Lexis-Nexis](#) (KSL/OhioLINK subscription)

A leading news and business information service which contains more than **5,000** combined sources.

[Press Display](#) (KSL subscription)

A full-color, full-page collection of **500** of today's newspapers from around the world, *PressDisplay.com* provides a convenient way to read newspapers and magazines from the Kelvin Smith Library web site.

Additional Resources

KSL Publications

In addition to premium licensed content, Case students, faculty, and staff use web-based resources created by KSL librarians and staff. These tools and resources are developed specifically for Case scholarly communities and are designed to aid the learning and research process. Librarians regularly seek faculty input to keep these resources relevant. Following are some examples.

- [Writing Aids](#)
A compilation of style, citation, and grammar guides.
- [How to Evaluate Web Resources](#)
Guidelines on how to properly credit web-based resources and avoid plagiarism.
- [Subject Portals](#)
Research guides compiled by KSL librarians specifically for Case programs and disciplines.
- [Research Spotlight](#)
A monthly news feature that focuses on a database, web site, journal, video, or reference book that relates to research, study, and/or lifelong learning.

Digital Media

Case students, faculty, and staff have access to a variety of digital media including the following.

[OhioLINK Digital Media Center](#)

<http://www.ohiolink.edu/about/news/dmceff.html>

The Digital Media Center (DMC) archives and provides access to a variety of multimedia material. It contains hundreds of thousands of multimedia assets including art and architecture images, audio recordings, historic archival collections, maps, educational videos and satellite images. Current components include:

- Art and Architecture Images
- Digital Video Collection
- Encyclopedia of Physics Demonstrations
- Social Studies Images
- ImagesMD—more than 55,000 images from Current Medicine’s series of illustrated medical atlases
- AccuNet/AP Multimedia Archive—a collection of pictures, graphics, and audio from the Associated Press.
- LANDSAT 7 Satellite Images—satellite images of Ohio, taken every 16 days

[Grove Art Online](#) (KSL subscription)

Grove Art Online provides web access to the entire text of [The Dictionary of Art](#), ed. Jane Turner (1996, 34 vols.) and [The Oxford Companion to Western Art](#), ed. Hugh Brigstocke (2001). Includes over 3,000 thumbnail art images and line drawings displayed in the text of articles and extensive image links.

[Naxos Music Library](#)—Classical Music (Cleveland Institute of Music/KSL)

A comprehensive collection of classical music including the complete Naxos and Marco Polo catalog of over 165,000+ tracks, including Classical music, Jazz, World, and Folk. Contains notes on the works being played as well as biographical information on composers or artists in Naxos’ database.

[Naxos Music Library—Jazz](#) (Cleveland Institute of Music/KSL)

Naxos Music Library Jazz contains close to 20,000 tracks of jazz from over 1,900 albums. Over 500 jazz artists are represented. Naxos Music Library Jazz comprises Naxos Jazz and the 22 labels of Fantasy Jazz.

Conclusion

The significance of electronic resources at Case Western Reserve University continues to grow. Quantitative, contextual, and anecdotal feedback indicates that students, faculty, and staff consider the electronic delivery of scholarly information one of the most valuable services offered by the Case libraries. Information access is becoming one of the new standards by which the university is measured. As one student observed, “Having other postgraduate friends in various programs across the country, I am extremely grateful for our Electronic Journal center access. It’s wonderful.”¹⁴

The Case libraries’ access and delivery methods are impacted by communication trends. *IM*, *RSS*, online chatting, and virtual communities are influencing communication across all venues, including academic. Information can be processed, packaged, and disseminated on scales magnitudes greater than those offered by traditional publishing outlets.¹⁵ Libraries should establish a virtual identity in this environment. Among the many reasons for doing so are the benefits derived from providing our users with the information they need at the point of need. In the process, libraries can also make available standards for producing and sharing information in the digital society.

Currently, the Case libraries’ online collections are a source of ‘passive’ marketing—users vaguely realize that this ‘vast wealth of information’ is associated with the libraries, but not that it is *paid* for by the libraries. By aggressively, but unobtrusively, branding resources that students and faculty download, libraries can remind users of this fact. Vendors brand; book publishers brand; libraries should brand as well.

Libraries with successful marketing campaigns often imitate the ‘fast food’ model—colorful icons and graphics offer popular resources from a clean, concise, front-page menu. Users are then enticed to explore in more detail, rather than ‘get in and get out as fast as you can.’ Library web sites that are resource focused make for a better user experience and contributes to greater user satisfaction.

In connection with this, the Case student and faculty readership survey provides unique insight about user perceptions and expectations. The Case libraries have never before had an assessment so intensely focused on journal reading patterns. Before this information becomes obsolete, staff should thoroughly investigate respondents’ comments, especially those from marginalized groups. The Electronic Resources Unit invites library staff to form focus groups, study the data in detail, and make changes that will benefit our diverse constituencies.

Finally, as OhioLINK continually demonstrates, usage statistics can tell a compelling story. Not only do Case students and faculty use the resources provided by the Case libraries; they search and download them in huge quantities. All the while, they demand access to more materials, retrospective as well as current. At Case Western Reserve University, resource usage, digital data needs, and scholarly communication trends demand that the Case libraries invest in electronic resources.

Glossary

Except where otherwise indicated, the definitions below are adapted from, *Project Counter, the Counter Code of Practice, Counting Online Usage of Networked Electronic Resources*:

<http://www.projectcounter.org/>. Project Counter provides an international set of standards and protocols governing the recording and exchange of online usage data.

Aggregator: A type of vendor that hosts content from multiple publishers, delivers content direct to customers, and is paid for this service by customers (e.g., EBSCO Information Services).

Bundled packages: Bundling is a practice whereby libraries purchase access to a package or ‘bundle’ of journals from a publisher’s stock. This practice was especially popular in the early development of online journals but has since decreased drastically because of cost.

(See: <http://connect.educause.edu/library/abstract/TheStateoftheLargePu/36825?time=1187368721>)

Database: A collection of electronically stored data or unit records (facts, bibliographic data, texts) with a common user interface and software for the retrieval and manipulation of data.

Download: An item (full text article, TOC, abstract, chapter, citation, etc.) saved to a computer, storage device, or printed by a user.

Hit: Each file requested by a user registers as a hit. There can be several hits on each page. While the volume of hits reflects the amount of server traffic, it is not an accurate reflection of the number of pages viewed.

Item: A uniquely identifiable piece of published work that may be original, or a digest, or a review of other published work. PDF, Postscript, and HTML formats of the same full text article (for example), will be counted as separate items.

Item requests: Number of items requested by users as a result of a search. User requests include viewing, downloading, emailing, and printing of items, where this activity can be recorded and controlled by the server rather than the browser.

“**Pay to Play**” (**PTP**) – Refers to online resources for which consortial pricing are negotiated by OhioLINK or OHIONET, but libraries must pay individually for access. Access is billed through OhioLINK or OHIONET.” (See-- OhioLINK Glossary: <http://www.OhioLINK.edu/ostaff/Glossary.html>)

Search: A specific intellectual query, typically equated to submitting the search form of the online service to the server.

Session: A successful request of an online service. It is one cycle of user activities that typically starts when a user connects to the service or database and ends by terminating activity that is either explicit (by leaving the service through exit or logout) or implicit (timeout due to user inactivity).

Service: A branded group of online information products from one or more vendors that can be subscribed to/licensed and searched as a complete collection, or at a lower level.

Subscriber: An individual or organization that pays a vendor in advance for access to a specified range of the vendor’s services and/or content for a pre-determined period of time and subject to terms and conditions agreed with the vendor.

Visit: A visit is a series of actions that begins when a user first views a page from a server, and ends when the user leaves the site.

Notes

¹ See “Electronic Resources Unit Annual Report: Supplement—2006-2007 Usage Data by Title and Vendor.”

² The Case libraries participated in a sponsored study, *Maximizing Library Investments in Digital Collections Through Better Data Gathering and Analysis (MaxData)*. As part of the study, faculty and students were surveyed about their reading patterns. For project details see: <http://web.utk.edu/~tenopir/imls/index.html>

³ Survey results are compiled in two reports: *Case Western Reserve University Faculty Journal Reading Patterns: Factual Summary of Results of the Survey Conducted Fall 2005*, and *Case Western Reserve University Student Journal Reading Patterns: Factual Summary of Results of the Survey Conducted Fall 2005*. Carol Tenopir, et al, (June 15, 2006).

⁴ Complete survey results as well as the survey instrument may be viewed at: <http://web.utk.edu/~tenopir/imls/index.html>. Results are also available upon request from Earnestine Adeyemon, Electronic Resources Librarian, Kelvin Smith Library, Case Western Reserve University, earnestine.adeyemon@case.edu.

⁵ “This is a variation on the ‘critical incident’ technique, in which the last article read functions as a random event, yielding a body of detailed information from a random sample of the total readings by the Case Western students.” Tenopir, *Student Journal Reading Patterns*, p.8.

⁶ Tenopir, *Student Survey*, pp. 60-61.

⁷ *Faculty Survey*, 35-36.

⁸ *Faculty Survey*, 38.

⁹ “Electronic Resource Usage Statistics: Defining a Complex Problem,” Anderson, Caryn. <http://web.simmons.edu/~andersoc/erus/ERUSlandscape.doc>, May 2006. For examples of usage reporting, see Appendix 3.

¹⁰ The Supplementary Report has sample vendor reports.

¹¹ KSL uses *WebTrends*, a log analysis tool, to track site visits and page hits.

¹² “Electronic Resources Unit Annual Report: Supplement.”

¹³ “The State of the Large Publisher Bundle: Findings from an ARL Member Survey,” *ARL Bimonthly Report* 245, April 2006, Karla Hahn, Director, ARL Office of Scholarly Communication <http://www.arl.org/newsltr/245/bundle.html>.

¹⁴ Student Readership Survey, p. 55.

¹⁵ “Making Space: Literacy Outreach through a Dedicated Learning Environment,” Adeyemon, Earnestine. *International Journal of Learning*, Vol.13, 7, 2006, pp. 2-3.