

Research and Assessment Unit Report

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Ivy Plus Library Benchmarks

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Date Submitted: April 2009

Purpose: Assess CUL's level of support, intensity of use, staffing, efficiency, etc. relative to peers

Intended Distribution: Unlimited

Edition: Final Draft Other:

Contributors: Library Executive Group

Description:

To inform the strategic budget planning exercise that Cornell is undertaking for the continued reduction of expenditures, the following library benchmarking data was assembled to answer questions about the level of relative support, intensity of use, level of staffing and staff efficiency at Cornell University Library and its Ivy Plus peers. Our analysis shows that Cornell, when put into the context of institutional characteristics, ranks significantly lower on measures relating to financial support (expenditures, collections and staffing) than on measures that show how heavily students use our services and staff efficiency.

Regrettably, the available comparative data only covers the decidedly traditional aspects of what modern academic libraries do. Metrics for more innovative aspects of librarianship that Cornell is very active in (such as building and archiving digital collections, managing repositories, supporting e-Science, or even some aspects of online research and data management) tend to be poorly defined, very difficult to collect in full, and consequently meaningless to compare across institutions.

Research and Assessment Unit (RAU) projects are undertaken to assess existing library programs and services, to investigate user needs and future directions, and to assist Library decision-makers in developing superior information services for the Cornell community. RAU strives for neutrality in the collection and analysis of data and in reporting its findings. Inherent in all research projects are contingencies and circumstances that call for caution when interpreting the data. Specific information about the known limitations of the study is included in the project report. RAU staff are happy to discuss interpretation of data in the reports they produce.

IVY PLUS LIBRARY BENCHMARKS

To inform the strategic budget planning exercise that Cornell is undertaking for the continued reduction of expenditures, the following library benchmarking data was assembled to answer questions about the level of relative support, intensity of use, level of staffing and staff efficiency at Cornell University Library and its Ivy Plus peers. **Our analysis shows that Cornell, when put into the context of institutional characteristics, ranks significantly lower on measures relating to financial support (expenditures, collections and staffing) than on measures that show how heavily students use our services and staff efficiency.**

Regrettably, the available comparative data only covers the decidedly traditional aspects of what modern academic libraries do. Metrics for more innovative aspects of librarianship that Cornell is very active in (such as building and archiving digital collections, managing repositories, supporting e-Science, or even some aspects of online research and data management) tend to be poorly defined, very difficult to collect in full, and consequently meaningless to compare across institutions.

The following data comes from the Association of Research Libraries (ARL) which generally sets consistent definitions for its measures, although, we suspect, interpretation of these definitions still varies across different institutions. All ARL data is for 2006/2007, the most recent year available at the time of our study. Since Stanford University Library is no longer a member of ARL, their figures come from the National Center for Education Statistics (NCES). NCES data is a year older and availability and definitions of certain measures sometimes vary from those of ARL's, so all rankings of Stanford are grayed out to indicate that they are based on data not directly comparable. Also note that not all measures are available for all libraries, so the number of institutions we can rank varies between 11 and 8 depending on the context.

Another point about the data throughout this report: both ARL and NCES definitions exclude unit libraries that are not within reasonable commuting distance of the main campus. **Thus, Cornell counts exclude the Medical Library.** Inclusion of a medical library or any other distant library, if any, is inconsistent and in some cases unclear across the peer institutions.

Our data sources can be accessed at:

<http://www.arl.org/stats/annualsurveys/arlstats/index.shtml>

<http://nces.ed.gov/surveys/libraries/Academic.asp>

<http://nces.ed.gov/ipeds/pas/>

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BASIC DATA POINTS FOR BENCHMARKING PEERS

This table illustrates the diversity of our peer group. At 88, Cornell offers the second most fields for doctoral study, second only to Columbia's 102. At the other end of the spectrum Dartmouth offers 15 and MIT 33. This metric is very important from the point of view of libraries, since they have to support a tremendous breadth and depth of information need for each PhD field.

Cornell is fourth in number of students, although first in number of undergraduates. Cornell is also the institution with the smallest number of part-time students. We rank fifth in the number of full-time instructional faculty. We are also fifth in the number of library non-student staff; however, Cornell staffs the highest number of library service points among all peers. For overall expenditures Cornell ranks 5th.

Institution	PhD fields	Undergraduate FTE ¹	Graduate FTE ¹	% Undergrad	% Part-time students	Full-time instructional faculty ²	Total expenditures	Volumes held ³	Library staff ⁴	Service points
BROWN	45	5,854	2,048	74.1%	4.6%	690	19,231,881	3,720,244	175	8
CHICAGO	66	4,775	7,868	37.8%	18.9%	1,295	31,966,296	7,926,905	259	30
COLUMBIA	102	9,087	16,944	34.9%	19.9%	2,011	60,071,960	10,004,848	572	50
CORNELL	88	13,554	6,073	69.1%	0.2%	1,698	43,832,341	7,999,177	430	53
DARTMOUTH	15	4,056	1,611	71.6%	2.5%	768	18,340,292	2,732,831	178	19
HARVARD	74	8,313	13,749	37.7%	24.0%	2,520	110,849,458	15,965,675	1,149	u/a
MIT	33	4,091	6,006	40.5%	2.5%	945	23,421,666	2,847,680	193	11
PENNSYLVANIA	63	10,852	10,341	51.2%	17.9%	1,384	35,258,073	5,994,465	292	34
PRINCETON	57	4,976	2,319	68.2%	1.8%	827	41,813,758	6,778,675	357	37
STANFORD*	u/a	6,539 ⁵	8,873 ⁵	42.4%	31.8%	1,711 ⁶	74,233,088	8,648,205	607	u/a
YALE	60	5,315	5,989	47.0%	1.6%	1,782	77,403,912	12,283,594	647	42

¹ FTE derived from ARL counts: full-time counts, plus part-time counts multiplied by .4. Fall enrollment.

² ARL's definition for instructional faculty: "... defined by the U.S. Dept. of Education as "... members of the instruction/research staff who are employed full-time as defined by the institution, including faculty with released time for research and faculty on sabbatical leave." Full-time counts generally exclude faculty who are employed to teach fewer than two semesters, three quarters, two trimesters, or two four month sessions; replacements for faculty on sabbatical leave or leave without pay; faculty for preclinical and clinical medicine; faculty who are donating their services; faculty who are members of military organizations and paid on a different pay scale from civilian employees; academic officers, whose primary duties are administrative; and graduate students who assist in the instruction of courses.

³ Figures include e-books if reported.

⁴ Excludes student staff.

⁵ NCES IPEDS measure: Fall enrollment, full- and part-time, by status (part-time multiplied by .4).

⁶ Closest matching NCES IPEDS variable found: Full-time employees (institutional & medical school) with faculty status (Fall 2005).

EXPENDITURE COMPARISONS

In absolute numbers Cornell's total library expenditure is \$43,832,341. This is the 5th largest library expenditure in the peer group. The ratio approach employed in this report asks the question: how does this absolute number rank when compared to measures that describe institutional characteristics such as size of the community served and number of PhD fields supported. Our goal is to allow for a more nuanced comparison within the peer group.

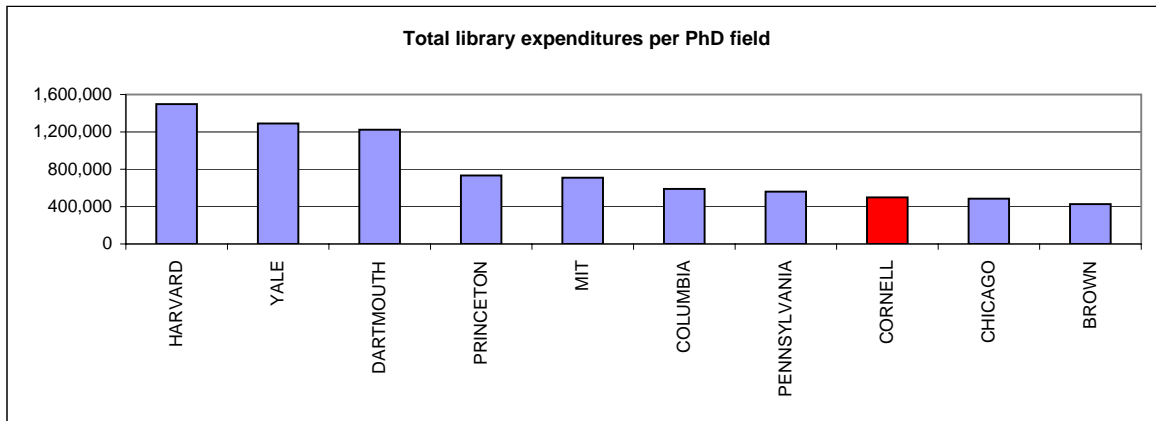
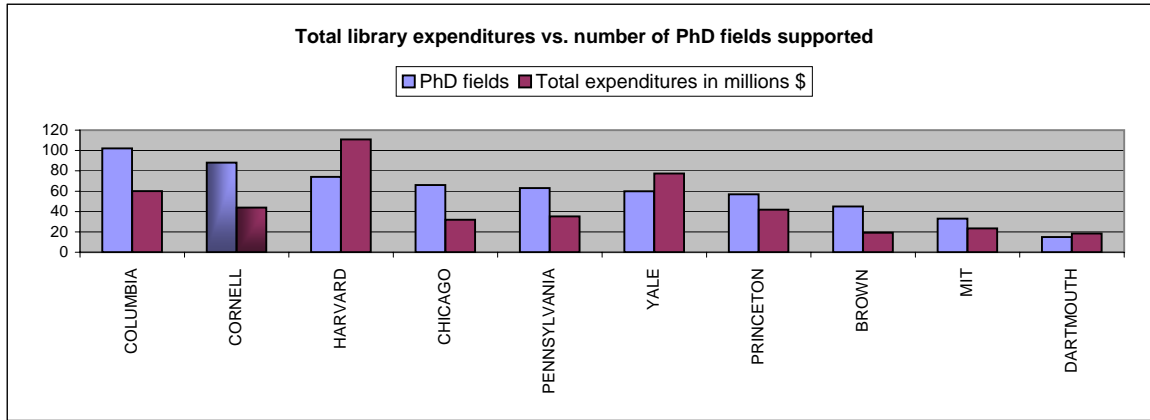
Cornell ranks eighth out of ten on total library spending per PhD field, an important metric to show the intellectual breadth and depth required of the library. Stanford's figures for number of PhD fields are unavailable, although they would have to offer doctoral degrees in over 149 fields to come in below Cornell on per PhD field spending. Cornell is separated only by about \$70 thousand per field from the bottom ranked Brown and by almost \$1 million per field from the top ranked Harvard.

Our total library spending also comes in low when compared by student FTE (ranked 10th out of 11), by number of full-time instructional faculty (ranked 7th out of 11), and by collection size (ranked 9th based on volume holdings and 7th based on current serial titles.) Looking at spending by collection size compares current expenditures against a measure of cumulative investment in the library throughout its history.

Total library materials expenditures are \$15,012,671, based on which Cornell is ranked 7th. However, if we look at this figure per PhD field, Cornell is ranked 10th out of 10 peer institutions. Stanford would have to offer PhDs in more than 106 fields to come in below Cornell in this comparison.

Through this ratio approach of looking at library expenditures, Cornell's average ranking is 8.5; this presents a very different picture from our rank of 5 for total number of dollars spent with no reference to institutional characteristics.

Expenditure comparisons -- by PhD field

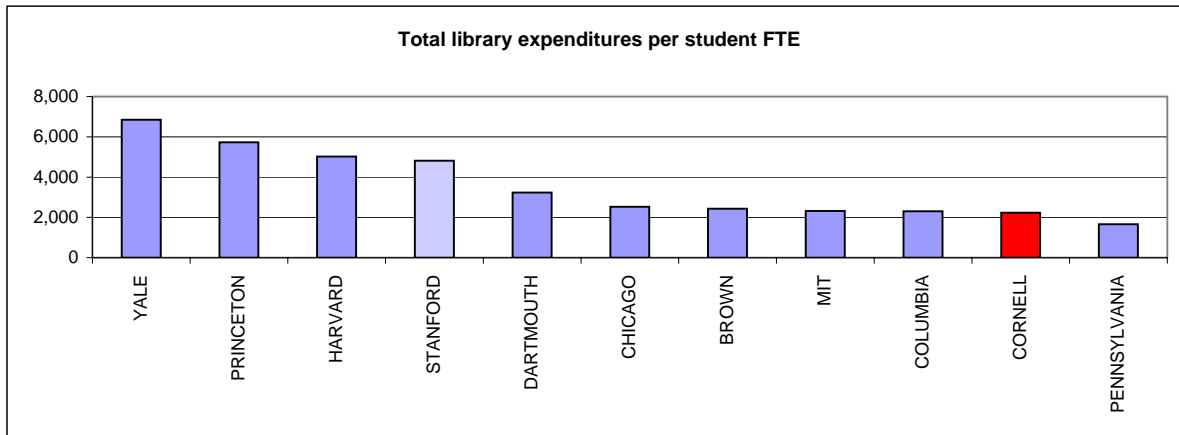
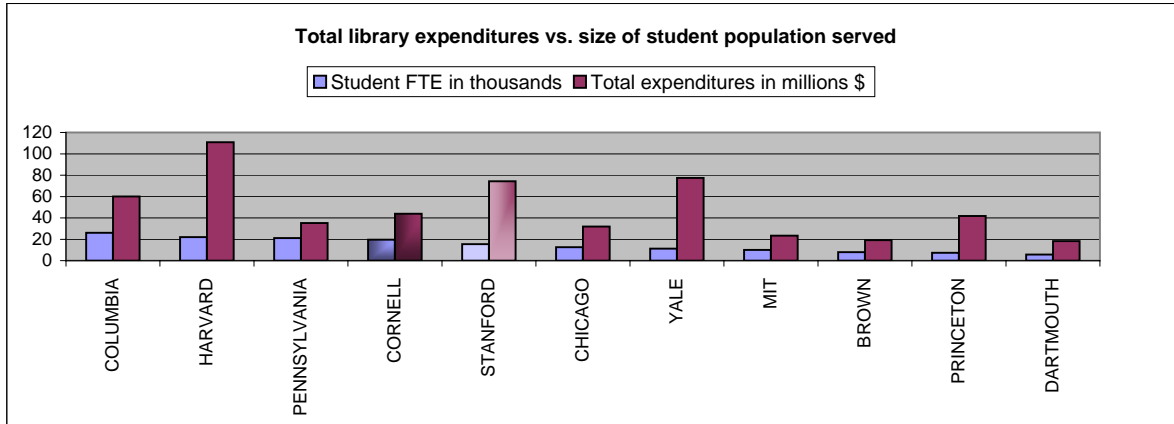


Rank	Institution	PhD fields
1	COLUMBIA	102
2	CORNELL	88
3	HARVARD	74
4	CHICAGO	66
5	PENNSYLVANIA	63
6	YALE	60
7	PRINCETON	57
8	BROWN	45
9	MIT	33
10	DARTMOUTH	15
u/a	STANFORD	u/a

Rank	Institution	Total expenditures \$
1	HARVARD	110,849,458
2	YALE	77,403,912
3	STANFORD	74,233,088
4	COLUMBIA	60,071,960
5	CORNELL	43,832,341
6	PRINCETON	41,813,758
7	PENNSYLVANIA	35,258,073
8	CHICAGO	31,966,296
9	MIT	23,421,666
10	BROWN	19,231,881
11	DARTMOUTH	18,340,292

Rank	Institution	Total expenditures per PhD field \$
1	HARVARD	1,497,966
2	YALE	1,290,065
3	DARTMOUTH	1,222,686
4	PRINCETON	733,575
5	MIT	709,747
6	COLUMBIA	588,941
7	PENNSYLVANIA	559,652
8	CORNELL	498,095
9	CHICAGO	484,338
10	BROWN	427,375
u/a	STANFORD	u/a

Expenditure comparisons -- by student FTE*



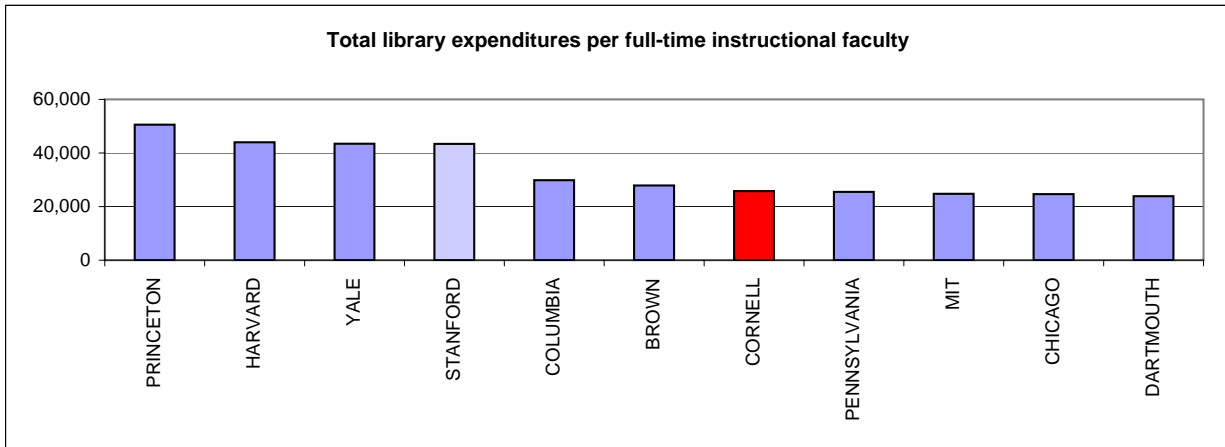
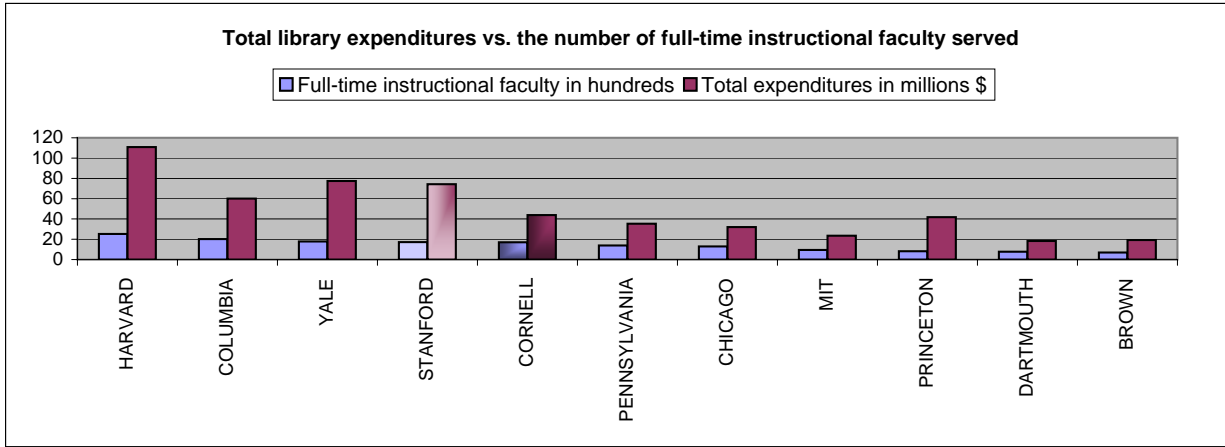
Rank	Institution	Student FTE
1	COLUMBIA	26,030
2	HARVARD	22,062
3	PENNSYLVANIA	21,192
4	CORNELL	19,626
5	STANFORD	15,413
6	CHICAGO	12,642
7	YALE	11,303
8	MIT	10,096
9	BROWN	7,902
10	PRINCETON	7,295
11	DARTMOUTH	5,667

Rank	Institution	Total expenditures \$
1	HARVARD	110,849,458
2	YALE	77,403,912
3	STANFORD	74,233,088
4	COLUMBIA	60,071,960
5	CORNELL	43,832,341
6	PRINCETON	41,813,758
7	PENNSYLVANIA	35,258,073
8	CHICAGO	31,966,296
9	MIT	23,421,666
10	BROWN	19,231,881
11	DARTMOUTH	18,340,292

Rank	Institution	Total expenditures per student FTE \$
1	YALE	6,848
2	PRINCETON	5,732
3	HARVARD	5,025
4	STANFORD	4,816
5	DARTMOUTH	3,237
6	CHICAGO	2,528
7	BROWN	2,434
8	MIT	2,320
9	COLUMBIA	2,308
10	CORNELL	2,233
11	PENNSYLVANIA	1,664

* For definitions, see footnotes 1 and 5 on page 2.

Expenditure comparisons -- by faculty*



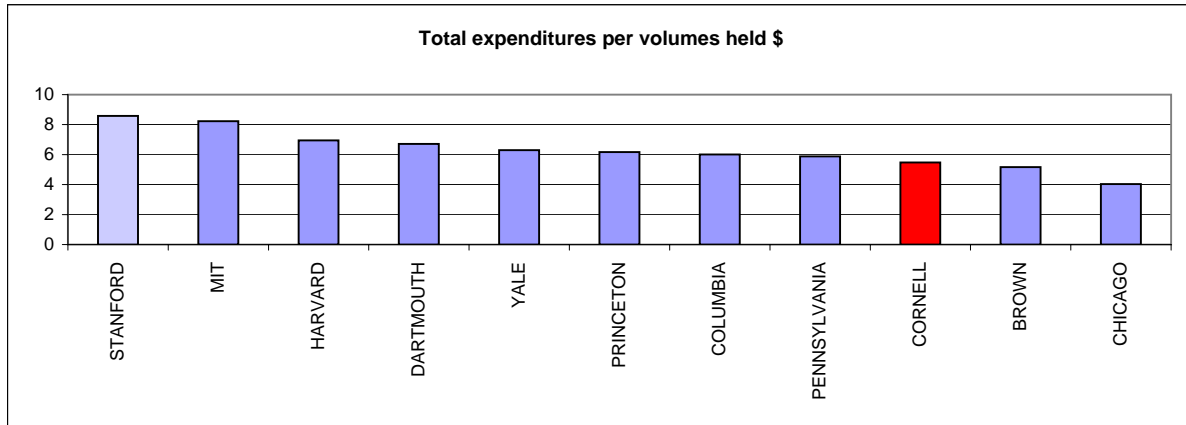
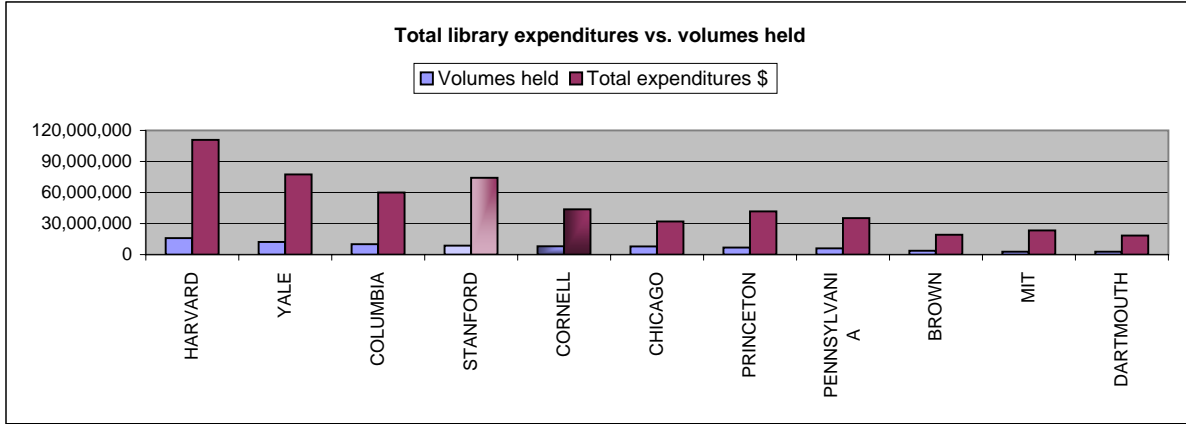
Rank	Institution	Full-time instructional faculty
1	HARVARD	2,520
2	COLUMBIA	2,011
3	YALE	1,782
4	STANFORD	1,711
5	CORNELL	1,698
6	PENNSYLVANIA	1,384
7	CHICAGO	1,295
8	MIT	945
9	PRINCETON	827
10	DARTMOUTH	768
11	BROWN	690

Rank	Institution	Total expenditures \$
1	HARVARD	110,849,458
2	YALE	77,403,912
3	STANFORD	74,233,088
4	COLUMBIA	60,071,960
5	CORNELL	43,832,341
6	PRINCETON	41,813,758
7	PENNSYLVANIA	35,258,073
8	CHICAGO	31,966,296
9	MIT	23,421,666
10	BROWN	19,231,881
11	DARTMOUTH	18,340,292

Rank	Institution	Total expenditures per full-time instructional faculty \$
1	PRINCETON	50,561
2	HARVARD	43,988
3	YALE	43,437
4	STANFORD	43,386
5	COLUMBIA	29,872
6	BROWN	27,872
7	CORNELL	25,814
8	PENNSYLVANIA	25,475
9	MIT	24,785
10	CHICAGO	24,684
11	DARTMOUTH	23,881

* For definitions, see footnotes 2 and 6 on page 2.

Expenditure comparisons -- by volume held*



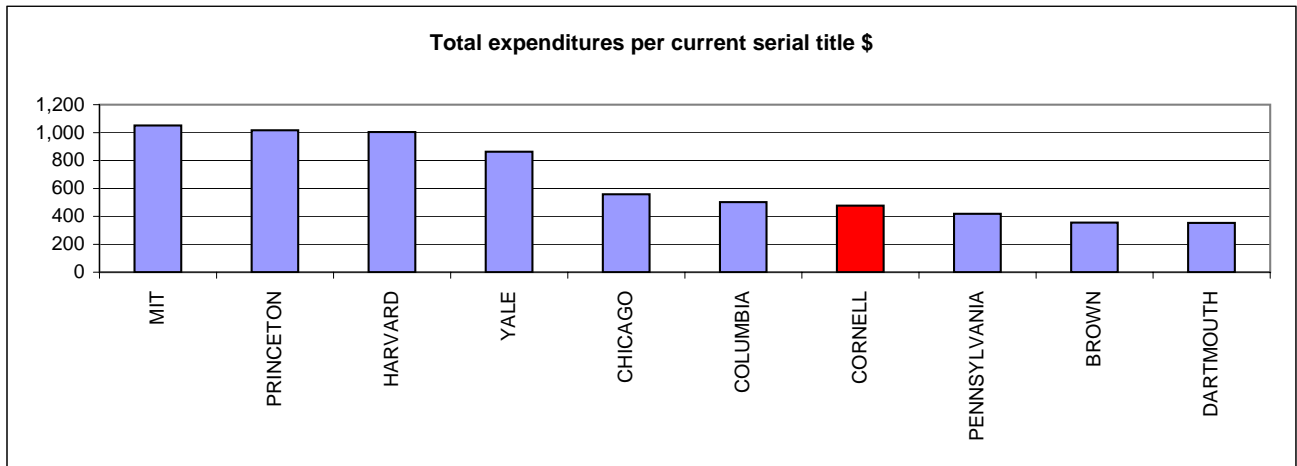
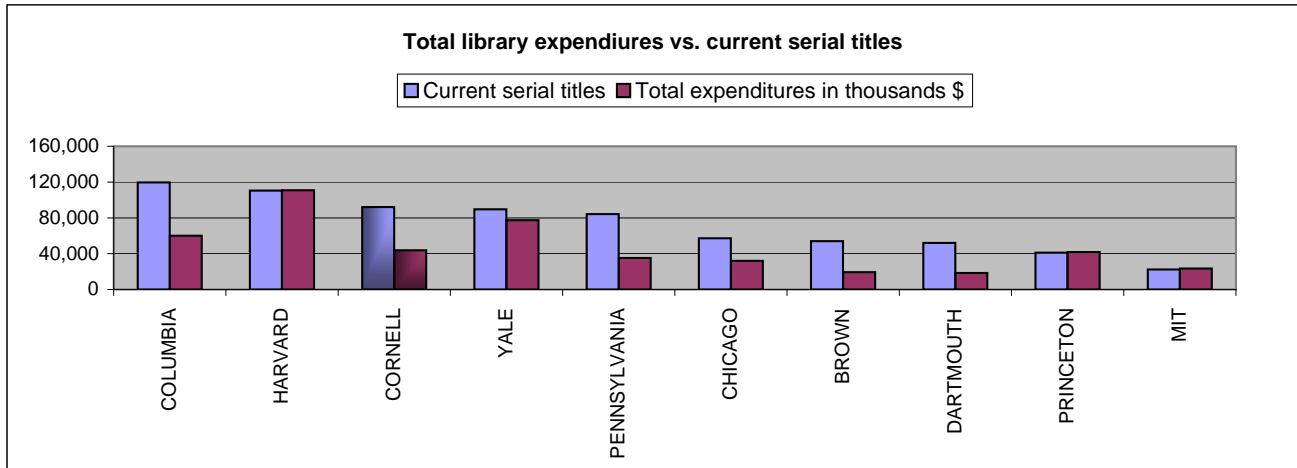
Rank	Institution	Volumes held
1	HARVARD	15,965,675
2	YALE	12,283,594
3	COLUMBIA	10,004,848
4	STANFORD	8,648,205
5	CORNELL	7,999,177
6	CHICAGO	7,926,905
7	PRINCETON	6,778,675
8	PENNSYLVANIA	5,994,465
9	BROWN	3,720,244
10	MIT	2,847,680
11	DARTMOUTH	2,732,831

Rank	Institution	Total expenditures \$
1	HARVARD	110,849,458
2	YALE	77,403,912
3	STANFORD	74,233,088
4	COLUMBIA	60,071,960
5	CORNELL	43,832,341
6	PRINCETON	41,813,758
7	PENNSYLVANIA	35,258,073
8	CHICAGO	31,966,296
9	MIT	23,421,666
10	BROWN	19,231,881
11	DARTMOUTH	18,340,292

Rank	Institution	Total expenditures per volumes held \$
1	STANFORD	8.6
2	MIT	8.2
3	HARVARD	6.9
4	DARTMOUTH	6.7
5	YALE	6.3
6	PRINCETON	6.2
7	COLUMBIA	6.0
8	PENNSYLVANIA	5.9
9	CORNELL	5.5
10	BROWN	5.2
11	CHICAGO	4.0

* Counts include e-books if reported.

Expenditure comparisons -- by current serial titles*



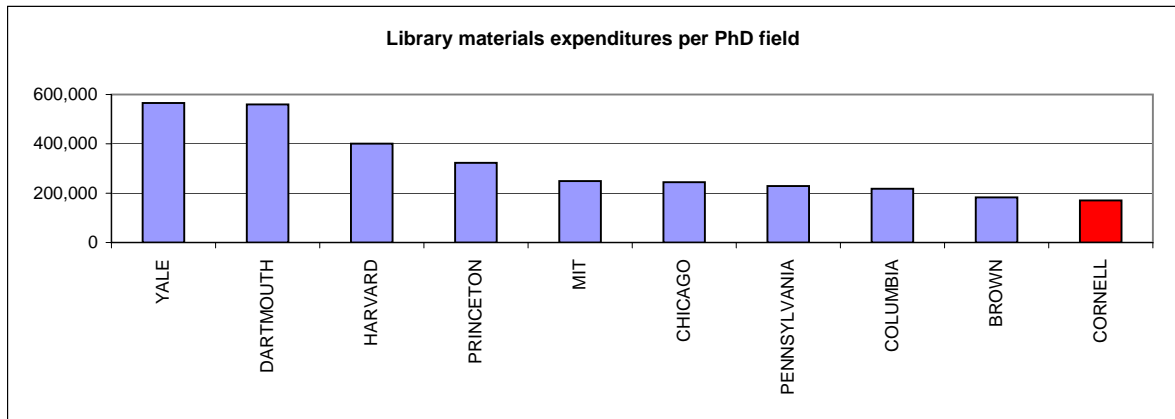
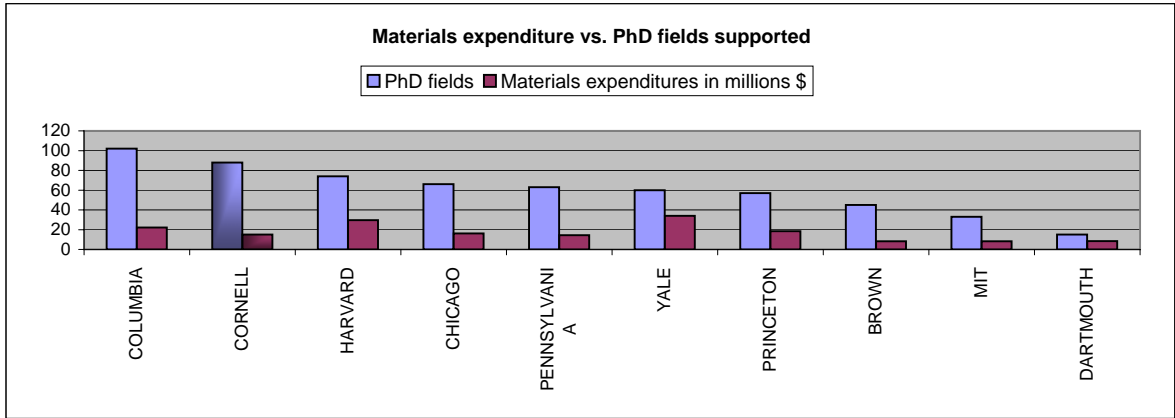
Rank	Institution	Current serial titles
1	COLUMBIA	119,637
2	HARVARD	110,463
3	CORNELL	92,000
4	YALE	89,649
5	PENNSYLVANIA	84,182
6	CHICAGO	57,236
7	BROWN	54,050
8	DARTMOUTH	51,936
9	PRINCETON	41,120
10	MIT	22,280
u/a	STANFORD	u/a

Rank	Institution	Total expenditures \$
1	HARVARD	110,849,458
2	YALE	77,403,912
3	STANFORD	74,233,088
4	COLUMBIA	60,071,960
5	CORNELL	43,832,341
6	PRINCETON	41,813,758
7	PENNSYLVANIA	35,258,073
8	CHICAGO	31,966,296
9	MIT	23,421,666
10	BROWN	19,231,881
11	DARTMOUTH	18,340,292

Rank	Institution	Total expenditures per current serial title \$
1	MIT	1,051
2	PRINCETON	1,017
3	HARVARD	1,003
4	YALE	863
5	CHICAGO	558
6	COLUMBIA	502
7	CORNELL	476
8	PENNSYLVANIA	419
9	BROWN	356
10	DARTMOUTH	353
u/a	STANFORD	u/a

* The ARL definition changed this year and was not clear or implementable by most libraries. CUL's count includes all monographic standing orders definitions ask for numbered standing orders only. CUL's counts include ceased electronic serials as requested.

Expenditures comparisons -- materials expenditures by PhD fields



Rank	Institution	PhD fields
1	COLUMBIA	102
2	CORNELL	88
3	HARVARD	74
4	CHICAGO	66
5	PENNSYLVANIA	63
6	YALE	60
7	PRINCETON	57
8	BROWN	45
9	MIT	33
10	DARTMOUTH	15
u/a	STANFORD	u/a

Rank	Institution	Materials expenditures \$
1	YALE	33,942,469
2	HARVARD	29,677,074
3	COLUMBIA	22,247,648
4	PRINCETON	18,428,119
5	STANFORD	18,155,467
6	CHICAGO	16,130,090
7	CORNELL	15,012,671
8	PENNSYLVANIA	14,426,982
9	DARTMOUTH	8,399,585
10	MIT	8,228,345
11	BROWN	8,219,812

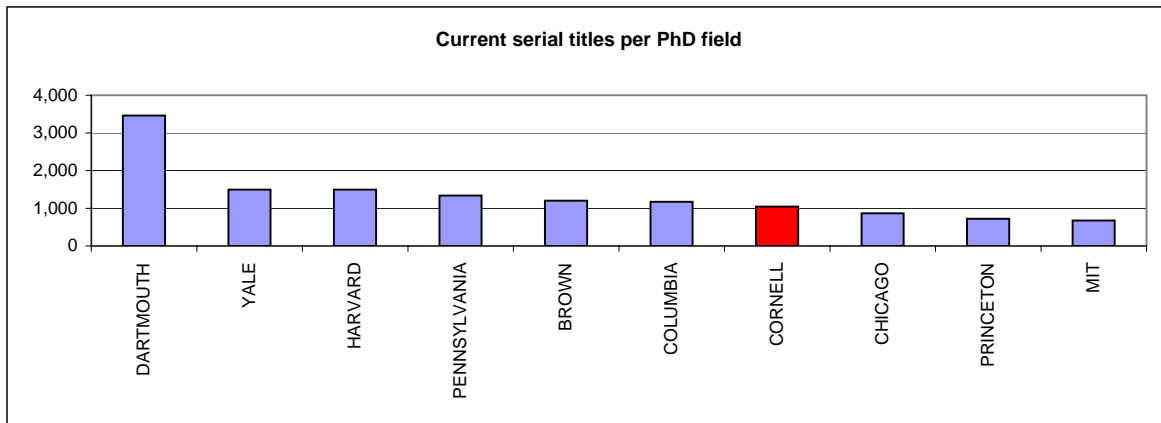
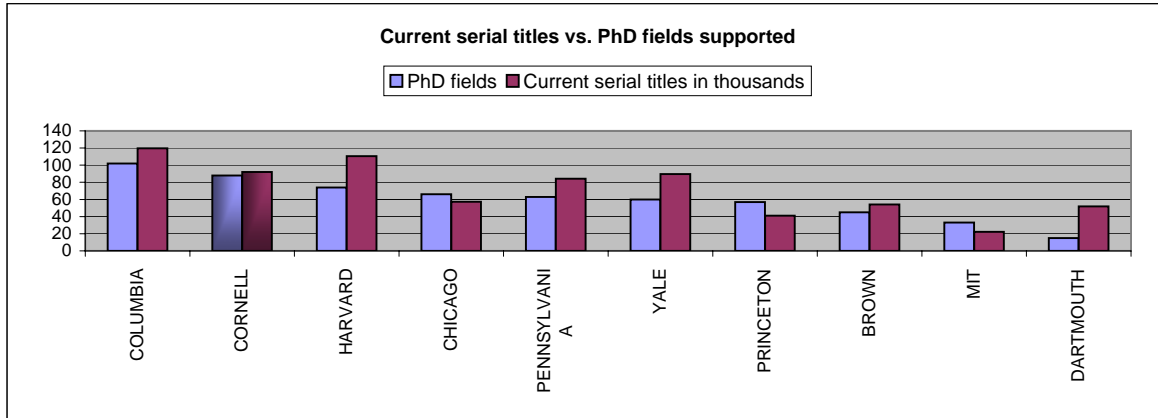
Rank	Institution	Material expenditures per PhD field \$
1	YALE	565,708
2	DARTMOUTH	559,972
3	HARVARD	401,042
4	PRINCETON	323,300
5	MIT	249,344
6	CHICAGO	244,395
7	PENNSYLVANIA	229,000
8	COLUMBIA	218,114
9	BROWN	182,662
10	CORNELL	170,599
u/a	STANFORD	u/a

COLLECTIONS COMPARISONS

How does the size of Ivy Plus library collections really compare across institutions with different needs? Once again, the number of PhD fields supported presents itself as a good comparison tool. When it comes to currently received serial titles per PhD field, Cornell ranks 7th out of 10 universities. For volumes held by PhD field, we are 8th out of 10. These numbers include both print and electronic sources.

Cornell's average ranking in the collections category of ratios, then, is 7.5, as opposed to an average ranking of 4th when only looking at collection size numbers without reference to institutional characteristics.

Collections comparisons -- serial titles* by PhD fields



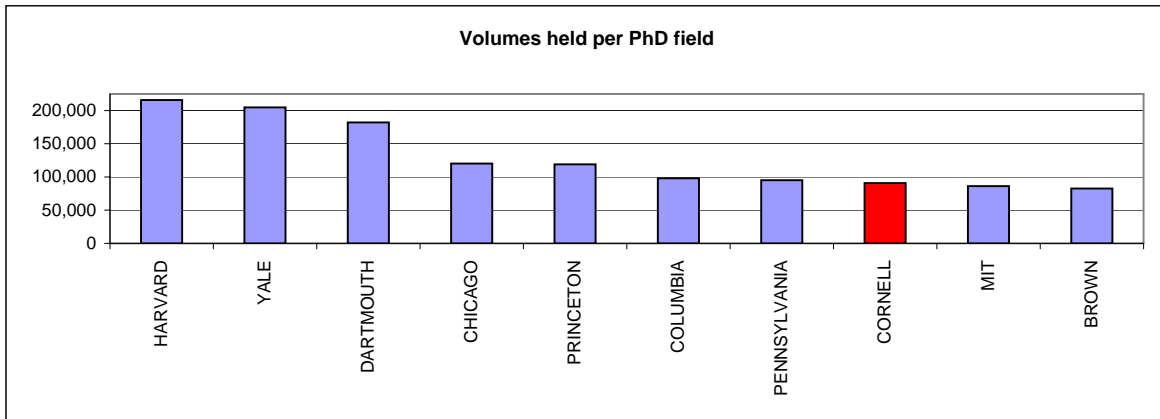
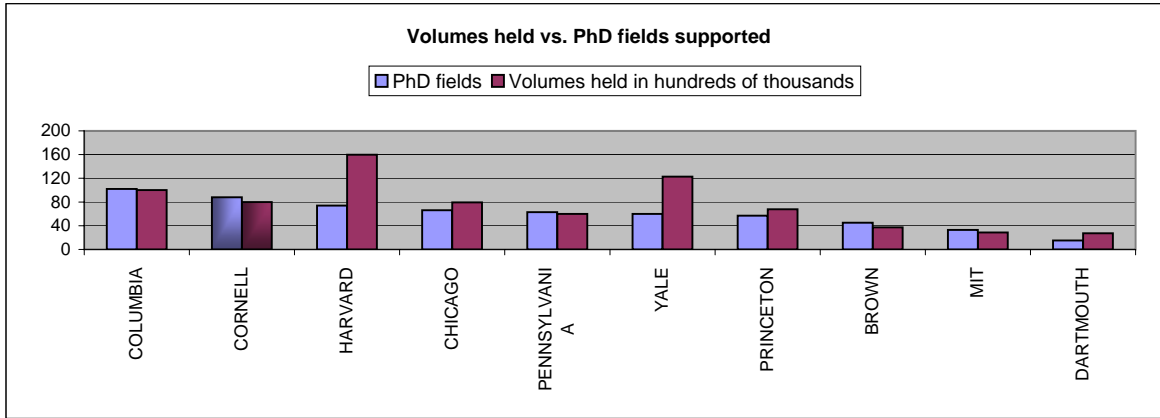
Rank	Institution	PhD fields
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2	CORNELL	88
3	HARVARD	74
4	CHICAGO	66
5	PENNSYLVANIA	63
6	YALE	60
7	PRINCETON	57
8	BROWN	45
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u/a	STANFORD	u/a

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3	CORNELL	92,000
4	YALE	89,649
5	PENNSYLVANIA	84,182
6	CHICAGO	57,236
7	BROWN	54,050
8	DARTMOUTH	51,936
9	PRINCETON	41,120
10	MIT	22,280
u/a	STANFORD	u/a

Rank	Institution	Current serial titles per PhD field
1	DARTMOUTH	3,462
2	YALE	1,494
3	HARVARD	1,493
4	PENNSYLVANIA	1,336
5	BROWN	1,201
6	COLUMBIA	1,173
7	CORNELL	1,045
8	CHICAGO	867
9	PRINCETON	721
10	MIT	675
u/a	STANFORD	u/a

* The ARL definition changed this year and was not clear or implementable by most libraries. CUL's count includes all monographic standing orders; definitions ask for numbered standing orders only. CUL's counts include ceased electronic serials as requested.

Collections comparisons -- volumes held* by PhD field



Rank	Institution	PhD fields
1	COLUMBIA	102
2	CORNELL	88
3	HARVARD	74
4	CHICAGO	66
5	PENNSYLVANIA	63
6	YALE	60
7	PRINCETON	57
8	BROWN	45
9	MIT	33
10	DARTMOUTH	15
u/a	STANFORD	u/a

Rank	Institution	Volumes held
1	HARVARD	15,965,675
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3	COLUMBIA	10,004,848
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5	CORNELL	7,999,177
6	CHICAGO	7,926,905
7	PRINCETON	6,778,675
8	PENNSYLVANIA	5,994,465
9	BROWN	3,720,244
10	MIT	2,847,680
11	DARTMOUTH	2,732,831

Rank	Institution	Volumes held per PhD field
1	HARVARD	215,752
2	YALE	204,727
3	DARTMOUTH	182,189
4	CHICAGO	120,105
5	PRINCETON	118,924
6	COLUMBIA	98,087
7	PENNSYLVANIA	95,150
8	CORNELL	90,900
9	MIT	86,293
10	BROWN	82,672
u/a	STANFORD	u/a

* Counts include e-books if reported.

SERVICE COMPARISONS

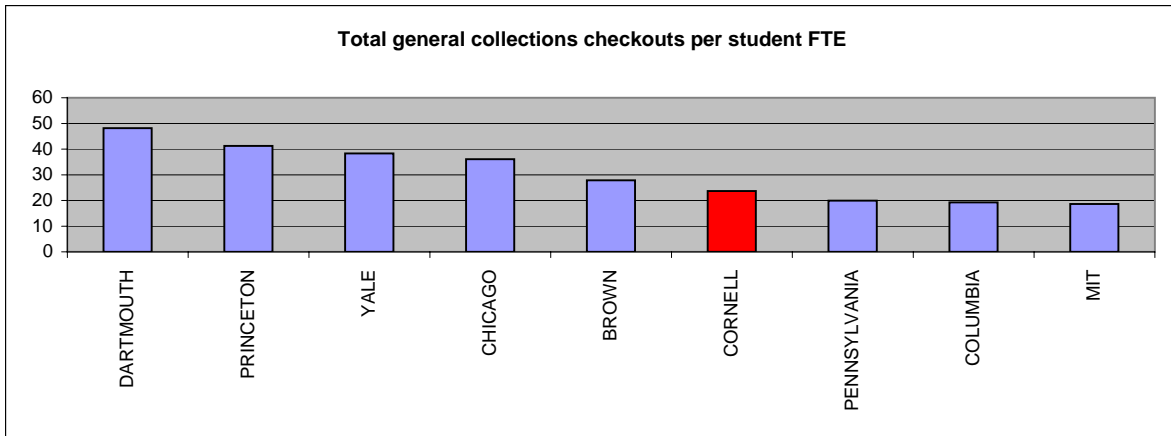
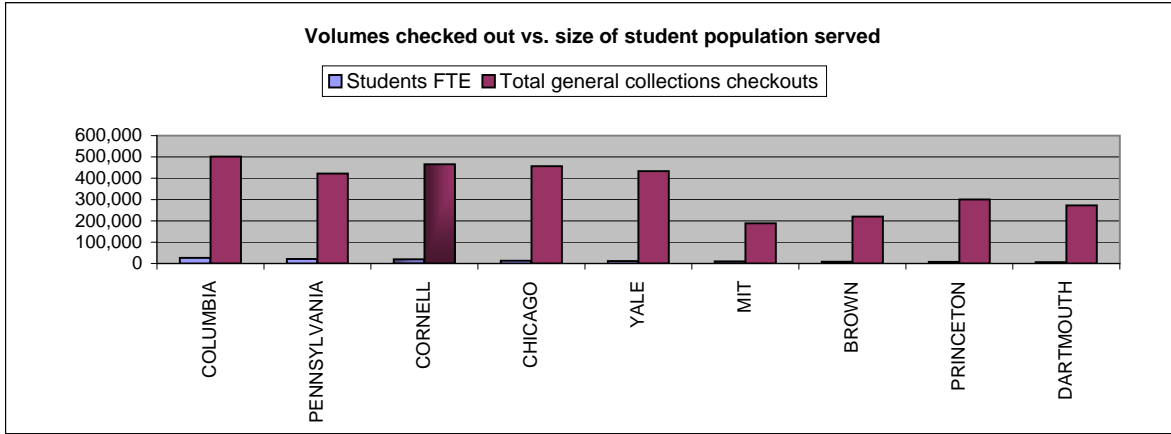
This section shows comparisons of how heavily library services are used across the Ivy Plus peers. While our numbers for books checked out from the stacks is second only to Columbia, when viewed on a per capita basis against the student population, Cornell is ranked sixth.

With a heightened emphasis on information competency in higher education, library instruction has been a growth field in academic research libraries. In just one year Cornell had 1.14 participants in library instruction sessions or tours for each student FTE, placing it in first of this IVY Plus group. That Cornell has the lowest number of part time students means that this number shows more intensity of instruction since one FTE represents fewer actual people to develop information literacy for than at our peer institutions.

Reference transactions, on the other hand, have been declining nation-wide at libraries. It has been observed, however, that the average complexity of the questions has increased as most reference questions have turned into requests for involved research help. Cornell is ranked fourth in reference questions per student FTE. Noting that each FTE represents fewer actual people at Cornell than at other Ivies is also relevant here.

Cornell's average ranking by per capita student use of these traditional library services is 3.7. We are ranked 2nd when we only consider the absolute number of service transactions without regard to the size of the student body.

Service comparisons -- volumes checked out* by student FTE**



Rank	Institution	Student FTE
1	COLUMBIA	26,030
2	HARVARD	22,062
3	PENNSYLVANIA	21,192
4	CORNELL	19,626
5	STANFORD	15,413
6	CHICAGO	12,642
7	YALE	11,303
8	MIT	10,096
9	BROWN	7,902
10	PRINCETON	7,295
11	DARTMOUTH	5,667

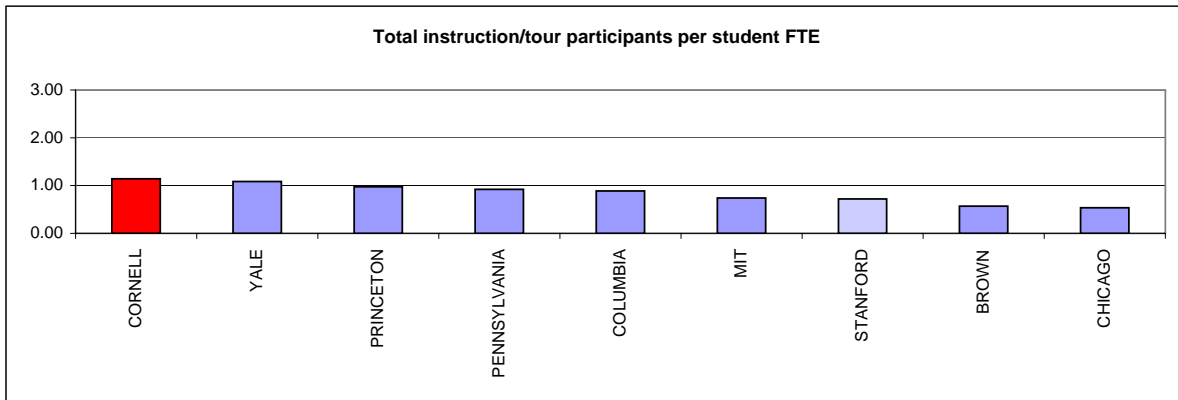
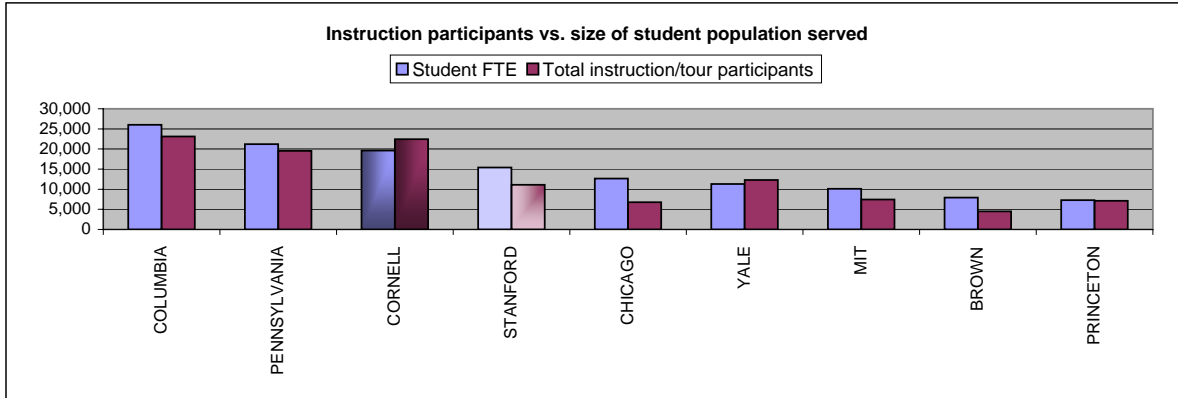
Rank	Institution	Total general collections checkouts
1	COLUMBIA	501,693
2	CORNELL	465,267
3	CHICAGO	456,431
4	YALE	433,186
5	PENNSYLVANIA	422,082
6	PRINCETON	300,726
7	DARTMOUTH	272,946
8	BROWN	219,860
9	MIT	188,364
u/a	HARVARD	u/a
u/a	STANFORD	u/a

Rank	Institution	Total general collections checkouts per student FTE
1	DARTMOUTH	48
2	PRINCETON	41
3	YALE	38
4	CHICAGO	36
5	BROWN	28
6	CORNELL	24
7	PENNSYLVANIA	20
8	COLUMBIA	19
9	MIT	19
u/a	HARVARD	u/a
u/a	STANFORD	u/a

* Includes checkouts for the entire community. Reserve transactions excluded. CUL excludes equipment transactions. CUL's count includes ILL to other institutions and some staff transactions.

** For definitions, see footnotes 1 and 5 on page 2.

Service comparisons -- instruction participants by student FTE**



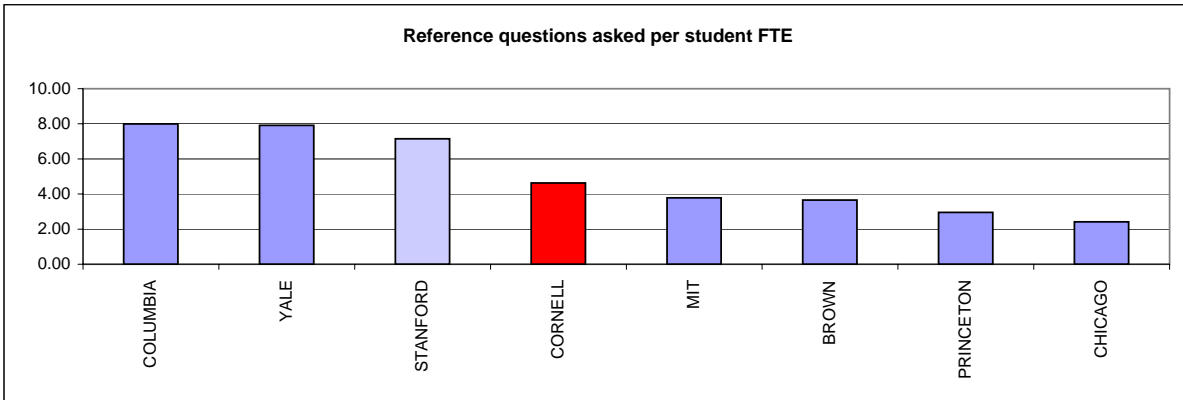
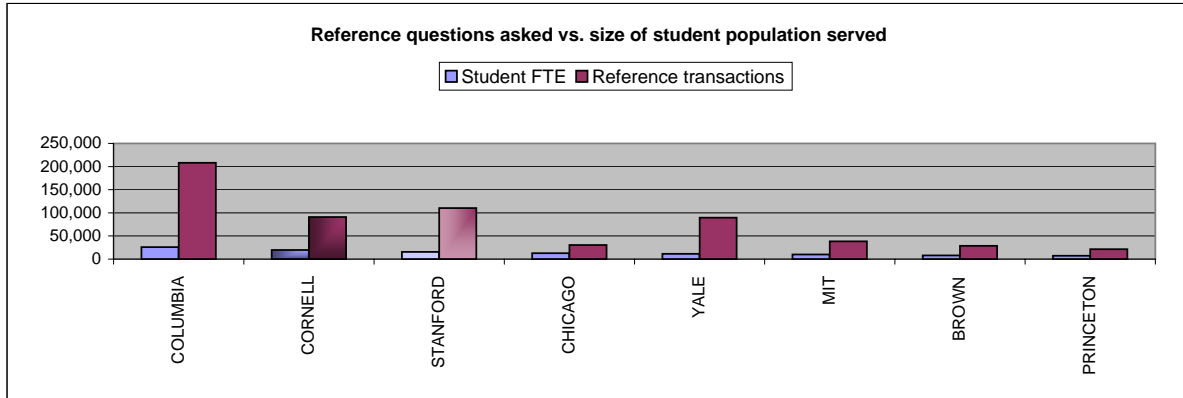
Rank	Institution	Student FTE
1	COLUMBIA	26,030
2	HARVARD	22,062
3	PENNSYLVANIA	21,192
4	CORNELL	19,626
5	STANFORD	15,413
6	CHICAGO	12,642
7	YALE	11,303
8	MIT	10,096
9	BROWN	7,902
10	PRINCETON	7,295
11	DARTMOUTH	5,667

Rank	Institution	Instruction/tour participants
1	COLUMBIA	23,125
2	CORNELL	22,424
3	PENNSYLVANIA	19,543
4	YALE	12,281
5	STANFORD	11,114
6	MIT	7,428
7	PRINCETON	7,114
8	CHICAGO	6,767
9	BROWN	4,504
u/a	DARTMOUTH	u/a
u/a	HARVARD	u/a

Rank	Institution	Instruction/tour participants per student FTE
1	CORNELL	1.14
2	YALE	1.09
3	PRINCETON	0.98
4	PENNSYLVANIA	0.92
5	COLUMBIA	0.89
6	MIT	0.74
7	STANFORD	0.72
8	BROWN	0.57
9	CHICAGO	0.54
u/a	DARTMOUTH	u/a
u/a	HARVARD	u/a

* For definitions, see footnotes 1 and 5 on page 2.

Service comparisons -- reference questions asked* per student FTE**



Rank	Institution	Student FTE
1	COLUMBIA	26,030
2	HARVARD	22,062
3	PENNSYLVANIA	21,192
4	CORNELL	19,626
5	STANFORD	15,413
6	CHICAGO	12,642
7	YALE	11,303
8	MIT	10,096
9	BROWN	7,902
10	PRINCETON	7,295
11	DARTMOUTH	5,667

Rank	Institution	Reference transactions
1	COLUMBIA	208,159
2	STANFORD	110,150
3	CORNELL	90,898
4	YALE	89,484
5	MIT	38,232
6	CHICAGO	30,533
7	BROWN	28,861
8	PRINCETON	21,566
9	HARVARD	u/a
u/a	DARTMOUTH	u/a
u/a	PENNSYLVANIA	u/a

Rank	Institution	Reference transactions per student FTE
1	COLUMBIA	8.00
2	YALE	7.92
3	STANFORD	7.15
4	CORNELL	4.63
5	MIT	3.79
6	BROWN	3.65
7	PRINCETON	2.96
8	CHICAGO	2.42
u/a	HARVARD	u/a
u/a	DARTMOUTH	u/a
u/a	PENNSYLVANIA	u/a

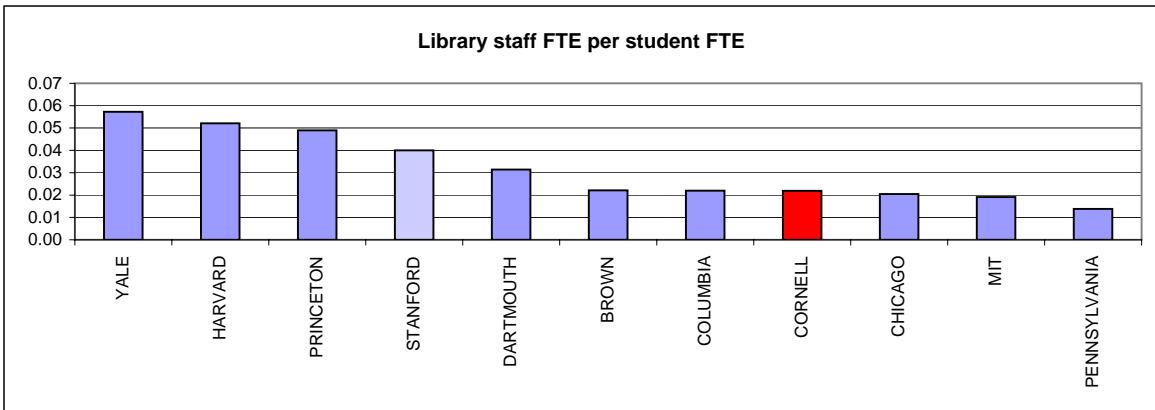
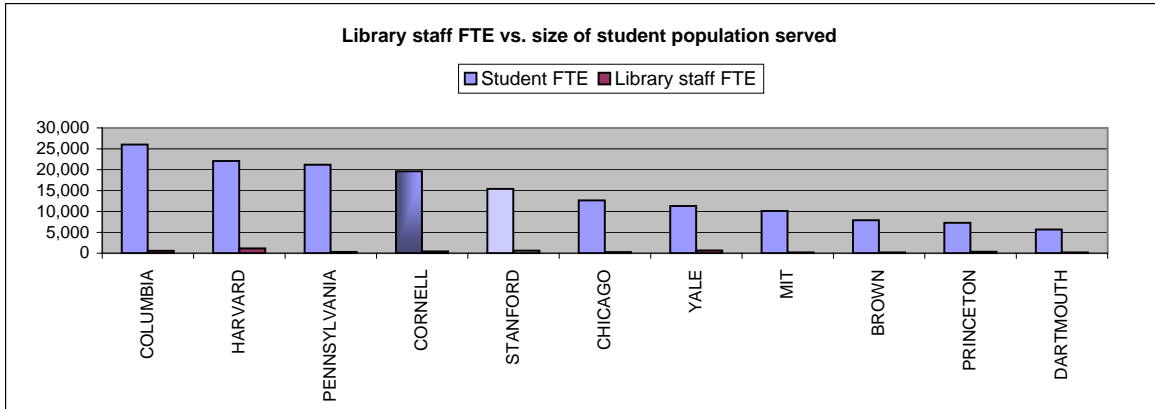
* Stanford's count is extrapolated from a typical week fall count reported to NCES (2,203 times 50).

** For definitions, see footnotes 1 and 5 on page 2.

LIBRARY STAFF COMPARISONS

In real numbers, Cornell has the fifth largest non-student library staff in the Ivy Plus group. However, the rank drops to eighth for library staff per student FTE, and seventh for library staff per full-time instructional faculty. Thus, the average ranking of the size of our staff when compared against the size of core audiences served is 7.5.

Library staff* comparisons -- by student FTE**



Rank	Institution	Student FTE
1	COLUMBIA	26,030
2	HARVARD	22,062
3	PENNSYLVANIA	21,192
4	CORNELL	19,626
5	STANFORD	15,413
6	CHICAGO	12,642
7	YALE	11,303
8	MIT	10,096
9	BROWN	7,902
10	PRINCETON	7,295
11	DARTMOUTH	5,667

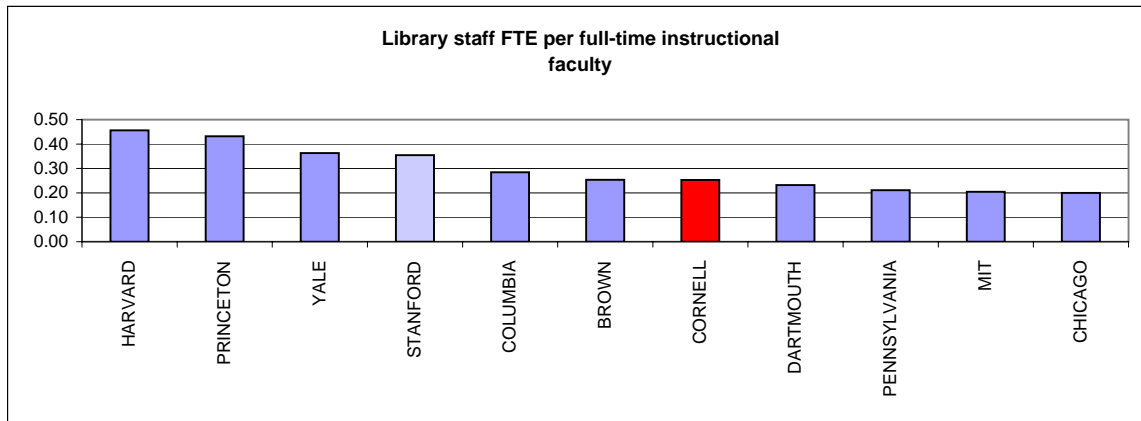
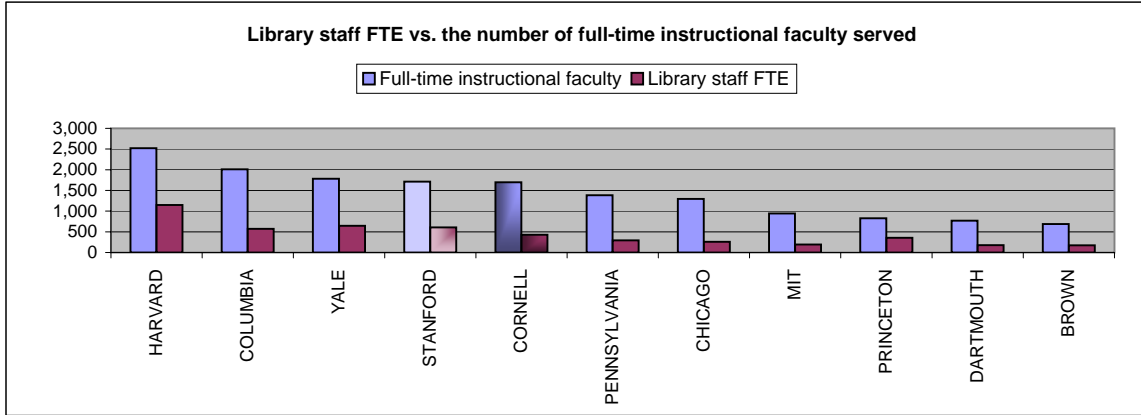
Rank	Institution	Library staff FTE
1	HARVARD	1,149
2	YALE	647
3	STANFORD	607
4	COLUMBIA	572
5	CORNELL	430
6	PRINCETON	357
7	PENNSYLVANIA	292
8	CHICAGO	259
9	MIT	193
10	DARTMOUTH	178
11	BROWN	175

Rank	Institution	Library staff FTE per student FTE
1	YALE	0.06
2	HARVARD	0.05
3	PRINCETON	0.05
4	STANFORD	0.04
5	DARTMOUTH	0.03
6	BROWN	0.02
7	COLUMBIA	0.02
8	CORNELL	0.02
9	CHICAGO	0.02
10	MIT	0.02
11	PENNSYLVANIA	0.01

* Excludes student staff.

** For definitions, see footnotes 1 and 5 on page 2.

Library staff* comparisons -- by faculty**



Rank	Institution	Full-time instructional faculty
1	HARVARD	2,520
2	COLUMBIA	2,011
3	YALE	1,782
4	STANFORD	1,711
5	CORNELL	1,698
6	PENNSYLVANIA	1,384
7	CHICAGO	1,295
8	MIT	945
9	PRINCETON	827
10	DARTMOUTH	768
11	BROWN	690

Rank	Institution	Library staff FTE
1	HARVARD	1,149
2	YALE	647
3	STANFORD	607
4	COLUMBIA	572
5	CORNELL	430
6	PRINCETON	357
7	PENNSYLVANIA	292
8	CHICAGO	259
9	MIT	193
10	DARTMOUTH	178
11	BROWN	175

Rank	Institution	Library staff FTE per full-time instructional faculty
1	HARVARD	0.46
2	PRINCETON	0.43
3	YALE	0.36
4	STANFORD	0.35
5	COLUMBIA	0.28
6	BROWN	0.25
7	CORNELL	0.25
8	DARTMOUTH	0.23
9	PENNSYLVANIA	0.21
10	MIT	0.20
11	CHICAGO	0.20

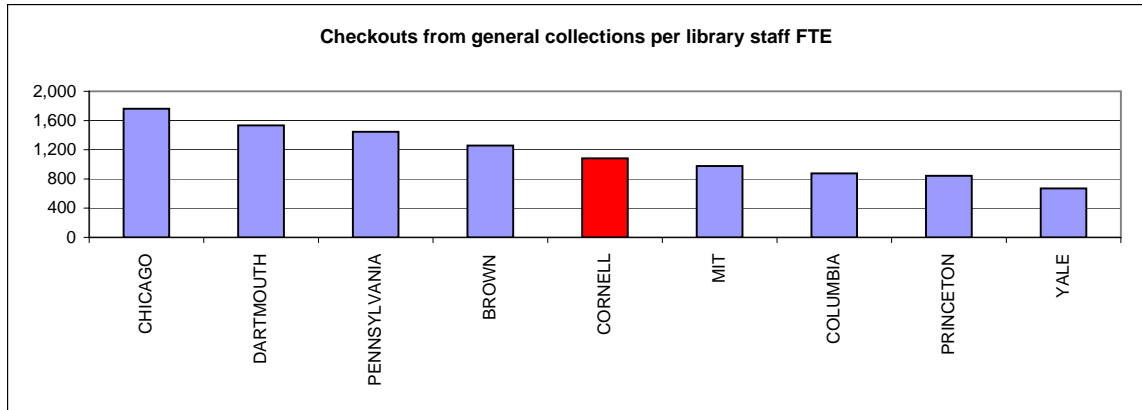
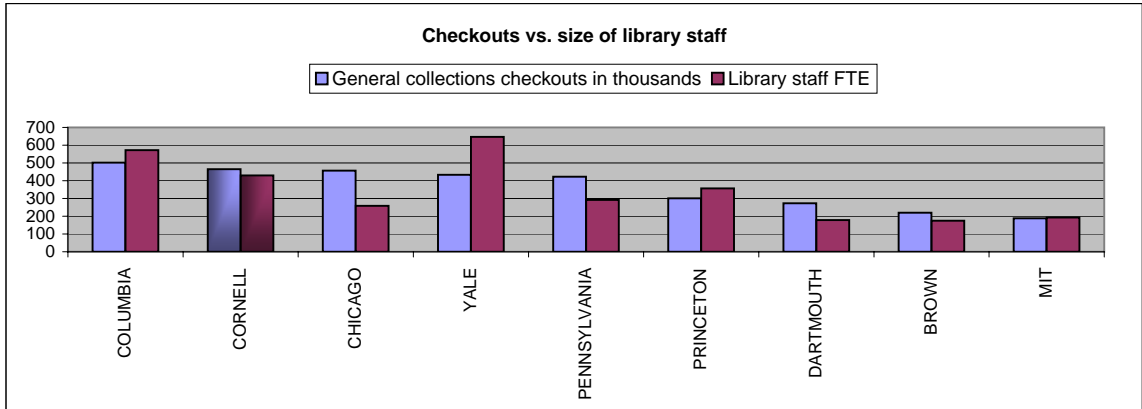
* Excludes student staff.

** For definitions, see footnotes 2 and 6 on page 2.

LIBRARY STAFF EFFICIENCY COMPARISONS

This section looks into the number of service transactions conducted by staff, including checkouts, instruction, research help, and interlibrary services. We rank very high in number of transactions performed, the average ranking in these service areas being 2.7. When considered in relation to the size of our library staff (ranked 5th), the per staff FTE transaction figures put us at an average ranking of 3.8. This average includes some very notable items: Cornell ranking number one in instruction sessions held per staff FTE, number 2 in instruction participants per staff FTE, and 2nd in the number of reference transactions per staff FTE.

Library staff* efficiency comparisons -- checkouts**



Rank	Institution	General collections checkouts
1	COLUMBIA	501,693
2	CORNELL	465,267
3	CHICAGO	456,431
4	YALE	433,186
5	PENNSYLVANIA	422,082
6	PRINCETON	300,726
7	DARTMOUTH	272,946
8	BROWN	219,860
9	MIT	188,364
u/a	HARVARD	u/a
u/a	STANFORD	u/a

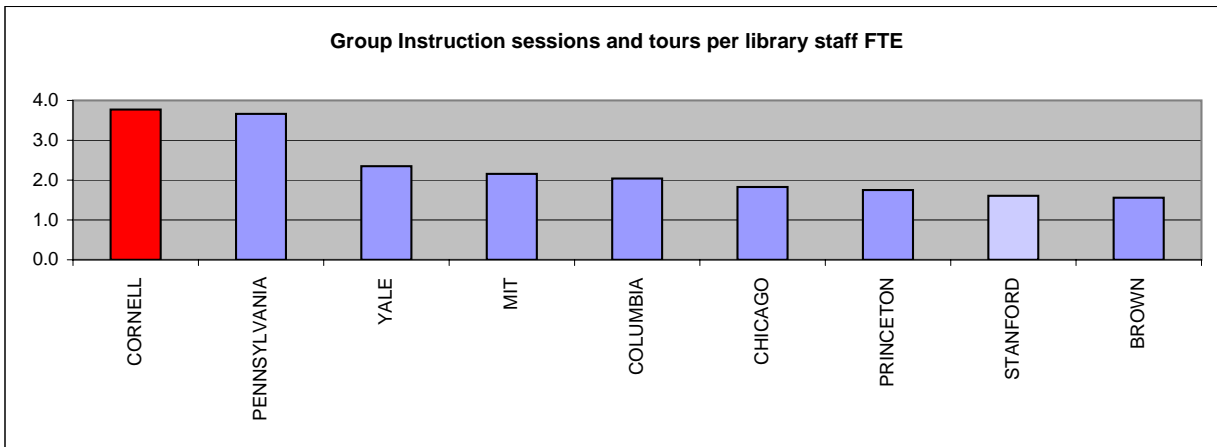
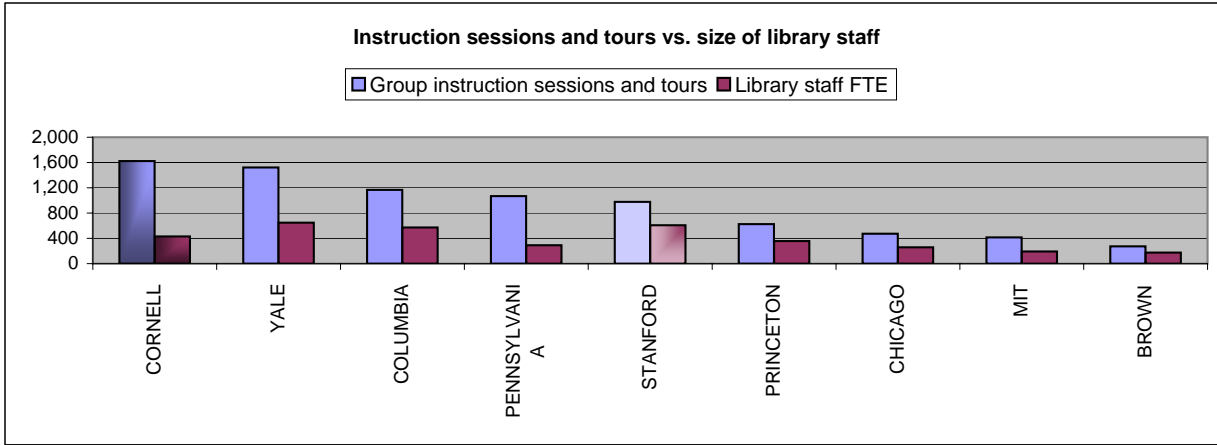
Rank	Institution	Library staff FTE
1	HARVARD	1,149
2	YALE	647
3	STANFORD	607
4	COLUMBIA	572
5	CORNELL	430
6	PRINCETON	357
7	PENNSYLVANIA	292
8	CHICAGO	259
9	MIT	193
10	DARTMOUTH	178
11	BROWN	175

Rank	Institution	General collections checkouts per library staff FTE
1	CHICAGO	1,762
2	DARTMOUTH	1,533
3	PENNSYLVANIA	1,445
4	BROWN	1,256
5	CORNELL	1,082
6	MIT	976
7	COLUMBIA	877
8	PRINCETON	842
9	YALE	670
u/a	HARVARD	u/a
u/a	STANFORD	u/a

* Excludes student staff.

** Reserve transactions excluded. CUL excludes equipment transactions. CUL's count includes ILL to other institutions and some staff

Library staff* efficiency comparisons -- instruction



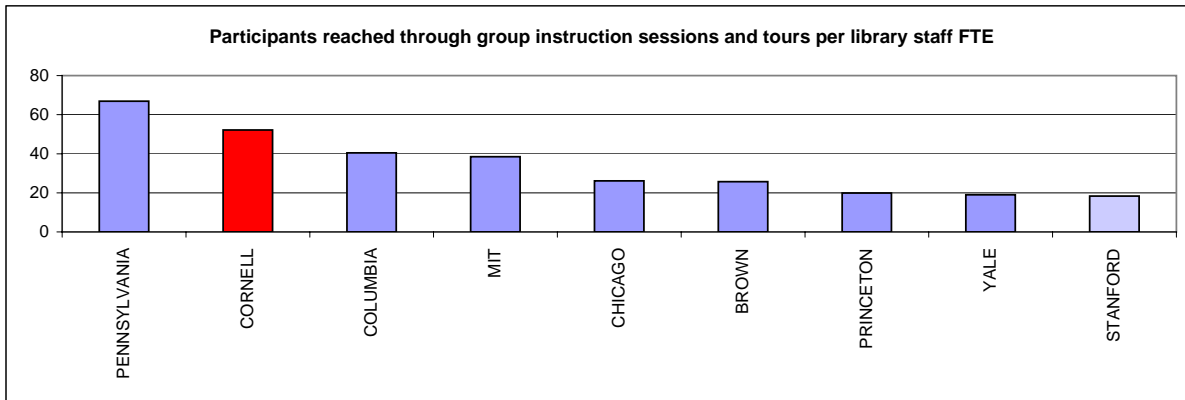
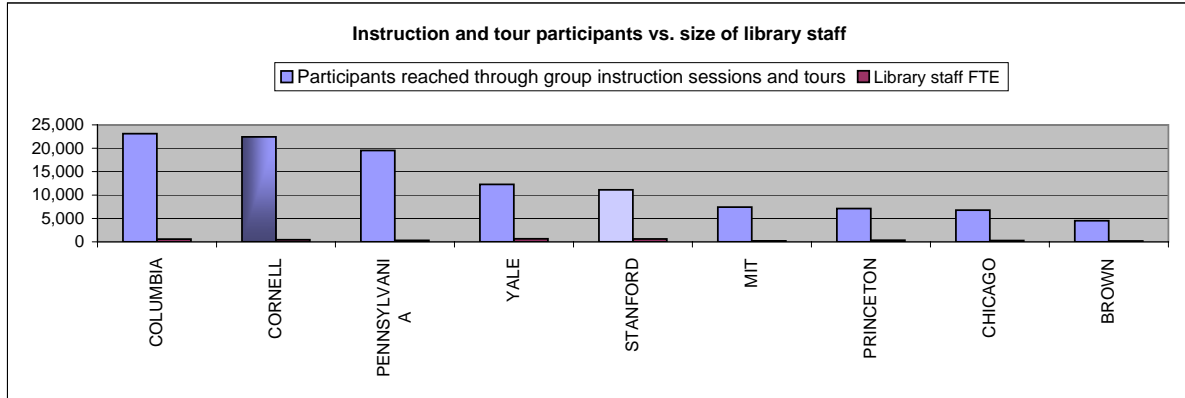
Rank	Institution	Group instruction sessions and tours
1	CORNELL	1,622
2	YALE	1,521
3	COLUMBIA	1,166
4	PENNSYLVANIA	1,069
5	STANFORD	976
6	PRINCETON	625
7	CHICAGO	473
8	MIT	416
9	BROWN	273
u/a	DARTMOUTH	u/a
u/a	HARVARD	u/a

Rank	Institution	Library staff FTE
1	HARVARD	1,149
2	YALE	647
3	STANFORD	607
4	COLUMBIA	572
5	CORNELL	430
6	PRINCETON	357
7	PENNSYLVANIA	292
8	CHICAGO	259
9	MIT	193
10	DARTMOUTH	178
11	BROWN	175

Rank	Institution	Group instruction sessions + tours per library staff FTE
1	CORNELL	3.8
2	PENNSYLVANIA	3.7
3	YALE	2.4
4	MIT	2.2
5	COLUMBIA	2.0
6	CHICAGO	1.8
7	PRINCETON	1.8
8	STANFORD	1.6
9	BROWN	1.6
u/a	DARTMOUTH	u/a
u/a	HARVARD	u/a

* Excludes student staff.

Library staff* efficiency comparisons -- instruction participants



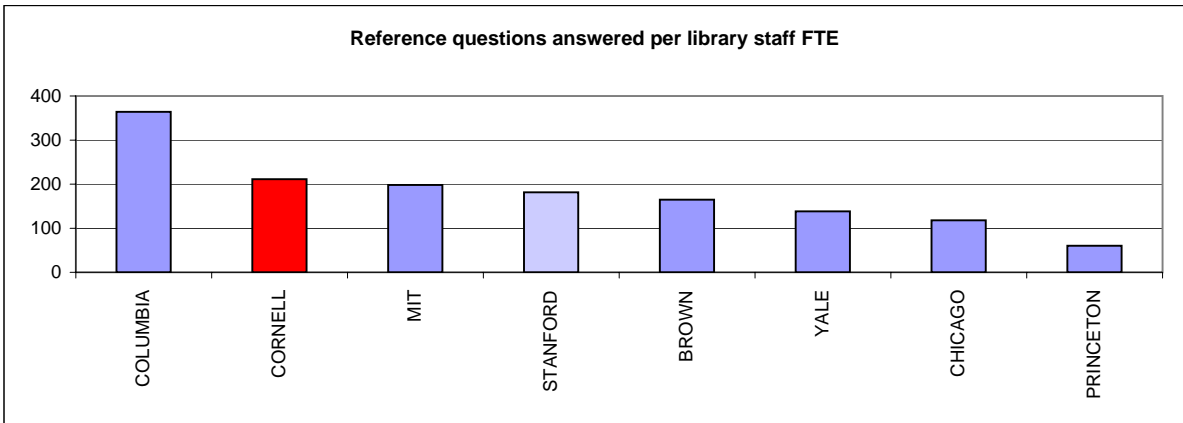
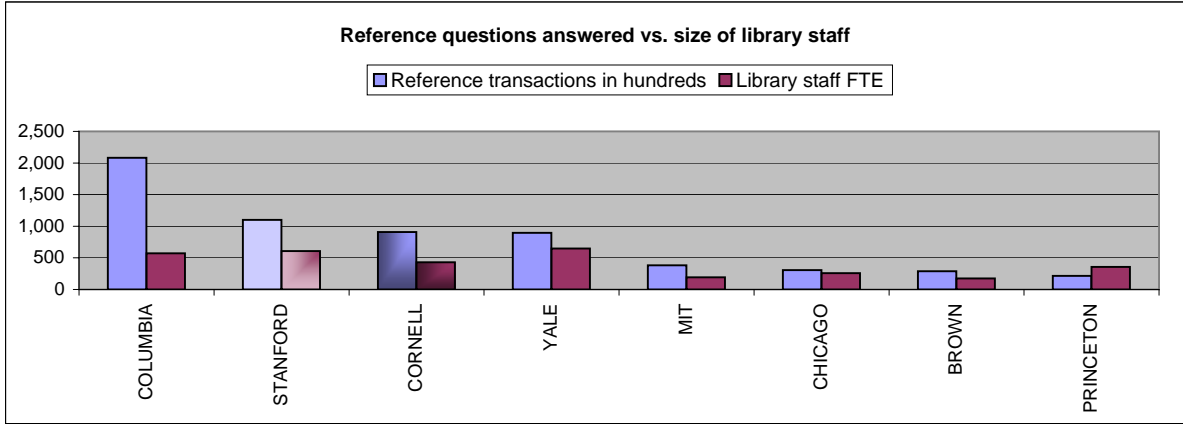
Rank	Institution	Participants reached through group instruction sessions + tours
1	COLUMBIA	23,125
2	CORNELL	22,424
3	PENNSYLVANIA	19,543
4	YALE	12,281
5	STANFORD	11,114
6	MIT	7,428
7	PRINCETON	7,114
8	CHICAGO	6,767
9	BROWN	4,504
u/a	DARTMOUTH	u/a
u/a	HARVARD	u/a

Rank	Institution	Library staff FTE
1	HARVARD	1,149
2	YALE	647
3	STANFORD	607
4	COLUMBIA	572
5	CORNELL	430
6	PRINCETON	357
7	PENNSYLVANIA	292
8	CHICAGO	259
9	MIT	193
10	DARTMOUTH	178
11	BROWN	175

Rank	Institution	Participants reached through group instruction + tours per library staff FTE
1	PENNSYLVANIA	67
2	CORNELL	52
3	COLUMBIA	40
4	MIT	38
5	CHICAGO	26
6	BROWN	26
7	PRINCETON	20
8	YALE	19
9	STANFORD	18
u/a	DARTMOUTH	u/a
u/a	HARVARD	u/a

* Excludes student staff.

Library staff* efficiency comparisons -- reference**



Rank	Institution	Reference transactions
1	COLUMBIA	208,159
2	STANFORD	110,150
3	CORNELL	90,898
4	YALE	89,484
5	MIT	38,232
6	CHICAGO	30,533
7	BROWN	28,861
8	PRINCETON	21,566
9	DARTMOUTH	u/a
u/a	HARVARD	u/a
u/a	PENNSYLVANIA	u/a

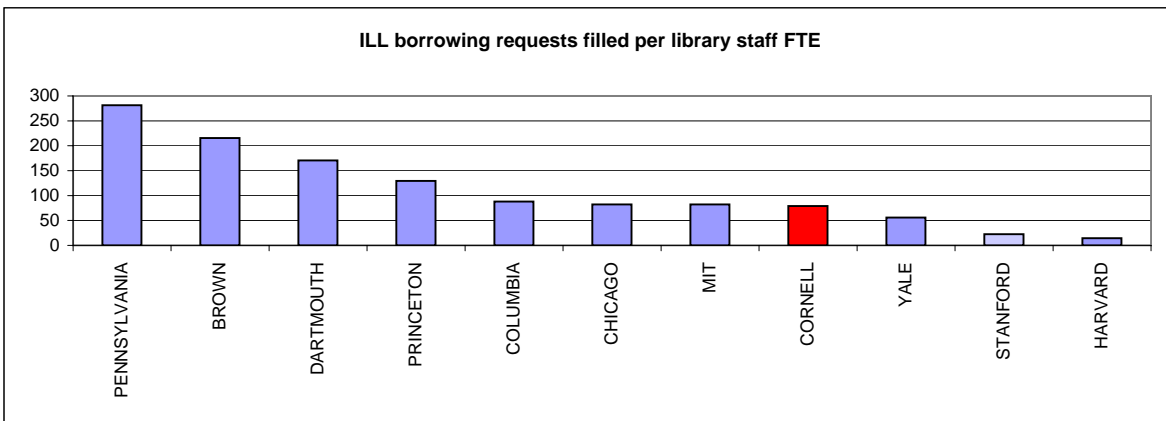
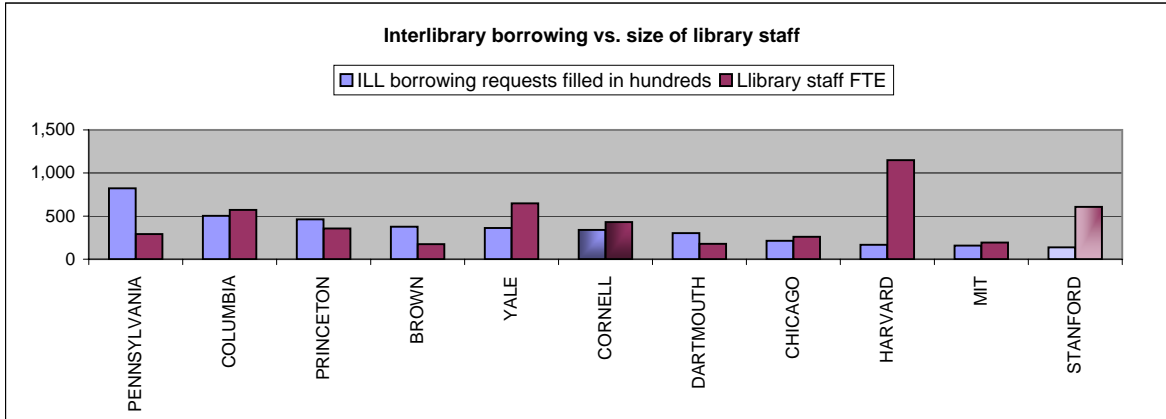
Rank	Institution	Library staff FTE
1	HARVARD	1,149
2	YALE	647
3	STANFORD	607
4	COLUMBIA	572
5	CORNELL	430
6	PRINCETON	357
7	PENNSYLVANIA	292
8	CHICAGO	259
9	MIT	193
10	DARTMOUTH	178
11	BROWN	175

Rank	Institution	Reference transactions per library staff FTE
1	COLUMBIA	364
2	CORNELL	211
3	MIT	198
4	STANFORD	181
5	BROWN	165
6	YALE	138
7	CHICAGO	118
8	PRINCETON	60
u/a	DARTMOUTH	u/a
u/a	HARVARD	u/a
u/a	PENNSYLVANIA	u/a

* Excludes student staff.

** Stanford's count is extrapolated from a typical week fall count reported to NCES (2,203 times 50).

Library staff* efficiency comparisons -- interlibrary loan borrowing



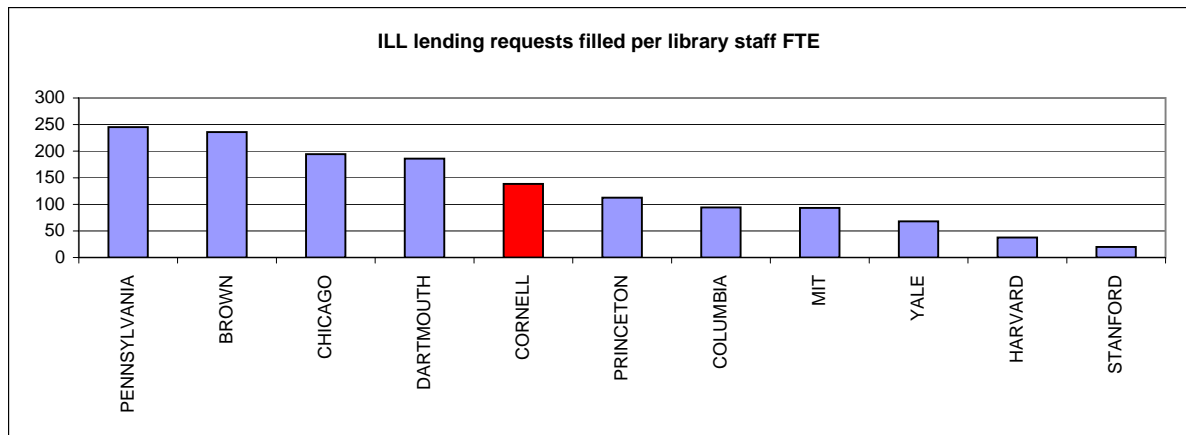
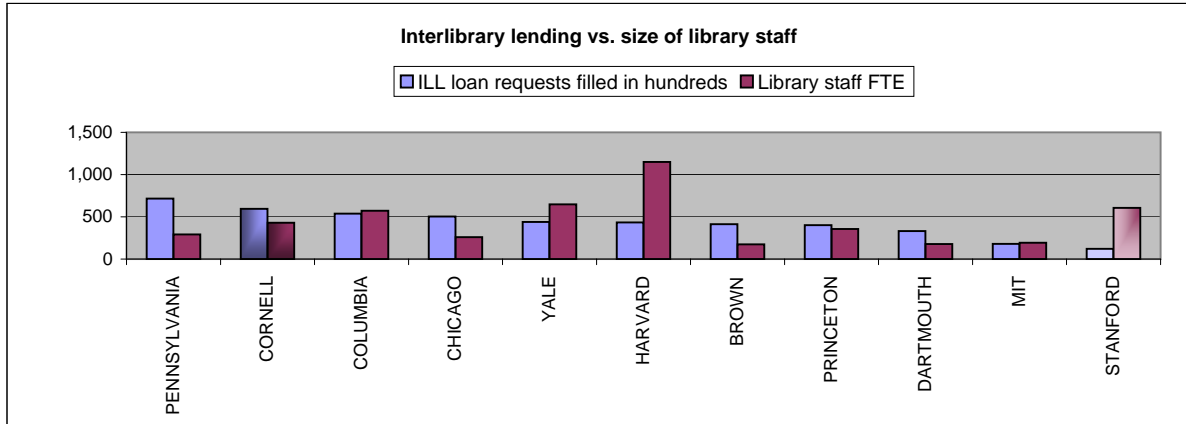
Rank	Institution	ILL borrowing requests filled
1	PENNSYLVANIA	82,189
2	COLUMBIA	50,344
3	PRINCETON	46,196
4	BROWN	37,736
5	YALE	36,153
6	CORNELL	33,960
7	DARTMOUTH	30,340
8	CHICAGO	21,301
9	HARVARD	16,620
10	MIT	15,853
11	STANFORD	13,676

Rank	Institution	Library staff FTE
1	HARVARD	1,149
2	YALE	647
3	STANFORD	607
4	COLUMBIA	572
5	CORNELL	430
6	PRINCETON	357
7	PENNSYLVANIA	292
8	CHICAGO	259
9	MIT	193
10	DARTMOUTH	178
11	BROWN	175

Rank	Institution	ILL borrowing requests filled per library staff FTE
1	PENNSYLVANIA	281
2	BROWN	216
3	DARTMOUTH	170
4	PRINCETON	129
5	COLUMBIA	88
6	CHICAGO	82
7	MIT	82
8	CORNELL	79
9	YALE	56
10	STANFORD	23
11	HARVARD	14

* Excludes student staff.

Library staff* efficiency comparisons -- interlibrary loan lending



Rank	Institution	ILL loan requests filled
1	PENNSYLVANIA	71,623
2	CORNELL	59,522
3	COLUMBIA	53,879
4	CHICAGO	50,335
5	YALE	44,027
6	HARVARD	43,298
7	BROWN	41,281
8	PRINCETON	40,211
9	DARTMOUTH	33,074
10	MIT	18,018
11	STANFORD	12,061

Rank	Institution	Library staff FTE
1	HARVARD	1,149
2	YALE	647
3	STANFORD	607
4	COLUMBIA	572
5	CORNELL	430
6	PRINCETON	357
7	PENNSYLVANIA	292
8	CHICAGO	259
9	MIT	193
10	DARTMOUTH	178
11	BROWN	175

Rank	Institution	ILL loan requests filled per library staff FTE
1	PENNSYLVANIA	245
2	BROWN	236
3	CHICAGO	194
4	DARTMOUTH	186
5	CORNELL	138
6	PRINCETON	113
7	COLUMBIA	94
8	MIT	93
9	YALE	68
10	HARVARD	38
11	STANFORD	20

* Excludes student staff.

CONCLUSIONS

The ratio approach used throughout this report attempts to put library statistics from across the Ivy Plus universities into context based on institutional characteristics related to the size of the community each library serves and the intellectual breadth and depth measured through fields of doctoral study supported by the libraries. This approach does lower the CUL's rank compared to when we use absolute figures, but conceptually these ranks do appear to show more relevance.

In fields where financial support is primary, such as total expenditure, collection size and staff size, our average ranks based on the ratios are 8.5, 7.5, and 7.5, respectively. We rank much higher when it comes to the intensity with which the student body uses our services, at 3.7, and our staff efficiency at providing those services, at 3.8.

Another notable observation that the ratio approach made possible is the fact that we rank last in material expenditure by PhD field.

CUL staffs the most service points among all Ivy Plus peers, although that does not appear to hurt our staff efficiency ranks and it is not known if it contributes to our high rankings when it comes to intensity of use for our services. However, it is important to keep in mind that this data only presents a partial view of all library operations. The high ranking on staff efficiency might also mean that activities not represented in these metrics (e.g. innovative operations, information technology, technical services, administrative services, outreach, etc.) are less well supported at Cornell than at our peers.