



*UC Davis General Library*

---

**ADMINISTRATIVE UNIT REVIEW:  
INTERLIBRARY LOAN  
AND  
DOCUMENT DELIVERY SERVICES**

August 1999

---

## Table of Contents

Executive Summary.....	iii
1.0 Introduction.....	1
2.0 Review Activities.....	2
3.0 Interlibrary Loan Programs and Services.....	2
3.1 Borrowing Services.....	2
3.1.1 Peter J. Shields Library.....	2
3.1.2 Physical Sciences & Engineering Library (PSE).....	4
3.1.3 The Carlson Health Sciences Library (CHSL).....	5
3.1.4 Medical Center Library (MCL), Sacramento.....	5
3.2 UCD Lending Services.....	5
4.0 Performance Measures.....	6
4.1 Turnaround Time.....	6
4.2 Fill Rate.....	7
4.3 User Satisfaction Surveys and Campus Advisory Committee Input.....	8
4.4 Cost.....	9
5.0 Workflow and Staff.....	11
Conclusion.....	12
Recommendations.....	13
Appendix A: Summary of the UC Study of Interlibrary Loan Operations, 1996 (Hughes Report).....	14
Appendix B: Data Tables.....	15
Appendix C: Report of the ILL User Satisfaction Surveys.....	18
Appendix D: UC Davis General Library Interlibrary Loan Resources On The Web.....	24

---

## Executive Summary

This Administrative Unit Review documents substantial growth and change in interlibrary loan (ILL) and document delivery services in UC Davis libraries during the 1990s. ILL is a highly dynamic service which has developed in close concert with rapidly evolving technology and proliferating electronic resources, and is currently one of the highest growth areas in academic libraries. Transactions in UCD libraries have increased 47 % since 1993--growth which directly reflects the mounting pace of research and the increased access afforded by today's networked environment. Technological development has brought many improvements to ILL: UCD users can now initiate ILL book requests electronically, and of those electronic requests, more can be sent directly to lending libraries without staff mediation. Fax and Internet delivery provide markedly faster receipt of materials.

Physical delivery of printed materials has also significantly improved. A 1995 study commissioned by UC systemwide examined ILL at five UC campuses and identified strategies and operational changes to improve the speed and efficiency of ILL delivery (*University of California: A Study of Interlibrary Loan Operations: A Report to the Library Council*. K. Scott Hughes Associates, March, 1996).<sup>1</sup> A key recommendation from the Hughes report was to contract for an overnight courier service specifically to deliver ILL materials among UC libraries. This has been successfully implemented at UCD and has improved delivery time. Other recommendations from the Hughes report have also been implemented at UCD libraries, including direct online user requesting, increased use of technology, enhanced access to campus technology and communication infrastructure, and improved staff training. A summary of Hughes report objectives and recommendations appears in Appendix A.

Compared with national resource sharing performance benchmarks established by the Association of Research Libraries (ARL) and the Research Libraries Group (RLG), current indicators for UCD libraries equal or better the national averages for turnaround time, fill rate, and unit cost.<sup>2</sup> A Spring 1999 survey of over 380 ILL users, including a cohort of the most frequent users, showed that 97 percent of users were highly satisfied with the timeliness, quality, staff interaction, and cost of the service.

Information access and delivery strategies for the future will focus on further enhancement of ILL services toward the goal of direct user access to and desktop delivery of research materials.

---

<sup>1</sup> The five campuses were UCLA, Santa Cruz, San Diego, San Francisco, and the Southern Region Library Facility (SRLF).

<sup>2</sup> Turnaround time is the number of calendar days between the user's initiation of an ILL request and the library's notification to the patron that the item is available for pickup. Fill rate is the number of successfully filled ILL requests as a percentage of the total borrowing requests submitted. Unit cost is an average cost per ILL transaction, calculated by dividing the total yearly direct and indirect costs associated with processing ILL transactions by the number of transactions.

## 1.0 Introduction

The General Library Administrative Unit Review (AUR) for 1998/99 examines the changing nature of interlibrary loan (ILL) and document delivery services in UC Davis libraries. In recent years, resource sharing has expanded faster than any other library service on this campus, with borrowing transactions increasing 47 % since 1993.

The reasons for this growth stem from the fundamental changes occurring in academic libraries in terms of rapidly emerging electronic resources, technological developments, and increased standardization. The fast pace of research, growing user needs, and collection budget limitations have also influenced the importance of resource sharing. In today's networked environment, access to research and instructional materials is far less limited by physical distance: users can now initiate interlibrary loan book requests electronically, and of those electronic requests, an increasing number are sent directly to lending libraries without UCD intervention, speeding transmission time. Fax and Internet delivery provide markedly faster receipt of materials.

Delivery of printed materials still constitutes a large part of the service, however, and significant service enhancements have occurred here as well. As part of the University of California's efforts to enhance interlibrary service, UC systemwide commissioned a study in 1995 to examine interlibrary lending and borrowing at five UC campuses (*University of California: A Study of Interlibrary Loan Operations: A Report to the Library Council*. K. Scott Hughes Associates, March, 1996).<sup>1</sup> The purpose of the study was to identify strategies and operational changes to improve the speed and efficiency of interlibrary loan delivery. Key recommendations from the Hughes report have been successfully implemented at UCD, including an overnight courier delivery service, direct online user requesting, increased use of technology, enhanced access to campus technology and communication infrastructure, and improved staff training.

Compared with national resource sharing performance measures established by the Association of Research Libraries (ARL) and the Research Libraries Group (RLG), current indicators for UCD libraries equal or better the national averages for research libraries in terms of turnaround time, fill rate, and unit cost.<sup>2</sup> A Spring 1999 survey of UCD interlibrary loan user satisfaction also showed that 97 percent of the users of interlibrary services were satisfied with the timeliness, quality, staff interaction, and cost of the service.

---

<sup>1</sup> The five campuses were UCLA, Santa Cruz, San Diego, San Francisco, and the Southern Region Library Facility (SRLF).

<sup>2</sup> Turnaround time is the number of calendar days between the user's initiation of an ILL request and the library's notification to the patron that the item is available for pickup. Fill rate is the number of successfully filled ILL requests as a percentage of the total borrowing requests submitted. Unit cost is an average cost per ILL transaction, calculated by dividing the total yearly direct and indirect costs associated with processing ILL transactions by the number of transactions.

## 2.0 Review Activities

This AUR evaluated interlibrary loan programs in Peter J. Shields Library, the Physical Sciences & Engineering Library (PSE), the Carlson Health Sciences Library (CHSL), and the UC Davis Medical Center Library in Sacramento (MCL). The review process included collecting and analyzing available statistical data for fiscal years 1993/94 through 1997/98 and performance benchmarking on turnaround time, fill rate, and cost. A summary of these statistics appears in Appendix B. During winter and spring quarters, the AUR review committee conducted staff interviews, job analysis surveys, workflow studies, user satisfaction surveys, and personal interviews with researchers. The committee also solicited comments on ILL services from campus library advisory groups.

## 3.0 Interlibrary Loan Programs and Services

Reflecting a large and diverse user population, several interlibrary loan programs operate on the UCD campus. The services maintain separate operations and management, and report to department or library heads depending on the complexity of the program. Each unit is unique in terms of its workload, user characteristics, and policy implementation.

### 3.1 Borrowing Services

#### 3.1.1 Peter J. Shields Library

The Shields Library Interlibrary Loan Department is the largest ILL operation on the UC Davis campus. Handling approximately 11,800 borrowing requests from UCD users, and 18,400 lending requests from other libraries in 1997/98, Shields accounted for 60 % of the borrowing activity and 40 % of lending campus-wide.

Figure 1. ILL Borrowing

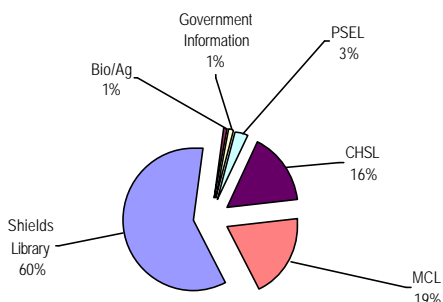
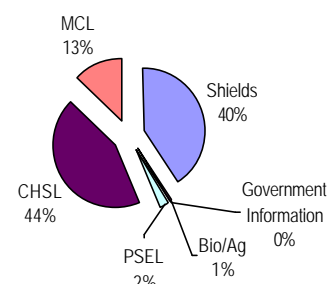


Figure 2. ILL Lending



The interlibrary loan office on the first floor of Shields Library serves undergraduates, graduates, faculty and staff with books and photocopied materials obtained from other libraries around the world. Approximately 70 % of borrowed materials comes from other UC campuses, 28 % from other research institutions in the US, and the remaining 2% from international sources.

*How requests are submitted.* Users may submit requests for Shields ILL several ways:

- Paper form turned in at the ILL office in Shields Library
- Online request form on the library's web site
- Online *Request* command from the Melvyl catalog.

The electronic *Request* service allows researchers to automatically register a request for an item directly from the Melvyl catalog, without re-typing the bibliographic information. Establishing the *Request* service was a primary objective of the UC Patron Initiated Request Project (PIR), an initiative originally rising from the Hughes report recommendation to investigate direct borrowing access to all UC libraries.

PIR has required close collaboration with other UC campuses to achieve automation and interface design goals, as well as to address policy and training issues, workflow, user education, and evaluation. Phase I, implemented in January 1999, allowed users to request loans from the Melvyl catalog electronically. Later phases will expand the service to include requests for articles, and requests for materials outside the UC system.

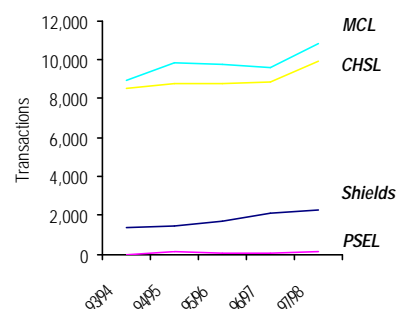
While it is too early to evaluate changes in material turnaround time and staff workload, *Request* has met with wide approval from UCD users who frequently noted the convenience of the function in the ILL user surveys conducted in Spring 1999. Similar satisfaction was noted in a systemwide survey conducted by the PIR project in April.

*How materials are delivered.* Most materials are transmitted among UC campuses using an overnight courier, as recommended in the Hughes Report. According to turnaround time studies conducted by UC systemwide, delivery time has improved markedly at UCD campus libraries. Shields Library also uses *Ariel*, a computer software system which scans and transmits article images electronically via the Internet. Users pick up all materials in the ILL office in Shields Library.

*GLIDE (General Library Information Delivery Express).*

The GLIDE service allows UCD faculty, staff, graduate students, and mobility-impaired undergraduate students to have books and documents transferred between UCD libraries. It is a steadily growing service, most heavily used at CHSL and MCL because of the similar focus of their collections and space limitations at MCL. GLIDE requests can be submitted in paper at the

Figure 3. GLIDE transactions



ILL office or online through the library web site or Melvyl *Request*. Requests are usually processed within one working day, not including campus mail delivery time. Requestors are notified of delays because of missing or unavailable items. Materials are returned if they are not picked up within 14 days or by the return date.

**Participating GLIDE libraries:**

Agricultural and Resource Economics Library  
Cadet Hand Library, Bodega Marine Laboratory  
The Carlson Health Sciences Library  
Medical Center Library  
Peter J. Shields Library  
Physical Sciences & Engineering Library

There are no charges for GLIDE book loans. Photocopy requests are \$3.50 for up to 30 pages, and \$3.50 for each additional 30 page increment. There is no charge for journal articles to and from the Medical Center Library.

*Document delivery.* UC faculty, staff, and graduate students can have copies of journal articles and book chapters delivered for fees ranging from \$3.50 to \$15.00 per item. Requests are processed within three days; delivery may take up to 10 days. Rush delivery is available. Requests may be submitted though the mail, fax, web form, or in person.

*Other services offered in Shields Library.* Shields Library also offers two other loan services for users. *BioShare Fax* is a service designed to provide priority access to scientific journal articles and conference papers within 48 hours for participating UC campuses and Stanford University. Rush service is also available for delivery within 24 hours. Requests are submitted and materials are delivered via fax to the Shields Library Biological and Agricultural Sciences Department (Bio/Ag).

*Government Information and Maps Department Direct Borrow Program.* The Government Information and Maps Department offers direct borrowing services outside of regular interlibrary loan for patents, technical reports, and other government documents not available onsite. Materials are primarily borrowed from the California State Library, which is the regional depository library for federal documents and a primary deposit point for state documents. Requests are submitted and materials picked up in the Government Information Department on the lower level of Shields Library. Materials are usually received within five to 14 working days.

### 3.1.2 *Physical Sciences & Engineering Library (PSE)*

Two interlibrary services are offered by PSE: *BioShare Fax* (described above), *Science Fax* (a similar service), and GLIDE. Science Fax also provides priority access to scientific journal literature within 48 hours among participating UC libraries and Stanford. PSE also uses *Ariel* to send and receive material electronically.

### 3.1.3 The Carlson Health Sciences Library (CHSL)

CHSL operates interlibrary loan, document delivery, and GLIDE services for its users similar to Shields Library. CHSL users are primarily the students, faculty, and staff of the School of Medicine and the School of Veterinary Medicine, as well as the staff of the Veterinary Medical Teaching Hospital. CHSL is a Resource Library in the Pacific Southwest Regional Medical Library region of the National Network of Libraries of Medicine, which accounts for a significant amount of ILL activity at CHSL.

### 3.1.4 Medical Center Library (MCL), Sacramento

MCL also offers interlibrary loan and GLIDE services to faculty, staff, hospital staff, and graduate students. Requests are submitted on paper at the MCL circulation desk, via fax or mail, or through the online form on the library's web page. Materials are picked up at the MCL circulation desk. Rush requests can be filled within 24 hours; GLIDE requests identified as clinical emergencies are filled within four hours.

## 3.2 UCD Lending Services

UC Davis plays a significant role in the UC interlibrary loan environment as one of three *net lenders* – that is, a library which lends significantly more than it borrows (the other two net lenders in UC are UCLA and Berkeley). In 1997/98, UC Davis libraries lent 42,535 items to other libraries and borrowed 18,208 items from other libraries on behalf of our own users. Approximately 50% of lending requests come from other UC libraries, 34% from other public and private research institutions in California, 15% from out of state, and 1% from international sources.

Figure 4. Interlibrary lending and borrowing transactions in UCD libraries

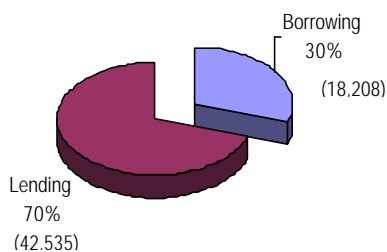
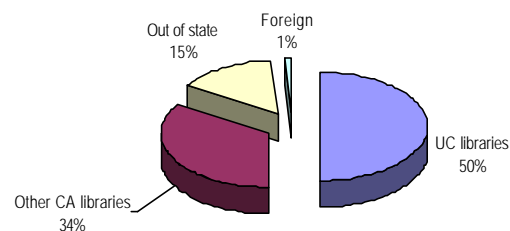


Figure 5. ILL lending sources



## 4.0 Performance Measures

Specific data was collected in order to characterize the performance of interlibrary loan transactions for fiscal years 1993/94 through 1997/98. The most recent benchmarking data available for comparison is the ARL study on interlibrary loan which provided 1996 baseline information for 119 research and college libraries in North America.<sup>3</sup> Turnaround time, fill rate, and unit cost indicators for UC Davis ILL operations in 1997/98 all exceed the means reported in the study.

*Table 1. Comparison of Shields Library and ARL Performance Measures*

	1998 UC Davis Shields Library	1996 UC Davis Shields Library	1996 ARL ILL/DD Research Libraries
Borrowing turnaround time	11.2 calendar days	10.6 calendar days	15.6 calendar days
Borrowing fill rate	90.2 %	85 %	85 %
Borrowing unit cost	\$16.03	\$26.43	\$18.35
Lending unit cost	\$8.46	\$8.17	\$9.48

### 4.1 Turnaround Time

*Borrowing turnaround time* is the number of days it takes for borrowing libraries to receive requested materials. This time includes several steps: request received at a UC Davis library, citation verified, request sent to a supplier, material received back at UC Davis, and the user notified that the item is available for pickup.

UC systemwide turnaround time surveys were conducted regularly during the 1990s as part of the effort to enhance ILL operations. The studies measured the number of days for the borrowing library to transmit the request, the number of days for the borrowing library to receive the requested material, and the number of days for a lending library to fill a lending request. In the most recent survey in November 1997, UC Davis turnaround time was close to the highest in the UC system, receiving 97 % of loan requests within eight to ten days. There exists a marked variation in turnaround time among libraries UC-wide, however, as shown below in the data for the UC libraries who participated in the survey:

<sup>3</sup> *Measuring the Performance of Interlibrary Loan Operations in North American Research and College Libraries*, by Mary E. Jackson. Results of a study funded by the Andrew W. Mellon Foundation. Washington, DC: Association of Research Libraries, 1998.

Table 2. Percent of ILL materials received in 8-10 days  
(source: UC Turnaround Time Study, Nov. 1997)

	Materials received within 8-10 days			
	% loans	% photocopies	% fax	% Ariel
<b>UCD</b>	<b>96.55</b>	<b>82.47</b>	<b>100</b>	<b>80</b>
UCLA	37.9	64.76	NA	69.05
UCSD	97.55	96.79	100	96.67
UCSF	93.88	96.85	NA	100

Average turnaround time for Shields ILL borrowing for all items in 1997/98 was 11.2 days. The UC turnaround time survey for November 1997 indicated that 65% of UCD materials were received in three to five days, and 97% in eight to ten days. This compares favorably with the mean turnaround time in the ARL study of 15.6 days, with 27 % received in seven days for research libraries nationwide.

The wide variation in turnaround time is caused by several factors, most notably the unpredictability of the number and types of requests at any given time. Particularly, requests for rare or hard-to-find items have a significant effect on overall turnaround time, as does the processing speed at the lending library, whether items are books or photocopies, and whether shipping is required. The unpredictability of ILL activity is reflected in the ARL study, which found a range of average turnaround times in research libraries from 10.2 to 22 calendar days.

The most valuable information to be gathered from turnaround time studies lies in the detailed data on how long the discrete steps in the process take. The Hughes report identified significant delays in delivery and recommended contracting with an overnight courier delivery service, which UC campuses implemented immediately. Delays in processing and verifying requests have been minimized further at UCD with the introduction of the online *Request* function, which sends most requests directly to the lending campus without UCD staff intervention. Decentralized services such as *BioShare Fax* and *ScienceFax* also improve turnaround time because of the close proximity of the collection to the fax delivery equipment.

#### 4.2 *Fill Rate*

Closely related to turnaround time is *fill rate*, measured as a percent of materials received over the total number of requests processed in a given time. Annual fill rates for Shields, Bio/Ag, PSE, CHSL, and MCL have been at or above the ARL median of 85 % since fiscal year 1995/96:

Table 3. Percent of ILL requests filled

	Percent of ILL Requests Filled				
	1993/94	1994/95	1995/96	1996/97	1997/98
Shields	87	93	92	93	90
Bio/Ag	84	83	88	90	85
PSE	86	82	88	89	87
CHSL	96	95	94	95	96
MCL	88	84	86	92	93

The use of automated request processing systems and the availability of journal holdings information enables UCD ILL staff to quickly verify bibliographic citations and identify the correct lending library, thereby minimizing failed requests. UCD staff also have extensive knowledge of collections, suppliers, and lending policies of ILL partners. In addition, staff are persistent in locating hard-to-find items.

The ARL study noted that fill rates have not changed significantly over the past ten years in spite of increased material finding aids such as journal holdings and circulation information. Although the study did not offer any insight as to why this is so, it is possible that certain variables that affect fill rate—such as the availability of items at lending libraries and the number of requests for rare materials—are inherently unpredictable and uncontrollable. Increased bibliographic access to online catalogs and indexes throughout the library community has increased the number of requests particularly for fugitive or rare items.

### 4.3 User Satisfaction Surveys and Campus Advisory Committee Input

#### 4.3.1 User Surveys

Two surveys of interlibrary loan users were conducted during Spring quarter 1999 to collect data on the level of user satisfaction with UCD ILL services: a paper survey form filled out by ILL users and interviews conducted by telephone. Both surveys measured user opinion in several areas: timeliness of the borrowing service, quality and completeness of requested materials, staff interaction, and cost. Three hundred and eighty-four responses were collected. A detailed report of the surveys is provided in Appendix C.

*Paper survey.* Survey forms were distributed with ILL materials picked up at Shields ILL, the Bio/Ag and Government Information departments, PSE, CHSL, and MCL. The results showed that 97 % of ILL users were very satisfied with interlibrary loan service, particularly in terms of speed, convenience, and staff capability. However, comments

provided by respondents indicate that some users are confused with the different methods of requesting materials and notification policies among libraries. A longer holding period for GLIDE materials at MCL was also requested.

*Telephone interviews.* Telephone interviews were conducted with 33 students, faculty, and staff selected from a group of frequent ILL users representing all campus ILL units and diverse academic disciplines. The telephone survey comments echoed the positive opinions collected in the paper survey. Several faculty members emphasized the value of the service for conducting research; other respondents noted the efficiency of submitting requests electronically and the helpfulness of the staff in solving problems with citations and hard-to-find materials. Respondents commented on the inefficiency of paper request forms, the need to improve notification procedures, the difficulty of getting certain materials such as foreign patents, and the variable quality of photocopied or faxed materials. Several users indicated that they would like to be able to check the status of their requests online.

#### 4.3.2 *Campus Advisory Committees*

Three significant advisory groups, the Academic Senate Library Committee (ASLC), the Health Sciences Library Committee (HSLC), and the PSE Library Committee met with library staff during Spring quarter 1999 to provide feedback on UCD ILL services. Faculty liaisons to PSE were also contacted. The comments from these groups repeated the perceptions noted above in the survey and interviews.

The ASLC and HSLC commended the General Library for operating efficient and responsive services and noted their particular satisfaction with the movement to streamline the request input process, notably the creation of the web request form and the development of the online *Request* function. PSE faculty library representatives felt ILL services were effective and heavily utilized, but some comments indicated a need for improved communication when materials were not available. Other comments expressed concern over longer waits for non-UC items, and the need for online help with the web request form.

#### 4.4 *Cost*

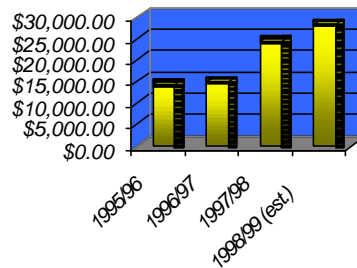
The direct costs associated with interlibrary services amounted to \$319,702 in total direct costs, or 2.2% of total General Library expenditures in fiscal year 1997/98. It should be noted that the General Library subsidizes fees charged by other libraries to borrow their materials for all UCD faculty, research staff, and graduate students.<sup>4</sup> This practice is in keeping with our objective to provide UCD researchers with the materials they need when such materials are not part of our collections or otherwise accessible (such as online). During fiscal year 1997/98, the General Library expended \$45,190 in borrowing

---

<sup>4</sup> There is no charge for borrowing among UC libraries. The subsidy applies to fees charged by non-UC libraries.

charges related to this service--\$24,391 for Shields borrowing alone. As shown in figure 6, funding for this subsidy has almost doubled since 1996.

Figure 6. Shields Library ILL borrowing subsidy



A detailed cost analysis of interlibrary loan in Shields Library was conducted for fiscal years 1990/91, 1995/96, and 1997/98 following the cost models used by RLG and ARL in national cost surveys conducted in 1991 and 1996. A cost per interlibrary loan transaction, or *unit cost*, was calculated by estimating the total costs associated with ILL operations and dividing by the total number of transactions.

Unit costs were compared to the ARL and RLG cost studies done in 1991 and 1996. It is important to note the extreme variation in total cost, unit cost, and cost breakdown in the ARL and RLG surveys; the 1996 ARL study showed a range in borrowing unit cost from \$8.13 to a high of \$30.47. Shields costs in 1996 reflect a substantial investment in communication, computers, and software to take advantage of automation technology; use of overnight delivery services to speed turnaround time; and a significant increase in direct borrowing charges. Total costs were reduced in 1998 because of more efficient staffing and improvements in workflow.

Table 4. Shields Library vs. ARL mean ILL unit costs

	1991	1996	1998
<b>Shields ILL</b>			
Borrowing	\$19.91	\$26.43	\$16.03
Lending	\$7.31	\$8.17	\$8.46
<b>ARL/RLG</b>			
Borrowing	\$17.79	\$18.35	NA
Lending	\$10.99	\$9.48	NA

The model allocated costs into several categories, as shown in the following table. Staffing accounts for 77% of total costs in Shields Library in 1998, which is slightly higher than the ARL average of 71% for research libraries.

Table 5. Percent of unit cost by category

	1991	1996	1998
Total direct costs	\$265,972	\$377,970	\$319,702
Staff	87 %	81 %	77 %
Network/communication	2 %	4 %	4 %
Delivery	7 %	7 %	8 %
Photocopying	2 %	0	0
Supply	1 %	3 %	2 %
Equipment and software	0	2 %	1 %
Rental and maintenance	0	0	0
Borrowing charges	0	4 %	8 %

## 5.0 Workflow and Staff

As documented in the previous section, staff salaries are the largest single contributor to unit cost. However, the 1996 ARL study found no evidence of an ideal staffing combination that would lower unit costs. Rather, ILL cost and performance appear to be influenced more directly by the way staff work, the nature of their work, and the technology they use to perform their work.

ILL tasks are highly labor-intensive. Requests must be checked for accuracy, potential lenders identified, books and journals pulled from the shelves, articles photocopied, materials delivered, users notified—all in a time-sensitive environment. Shields Library alone processes over 340 requests a day during peak periods.

Significant developments in technology occurring in recent years have had a positive effect on ILL workflow and procedure, and have also influenced productivity, turnaround time, and overall ILL performance. These include online patron requesting, electronic delivery of non-returnables via Ariel and fax, and the use of better ILL management software. At the same time, the rapid pace of change has posed a challenge to staff in maintaining and improving their efficiency.

A job activity questionnaire was administered to elicit staff opinion on their job functions, departmental strengths, and recommendations for improvement. Employees representing all the ILL departments submitted replies, and it was clear that they gave the survey a great deal of thought and consideration. The results acknowledged the improved technological developments in managing ILL transactions, and included a call for ongoing staff training to keep up with developments, better integration and coordination of policies and procedures among ILL departments, and the development of a more consistent method of requesting for the user.

## Conclusion

Substantial growth and change in UCD interlibrary services is documented throughout this review. Interlibrary borrowing transactions have increased 47 % since 1993, and the service continues to be the highest growth area not only for the UCD General Library but for academic libraries nationally. Benchmarking against resource sharing performance measures established by the Association of Research Libraries (ARL) and the Research Libraries Group (RLG) equal or better the national averages for interlibrary transaction turnaround time, fill rate, and unit cost.<sup>5</sup> Surveys of UCD ILL users indicate that users are highly satisfied with the speed, quality, staff competence, and low cost of ILL services.

This AUR notes the fundamental change occurring in academic libraries this decade. ILL services are developing in close concert with rapidly emerging electronic resources, technological developments, and increased standardization. In the networked environment, user needs are shifting to include digital formats as well as print. Users are requesting more research materials than ever—partly the result of better bibliographic access. This, combined with collection budget limitations, strengthens further the importance of resource sharing.

Access is now far less limited geographically. Users can now find materials online and initiate ILL book requests electronically, and of those electronic requests, an increasing number are sent directly to lending libraries without staff intervention. The implementation of the UC user-initiated online request mechanism marks significant progress toward the next generation of information access. The strategic direction of information access turns next toward the *desktop delivery* of research materials.

Many issues, problems, and limitations have yet to be resolved before this goal can be reached. The evolving electronic environment has allowed rapid progress toward some objectives, as seen with the success of the online *Request* function and web-based document delivery systems. Progress continues in other areas, such as implementing *Request* for journal articles and providing more rapid access to materials located outside UC. Future efforts to accomplish these objectives will focus on meeting the dynamic needs of our users with flexibility and efficiency.

---

<sup>5</sup> Turnaround time is the number of calendar days between the user's initiation of an ILL request and the library's notification to the patron that the item is available for pickup. Fill rate is the number of successfully filled ILL requests as a percentage of the total borrowing requests submitted. Unit cost is an average cost per ILL transaction, calculated by dividing the total yearly direct and indirect costs associated with processing ILL transactions by the number of transactions.

### **Recommendations**

- Continue to work closely with the UC Patron Initiated Request (PIR) project team to enable users to directly request journal articles online. This feature is scheduled for implementation in January 2000.
- Develop an automated function to allow users to check the status of their requests online.
- Continue to encourage users to submit requests electronically, which will speed request transmission and delivery.
- Develop an automated capability to extract call number and item circulation status from a local online public access catalog (OPAC) and merge this data with incoming lending requests. This will significantly improve lending response time and unit efficiency.
- Extend the use of ILL management software to include all campus ILL units, which will improve unit efficiency at CHSL and MCL.



## **Appendix A: Summary of the UC Study of Interlibrary Loan Operations, 1996 (Hughes Report)**

The Hughes report was commissioned in 1995 to identify ways to improve the speed and efficiency of ILL among UC campuses. The study reviewed statistics, analyzed operations and workflow, and investigated emerging technology affecting ILL activities at five UC campuses.<sup>6</sup> In an environment of lean budgets and rapidly changing technology, this report proved to be timely and valuable. The Hughes report provided general, overarching recommendations which produced varied responses from individual UC campuses. Because interlibrary loan is a highly individualized service at each institution, it was challenging to apply those recommendations to specific situations.

Many of the Hughes recommendations were already in place or have since been implemented at UCD:

- Contract with private overnight delivery service to speed delivery among UC campuses
- Improve access to campus technology and communication infrastructure
- Implement appropriate technology and standardize workstations
- Establish staff training and performance standards
- Allow direct patron access to electronic journals
- Allow direct receipt of non-returnable items
- Allow direct patron requesting.

Two of the Hughes recommendations are in development at UCD:

- Use the circulation system to record ILL transactions. UCD is investigating automation to systematize ILL management as part of the requirement for the future integrated library system.
- Automate the front-end verification process of incoming online lending requests to verify call numbers and status. UCD library intends to have the capability to automatically check online incoming requests against a local online public access catalog (OPAC) when the OPAC is implemented.

The remaining recommendations call for systemwide planning and development, and are not yet fully implemented:

- Standardize lending and borrowing practices among UC campuses
- Establish fair cost and pricing policies.

---

<sup>6</sup> Santa Cruz, San Diego, San Francisco, UCLA, and the Southern Region Library Facility (SRLF).

## Appendix B: Data Tables

Table B.1 Borrowing Transactions

	1993/94	1994/95	1995/96	1996/97	1997/98
<b>Peter J. Shields Library</b>					
Loans	5,079	5,477	6,159	6,955	7,510
Copies	2,561	2,190	2,611	2,509	3,409
Subtotal	7,640	7,667	8,770	9,464	10,919
<b>BIO/AG: BioShare</b>					
Copies	91	222	318	245	144
<b>Government Information</b>					
Loans	260	220	69	70	101
Copies	345	184	193	210	165
Subtotal	605	404	262	280	266
<b>PSE: ScienceFax/BioShare</b>					
Copies	339	430	368	688	573
<b>CHSL</b>					
Loans	391	415	329	393	360
Copies	1,343	1,647	1,836	2,097	2,582
Subtotal	1,734	2,062	2,165	2,490	2,942
<b>MCL</b>					
Loans	228	282	453	418	425
Copies	1,785	2,134	2,423	2,515	2,939
BioShare	na	na	na	na	66
Subtotal	2,013	2,416	2,876	2,933	3,430
<b>Total loans</b>	<b>5,958</b>	<b>6,394</b>	<b>7,010</b>	<b>7,836</b>	<b>8,396</b>
<b>Total copies</b>	<b>6,464</b>	<b>6,807</b>	<b>7,749</b>	<b>8,264</b>	<b>9,812</b>
<b>Total ILL borrowing</b>	<b>12,422</b>	<b>13,201</b>	<b>14,759</b>	<b>16,100</b>	<b>18,208</b>

Table B.2. Lending Transactions

	1993/94	1994/95	1995/96	1996/97	1997/98
<b>Peter J. Shields Library</b>					
Loans	8,718	9,957	10,252	9,978	10,523
Copies	5,831	6,637	7,552	7,615	6,574
<b>Subtotal</b>	<b>14,549</b>	<b>16,594</b>	<b>17,804</b>	<b>17,593</b>	<b>17,097</b>
<b>BIO/AG: BioShare</b>					
Copies	12	66	419	179	236
<b>Government Information</b>					
Loans	213	192	14	13	31
Copies	0	6	38	42	25
USDA Loans	144	156	165	0	0
USDA Copies	5,273	5,222	5,471	0	0
<b>Subtotal</b>	<b>5,630</b>	<b>5,576</b>	<b>5,688</b>	<b>55</b>	<b>56</b>
<b>PSE: ScienceFax/BioShare</b>					
Copies	771	1,059	709	923	1,053
<b>CHSL</b>					
Loans	1,655	1,665	1,306	1,333	1,308
Copies	16,136	18,539	16,882	17,744	17,332
<b>Subtotal</b>	<b>17,791</b>	<b>20,204</b>	<b>18,188</b>	<b>19,077</b>	<b>18,640</b>
<b>MCL</b>					
Loans	322	273	302	253	250
Copies	2,273	3,111	4,464	4,854	5,203
<b>Subtotal</b>	<b>2,595</b>	<b>3,384</b>	<b>4,766</b>	<b>5,107</b>	<b>5,453</b>
<b>Total loans</b>	<b>11,052</b>	<b>12,243</b>	<b>12,039</b>	<b>11,577</b>	<b>12,112</b>
<b>Total copies</b>	<b>30,296</b>	<b>34,640</b>	<b>35,535</b>	<b>31,357</b>	<b>30,423</b>
<b>Total lending</b>	<b>41,348</b>	<b>46,883</b>	<b>47,574</b>	<b>42,934</b>	<b>42,535</b>

Table B.3. GLIDE Transactions

	1993/94	1994/95	1995/96	1996/97	1997/98
SHIELDS	1,408	1,440	1,684	2,067	2,311
PSE	NA	109	82	97	138
CHSL	8,539	8,767	8,755	8,822	9,938
MCL	8,979	9,851	9,731	9,604	10,878
<b>Total</b>	<b>18,926</b>	<b>20,167</b>	<b>20,252</b>	<b>20,590</b>	<b>23,265</b>

Table B.4. Borrowing Fill Rate

	Percent of borrowing requests filled				
	1993/94	1994/95	1995/96	1996/97	1997/98
SHIELDS	87%	93%	92%	93%	90%
Bio/Ag	84	83	88	90	85
PSE	86	82	88	89	87
CHSL	96	95	94	95	96
MCL	88	84	86	92	93

Table B.5. Lending Fill Rate

	Percent of lending requests filled				
	1993/94	1994/95	1995/96	1996/97	1997/98
SHIELDS	55%	57%	60%	62%	66%
Bio/Ag	100	88	92	90	93
PSE	81	77	83	88	87
CHSL	67	73	71	70	70
MCL	80	85	86	88	87

Table B.6. Shields Library Borrowing Turnaround Time

	Calendar days from request to notification		
	1995/96	1996/97	1997/98
Copies	8.80	15.61	11.97
Loans	12.36	11.72	10.37
Total	10.58	13.52	11.17

---

## Appendix C: Report of the ILL User Satisfaction Surveys

July 27, 1999

To: UCD General Library Interlibrary Loan/Document Delivery Review Team  
From: Jennifer Sweeney, Library Analyst

### RE: REPORT OF THE ILL USER SATISFACTION SURVEYS

#### *1. Survey description*

Two surveys of interlibrary loan users were conducted during Spring quarter 1999 to collect data on the level of user satisfaction with interlibrary loan services in UC Davis campus libraries: a paper survey form filled out by ILL users and a telephone survey. Both surveys measured user opinion in several areas: timeliness of the borrowing service, quality and completeness of requested materials, staff interaction, and cost.

*Paper survey:* Survey forms were distributed with ILL materials picked up at Shields ILL, the Bio/Ag and Government Information departments, Physical Sciences & Engineering Library, the Carlson Health Sciences Library, and the Medical Center Library. Three hundred and fifty-one responses were collected during the survey periods from March 1 to March 13 and from April 19 to April 30.

The results of the paper survey showed that 97% of users are very satisfied with interlibrary loan service, particularly in terms of speed, convenience, and staff capability. However, comments provided by respondents indicate that there is some confusion over interlibrary loan procedures and policies, especially regarding request methods and notification. A longer holding period for GLIDE materials was also requested.

*Telephone survey:* Telephone interviews were conducted with 33 students and faculty selected from a group of frequent ILL users, representing all campus ILL units and a diverse number of academic disciplines. The telephone survey comments echoed the positive opinions collected in the paper survey. Several faculty members emphasized the value of the service for conducting research; other respondents noted the efficiency of submitting requests electronically and the helpfulness of the staff in solving problems with citations and hard-to-find materials. Respondents commented on the inefficiency of paper request forms, the need to improve notification procedures, the difficulty of getting certain materials such as foreign patents, and the variable quality of photocopied or faxed

materials. Several users also indicated that they would like to be able to check the status of their requests online.

## 2. Paper Survey Respondents

The majority of ILL users responding to the paper survey were graduate students and faculty, who combined accounted for 60 percent of the ILL transactions surveyed.

	Number	Percent
Undergraduate students	33	9 %
Graduate students	122	35
Faculty	89	25
Researcher	45	13
University staff	31	9
Hospital staff	31	9
Total	351	100 %

## 3. Type Of ILL Service Used

Several discrete interloan services are offered in campus libraries. ILL refers to items that are requested from libraries outside UC Davis. GLIDE is the intracampus book and journal delivery service that operates among UCD campus libraries. NRLF covers items requested from the Northern Region Library Facility, an off-campus storage location, and document delivery refers to items delivered to users through the document delivery service.

Interlibrary loan accounted for more than half the total requests made during the survey period, and GLIDEs for about a quarter of the requests.

	Number	Percent
ILL	192	55 %
GLIDE	92	26
NRLF	65	18
Document Delivery	2	1
Total	351	100 %

#### 4. Type of Service Used by Library Department

	Number of transactions				Total
	ILL	GLIDE	NRLF	DD	
Shields	69	7	37	0	113
Bio-Ag	4	na	na	na	4
Government	3	na	na	na	3
PSE	19	0	28	0	47
CHSL	28	24	0	2	54
MCL	69	61	0	0	130
Total	192	92	65	2	351

The types of services requested by our users during the survey period varies among campus libraries, reflecting a variety of information needs among our users. In Shields Library, for example, ILL was the primary service requested, while CHSL and MCL users were almost evenly split between ILL and GLIDE. This may be due to the closely-related nature of the collections in the health sciences libraries coupled with space constraints at MCL.

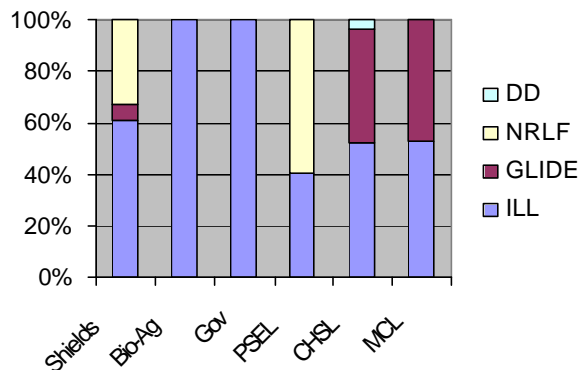
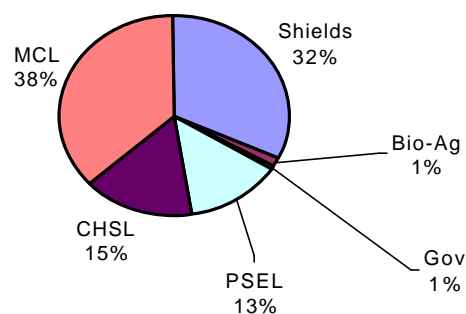


Figure 1. Type of transaction by library department.

Regarding overall volume, Shields Library and MCL each account for about a third of the total transactions in the survey; CHSL and PSE about a sixth.

Figure 2. Percent of ILL transactions by library department.



## 5. Responses to Survey Questions

### a. *Did this item or notification that the item wasn't available arrive in a timely manner?*

A high level of timeliness was noted by users in the survey, with 97 percent of respondents indicating that they received materials or notification in time for them to be useful. Most of the survey comments on this question were positive, with one comment that requests or materials got lost between campuses.

	Number	Percent
Yes	339	97
No	9	3
Not answered	3	na

### b. *Was the quality of the photocopy acceptable or were all volumes or pages of the item supplied?*

Ninety-seven percent of respondents were satisfied with the quality of the items they received. Some comments on this aspect of the service mentioned the inferior quality of some photocopied or faxed materials.

	Number	Percent (n=295)
Yes	286	97
No	9	3
Not answered	56	na

### c. *If the request was not filled, do you believe the ILL staff did all they could to obtain the item?*

Respondents were highly satisfied with their interaction with ILL staff, many noting a high level of competence and problem solving abilities, as well as service perceived as “above and beyond the call of duty.”

	Number	Percent (n=108)
Yes	105	97
No	3	3
Not answered	243	na

d. Did you have to pay for this request?

	Number	Percent (n=342)
Yes	16	7
No	326	93
Not answered	9	na

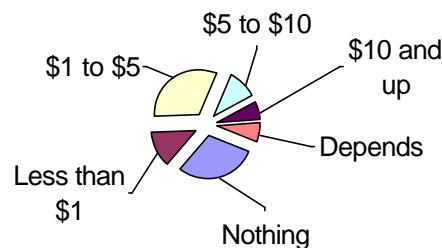
e. If no, how much would you be willing to pay for this request?

One hundred and twenty-two respondents indicated that they would be willing to pay either nothing or some amount, from less than a dollar to \$20, depending on the item and how necessary it was to their research. The majority of users were willing to pay for the cost of the photocopying, or about \$.10 per page for journal articles, as well as the delivery or mailing cost to obtain books.

A number of students felt the service should be paid for out of tuition or fees, and many faculty and others agreed that the service should be provided free as a matter of course.

Percent of users willing to pay					
Nothing	< \$1	\$1 < \$5	\$5 < \$10	\$10 and up	Depends
29 %	13 %	34 %	11 %	7 %	6 %

Figure 3. Percent of users willing to pay a specified amount for an interlibrary loan request.



f. Please comment on UCD ILL services in general (e.g. timeliness, suggestions for improvement, etc.).

Two hundred and fifty-nine respondents provided comments in this part of the survey, 88 percent of which were positive or complimentary in nature. Five percent were complaints, and 12 percent contained suggestions for improvements, additions to the

collection, or new services.<sup>1</sup> Comments covered many aspects of the ILL service, including speed and timeliness of delivery, value and convenience of the service, staff competence, the efficiency of the online request process and delivery mechanisms, the reliability/quality of the service overall, communication and notification procedures, library collection policies, and overall satisfaction with the service.

*Convenience.* A significant number of observations were made regarding the convenience and essential importance of the GLIDE service for clients in MCL and other facilities off the Davis campus who do not travel to Davis on a regular basis.

*Staff competence.* Fifty-three users pointed out the high level of staff competence, noting that ILL staff were always helpful and willing to go to great lengths to check citations, find materials, and help users make the most efficient use of the ILL system.

*Request process.* Users indicated they were very happy with the online request process, including both the ILL form available on the UC Davis web site as well as the newly developed CDL *Request* function on the Melvyl catalog web page. Suggestions focused on the inefficient and repetitive nature of the paper request forms, and a desire for better tracking of requests.

*Delivery mechanism.* A number of users felt that delivery of photocopies through campus mail was convenient and easy. Several respondents asked for GLIDE items to be held longer at MCL.

*Reliability/quality.* Users thought the ILL service in general was highly reliable.

*Communication/notification.* Although a few users mentioned that they thought the email notification system was helpful, there were a large number of comments regarding confusion over when and/or whether users are notified of requests that are ready to be picked up. Users also indicated that they would like more complete citations in the notification. Suggestions included installing an automated phone system to notify patrons of requests that have arrived.

*Library acquisition policy.* There were several requests for increased periodicals holdings at MCL.



---

<sup>1</sup> Percentages do not add to 100 because some comments contained both positive, negative, and suggestion items.

---

## Appendix D: UC Davis General Library Interlibrary Loan Resources On The Web

Peter J. Shields Library Interlibrary Loan and GLIDE:  
<http://www.lib.ucdavis.edu/access/circweb/illglide.html>

Physical Sciences & Engineering Library Interlibrary Loan and  
Science Fax Services:  
<http://www.lib.ucdavis.edu/psl/ill/pslill.html>

The Carlson Health Sciences Library Document Delivery:  
<http://www.lib.ucdavis.edu/hsl/docdel/docdel.html>

The Carlson Health Sciences Library Interlibrary Borrowing:  
<http://www.lib.ucdavis.edu/hsl/ill/aboutill.html>

The Carlson Health Sciences Library Interlibrary Lending:  
<http://www.lib.ucdavis.edu/hsl/ill/illlend.html>

The Carlson Health Sciences Library GLIDE:  
<http://www.lib.ucdavis.edu/hsl/ill/glides.html>

Medical Center Library Interlibrary Loan and GLIDE Services for  
Individuals:  
<http://www.lib.ucdavis.edu/mcl/ill.html>  
<http://www.lib.ucdavis.edu/mcl/glides.html>

University of California Libraries Intercampus Interlibrary Loan  
Manual and Directory:  
<http://www.lib.ucdavis.edu/uc-ill/contents.html>