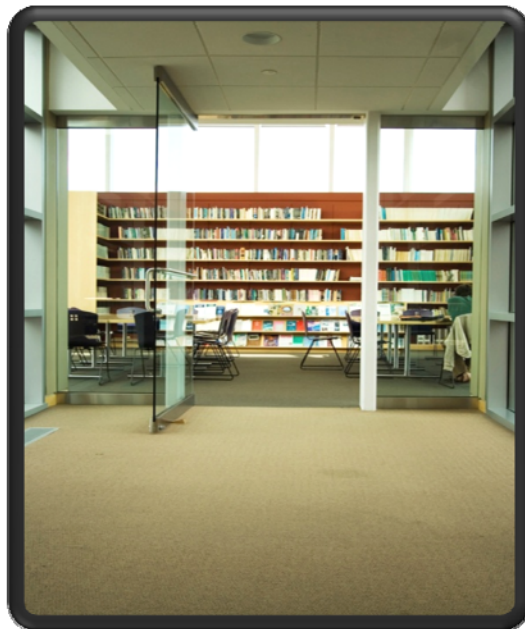


## Trends in Academic Libraries, 1998 to 2008

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Prepared by Denise M. Davis  
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## Contents

Figures and Graphs .....	4
About the Author .....	6
Acknowledgements.....	7
Introduction .....	8
Methodology.....	8
Number of academic libraries.....	10
Circulation and Reserve Collections.....	13
Interlibrary Loan Transactions and Documents Received from Commercial Services .....	16
Public Service Hours.....	20
Volumes Held and Added .....	23
Library Staffing.....	28
Library Expenditures .....	32
Electronic Services .....	38
Information Literacy Activities.....	42
Conclusion.....	46

## Figures and Graphs

Figure 1. Total number of academic libraries and percent change by institutional characteristics, 1998 to 2008

Figure 2. Total number and percent change circulation, general and reserve collections by year and institutional characteristics, 1998 to 2008

Graph 1. Items loaned and loans provided by full-time equivalent enrollment

Graph 2. Items loaned and loans provided by Carnegie Classification

Figure 3A. Total number and percent change interlibrary loan transactions and documents provided to other libraries, 1998 to 2008

Figure 3B. Total number and percent change interlibrary loans received from libraries and commercial services by year and institutional characteristics, 1998 to 2008

Figure 4A. Total number and percent change of public service hours Less than 20 thru 60-79 per typical week by institutional characteristics, 1998 to 2008

Figure 4B. Percent change public service hours per typical week 80-99 thru 168 by institutional characteristics, 1998 to 2008

Figure 5A. Total items held and held per full-time equivalent (FTE) by type and year, 1998 to 2008

Figure 5B. Total items added and added per full-time equivalent (FTE) by type and year, 1998 to 2008

Figure 6A. Total items held and held per full-time equivalent (FTE) by type, institutional characteristic and Carnegie classification, 2008

Figure 6B. Total items added and added per full-time equivalent (FTE) by institutional characteristic and Carnegie classification, 2008

Figure 7A. Number and percent change of full-time equivalent (FTE) staff at academic libraries by institutional characteristic, 1998 to 2008

Figure 7B. Number and percent change of full-time equivalent (FTE) librarians and other professional staff at academic libraries by institutional characteristics, 1998 to 2008

Figure 7C. Number and percent change of full-time equivalent (FTE) other paid staff and student assistants at academic libraries by institutional characteristics, 1998 to 2008

Figure 8A. Total expenditures, total salary and wages expenditures and as a percent of total expenditures by institutional characteristics, 1998 and 2008

Figure 8B. Information resources expenditures and percent change by institutional characteristic, 1998 to 2008

Figure 8C. Total operating expenditures, computer hardware and software, bibliographic utilities, networks, consortia, other operating expenditures and percent change by institutional characteristic, 1998 to 2008

Figure 9A. Number and percent of academic libraries with documents digitized by library staff and library reference services by e-mail or the Web by institutional characteristics, 1998 to 2008 and 2002 to 2008

Figure 9B. Number and percent of academic libraries with technology to assist patrons with disabilities and electronic theses and dissertations produced by institutional characteristics, 1998 to 2008 and 2002 to 2008

Figure 10A. Percent of academic libraries reporting defined information literacy or information literate students, incorporated information literacy into institution's mission, and incorporated information literacy into institution's strategic plan by institutional characteristics, 2004 to 2008

Figure 10B. Percent of academic libraries have institution-wide committee to implement strategic plan for information literacy and strategic plan formally recognizes the library's role in information literacy instruction by institutional characteristics, 2004 to 2008

## About the Author

**Denise M. Davis** is deputy director of Sacramento Public Library (SPL) since October 2010. Prior to joining **SPL**, Davis directed the ALA Office for Research and Statistics leading many research activities for ALA to expand the knowledge base of the field, to understand association membership trends, and to collect useful statistics about all types of libraries. Most notably among the various ALA research initiatives were Diversity Counts, a longitudinal study of library staff; LNCC, a three-year research study of library networks, cooperatives, and consortia and the development of a searchable database of the study findings; an ongoing study of Public Library Funding and Technology Access; and a study of public library support of non-English speakers. Davis also supported the National Center for Education Statistics with its biennial survey of academic libraries. Davis has worked in a variety of capacities in academic, state library agencies and public libraries, and with the National Commission on Libraries and Information Science, whose operations were absorbed in 2008 by the Institute of Museum and Library Services.

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Additional recognition is due the Academic Library Survey advisory panel without whose guidance the quality of the questionnaire and data reported would be lessened. The panel members have changed over the years, however a roster of the current members is available on the American Library Association, Office for Research and Statistics website ( <http://www.ala.org/ala/aboutala/offices/ors/natlctrforedstats/ncesalsadvcmteroster.cfm> ).

## Introduction

The National Center for Education Statistics in collaboration with the academic library community conducts a biennial survey that captures information about libraries in all degree-granting colleges and universities including location, hours of operation, staffing, types of services offered, collection type and size, and questions to understand trends in their impact. These data are then reported by institutional characteristics such as public or private, degree-granting level, size (full-time equivalent enrollment) and Carnegie Classification.

Consideration of all data reported were made, and it was determined that core library operating components would best demonstrate change during the period of analysis. The summary findings presented in this report demonstrate the influence of technology on academic library expenditures, collections and services and that use is not less, just different. Analysis of data reported between 1998 and 2008 provide insight into changes in 2008 from 1998 that are not as prominent when reviewing findings in closer periodicity.

## Methodology

Data analyzed in this report are drawn from the National Center for Education Statistics (NCES) Academic Libraries series public use data for 1998, 2000, 2002, 2004, 2006, and 2008.<sup>1</sup> Institutions that report results on another institution's record (child institutions) were removed from the data sets before analysis. The data were then analyzed by institutional characteristics: Control (public vs. private institutions), Highest Level Offered, size of enrollment as determined by Full-Time Equivalents, and Carnegie Classification.

Response totals by institutional characteristics for each survey period were extracted from the public use data files, and net change in 2008 from 1998 or other start year was calculated. The change is reported in numeric total and percent changes. Per Full-time Equivalent (FTE) are included for questions where such analysis had appeared in the NCES biennial survey reports (e.g., collections per FTE).

## *Limitations of the data analysis*

Data analysis was limited due to two factors: variations in Carnegie Classifications across the 10-year period and changes in survey questions.

The breakout by Highest Level Offered does not sum to the total number of institutions in 2008 data; 34 institutions were listed as offering First Professional Degrees only and did not have a categorical match with 1998 data. The breakout by Carnegie Classification also does not sum to all institutions. Fifty-one (51) institutions were categorized as Baccalaureate/ Associate's Colleges, where the majority of conferrals are at the sub-baccalaureate level (associate's degrees and certificates) but bachelor's

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<sup>1</sup> National Center for Education Statistics. Academic Libraries Survey. Biennial data files available at [http://nces.ed.gov/surveys/libraries/aca\\_data.asp](http://nces.ed.gov/surveys/libraries/aca_data.asp) (last accessed Jun 16, 2011).



degrees account for at least ten percent of undergraduate awards. These were removed from the tables since the classifications did not match with earlier Carnegie Classification categories.

Changes in questions also posed challenges for analysis. Although minor edits to improve interpretation of questions and survey response were made between 1998 and 2008, some new questions were introduced during the 10-year period: collection counts including E-Books and electronic reference sources and aggregation services (2002-2008); electronic theses and dissertations produced (2002-2008); and information literacy activities (2004-2008).

## Number of academic libraries

The total number of academic libraries reporting grew 6.9 percent in 2008 from 1998 (Figure 1). The percent increase in libraries with branches (up 6.0 percent from 1998) and without branches (up 7.4 percent from 1998) aligned with the overall increase in total libraries reporting, while the total number of branches increased nearly twice that amount at 12.8 percent.

### *Public and private academic libraries*

The number of public academic libraries increased slightly (up 1.1 percent) in 2008 from 1998, while the number with branches increased 3.3 percent and the number of branches reported increased 7.7 percent. Those without branches declined less than one percent (-0.3 percent) during this 10-year period. The number of private academic libraries increased 11.4 percent in 2008 from 1998 and reported overall increases of 12.3 percent in the number of libraries without branches and 8.9 percent in libraries with branches, however the number of branches declined -21.1 percent.

### *Degree levels*

Doctoral degree-granting institutions saw the largest proportional growth in the number of libraries, increasing from 570 to 733 (28.6 percent) in 2008 from 1998. Those reporting no branches increased 55 percent, and 8.1 percent more reported having branches but the number of branches declined very slightly (-0.4 percent) in 2008 from 1998.

Master's degree-granting institutions saw a decrease of -0.8 percent in 2008 from 1998 in the total number of libraries. About 4.0 percent more reported libraries without branches and- 12.9 percent fewer libraries reported having branches during the same 10-year period. However, even with the decline in libraries with branches the number of branches reported increased 8.7 percent in 2008 from 1998.

Bachelor degree-granting institutions saw increases in the total number of libraries (up 6.3 percent from 1998), those without branches increased 2.7 percent, those with branches increased 20.6 percent and the number of branches reported increased 51.8 percent in 2008 from 1998.

While institutions with Less than 4-year degree granting status reported an increase in the total number of libraries (up 1.4 percent from 1998), there was a decline in the number without branches (down 2.6 percent from 1998) and an increase in the number with branches (up 10.2 percent from 1998). There also was a corresponding increase in the total number of branches (up 28.9 percent from 1998) reported by Less than 4-year degree granting institutions.

**Figure 1. Total number of academic libraries and percent change by institutional characteristics, 1998 to 2008**

	Total number of libraries	Libraries			Libraries without branches			Libraries with branches			Branches		
Institutional Characteristic	2008	Change 1998-2008	2008	1998	Change 1998-2008	2008	1998	Change 1998-2008	2008	1998	Change 1998-2008	2008	1998
<b>All postsecondary degree-granting institutions</b>	3,911	6.9%	3,911	3,658	7.4%	2,656	2,474	6.0%	1,255	1,184	12.8%	3,217	2,852
<b>CONTROL</b>													
<b>Public</b>	1,600	1.1%	1,600	1,583	-0.3%	970	973	3.3%	630	610	7.7%	1,705	1,583
<b>Private</b>	2,311	11.4%	2,311	2,075	12.3%	1,686	1,501	8.9%	625	574	-21.1%	1,512	2,075
<b>LEVEL</b>													
<b>Total 4-year and above</b>	2,416	9.0%	2,416	2,217	12.1%	1,662	1,483	2.7%	754	734	6.5%	2,238	2,102
<b>Doctor's</b>	733	28.6%	733	570	55.0%	386	249	8.1%	347	321	-0.4%	1,447	1,453
<b>Master's</b>	936	-0.8%	936	944	4.0%	699	672	-12.9%	237	272	8.7%	489	450
<b>Bachelor's</b>	747	6.3%	747	703	2.7%	577	562	20.6%	170	141	51.8%	302	199
<b>Less than 4-year</b>	1,461	1.4%	1,461	1,441	-2.6%	965	991	10.2%	496	450	28.9%	967	750
<b>SIZE (FTE Enrollment)</b>													
<b>Less than 1,000</b>	1,494	6.9%	1,494	1,397	6.8%	1,217	1,140	7.8%	278	258	40.3%	446	318
<b>1,000 to 2,999</b>	1,165	11.8%	1,165	1,042	15.5%	821	711	3.9%	345	332	2.1%	574	562
<b>3,000 to 4,999</b>	484	28.3%	484	377	22.1%	298	244	39.6%	187	134	46.8%	345	235
<b>5,000 to 9,999</b>	409	-8.3%	409	446	-13.4%	219	253	-1.5%	191	194	-3.0%	426	439
<b>10,000 to 19,999</b>	241	-11.7%	241	273	-19.8%	89	111	-6.1%	153	163	8.9%	527	484
<b>20,000 or more</b>	118	-4.0%	118	123	-14.3%	18	21	-1.9%	101	103	10.4%	899	814
<b>CARNEGIE CLASSIFICATION (2005)</b>													
<b>Doctoral/Research</b>	257	9.8%	257	234	50.0%	51	34	3.0%	206	200	-0.3%	1,203	1,207
<b>Master's I and II</b>	590	13.2%	590	521	22.5%	403	329	-2.6%	187	192	10.3%	364	330
<b>Baccalaureate</b>	512	-15.1%	512	603	-10.5%	391	437	-27.1%	121	166	-31.4%	188	274
<b>Associates</b>	1,362	11.9%	1,362	1,217	8.3%	888	820	19.4%	474	397	39.4%	952	683
<b>Specialized</b>	620	13.1%	620	548	18.6%	497	419	-4.7%	123	129	8.2%	251	232
<b>Not Classified</b>	519	-3.0%	519	535	-9.9%	392	435	27.0%	127	100	84.9%	233	126

### *Full Time Equivalent Enrollment*

When considered by size (full time equivalent enrollment, FTE), there were some noticeable shifts in the number of libraries in 2008 from 1998 (Figure 1). Institutions with the smallest enrollment (ranges under 5,000 FTE, about 80.4 percent of institutions reporting) saw the greatest increase in the number of libraries and branches than did those with enrollment over 5,000 FTE (about 19.7 percent of institutions reporting).

- Institutions with less than 1,000 FTE represent about 38.2 percent of academic libraries and saw an increase in libraries of 6.9 percent in 2008 from 1998, and an almost equal increase in the number of libraries without branches (6.8 percent) and with branches (7.8 percent). For those with branches, the number of branches increased 40.3 percent in 2008 from 1998.
- Institutions with 1,000 to 2,999 FTE represent about 29.8 percent of academic libraries and saw an increase in the number of libraries of 11.8 percent in 2008 from 1998 and an increase in the number of libraries without branches (15.5 percent) and only 3.9 percent increase of those with branches. For those with branches, the number of branches increased about 2.1 percent in 2008 from 1998.
- Institutions with 3,000 to 4,999 FTE represent about 12.4 percent of academic libraries and saw a 28.3 percent increase in the number of libraries in 2008 from 1998. This group also reported an increase in the number of libraries without branches (22.1 percent) and 39.6 percent with branches. For those without branches, the number increased 46.8 percent in 2008 from 1998.
- Institutions with 5,000 to 9,999 FTE represent about 10.5 percent of academic libraries and saw declines in the number of libraries (-8.3 percent), libraries without branches (-13.4 percent), and libraries with branches (-1.5 percent) in 2008 from 1998. For those with branches, there was a decline in the number of branches, down about -3.0 percent in 2008 from 1998.
- Institutions with 10,000 to 19,999 FTE represent about 6.2 percent of academic libraries and saw even greater declines in the number of libraries (-11.7 percent) and libraries without branches (-19.8 percent) in 2008 from 1998. Libraries with branches did report increases in the number of branches, up about 8.9 percent in 2008 from 1998.
- Similarly, institutions with 20,000 or more FTE, representing about 3.0 percent of academic libraries, also saw decreases in the number of libraries (-4.0%), decreases in the number of libraries without branches (-14.3 percent), and decreases in the number of libraries with branches (-1.9 percent) in 2008 from 1998. Those with branches reported an increase of 10.4 percent in 2008 from 1998.

## Circulation and Reserve Collections

Overall, circulation of academic library general collections declined -20.9 percent in 2008 from 1998, while reserve collection use grew slightly at 2.7 percent during this period (Figure 2). Public academic libraries represent about 40.9 percent of those reporting and saw a decline of -23.9 percent in circulation of general collections, but an increase of 11.0 percent in use of reserve collections during this 10-year period. Private academic libraries, about 59.1 percent of those reporting, saw declines in general collection circulation of -14.8 percent and similar declines in reserve collection circulation of -11.0 percent in 2008 from 1998.

Master's level degree granting institutions saw the most significant declines in general circulation (-35.3 percent), followed by Less than 4-year (-29.2 percent), then Doctoral level (-15.9 percent) and Bachelor's (-8.0 percent) in 2008 from 1998. Reserve circulation grew for Bachelor's level (12.2 percent) and Doctoral (10.2 percent), but declined for Master's (-19.1 percent) and Less than 4-year libraries (-2.6 percent) in 2008 for 1998.

General collection and reserve collection circulation changes in 2008 from 1998 are far more dramatic when considered by FTE enrollment:

- Institutions with Less than 1,000 and 1,000 to 2,999 FTE saw declines in both general collection (-48.2 percent and -13.6 percent, respectively) and reserve circulation (-53.5 percent and -3.1 percent, respectively) in 2008 from 1998. These two enrollment groups represent 19.5 percent of total circulation in 2008.
- Institutions with enrollment above 3,000 FTE reported declines in general collection circulation and increases in reserve circulation in 2008 from 1998:
  - 3,000 to 4,999 FTE represent 8.6 percent of total circulation; general collection circulation declined -1.3 percent while reserve circulation increased a noteworthy 34.5 percent.
  - 5,000 to 9,999 FTE represent 13.9 percent of total circulation; general collection circulation declined -30.9 percent and reserve circulation increased 9.7 percent.
  - 10,000 to 19,999 FTE represent 22.9 percent of total circulation; general circulation declined -23.3 percent and reserve circulation increased 12.5 percent.
  - 20,000 or more FTE represent 35.0 percent of total circulation; general circulation declined -15.1 percent and reserve circulation increased 1.0 percent.

The decrease in reported circulation figures must be considered in relation to the significant growth in digital and electronic collections, specifically E-Books, serial subscriptions in electronic format, and electronic reference sources and aggregation services (Figures 5A-5B).

The changes in reserve circulation may be a result of increased the adoption of e-reserve and print reserve services in academic libraries.

“During this time period there was a significant increase in course management systems. The ability of faculty to place items within these systems has led to the eventual elimination of electronic reserves for many academic institutions. Also, more libraries are circulating non-book items- earphones, bikes, eReaders, and more. Some of these items are kept on reserve and affect what exactly is being reported.”

Terri Fishel, Director, DeWitt Wallace Library, Macalester College, St. Paul, MN  
(<http://www.macalester.edu/~fishel/>)

**Figure 2. Total number and percent change circulation, general and reserve collections by year and institutional characteristics, 1998 to 2008**

	Total number of libraries	Total circulation	Libraries reporting		Total general collection circulation			Total reserve collection		
Institutional Characteristic	2008	2008	2008	1998	Change 1998-2008	2008	1998	Change 1998-2008	2008	1998
<b>All postsecondary degree-granting institutions</b>	3,911	180,568,668	3,911	3,658	-20.9%	138,822,274	175,409,202	2.7%	41,746,394	40,657,911
<b>CONTROL</b>										
Public	1,600	116,394,934	1,600	1,583	-23.9%	88,350,416	116,158,325	11.0%	28,044,518	25,267,126
Private	2,311	64,173,734	2,311	2,075	-14.8%	50,471,858	59,250,877	-11.0%	13,701,876	15,390,785
<b>LEVEL</b>										
Total 4-year and above	2,416	156,353,856	2,416	2,217	-19.7%	120,889,703	150,565,833	2.9%	35,464,153	34,451,397
Doctor's	733	113,555,666	733	570	-15.9%	88,795,158	105,613,558	10.2%	24,760,508	22,469,135
Master's	936	28,970,597	936	944	-35.3%	21,896,679	33,868,817	-19.1%	7,073,918	8,746,691
Bachelor's	747	13,827,593	747	703	-8.0%	10,197,866	11,083,458	12.2%	3,629,727	3,235,571
Less than 4-year	1,461	23,644,437	1,461	1,441	-29.2%	17,601,493	24,843,369	-2.6%	6,042,944	6,206,514
<b>SIZE (FTE Enrollment)</b>										
Less than 1,000	1,494	8,917,715	1,494	1,397	-48.2%	7,421,573	14,321,763	-53.5%	1,496,142	3,219,516
1,000 to 2,999	1,165	26,399,954	1,165	1,042	-13.6%	19,969,751	23,117,446	-3.1%	6,430,203	6,635,604
3,000 to 4,999	484	15,447,250	484	377	-1.3%	11,433,933	11,580,458	34.5%	4,013,317	2,984,177
5,000 to 9,999	409	25,143,060	409	446	-30.9%	17,727,626	25,663,838	9.7%	7,415,434	6,762,029
10,000 to 19,999	241	41,399,094	241	273	-23.3%	30,397,293	39,635,800	12.5%	11,001,801	9,776,671
20,000 or more	118	63,261,595	118	123	-15.1%	51,872,098	61,089,897	1.0%	11,389,497	11,279,914
<b>CARNEGIE CLASSIFICATION (2005)</b>										
Doctoral/Research	257	91,691,104	257	234	-18.0%	72,258,532	88,068,106	6.0%	19,432,572	18,334,718
Master's I and II	590	32,655,811	590	521	-24.1%	24,165,799	31,830,547	12.6%	8,490,012	7,536,918
Baccalaureate	512	18,389,145	512	603	-15.1%	13,439,027	15,820,361	5.9%	4,950,118	4,676,047
Associates	1,362	25,558,359	1,362	1,217	-13.3%	19,399,158	22,362,696	0.7%	6,159,201	6,115,275
Specialized	620	9,529,471	620	548	-37.3%	7,716,823	12,306,340	-42.0%	1,812,648	3,126,356
Not Classified	519	1,741,179	519	535	-76.7%	1,167,567	5,021,152	-34.0%	573,612	868,597

## Interlibrary Loan Transactions and Documents Received from Commercial Services

Interlibrary loans to and from libraries experienced considerable growth between 1998 and 2008, with loans of returnable materials provided to other libraries increasing 54.0 percent and loans received increasing 62.9 percent during the 10-year period (Figures 3A-3B). Non-returnable loans, usually in the form of photo or digital facsimiles of materials, declined -9.5 percent and -1.2 percent, respectively, in 2008 from 1998. Showing significant declines were documents provided by commercial services, down -23.9 percent in 2008 from 1998. These declines should not be surprising given the increased access to e-content through individual journal subscriptions and full text journal and newspaper databases (see Figures 5A, 5B).

Private academic institutions were more likely than public institutions to report larger increases and declines in 2008 from 1998 than were public institutions. Returnable loans to other libraries increased 83.8 percent for private institutions, more than twice that of public academic institutions (39.2 percent) in 2008 from 1998. Loans and documents received by private institutions also increased at nearly double that of public institutions (89.98 percent and 47.8 percent, respectively) in 2008 from 1998.

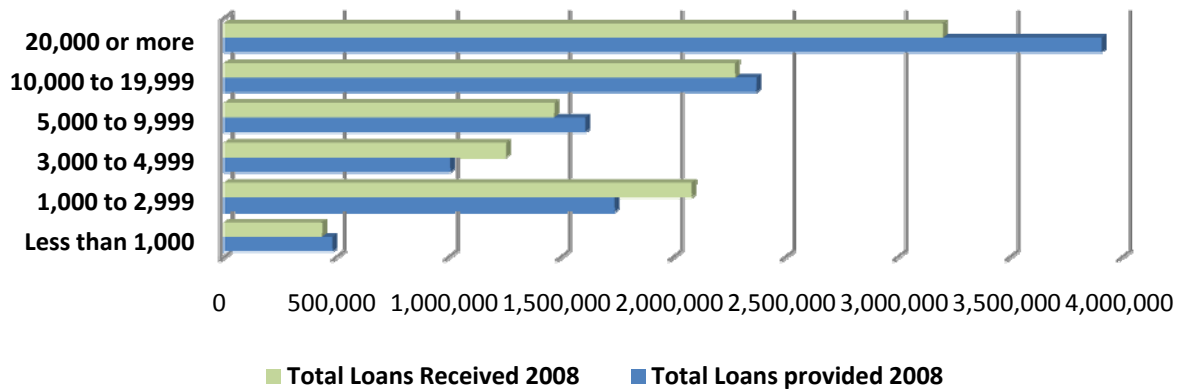
Less than 4 year degree granting institutions reported the greatest change overall, with an increase of 79.1 percent in returnable loans to other libraries. Doctoral degree granting institutions also reported significant growth in 2008 from 1998 for returnable loans to other libraries, up 63 percent from 1998. By FTE ranges the following was reported:

- 3,000 to 4,999 FTE reported the greatest percent change in returnable loans, increasing 127.1 percent in 2008 from 1998, and loans received from other libraries, increasing 55.6 percent in 2008 from 1998 compared with other student FTE ranges.
- 20,000 or more FTE reported the second largest increase in loans provided to other libraries – returnable loans increased 64.2 percent and non-returnable loans increased 2.5 percent, and in loans received – returnable loans increased 53.7 percent and non-returnable loans increased 63.3 percent in 2008 from 1998.
- Less than 1,000 FTE reported the largest declines in non-returnable loans provided to other libraries, down -49.1 percent, and non-returnable loans received from other libraries, down -25.1 percent in 2008 from 1998.

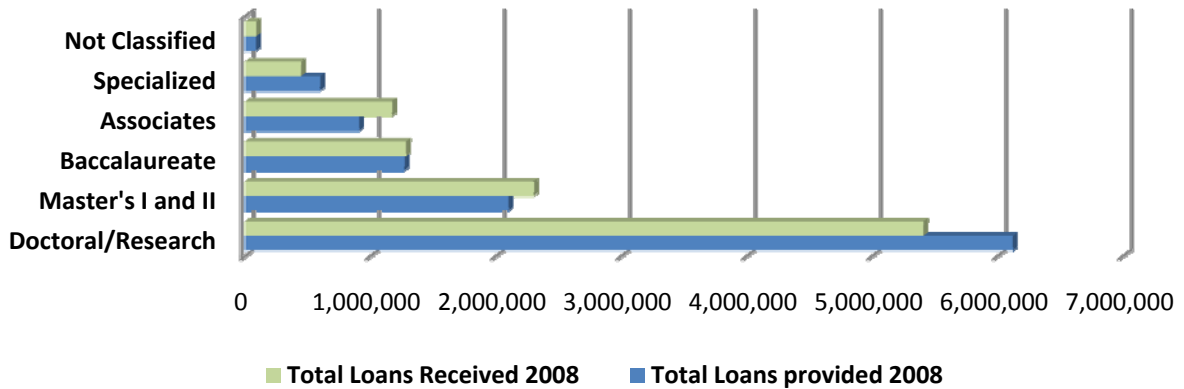
All degree granting levels reported declines in non-returnable loans to other libraries, ranging from -0.8 percent for Master's level to 63.6 percent for Less than 4 year institutions. The declines in non-returnable loans may reflect increased access to full text content from databases and e-journal subscriptions during this 10-year period (see Figures 5 and 6).



**Graph 1. Items Loaned and Loans Provided by Full-time Equivalent Enrollment**



**Graph 2. Items Loaned and Loans Provided by Carnegie Classification**



**Figure 3A. Total number and percent change interlibrary loan transactions and documents provided to other libraries, 1998 to 2008**

	Loans provided to other libraries								
	Total loans	Libraries reporting		Returnable change			Non-returnable change		
Institutional Characteristic	2008	2008	1998	1998-2008	2008	1998	1998-2008	2008	1998
<b>All postsecondary degree-granting institutions</b>	11,105,050	3,911	3,658	54.0%	6,726,266	4,367,107	-9.5%	4,378,784	4,840,867
<b>Public</b>	6,973,771	1,600	1,583	39.2%	4,056,775	2,915,081	-8.9%	2,916,996	3,202,330
<b>Private</b>	4,131,279	2,311	2,075	83.8%	2,669,491	1,452,026	-10.8%	1,461,788	1,638,537
<b>LEVEL</b>									
<b>Total 4-year and above</b>	9,497,339	2,416	2,217	49.7%	5,854,605	3,910,487	-8.2%	4,304,639	4,687,652
<b>Doctor's</b>	7,678,490	733	570	63.0%	4,127,762	2,532,000	-0.8%	3,550,728	3,579,991
<b>Master's</b>	1,836,472	936	944	23.3%	1,251,182	1,015,147	-30.5%	585,290	841,808
<b>Bachelor's</b>	644,282	747	703	30.9%	475,661	363,340	-36.6%	168,621	265,853
<b>Less than 4-year</b>	873,507	1,461	1,441	79.1%	817,793	456,620	-63.6%	55,714	153,215
<b>SIZE (FTE Enrollment)</b>									
<b>Less than 1,000</b>	481,109	1,494	1,397	21.6%	319,371	262,548	-49.1%	161,738	317,626
<b>1,000 to 2,999</b>	1,737,851	1,165	1,042	48.5%	1,187,932	799,932	-23.4%	549,919	717,985
<b>3,000 to 4,999</b>	1,005,460	484	377	127.1%	738,030	324,987	-8.7%	267,430	292,782
<b>5,000 to 9,999</b>	1,607,654	409	446	45.5%	1,012,222	695,581	-1.7%	595,432	605,497
<b>10,000 to 19,999</b>	2,367,686	241	273	36.2%	1,371,007	1,006,880	-12.8%	996,679	1,143,595
<b>20,000 or more</b>	3,905,290	118	123	64.2%	2,097,704	1,277,179	2.5%	1,807,586	1,763,382
<b>CARNEGIE CLASSIFICATION (2005)</b>									
<b>Doctoral/Research</b>	6,118,422	257	234	60.2%	3,268,873	2,040,928	1.1%	2,849,549	2,819,454
<b>Master's I and II</b>	2,097,675	590	521	34.8%	1,302,954	966,280	-8.9%	794,721	871,987
<b>Baccalaureate</b>	1,265,324	512	603	57.7%	957,997	607,298	-20.2%	307,327	385,239
<b>Associates</b>	906,849	1,362	1,217	83.7%	844,009	459,468	-58.0%	62,840	149,464
<b>Specialized</b>	592,229	620	548	13.0%	264,313	233,967	-41.0%	327,916	555,694
<b>Not Classified</b>	81,078	519	535	-15.3%	50,143	59,166	-47.6%	30,935	59,029

**Figure 3B. Total number and percent change interlibrary loans received from libraries and commercial services by year and institutional characteristics, 1998 to 2008**

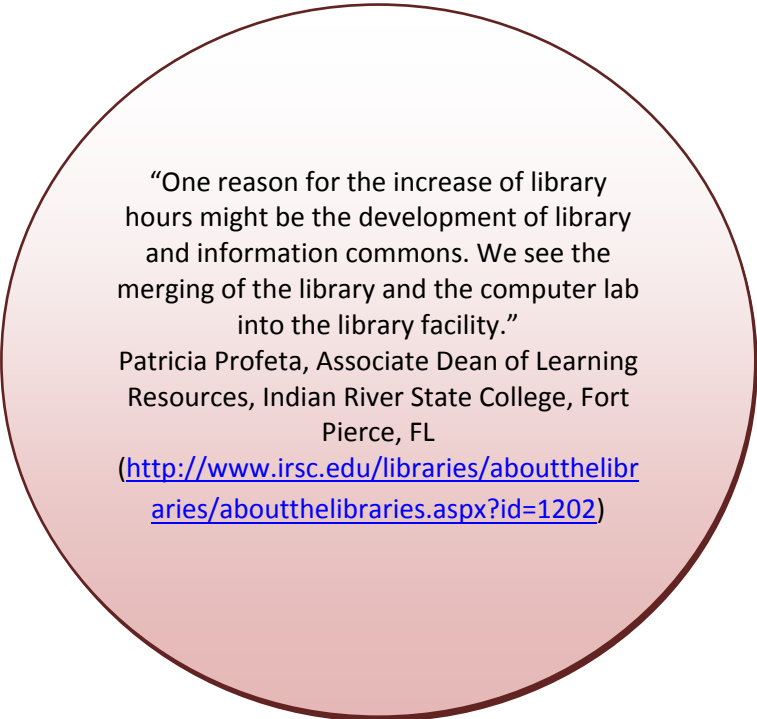
	Loans and documents received	Libraries reporting		Returnable change	Total returnable		Non-returnable change	Total non-returnable		Commercial services change	Total from commercial services	
Institutional Characteristic	Total Loans Received 2008	2008	1998	1998-2008	2008	1998	1998-2008	2008	1998	2000-2008	2008	2000
<b>All postsecondary degree-granting institutions</b>	9,771,767	3,911	3,658	62.9%	5,540,189	3,400,138	-1.2%	4,231,578	4,283,647	-23.9%	935,714	1,228,976
<b>Public</b>	5,828,782	1,600	1,583	47.8%	3,213,740	2,174,349	-1.4%	2,615,042	2,652,265	-19.7%	564,311	703,147
<b>Private</b>	3,942,985	2,311	2,075	89.8%	2,326,449	1,225,789	-0.9%	1,616,536	1,631,382	-29.4%	371,403	525,829
<b>LEVEL</b>												
<b>Total 4-year and above</b>	9,194,718	2,416	2,217	65.2%	4,968,237	3,006,940	4.0%	4,226,481	4,065,644	13.7%	935,273	822,895
<b>Doctor's</b>	6,602,893	733	570	87.8%	3,481,981	1,853,891	18.0%	3,120,912	2,645,803	-6.4%	352,577	376,668
<b>Master's</b>	1,828,466	936	944	26.4%	1,053,039	833,090	-25.5%	775,427	1,041,011	-69.2%	96,382	313,118
<b>Bachelor's</b>	683,764	747	703	35.4%	433,217	319,959	-33.9%	250,547	378,830	-91.3%	11,550	133,109
<b>Less than 4-year</b>	632,248	1,461	1,441	40.6%	552,653	393,198	-63.5%	79,595	218,003	18.3%	474,764	401,221
<b>SIZE (FTE Enrollment)</b>												
<b>Less than 1,000</b>	399,764	1,494	1,397	-16.0%	234,759	279,470	-25.1%	165,005	220,185	-60.8%	34,483	87,944
<b>1,000 to 2,999</b>	1,659,112	1,165	1,042	25.0%	1,026,154	820,849	-9.0%	632,958	695,328	-11.0%	421,495	473,715
<b>3,000 to 4,999</b>	918,349	484	377	55.6%	572,566	367,994	24.0%	345,783	278,798	130.6%	334,018	144,861
<b>5,000 to 9,999</b>	1,445,363	409	446	21.2%	806,349	665,461	16.7%	639,014	547,535	-91.0%	23,143	257,178
<b>10,000 to 19,999</b>	2,214,579	241	273	15.0%	1,198,077	1,042,192	30.1%	1,016,502	781,222	-59.4%	59,313	146,127
<b>20,000 or more</b>	3,134,600	118	123	53.7%	1,702,284	1,107,681	63.3%	1,432,316	877,070	-46.0%	63,262	117,253
<b>CARNEGIE CLASSIFICATION (2005)</b>												
<b>Doctoral/Research</b>	5,152,162	257	234	83.0%	2,786,615	1,522,553	16.5%	2,365,547	2,030,618	26.3%	253,302	200,551
<b>Master's I and II</b>	2,144,244	590	521	53.3%	1,096,441	714,993	-2.3%	1,047,803	1,071,962	-50.6%	153,940	311,669
<b>Baccalaureate</b>	1,273,711	512	603	52.8%	845,886	553,737	-25.1%	427,825	571,442	-96.9%	6,503	211,619
<b>Associates</b>	662,068	1,362	1,217	47.0%	573,137	389,894	-56.6%	88,931	204,959	29.6%	504,072	388,807
<b>Specialized</b>	423,556	620	548	17.7%	171,628	145,815	-17.8%	251,928	306,401	-81.1%	16,259	85,828
<b>Not Classified</b>	81,346	519	535	-43.3%	41,479	73,146	-59.4%	39,867	98,265	-94.8%	1,572	30,502

## Public Service Hours

Public service hours per typical week increased overall for academic libraries in 2008 from 1998 with data indicating shifts from the lowest ranges (Less than 20, 20-39) up to 40-59 hours. Libraries providing 40-59 public service hours increased 20.2 percent (116 institutions), followed by a 65 percent increase for libraries open 168 hours (24 hours, 7 days per week), and a 91.5 percent increase for libraries open 120-167 hours per typical week (Figures 4A-4B).

Changes reported by public and private institutions showed triple-digit percent changes in some hours per typical week ranges. However, it is important to put this change in context. For instance, public institutions reporting less than 20 public service hours per typical week was 6 in 2008 and 2 in 1998, about a 200 percent increase in the 10-year period.

It also is worth noting that some hours per typical week ranges are not relevant for some FTE enrollment categories (e.g., Less than 20 and 20-39 hours for institutions serving 3,000 to 4,999, 10,000 to 19,999 and 20,000 or more student FTE). No institutions serving 5,000 to 9,999 FTE reported 168 public service hours per typical week, and no institutions serving FTE ranges above 10,000 reported service hours under 60 per typical week or 120 hours and above in 2008 compared with 1998.



“One reason for the increase of library hours might be the development of library and information commons. We see the merging of the library and the computer lab into the library facility.”

Patricia Profeta, Associate Dean of Learning Resources, Indian River State College, Fort Pierce, FL

(<http://www.irsc.edu/libraries/aboutthelibraries/aboutthelibraries.aspx?id=1202>)

**Figure 4A. Total number and percent change of public service hours Less than 20 thru 60-79 per typical week by institutional characteristics, 1998 to 2008**

	Public service hours per typical week													
			Less than 20			20-39			40-59			60-79		
	Total libraries		Change	Libraries reporting		Change	Libraries reporting		Change	Libraries reporting		Change	Libraries reporting	
Institutional Characteristic	2008	1998	1998-2008	2008	1998	1998-2008	2008	1998	1998-2008	2008	1998	1998-2008	2008	1998
All postsecondary degree-granting institutions	3,911	3,658	-7.7%	36	39	-31.2%	64	93	20.2%	691	575	4.1%	1,613	1,550
<b>CONTROL</b>														
Public	1,600	1,583	200.0%	6	2	-55.6%	4	9	44.7%	259	179	-11.3%	761	858
Private	2,311	2,075	-18.9%	30	37	-28.6%	60	84	9.1%	432	396	23.1%	852	692
<b>LEVEL</b>														
Total 4-year and above	2,416	3,658	-41.7%	36	39	-19.4%	64	93	-62.4%	216	575	17.8%	766	650
Doctor's	733	570	-60.0%	2	5	-33.3%	6	9	-16.3%	36	43	33.7%	127	95
Master's	936	944	-20.0%	8	10	-50.0%	7	14	0.0%	67	67	2.8%	261	254
Bachelor's	747	703	-55.6%	4	9	23.1%	16	13	46.8%	113	77	25.6%	378	301
Less than 4 Years	1461	1,441	46.7%	22	15	-38.6%	35	57	22.4%	475	388	-5.9%	847	900
<b>SIZE (FTE Enrollment)</b>														
Less than 1,000	1,495	1,397	-11.4%	31	35	-35.7%	54	84	9.5%	473	432	19.1%	697	585
1,000 to 2,999	1,166	1,042	-33.3%	2	3	125.0%	9	4	81.8%	160	88	1.3%	463	457
3,000 to 4,999	485	377	N/A	0	0	N/A	0	0	30.4%	30	23	21.9%	223	182
5,000 to 9,999	410	446	-100.0%	0	1	-100.0%	0	2	-4.3%	22	23	-26.2%	149	202
10,000 to 19,999	242	273	N/A	1	0	N/A	1	0	-37.5%	5	8	-29.0%	71	100
20,000 or more	119	123	N/A	0	0	N/A	0	3	0.0%	1	1	-56.5%	10	23
<b>CARNEGIE CLASSIFICATION (2005)</b>														
Doctoral/Research	257	234	N/A	1	0	-100.0%	0	3	-50.0%	1	2	-14.3%	6	7
Master's I and II	590	521	0.0%	2	2	N/A	0	0	250.0%	7	2	-6.3%	74	79
Baccalaureate	512	603	100.0%	2	1	33.3%	4	3	-8.3%	11	12	-29.9%	124	177
Associates	1,362	1,217	37.5%	11	8	-16.7%	20	24	43.7%	362	252	3.2%	862	835
Specialized	620	548	-50.0%	3	6	28.6%	18	14	14.1%	105	92	22.4%	295	241
Not Classified	519	535	-22.7%	17	22	-55.1%	22	49	-7.0%	200	215	7.1%	226	211

Figure 4B. Percent change public service hours per typical week 80-99 thru 168 by institutional characteristics, 1998 to 2008

	Public service hours per typical week											
	80-99			100-119			120-167			168 (open 24x7)		
	Change	Libraries reporting		Change	Libraries reporting		Change	Libraries reporting		Change	Libraries reporting	
Institutional Characteristic	1998-2008	2008	1998	1998-2008	2008	1998	1998-2008	2008	1998	1998-2008	2008	1998
All postsecondary degree-granting institutions	-1.4%	970	984	18.3%	414	350	91.5%	90	47	65.0%	33	20
CONTROL												
Public	-5.5%	363	384	19.8%	145	121	96.0%	49	25	160.0%	13	5
Private	1.2%	607	600	17.5%	269	229	86.4%	41	22	33.3%	20	15
LEVEL												
Total 4-year and above	-3.9%	970	984	15.5%	414	350	121.6%	90	47	68.4%	33	20
Doctor's	19.6%	269	225	18.8%	209	176	187.5%	69	24	200.0%	15	5
Master's	-6.8%	451	484	25.3%	124	99	-22.2%	7	9	22.2%	11	9
Bachelor's	-22.1%	166	213	-7.5%	62	67	50.0%	6	4	20.0%	6	5
Less than 4-year	35.5%	84	62	137.5%	19	8	-20.0%	8	10	0.0%	1	1
SIZE (FTE enrollment)												
Less than 1,000	-9.5%	182	201	2.3%	45	44	25.0%	5	4	-41.7%	7	12
1,000 to 2,999	6.7%	382	358	5.8%	127	120	60.0%	16	10	200.0%	6	2
3,000 to 4,999	24.8%	166	133	90.0%	57	30	-33.3%	4	6	0.0%	2	2
5,000 to 9,999	-8.8%	156	171	53.5%	66	43	225.0%	13	4	N/A	3	
10,000 to 19,999	-33.7%	61	92	27.6%	74	58	69.2%	22	13	200.0%	6	2
20,000 or more	-20.7%	23	29	-18.2%	45	55	200.0%	30	10	350.0%	9	2
CARNEGIE CLASSIFICATION (2005)												
Doctoral/Research	-5.3%	72	76	-10.5%	111	124	184.2%	54	19	300.0%	12	3
Master's I and II	0.3%	365	364	90.8%	124	65	83.3%	11	6	133.3%	7	3
Baccalaureate	-17.5%	255	309	11.8%	104	93	20.0%	6	5	100.0%	6	3
Associates	16.5%	92	79	28.6%	9	7	-50.0%	5	10	-50.0%	1	2
Specialized	3.9%	134	129	-1.9%	52	53	40.0%	7	5	-25.0%	6	8
Not Classified	33.3%	36	27	62.5%	13	8	100.0%	4	2	0.0%	1	1

## Volumes Held and Added

Results for volumes held and volumes added are presented by year, 1998 to 2008 (Figures 5A and 5B), institution FTE enrollment ranges and Carnegie Classification for 2008 (Figures 6A and 6B). Total volumes held includes books, serial backfiles, other paper materials including government documents, E-books, microform units, current serial subscriptions (all formats), audiovisual material, and electronic reference sources and aggregation services.

### *Volumes Held*

Overall collection growth (volumes held) in 2008 from 1998 was as follows:

- 20.2 percent increase for books, serial backfiles and other paper materials
- 898.3 percent increase for E-books (2002-2008)
- 9.2 percent increase for microform units
- 244.6 percent increase for current serial subscriptions
- 19.6 percent increase for audiovisual materials
- 92.6 percent increase for electronic reference sources and aggregation services (2002-2008)



Perhaps not surprising is that in 2008 Doctoral/Research libraries represent 6.6 percent of academic libraries reporting and hold 58.7 percent of print books and serials, 62 percent of E-Books, 44.6 percent of current serial subscriptions and 76.7 percent of audio visual materials. Masters I/II exceed Doctoral/Research in only one category, holding 30.6 percent of electronic reference sources and aggregation services compared with 21.8 percent of Doctoral/Research.

## *Volumes Added*

Volumes added each year, 1998 to 2008 (Figures 5B, 6B), indicate more stable year-to-year growth rates than did volumes held (Figures 5A, 6A).

- The number of paper materials added hovered around 24.5 million each year except 2006, when declines of -2.23 million (about 12.8 percent) were reported from 2004, then rising back to 24.16 million in 2008.
- The number of E-books added rose most significantly in 2004 from 2002, about 9.5 million titles (66.5 percent), and 2.09 million in 2006 (12.8 percent), and 3.9 million in 2008 (19.4 percent).
- Microform units show steady declines since 1998, with the most marked decline in 2008 from 2006 when academic libraries added 111.4 million fewer units (-61.8 percent).
- Current serial subscriptions showed steady increases during the 1998 to 2008 period, with academic libraries reporting more than 9-fold increases in subscriptions added in 2008 from 1998 (3.5 million from 338,000, respectively). The most significant biennial change occurred in 2004 when academic libraries reported 112 percent increase in current serial subscriptions added from 2002.
- Audio visual materials added fluctuate throughout the 1998 to 2008 period, with volumes added per FTE hovering at 0.2 to 0.4 each year reported.
- Electronic reference sources and aggregation services added show considerable biennial variation. This change may reflect availability of new titles from publishers, as well as a shift away from aggregated services to title purchases of E-books and electronic serials.



**Figure 5A. Total items held and held per full-time equivalent (FTE) by type and year, 1998 to 2008**

		Books, serial backfiles, and other paper materials including government documents		E-Books		Microform units		Current Serial Subscriptions		Audiovisual materials		Electronic reference sources and aggregation services	
Year	Libraries reporting	Number in thousands	Per FTE enrollment	Number in thousands	Per FTE enrollment	Number in thousands	Per FTE enrollment	Number in thousands	Per FTE enrollment	Number in thousands	Per FTE enrollment	Number in thousands	Per FTE enrollment
2008	3,911	1,056,418	72.0	103,011	7.0	1,159,845	79.1	25,995	1.8	110,357	7.5	3,676	0.3
2006	3,698	1,018,878	73.7	64,682	4.7	1,169,444	84.5	16,597	1.2	99,438	7.2	3,933	0.3
2004	3,653	982,590	78.6	32,775	2.6	1,173,287	93.8	12,764	1.0	91,894	7.3	1,909	0.2
2002	3,717	954,182	86.3	10,318	0.9	1,143,728	103.5	9,856	0.9	88,199	8.0	*	*
2000	3,527	913,547	64.3	*	*	1,111,497	78.3	7,500	0.5	87,558	6.2	*	*
1998	3,658	878,906	62.2	*	*	1,062,082	75.1	7,544	0.5	92,306	6.5	*	*

\*Data element not collected during this survey period.

**Figure 5B. Total items added and added per full-time equivalent (FTE) by type and year, 1998 to 2008**

		Books, serial backfiles, and other paper materials including government documents		E-Books		Microform units		Current serial subscriptions		Audiovisual materials		Electronic reference sources and aggregation services	
Year	Libraries reporting	Number in thousands	Per FTE enrollment	Number in thousands	Per FTE enrollment	Number in thousands	Per FTE enrollment	Number in thousands	Per FTE enrollment	Number in thousands	Per FTE enrollment	Number in thousands	Per FTE enrollment
2008	3,911	24,165	1.6	20,256	1.4	7,086	0.5	3,588	0.2	3,427	0.2	662	0.0
2006	3,698	22,381	1.6	16,332	1.2	18,555	1.3	2,180	0.2	5,141	0.4	1,638	0.1
2004	3,653	24,615	2.0	14,240	1.1	22,059	1.8	1,364	0.1	3,966	0.3	476	0.0
2002	3,717	24,576	2.2	4,776	0.4	24,443	2.2	642	0.1	3,610	0.3	*	*
2000	3,527	24,436	1.7	*	*	34,564	2.4	573	0.0	2,831	0.2	*	*
1998	3,658	24,551	1.7	*	*	36,045	2.6	338	0.0	3,181	0.2	*	*

\*Data element not collected during this survey period.

**Figure 6A. Total items held and held per full-time equivalent (FTE) by type, institutional characteristic and Carnegie classification, 2008**

		Books, serial backfiles, and other paper materials including government documents		E-Books		Microform units		Current serial subscriptions		Audiovisual materials		Electronic reference sources and aggregation services	
Institutional Characteristic	Libraries reporting	Number in thous- ands	Per FTE enroll- ment	Number in thous- ands	Per FTE enroll- ment	Number in thous- ands	Per FTE enroll- ment	Number in thous- ands	Per FTE enroll- ment	Number in thous- ands	Per FTE enroll- ment	Number in thous- ands	Per FTE enroll- ment
<b>SIZE (FTE Enrollment)</b>													
<b>Less than 1,000</b>	1,494	60,935	91.9	10,352	15.6	29,454	44.4	2,328	3.5	4,023	6.1	929	1.4
<b>1,000 to 2,999</b>	1,165	139,940	65.3	23,279	10.9	106,301	49.6	5,336	2.5	9,375	4.4	795	0.4
<b>3,000 to 4,999</b>	484	75,797	40.5	9,493	5.1	84,967	45.4	2,434	1.3	4,838	2.6	280	0.1
<b>5,000 to 9,999</b>	409	157,025	53.9	12,908	4.4	208,040	71.5	4,863	1.7	8,221	2.8	504	0.2
<b>10,000 to 19,999</b>	241	250,229	75.4	20,138	6.1	290,996	87.7	5,549	1.7	26,122	7.9	718	0.2
<b>20,000 or more</b>	118	372,492	99.1	26,841	7.1	440,088	117.1	5,485	1.5	57,777	15.4	452	0.1
<b>CARNEGIE CLASSIFICATION (2005)</b>													
<b>Doctoral/Research</b>	257	618,399	138.5	714,152	160.0	11,037	2.5	45,694	10.2	83,633	18.7	798	0.2
<b>Master's I and II</b>	590	205,552	62.3	321,275	97.4	6,767	2.1	16,962	5.1	9,588	2.9	1,118	0.3
<b>Baccalaureate</b>	512	109,839	124.3	63,375	71.7	3,483	3.9	15,425	17.5	5,794	6.6	673	0.8
<b>Associates</b>	1,362	62,212	13.7	27,398	6.0	2,212	0.5	17,482	3.8	5,131	1.1	353	0.1
<b>Specialized</b>	620	49,460	51.4	26,856	27.9	1,501	1.6	3,763	3.9	5,598	5.8	256	0.3
<b>Not Classified</b>	519	7,670	20.5	5,922	15.8	550	1.5	3,124	8.3	302	0.8	459	1.2

**Figure 6B. Total items added and added per full-time equivalent (FTE) by institutional characteristic and Carnegie classification, 2008**

		Books, serial backfiles, and other paper materials including government documents		E-Books		Microform units		Current serial subscriptions		Audiovisual materials		Electronic reference sources and aggregation services	
Institutional Characteristic	Libraries reporting	Number in thous- ands	Per FTE enroll- ment	Number in thous- ands	Per FTE enroll- ment	Number in thous- ands	Per FTE enroll- ment	Number in thous- ands	Per FTE enroll- ment	Number in thous- ands	Per FTE enroll- ment	Number in thous- ands	Per FTE enroll- ment
<b>SIZE (FTE Enrollment)</b>													
Less than 1,000	1,494	1,893	2.9	1,609	2.4	309	0.5	233	0.4	190	28.7%	206	0.3
1,000 to 2,999	1,165	3,521	1.6	3,935	1.8	827	0.4	767	0.4	447	20.8%	159	0.1
3,000 to 4,999	484	1,770	0.9	1,719	0.9	445	0.2	327	0.2	233	12.5%	46	0.0
5,000 to 9,999	409	3,156	1.1	2,228	0.8	824	0.3	589	0.2	359	12.3%	64	0.0
10,000 to 19,999	241	5,340	1.6	4,664	1.4	1,487	0.4	732	0.2	623	18.8%	153	0.0
20,000 or more	118	8,484	2.3	6,102	1.6	3,193	0.8	941	0.3	1,575	41.9%	32	0.0
<b>CARNEGIE CLASSIFICATION (2005)</b>													
Doctoral/ Research	257	13,310	3.0	9,402	2.1	4,242	1.0	1,765	0.4	144	0.0	2,137	0.5
Master's I and II	590	3,962	1.2	3,643	1.1	1,551	0.5	737	0.2	150	0.0	378	0.1
Baccalaureate	512	2,361	2.7	2,809	3.2	632	0.7	547	0.6	143	0.2	257	0.3
Associates	1,362	2,532	0.6	3,241	0.7	262	0.1	287	0.1	53	0.0	369	0.1
Specialized	620	1,412	1.5	533	0.6	271	0.3	142	0.1	51	0.1	236	0.2
Not Classified	519	482	1.3	466	1.2	60	0.2	78	0.2	120	0.3	40	0.1

## Library Staffing

Academic library staffing percent changes from 1998 to 2008 by institutional characteristic, size of enrollment, and Carnegie Classification are presented in Figures 7A-7C. Overall, total library staff reported decreased slightly (-1.6 percent) in 2008 from 1998 however some staff categories saw significant change during this period.

- Librarians increased 10.1 percent
- Other professional staff increased 57.5 percent
- Other paid staff decreased -5.8 percent
- Student assistants decreased -11.9 percent


Public academic libraries reported an overall decline in total FTE staff (-2.8 percent) in 2008 from 1998, with increases in total librarians (8.2 percent) and other professional staff (61.8 percent), and decreases in other paid staff (-7.1 percent) and student assistants (-13.7 percent).

Private academic libraries reported little change (0.2 percent) in total FTE staff in 2008 from 1998 however librarians increased (12.9 percent), as did other professional staff (51.9 percent). Other paid staff and student assistants decreased during this 10-year period (-3.3 percent and -9.5 percent, respectively).

Doctoral degree granting institutions saw growth in overall staff (4.8 percent), with increases reported for librarians (15.9 percent) and other professional staff (74.7 percent) in 2008 from 1998. Decreases were reported for other paid staff (-3.1 percent) and student assistants (-4.8 percent) during this 10-year period.

Master's, Bachelor's and Less than 4-year degree granting institutions reported overall declines in total FTE staff in 2008 from 1998.

- Master's librarians decreased (-6.0 percent), other professional staff increased (16.1 percent), other paid staff decreased (-17.8 percent), as did student assistants (-21.2 percent).
- Bachelor's librarians increased (6.4 percent), as did professional staff (53.7 percent); other paid staff decreased (-5.6 percent) as did student assistants (-15.8 percent).



“With some of the new roles that librarians have undertaken since 1998, it is no surprise to see that this number has increased while staff and assistants numbers declined. Increased responsibility for fund development, curriculum design, and service delivery methods are among those changes.”

Patricia Profeta, Associate Dean of Learning Resources, Indian River State College, Fort Pierce, FL

- Less than 4-year librarians increased (10.1 percent), as did other professional staff (40.2 percent), while other paid staff and student assistants decreased (-5.7 percent and -23.0 percent, respectively) during this 10-year period.

Total FTE staff declined for all enrollment ranges except 3,000 to 4,999 (22.4 percent) and 20,000 or more (2.0 percent) in 2008 from 1998. Total librarians and other professional staff increased except for a slight decline reported for librarians at institutions serving 10,000 to 19,999 FTE (-0.8 percent). Other paid staff and student assistants declined in all enrollment ranges except 3,000 to 4,999 FTE (increasing 18.8 percent and 14.0 percent, respectively).

**Figure 7A. Number and percent change of full-time equivalent (FTE) staff at academic libraries by institutional characteristic, 1998 to 2008**

Institutional Characteristic	Total number of libraries	Total FTE		Percent change
	2008	2008	1998	1998-2008
<b>All postsecondary degree-granting institutions</b>	3,911	95,175	96,709	-1.6%
<b>CONTROL</b>				
Public	1,600	56,687	58,314	-2.8%
Private	2,311	38,488	38,395	0.2%
<b>LEVEL</b>				
Total 4-year and above	2,416	81,391	82,524	-1.4%
Doctor's	733	57,088	54,478	4.8%
Master's	936	17,282	20,547	-15.9%
Bachelor's	747	7,021	7,499	-6.4%
Less than 4-year	1,461	13,220	14,185	-6.8%
<b>SIZE (FTE Enrollment)</b>				
Less than 1,000	1,494	6,934	7,605	-8.8%
1,000 to 2,999	1,165	15,232	15,623	-2.5%
3,000 to 4,999	484	9,777	7,990	22.4%
5,000 to 9,999	409	14,981	15,730	-4.8%
10,000 to 19,999	241	20,723	22,951	-9.7%
20,000 or more	118	27,528	26,809	2.7%
<b>CARNEGIE CLASSIFICATION (2005)</b>				
Doctoral/Research	257	44,142	43,837	0.7%
Master's I and II	590	19,399	19,804	-2.0%
Baccalaureate	512	9,262	10,890	-14.9%
Associates	1,362	13,894	13,540	2.6%
Specialized	620	5,842	6,324	-7.6%
Not Classified	519	1,939	2,315	-16.2%

**Figure 7B. Number and percent change of full-time equivalent (FTE) librarians and other professional staff at academic libraries by institutional characteristics, 1998 to 2008**

	Librarians and other professionals								
	Total			Librarians			Other professional staff		
Institutional Characteristic	Total FTE		Change	Total FTE		Change	Total FTE		Change
	2008	1998	1998-2008	2008	1998	1998-2008	2008	1998	1998-2008
All postsecondary degree-granting institutions	35,152	30,041	17.0%	27,333	24,815	10.1%	7,819	4,966	57.5%
<b>CONTROL</b>									
Public	20,312	17,495	16.1%	15,792	14,594	8.2%	4,520	2,794	61.8%
Private	14,840	12,546	18.3%	11,541	10,222	12.9%	3,299	2,172	51.9%
<b>LEVEL</b>									
Total 4-year and above	34,918	30,041	16.2%	22,130	24,815	9.3%	7,788	4,966	56.8%
Doctor's	20,525	16,282	26.1%	15,455	13,330	15.9%	5,070	2,903	74.7%
Master's	6,318	6,570	-3.8%	5,247	5,579	-6.0%	1,071	923	16.1%
Bachelor's	2,708	2,431	11.4%	2,155	2,025	6.4%	553	360	53.7%
Less than 4-year	5,366	4,758	12.8%	4,273	3,881	10.1%	1,093	780	40.2%
<b>SIZE (FTE Enrollment)</b>									
Less than 1,000	3,082	2,899	6.3%	2,385	2,315	3.0%	697	483	44.3%
1,000 to 2,999	5,740	5,077	13.1%	4,628	4,237	9.2%	1,112	779	42.7%
3,000 to 4,999	3,769	2,711	39.0%	3,020	2,204	37.0%	749	481	55.7%
5,000 to 9,999	5,522	5,031	9.7%	4,499	4,208	6.9%	1,023	792	29.1%
10,000 to 19,999	7,212	6,663	8.2%	5,574	5,621	-0.8%	1,638	1,015	61.4%
20,000 or more	9,827	7,660	28.3%	7,226	6,229	16.0%	2,601	1,416	83.7%
<b>CARNEGIE CLASSIFICATION (2005)</b>									
Doctoral/Research	15,711	12,868	22.1%	11,569	10,470	10.5%	4,143	2,371	74.7%
Master's I and II	6,935	6,116	13.4%	5,744	5,253	9.4%	1,191	831	43.3%
Baccalaureate	3,211	3,292	-2.5%	2,618	2,742	-4.5%	593	505	17.4%
Associates	5,509	4,579	20.3%	4,445	3,759	18.2%	1,064	746	42.7%
Specialized	2,480	2,320	6.9%	1,981	1,900	4.3%	499	386	29.3%
Not Classified	1,017	867	17.4%	764	692	10.4%	253	127	99.5%

**Figure 7C. Number and percent change of full-time equivalent (FTE) other paid staff and student assistants at academic libraries by institutional characteristics, 1998 to 2008**

	Other paid staff			Student assistants		
Institutional Characteristic	Total FTE		Change	Total FTE		Change
	2008	1998	1998-2008	2008	1998	1998-2008
<b>All postsecondary degree-granting institutions</b>	35,031	37,174	-5.8%	25,007	28,373	-11.9%
<b>CONTROL</b>						
Public	22,516	24,238	-7.1%	13,858	16,056	-13.7%
Private	12,514	12,936	-3.3%	11,148	12,317	-9.5%
<b>LEVEL</b>						
Total 4-year and above	34,842	37,174	-6.3%	24,866	28,373	-12.4%
Doctor's	22,504	23,236	-3.1%	14,058	14,771	-4.8%
Master's	5,515	6,706	-17.8%	5,464	6,932	-21.2%
Bachelor's	1,862	1,972	-5.6%	2,451	2,911	-15.8%
Less than 4-year	4,960	5,260	-5.7%	2,893	3,758	-23.0%
<b>SIZE (FTE Enrollment)</b>						
Less than 1,000	1,524	1,724	-11.6%	2,328	2,643	-11.9%
1,000 to 2,999	4,636	4,898	-5.4%	4,871	5,291	-7.9%
3,000 to 4,999	3,314	2,790	18.8%	2,694	2,362	14.0%
5,000 to 9,999	5,638	6,137	-8.1%	3,820	4,404	-13.2%
10,000 to 19,999	8,664	9,981	-13.2%	4,847	6,217	-22.0%
20,000 or more	11,255	11,644	-3.3%	6,446	7,458	-13.6%
<b>CARNEGIE CLASSIFICATION (2005)</b>						
Doctoral/Research	18,155	19,156	-5.2%	10,275	11,732	-12.4%
Master's I and II	6,694	7,188	-6.9%	5,769	6,338	-9.0%
Baccalaureate	2,649	2,955	-10.4%	3,403	4,398	-22.6%
Associates	5,231	5,173	1.1%	3,153	3,422	-7.8%
Specialized	1,752	2,208	-20.6%	1,624	1,629	-0.3%
Not Classified	398	494	-19.3%	523	854	-38.8%

## Library Expenditures

Academic library expenditures by institutional characteristic, FTE enrollment and Carnegie Classification are presented in Figures 8A - 8C. Total expenditures, salaries and wages, and salaries and wages as a percentage of total expenditures appear in Figure 8A; information resources appear in Figure 8B; and total operating expenditures, computer hardware and software expenditures, bibliographic utilities, networks, consortia expenditures, and other operating expenditures appear in Figure 8C.

### *Total Expenditures*

Total expenditures for academic libraries grew 48.5 percent in 2008 from 1998, with salaries and wages rising 30.6 percent and information resources 134.9 percent (Figure 8A). However, salaries and wages as a percentage of all expenditures declined -5.9 percent during the 10-year period. This pattern was evident in all degree granting institutions except Doctor's, which reported a 7.7 percent increase in salaries and wages as a percentage of total expenditures in 2008 from 1998. In fact, Doctor's institutions reported the most significant growth in total expenditures (62.9 percent), salaries and wages (99.2 percent), and information resources (499.8 percent) in 2008 from 1998.

Master's degree granting institutions reported growth, with total expenditures increasing 15.4 percent, salaries and wages increasing 2.5 percent but dropping as a percent of total expenditure by -5.7 percent, and information resources expenditures rising 68.6 percent in 2008 from 1998.

Bachelor's degree granting institutions reported increases in total expenditures of 28.5 percent, salaries and wages 18.5 percent but dropping as a percent of total expenditures by -3.4 percent, and information resources increases of 68.6 percent in 2008 from 1998.

Less than 4-year degree granting institutions reported similar changes in library expenditures, with total expenditures increasing 23.9 percent, salaries and wages declining -0.6 percent but decreasing as a percent of total expenditures by -11.3 percent, and information resources rising 51.3 percent in 2008 from 1998.

When considered by FTE enrollment total expenditures increased in 2008 from 1998 for all enrollment ranges, rising between 23.1 percent and 65.4 percent, respectively. Salaries and wages increased from between 10.9 percent and 45.7 percent, respectively. And, Information resources expenditures increased from between 73.3 percent and 181.6 percent, respectively. However, salaries and wages as a percent of total expenditures decreased for all enrollment ranges in 2008 from 1998, from between -1.5 percent to -11.3 percent, respectively.

### *Information Resources Expenditures*

As a percent of total expenditures, information resources consumed a larger proportion in 2008 (56.6 percent) than did salaries and wages (42.7 percent) as compared with 1998 when information resources represented 35.8 percent of total expenditures compared with 48.6 percent of salaries and wages.



As a percentage of total expenditures, 2008 information resources expenditures by degree-granting level were as follows:

- Doctoral 62.6 percent
- Master's 50.0 percent
- Bachelor's 47.5 percent
- Less than 4-year 27.1 percent

Also interesting was the dramatic increase when considered by Carnegie Classification:

- Doctoral/Research 63.5 percent in 2008 from 38.4 percent in 1998
- Master's I and II 52.4 percent in 2008 from 36.0 percent in 1998
- Baccalaureate 54.1 percent in 2008 from 37.7 percent in 1998

Associates degree libraries spent only slightly more for information resources as a proportion of total expenditures in 2008 (28.0 percent) as in 1998 (22.4%).

### *Operating Expenditures*

Operating expenditures are comprised of computer hardware and software, bibliographic utilities, networks and consortia, and other operating expenditures (Figure 8C). Total operating expenditures are a subset of total expenditures (see Figure 8A) and increased 21.1 percent in 2008 from 1998. Declining during this period were expenditures for computer hardware and software (-2.9 percent), while expenditures for bibliographic utilities, networks, consortia increased (up 27.3 percent) as did other operating expenditures (30.7 percent).

Private academic libraries reported decreases in expenditures for computer hardware and software (-8.9 percent) compared with public academic libraries that reported a slight (1.0 percent) increase, and smaller increases in expenditures for bibliographic utilities, networks and consortia (14.9 percent) compared with public academic libraries (38.6 percent) in 2008 from 1998. Other operating expenditures reported by private academic libraries increased 33.2 percent and 28.6 percent for public academic libraries during the 10-year period.

- Doctor's degree granting institutions saw the largest increases in operating expenditures compared with other institutions, with total operating expenditures increasing 34.8 percent, computer hardware and software expenditures increasing 12.4 percent, bibliographic utilities, networks and consortia expenditures increasing 45.1 percent and other operating expenditures increasing 41.5 percent in 2008 from 1998.

Figure 8A. Total expenditures, total salary and wages expenditures and as a percent of total expenditures by institutional characteristics, 1998 and 2008											
	Total libraries		Total expenditures		Change	Total salaries and wages expenditures		Change	Salaries and wages as a percentage of total expenditures		Change
Institutional Characteristic	2008	1998	2008	1998	1998-2008	2008	1998	1998-2008	2008	1998	1998-2008
All postsecondary degree-granting institutions	3,911	3,658	\$6,820,872,550	\$4,592,657,325	48.5%	\$2,914,283,234	\$2,231,927,479	30.6%	42.7%	48.6%	-5.9%
CONTROL											
Public	1,600	1,583	\$4,050,466,422	\$2,780,103,432	45.7%	\$1,777,655,263	\$1,421,804,733	25.0%	43.9%	51.1%	-7.3%
Private	2,311	2,075	\$2,770,406,128	\$1,812,553,893	52.8%	\$1,136,627,971	\$810,122,746	40.3%	41.0%	44.7%	-3.7%
LEVEL											
Total 4-year and above	2,416	3,658	\$6,125,726,389	\$4,072,055,198	50.4%	\$2,823,136,002	\$1,571,369,108	79.7%	67.3%	38.6%	28.7%
Doctor's	733	570	\$4,764,200,455	\$2,923,751,351	62.9%	\$2,005,465,454	\$1,006,615,477	99.2%	42.1%	34.4%	7.7%
Master's	936	944	\$1,001,779,737	\$868,309,659	15.4%	\$452,322,120	\$441,446,268	2.5%	45.2%	50.8%	-5.7%
Bachelor's	747	703	\$359,746,197	\$279,994,188	28.5%	\$146,122,700	\$123,307,363	18.5%	40.6%	44.0%	-3.4%
Less than 4-year	1,461	1,441	\$645,100,815	\$520,602,127	23.9%	\$294,343,180	\$296,150,752	-0.6%	45.6%	56.9%	-11.3%
SIZE (FTE Enrollment)											
Less than 1,000	1,494	1,398	\$334,505,789	\$271,823,064	23.1%	\$112,702,391	\$95,657,838	17.8%	33.7%	35.2%	-1.5%
1,000 to 2,999	1,165	1,043	\$868,786,888	\$645,747,228	34.5%	\$330,177,914	\$297,667,119	10.9%	38.0%	46.1%	-8.1%
3,000 to 4,999	484	378	\$565,139,380	\$341,730,290	65.4%	\$225,558,756	\$175,116,469	28.8%	39.9%	51.2%	-11.3%
5,000 to 9,999	409	447	\$1,018,852,943	\$719,844,506	41.5%	\$458,084,774	\$379,131,644	20.8%	45.0%	52.7%	-7.7%
10,000 to 19,999	241	274	\$1,649,713,025	\$1,172,259,317	40.7%	\$760,969,033	\$579,636,210	31.3%	46.1%	49.4%	-3.3%
20,000 or more	118	124	\$2,383,874,525	\$1,441,252,920	65.4%	\$1,026,790,366	\$704,718,199	45.7%	43.1%	48.9%	-5.8%
CARNEGIE CLASSIFICATION (2005)											
Doctoral/Research	257	234	\$3,887,123,142	\$2,421,563,247	60.5%	\$1,645,847,889	\$1,129,260,645	45.7%	42.3%	46.6%	-4.3%
Master's I and II	590	521	\$1,211,205,503	\$868,946,617	39.4%	\$580,404,072	\$453,665,983	27.9%	47.9%	52.2%	-4.3%
Baccalaureate	512	603	\$526,655,099	\$415,075,215	26.9%	\$221,012,493	\$195,378,003	13.1%	42.0%	47.1%	-5.1%
Associates	1,362	1,217	\$679,520,212	\$505,713,015	34.4%	\$311,894,515	\$295,329,120	5.6%	45.9%	58.4%	-12.5%
Specialized	620	234	\$387,881,749	\$299,411,356	29.5%	\$111,391,796	\$132,068,012	-15.7%	28.7%	44.1%	-15.4%
Not Classified	519	535	\$101,217,392	\$81,947,875	23.5%	\$31,719,660	\$26,225,716	20.9%	31.3%	32.0%	-0.7%

Figure 8B. Information resources expenditures and percent change by institutional characteristic, 1998 to 2008			
	Information resources		
	Total Expenditures		Change
Institutional Characteristic	2008	1998	1998-2008
All postsecondary degree-granting institutions	\$3,860,802,631	\$1,643,914,009	134.9%
CONTROL			
Public	\$2,272,305,600	\$967,914,536	134.8%
Private	\$1,588,497,031	\$675,999,473	135.0%
LEVEL			
Total 4-year and above	\$3,652,791,569	\$853,639,669	327.9%
Doctor's	\$2,981,506,016	\$497,079,655	499.8%
Master's	\$500,528,447	\$255,304,441	96.1%
Bachelor's	\$170,757,106	\$101,255,573	68.6%
Less than 4-year	\$174,625,968	\$115,412,642	51.3%
SIZE (FTE Enrollment)			
Less than 1,000	\$151,610,711	\$87,507,513	73.3%
1,000 to 2,999	\$443,927,652	\$235,675,560	88.4%
3,000 to 4,999	\$264,985,033	\$120,193,382	120.5%
5,000 to 9,999	\$552,750,377	\$246,602,937	124.1%
10,000 to 19,999	\$978,508,899	\$432,188,995	126.4%
20,000 or more	\$1,469,019,959	\$521,745,622	181.6%
CARNEGIE CLASSIFICATION (2005)			
Doctoral/Research	\$2,467,300,833	\$930,529,647	165.2%
Master's I and II	\$634,792,335	\$312,512,241	103.1%
Baccalaureate	\$284,918,592	\$156,293,283	82.3%
Associates	\$190,107,117	\$113,461,702	67.6%
Specialized	\$224,010,198	\$104,516,620	114.3%
Not Classified	\$48,652,073	\$26,600,516	82.9%

**Figure 8C. Total operating expenditures, computer hardware and software, bibliographic utilities, networks, consortia, other operating expenditures and percent change by institutional characteristic, 1998 to 2008**

	Total operating expenditures			Computer hardware and software			Bibliographic utilities, networks, consortia			Other operating expenditures		
	Total		Change	Total		Change	Total		Change	Total		Change
Institutional Characteristic	2008	1998	1998-2008	2008	1998	1998-2008	2008	1998	1998-2008	2008	1998	1998-2008
<b>All postsecondary degree-granting institutions</b>	\$740,083,763	\$610,927,792	21.1%	\$159,590,373	\$164,378,701	-2.9%	\$114,113,133	\$89,617,521	27.3%	\$466,380,257	\$356,931,570	30.7%
<b>CONTROL</b>												
<b>Public</b>	\$420,722,929	\$344,817,083	22.0%	\$100,490,663	\$99,484,304	1.0%	\$65,214,000	\$47,043,689	38.6%	\$255,018,266	\$198,289,090	28.6%
<b>Private</b>	\$319,360,834	\$266,110,709	20.0%	\$59,099,710	\$64,894,397	-8.9%	\$48,899,133	\$42,573,832	14.9%	\$211,361,991	\$158,642,480	33.2%
<b>LEVEL</b>												
<b>Total 4-year and above</b>	\$693,130,802	\$555,346,903	24.8%	\$145,596,896	\$142,382,724	1.7%	\$102,639,954	\$79,696,323	28.8%	\$444,893,952	\$332,448,255	33.8%
<b>Doctor's</b>	\$570,097,871	\$423,019,008	34.8%	\$116,914,799	\$103,980,706	12.4%	\$69,415,689	\$47,826,110	45.1%	\$383,767,383	\$271,212,192	41.5%
<b>Master's</b>	\$89,545,767	\$99,527,174	-10.0%	\$20,968,112	\$29,894,718	-29.9%	\$24,370,404	\$23,727,359	2.7%	\$44,207,251	\$45,905,097	-3.7%
<b>Bachelor's</b>	\$33,487,164	\$32,800,721	2.1%	\$7,713,985	\$8,507,300	-17.5%	\$8,853,861	\$8,142,854	8.7%	\$16,919,318	\$15,330,966	10.4%
<b>Less than 4-year</b>	\$44,203,466	\$55,580,889	-20.5%	\$13,214,109	\$21,156,391	-37.5%	\$10,942,891	\$9,775,666	11.9%	\$20,046,466	\$24,648,832	-18.7%
<b>SIZE (FTE Enrollment)</b>												
<b>Less than 1,000</b>	\$26,623,761	\$34,789,995	-23.5%	\$7,747,127	\$13,244,432	-41.5%	\$7,823,189	\$7,095,373	10.3%	\$11,053,445	\$14,450,190	-23.5%
<b>1,000 to 2,999</b>	\$80,713,398	\$77,892,416	3.6%	\$20,031,743	\$24,637,546	-18.7%	\$21,247,564	\$17,856,840	19.0%	\$39,434,091	\$35,398,030	11.4%
<b>3,000 to 4,999</b>	\$51,413,645	\$38,050,253	35.1%	\$10,853,716	\$10,812,628	0.4%	\$13,179,921	\$9,275,441	42.1%	\$27,380,008	\$17,962,184	52.4%
<b>5,000 to 9,999</b>	\$98,472,280	\$86,936,340	13.3%	\$22,051,931	\$23,382,303	-5.7%	\$17,835,558	\$16,123,742	10.6%	\$58,584,791	\$47,430,295	23.5%
<b>10,000 to 19,999</b>	\$194,699,575	\$159,226,759	22.3%	\$32,880,649	\$39,463,509	-16.7%	\$23,400,484	\$20,996,454	11.4%	\$138,418,442	\$98,766,796	40.1%
<b>20,000 or more</b>	\$288,161,104	\$214,032,029	34.6%	\$66,025,207	\$52,838,283	25.0%	\$30,626,417	\$18,269,671	67.6%	\$191,509,480	\$142,924,075	34.0%
<b>CARNEGIE CLASSIFICATION (2005)</b>												
<b>Doctoral/Research</b>	\$3,887,123,142	\$361,334,394	33.9%	\$95,533,291	\$83,138,227	14.9%	\$52,156,622	\$37,969,818	37.4%	\$483,894,117	\$483,894,117	33.9%
<b>Master's I and II</b>	\$1,211,205,503	\$99,296,825	17.4%	\$28,038,921	\$31,017,080	-9.6%	\$26,917,170	\$20,421,064	31.8%	\$116,615,648	\$47,858,681	17.4%
<b>Baccalaureate</b>	\$526,655,099	\$50,447,655	4.2%	\$10,200,031	\$13,752,812	-25.8%	\$13,649,953	\$13,445,223	1.5%	\$52,584,900	\$23,249,620	4.2%
<b>Associates</b>	\$679,520,212	\$52,077,452	-9.2%	\$13,535,755	\$19,267,120	-29.7%	\$12,291,632	\$9,859,079	24.7%	\$47,307,275	\$22,951,253	-9.2%
<b>Specialized</b>	\$387,881,749	\$36,976,586	-15.0%	\$9,552,591	\$12,705,913	-24.8%	\$7,134,948	\$6,496,066	9.8%	\$31,422,995	\$17,774,607	-15.0%
<b>Not Classified</b>	\$101,217,392	\$10,794,880	-45.1%	\$1,889,566	\$4,497,549	-58.0%	\$1,332,602	\$1,426,271	-6.6%	\$5,925,129	\$4,871,060	-45.1%

- Master's degree granting institutions saw decreases in a number of operating expenditure categories, with total operating expenditures declining -10.0 percent, computer hardware and software dropping -29.9 percent, and other operating expenditures down -3.7 percent in 2008 from 1998. Expenditures for bibliographic utilities, networks and consortia increased a slight 2.7 percent during this 10-year period.
- Bachelor's degree granting institutions saw increases (2.1 percent) in total operating expenditures, bibliographic utilities, networks and consortia (8.7 percent) and other operating expenditures (10.4 percent) in 2008 from 1998. However, expenditures for computer hardware and software declined -17.5 percent during this 10-year period.
- Less than 4-year degree granting institutions reported decreases (-20.5 percent) in total operating expenditures, computer hardware and software (-37.5 percent), and other operating expenditures (-18.7 percent) in 2008 from 1998. Expenditures for bibliographic utilities, networks and consortia rose 11.9 percent during this 10-year period.

Variation in total operating expenditures in 2008 from 1998 was more apparent when considered by enrollment ranges. The smallest academic institutions, those serving less than 1,000 FTE, saw the largest overall reductions (-23.5 percent, or about -\$26.6 million) in total operating expenditures. All other enrollment ranges reported increases in 2008 from 1998:

- 1,000 to 2,999 FTE increasing 3.6 percent (\$80.7 million)
- 3,000 to 4,999 increasing 35.1 percent (\$51.4 million)
- 5,000 to 9,999 FTE increasing 13.3 percent (\$98.4 million)
- 10,000 to 19,999 increasing 22.3 percent (\$194.7 million)
- 20,000 or more increasing 34.6 percent (\$288.1 million)

Academic libraries serving 3,000 to 4,999 FTE saw the largest percent increase overall and by type of operating expenditures - computer hardware and software increasing 0.4 percent, bibliographic utilities, networks and consortia up 42.1 percent, and other operating expenditures up 52.4 percent in 2008 from 1998.

It is clear from these data the impact rising costs of information resources had on academic library operating budgets. While FTE staffing in academic libraries decreased in all but Doctor's degree granting institutions (see Figure 7), collections continued to grow in all formats (see Figure 5).

## Electronic Services

The number and percent of academic libraries reporting selected electronic services by institutional characteristics in 2008 and percentage change 1998 to 2008 are presented in Figures 9A-9B. Electronic services include documents digitized by library staff, library reference services by email or the Web, technology to assist patrons with disabilities, and electronic theses and dissertations (reporting began in 2002).



### *Document Digitization*

The number of academic libraries reporting document digitization activities decreased -13.3 percent in 2008 from 1998, with public institutions reporting more significant reductions (-20.0 percent) than private (-6.5 percent) during the 10-year period. Only Doctor's (19.7 percent) degree granting institutions reported increases in 2008 from 1998 and Less than 4-yr reported a decrease of -59.3 percent.

### *E-Reference Services*

Academic libraries reporting reference services by email or the Web increased 52.4 percent in 2008 from 1998. More public institutions (57.9 percent) than private (47.6 percent) offered e-reference services, and institutions at the Less than 4-year degree granting level reported the smallest increase (29.7 percent) in these services in 2008 from 1998. Doctor's and Master's degree granting institutions increased at about the same rate (43.6 percent and 44.1 percent, respectively), followed by Bachelor's (37.9 percent). When considered by FTE enrollment range, the smallest percentage growth in e-reference services reported was for 20,000 or more FTE (23.7 percent) and the largest percentage growth for 3,000 to 4,999 FTE (108.0 percent) in 2008 from 1998.

### *Technology to Assist Patrons with Disabilities*

Academic libraries providing technology to assist patrons with disabilities rose 27.2 percent in 2008 from 1998, with private institutions reporting increases of 37.7 percent compared with public at 21.8 percent during this 10-year period. Increases reported by degree granting level ranged from Doctor's (33.9 percent), Bachelor's (29.8 percent), followed by Master's (21.8 percent) then Less than 4-year (1.6

percent), The larger the FTE enrollment the more likely there were to be a decreases in academic libraries reporting technologies to support those with disabilities. Enrollment ranges less than 10,000 FTE reported between 8.3 percent and 54.6 percents increases in 2008 from 1998, compared with 10,000 FTE or more reporting declines between -4.5 percent and -6.7 percent during this 10-year period.

### *Electronic Theses and Dissertations*

Electronic theses and dissertation were first reported by academic libraries in 2002. In 2008, 140.7 percent more institutions reported providing these services than in 2002. Private academic libraries reported increases of 190.8 percent and public 98.3 percent in 2008 from 2002. Increases reported by degree granting level were between 143.8 percent and 150.0 percent, except for Less than 4-year that reported a 50.0 percent increase. Increases by FTE enrollment ranged from between 113.0 percent (10,000 to 19,999 FTE) and 187.7 percent (1,000 to 2,999 FTE) in 2008 from 2002.

**Figure 9A. Number and percent of academic libraries with documents digitized by library staff and library reference services by e-mail or the Web by institutional characteristics, 1998 to 2008 and 2002 to 2008**

			Documents digitized by library staff			Library reference services by e-mail or the Web		
	Total libraries		Total		Change	Total		Change
Institutional Characteristic	2008	1998	2008	1998	1998-2008	2008	1998	1998-2008
<b>All postsecondary degree-granting institutions</b>	3,911	3,658	1,399	1,613	-13.3%	2,803	1,839	52.4%
<b>CONTROL</b>								
Public	1,600	1,583	650	812	-20.0%	1,361	862	57.9%
Private	2,311	2,075	749	801	-6.5%	1,442	977	47.6%
<b>LEVEL</b>								
Total 4-year and above	2,416	3,658	1,113	1,152	-3.4%	1,823	1,281	42.3%
Doctor's	733	570	480	401	19.7%	613	427	43.6%
Master's	936	944	448	481	-6.9%	755	524	44.1%
Bachelor's	747	703	185	270	-31.5%	455	330	37.9%
Less than 4-year	1,461	1,441	270	663	-59.3%	956	737	29.7%
<b>SIZE (FTE Enrollment)</b>								
Less than 1,000	1,494	1,398	291	372	-21.8%	766	529	44.8%
1,000 to 2,999	1,165	1,043	434	490	-11.4%	924	587	57.4%
3,000 to 4,999	484	378	202	201	0.5%	416	200	108.0%
5,000 to 9,999	409	447	217	258	-15.9%	360	261	37.9%
10,000 to 19,999	241	274	157	190	-17.4%	222	169	31.4%
20,000 or more	118	124	98	102	-3.9%	115	93	23.7%
<b>CARNEGIE CLASSIFICATION (2005)</b>								
Doctoral/Research	257	234	223	207	7.7%	247	204	21.1%
Master's I and II	590	521	366	344	6.4%	534	332	60.8%
Baccalaureate	512	603	255	315	-19.0%	423	342	23.7%
Associates	1,362	1,217	261	425	-38.6%	965	507	90.3%
Specialized	620	234	193	199	-3.0%	370	292	26.7%
Not Classified	519	535	89	123	-27.6%	234	162	44.4%



Figure 9B. Number and percent of academic libraries with technology to assist patrons with disabilities and electronic theses and dissertations produced by institutional characteristics, 1998 to 2008 and 2002 to 2008						
	Technology to assist patrons with disabilities			Electronic theses and dissertations produced		
	Total		Change	Total		Change
Institutional Characteristic	2008	1998	1998-2008	2008	2002	2002-2008
All postsecondary degree-granting institutions	1,912	1,503	27.2%	515	214	140.7%
CONTROL						
Public	1,203	988	21.8%	230	116	98.3%
Private	709	515	37.7%	285	98	190.8%
LEVEL						
Total 4-year and above	1,133	885	28.0%	498	203	145.3%
Doctor's	462	345	33.9%	351	144	143.8%
Master's	453	372	21.8%	117	47	148.9%
Bachelor's	218	168	29.8%	30	12	150.0%
Less than 4-year	765	753	1.6%	15	10	50.0%
SIZE (FTE Enrollment)						
Less than 1,000	325	230	41.3%	78	36	116.7%
1,000 to 2,999	611	416	46.9%	112	39	187.2%
3,000 to 4,999	320	207	54.6%	51	20	155.0%
5,000 to 9,999	340	314	8.3%	90	38	136.8%
10,000 to 19,999	209	224	-6.7%	98	46	113.0%
20,000 or more	107	112	-4.5%	86	35	145.7%
CARNEGIE CLASSIFICATION (2005)						
Doctoral/Research	226	200	13.0%	193	105	83.8%
Master's I and II	409	318	28.6%	152	49	210.2%
Baccalaureate	243	202	20.3%	60	19	215.8%
Associates	743	577	28.8%	14	12	16.7%
Specialized	142	105	35.2%	72	26	176.9%
Not Classified	129	101	27.7%	23	2	1050.0%

## Information Literacy Activities

The number of academic libraries reporting information literacy activities in 2008 and percent change 2004 to 2008 by institutional characteristics are presented in Figures 10A-10B. The information literacy activities were derived from research done by the American Library Association academic library division, Association of College and Research Libraries (ACRL)<sup>2</sup> and were incorporated in the 2004 NCES Academic Library Survey.<sup>3</sup> The question statements were modified in 2006 and did not alter the meaning of each statement, but provided more granular description of information literacy in the institutions strategic plan as noted in this list:

- Defined information literacy or information literate student (2004-2008)
- Incorporated information literacy into institution's mission (2004-2008)
- Incorporated information literacy into institution's strategic plan (2004-2008)
  - Has institution-wide committee to implement strategic plan for information literacy (2004-2008)
  - The strategic plan formally recognizes the library's role in information literacy instruction (2006-2008)



### *Defined information literacy:*

Nearly half (46.6 percent) of all academic libraries reporting had a definition for information literacy or an information literate student, increasing about 18.2 percent in 2008 from 2004. A similar proportional increase was reported by public (19.9 percent) and private (16.7 percent) academic libraries. When considered by degree granting level, Doctor's institutions (30.7 percent) reported the largest increase in having definitions, followed by Less than 4-year (16.2 percent), Master's (15.8 percent) and Bachelor's (14.3 percent) in 2008 from 2004. By enrollment size, libraries serving 20,000 or more (34.8 percent) reported the largest increase in having an information literacy definition in 2008 from 2004, followed closely by 3,000 to 4,999 FTE (33.3 percent). Libraries serving between 5,000 and 19,999 reported increases between 18.9 percent and 20.5 percent, respectively. Reporting the least growth in having a definition for information literacy were academic libraries serving Less than 1,000 FTE, increasing only 6.8 percent in 2008 from 2004.

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<sup>2</sup> ALA. Association of College and Research Libraries. *A Progress Report on Information Literacy: An update on the American Library Association Presidential Committee on Information Literacy: Final Report* (March 1998). Last accessed 1-7-2011. <http://www.ala.org/ala/mgrps/divs/acrl/publications/whitepapers/progressreport.cfm>. A follow-up report to the *American Library Association Presidential Committee on Information Literacy: Final Report* outlining the progress made toward the meeting the recommendations put forth in the initial report (<http://www.ala.org/ala/mgrps/divs/acrl/publications/whitepapers/presidential.cfm>).

<sup>3</sup> National Center for Education Statistics. US Department of Education. Institute of Education Sciences. *Academic Libraries 2004*. Last accessed 1-7-2011. [http://nces.ed.gov/pubs2007/2007301\\_s2.pdf](http://nces.ed.gov/pubs2007/2007301_s2.pdf).

Although not indicative of an institutions commitment to information literacy or its relationship with campus libraries, the following detail was revealed by the data analysis.

### *Incorporated information literacy into institution's mission*

- About one-third (32.9 percent) of all academic libraries reported having incorporated information literacy into institution's mission, an increase of 13.0 percent in 2008 from 2004.
- Public academic libraries reported a 13.4 percent increase and private a 12.7 percent increase in 2008 from 2004.
- Doctor's degree granting institutions reported the largest increase (36.2 percent) during this period.
- Libraries serving Less than 4-year (13.2 percent), Master's (9.3 percent), and Bachelor's (14.3 percent) degree granting institutions reported comparatively less change in 2008 from 2004.

### *Information literacy incorporated into institutions strategic plan, institution-wide committee, and normal recognition of library's role in information literacy instruction*

- Fewer academic libraries (-4.5 percent) reported information literacy being incorporated into its institutions strategic plan in 2008 from 2004.
- Declines also were reported in the sub-category of strategic plan inclusion, institution-wide committee (-9.0 percent), while formal recognition of the library's role in information literacy instruction increased (3.5 percent) in 2008 from 2004 and 2006, respectively.

These changes may reflect cultural changes on academic campuses where formal recognition of information literacy in strategic plans is no longer necessary.

Figure 10A. Percent of academic libraries reporting defined information literacy or information literate students, incorporated information literacy into institution's mission, and incorporated information literacy into institution's strategic plan by institutional characteristics, 2004 to 2008									
	Defined information literacy or information literate student			Incorporated information literacy into institution's mission			Incorporated information literacy into institution's strategic plan		
	Change	Libraries reporting yes		Change	Libraries reporting yes		Change	Libraries reporting yes	
Institutional Characteristic	2004-2008	2004	2008	2004-2008	2004	2008	2004-2008	2004	2008
All postsecondary degree-granting institutions	18.2%	1,541	1,822	13.0%	1,137	1,285	-4.5%	1,256	1,200
CONTROL									
Public	19.9%	744	892	13.4%	514	583	-11.0%	618	550
Private	16.7%	797	930	12.7%	623	702	1.9%	638	650
LEVEL									
Total 4-year and above	19.4%	953	1,138	13.2%	720	815	-3.4%	771	745
Doctor's	30.7%	261	341	36.2%	185	252	10.9%	211	234
Master's	15.8%	406	470	9.3%	301	329	-15.2%	349	296
Bachelor's	14.3%	286	327	0.0%	234	234	1.9%	211	215
Less than 4-year	16.2%	582	676	13.2%	408	462	-6.1%	476	447
SIZE (FTE Enrollment)									
Less than 1,000	6.8%	457	488	-4.3%	418	400	0.5%	384	386
1,000 to 2,999	19.7%	498	596	20.6%	339	409	-12.4%	419	367
3,000 to 4,999	33.3%	213	284	39.2%	125	174	2.4%	165	169
5,000 to 9,999	20.5%	205	247	16.8%	137	160	0.0%	153	153
10,000 to 19,999	18.9%	122	145	16.7%	84	98	-12.1%	91	80
20,000 or more	34.8%	46	62	29.4%	34	44	2.3%	44	45
CARNEGIE CLASSIFICATION (2005)									
Doctoral/Research	3.2%	126	130	14.6%	89	102	-16.7%	102	85
Master's I and II	11.0%	319	354	4.7%	213	223	-12.4%	249	218
Baccalaureate	19.2%	219	261	15.1%	146	168	-8.5%	165	151
Associates	17.0%	634	682	11.4%	445	459	-8.0%	511	438
Specialized	12.7%	166	187	9.5%	148	162	-3.4%	147	142
Not Classified	72.6%	106	183	45.7%	105	153	59.1%	93	148

**Figure 10B. Percent of academic libraries have institution-wide committee to implement strategic plan for information literacy and strategic plan formally recognizes the library's role in information literacy instruction by institutional characteristics, 2004 to 2008**

	Has institution-wide committee to implement strategic plan for information literacy			The strategic plan formally recognizes the library's role in information literacy instruction		
	Change	Libraries reporting yes		Change	Libraries reporting yes	
Institutional Characteristic	2004-2008	2004	2008	2004-2008	2006	2008
All postsecondary degree-granting institutions	-9.0%	781	711	3.5%	934	967
<b>CONTROL</b>						
Public	-17.1%	369	306	-0.5%	426	424
Private	-1.7%	412	405	6.9%	508	543
<b>LEVEL</b>						
Total 4-year and above	-7.8%	477	440	0.8%	598	603
Doctor's	-3.0%	132	128	-2.6%	189	184
Master's	-16.0%	212	178	9.8%	224	246
Bachelor's	0.8%	133	134	-6.5%	185	173
Less than 4-year	-11.4%	299	265	5.1%	336	353
<b>SIZE (FTE Enrollment)</b>						
Less than 1,000	2.1%	243	248	8.6%	302	328
1,000 to 2,999	-16.8%	250	208	4.1%	294	306
3,000 to 4,999	-12.1%	99	87	2.5%	120	123
5,000 to 9,999	-14.9%	101	86	9.4%	106	116
10,000 to 19,999	-10.3%	58	52	-15.5%	71	60
20,000 or more	0.0%	30	30	-17.1%	41	34
<b>CARNEGIE CLASSIFICATION (2005)</b>						
Doctoral/Research	-58.7%	126	52	-18.3%	82	67
Master's I and II	-65.5%	319	110	0.0%	169	169
Baccalaureate	-63.5%	219	80	5.2%	115	121
Associates	-58.5%	634	263	1.5%	341	346
Specialized	-47.0%	166	88	3.6%	111	115
Not Classified	-2.8%	106	103	36.1%	97	132

## Conclusion

The analysis for the years 1998-2008 found that there are more academic libraries with more buildings serving more students with a wider variety of content in new formats – what is new about that?

The impact of technology and maturation of the Internet as the conduit for information delivery has not reduced the need for library space but, in many respects, has increased that need. The data indicate greater investments in collections and services. Even with increased virtual reference and information services, up 52.4 percent from 1998, use of academic libraries rose during the 1998-2008 period.

Resource sharing continues to augment academic library collections, increasing 54 percent in 2008 from 1998. Declines in non-returnable loans (typically digital or tangible copies of serial content, chapters, etc.) is a result of increased access to online full-text content – current serial subscriptions are up over 240 percent, E-Books up 898.3 percent, and reference sources and aggregation services are up 92.6 percent in 2008 from 1998.

Expenditures for information resources represented a majority (more than 50 percent) of overall expenditures for degree-granting levels 4-years and above. Doctoral/Research and Masters I/II represent only 21.7 percent of reporting libraries and have the largest staffs and collections, and are open the most hours and have the largest total enrollment. The influence of totals reported by these libraries is undeniably significant on national estimates. Yet, the trends demonstrated with these levels are also visible in all others, indicating they are, in fact, reliable national estimates of overall trends. Looking ahead to 2010 and beyond it will be interesting to see if there is continued homogenization of trends.