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Benefit and Cost Analysis of Resource Sharing

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ABSTRACT

Libraries are not exempt from rising costs. The situation presented is how libraries can continue to provide services while also finding efficiencies in labor and operational expenditures. Libraries must examine where budgets are currently being allocated and then evaluate what further steps can be taken to ensure prompt and reliable service while also remaining efficient. For libraries who participate in interlibrary loan or consortial resource sharing, it may be beneficial to use OCLC's Interlibrary Loan Cost Calculator or to determine what the return on investment is for being part of a consortium. University of Illinois Urbana-Champaign used the ILL Cost Calculator and the return on investment provided by the statewide consortium to evaluate current operations and determine what further steps could be taken to provide materials in a timely manner.

Keywords: Resource Sharing, interlibrary loan, cost analysis, state consortium

INTRODUCTION

The University of Illinois Urbana-Champaign (Illinois) participates in a robust resource sharing environment as a net lender and also as a borrower to support the research and scholarship needs of those affiliated with the institution as well as those around the world. The resource sharing environment for Illinois consists of consortial, national, and international interlibrary loan networks. Illinois has a long history of working with the Consortium of Academic and Research Libraries in Illinois (CARLI), a statewide consortium, to provide materials to the member institutions in the state of Illinois (CARLI, n.d.-a). CARLI was formed with the intent of bringing the services of resource sharing, e-resource licensing and subsidized resources, link resolver management, digital collections, statewide collections programs, training and continuing education, integrated library system administration, and help desk function together in one place for the member institutions (CARLI, n.d.-b). Currently, there are 125 governing members, many of which participate in I-Share, the online union catalog and library management system that supports patron-initiated resource sharing among participating member institution libraries

(CARLI, n.d.-d). Due to the size of Illinois' collection, Illinois is consistently ranked first amongst I-Share institutions for number of requests received and filled.

Illinois (OCLC symbol UIU) also participates in interlibrary loan with the primary consortial partners being the BTAA (Big Ten Academic Alliance) libraries, but also with any library nation-wide as well as international libraries around the world (Big Ten Academic Alliance, n.d.; OCLC, n.d.-a). Illinois has been a net lender for decades and philosophically, due to the size of the collection, adheres to the guiding principle that in order to borrow materials from other libraries, one must first be a good lender. Illinois strives to widely share as much from its large and unique 15+ million collection through loans or scans as possible in order to support research and scholarship worldwide.

ASSESSMENT APPROACH

The assessment approach started with an initiative by the BTAA ILL Directors, which was spearheaded by The Ohio State University to use the ILL Cost Calculator (OCLC, n.d.-b) to benchmark and compare costs among the group. Institutions that are members of the BTAA consistently appear in the top ten of the annual list of lenders through the OCLC ILL Worldshare system (OCLC. (n.d.-c) and Illinois is consistently in that group. The decision was made by the BTAA ILL Directors to complete the ILL Cost Calculator for FY22 and submit the data by December 2023. Several institutions were able to participate in the inaugural year in order to set a first benchmark measuring costs for libraries engaged in interlibrary loan. The current goal is for the BTAA to submit data into the ILL Cost Calculator again for FY26 with the assumption that the results will be different given that over the four year span of time that numerous institutions in the consortium will have migrated and implemented a new ILS system. The BTAA ILL Directors will be able to study the impacts on costs as the interlibrary loan operations at each institution stabilize after workflow changes created by new software and other automations that are implemented during that time.

The ILL Cost Calculator was developed by OCLC in collaboration with staff from OCLC Research Library Partnership institutions. Although this tool was created by OCLC, institutions do not need to be a member library in order to use the ILL Cost Calculator. The goal of the tool is to provide a way for libraries to better understand the costs of resource sharing. OCLC highlights six areas that the ILL Cost Calculator allows libraries to analyze:

- Learn the average ILL lending and borrowing costs across the ILL system (whether using OCLC or not)
- Learn the interlending unit costs of the library
- Track changes over time when using the tool multiple years
- Compare their own costs with averages of anonymized peer institutions
- Simulate the cost impact of automating a particular process
- Estimate their own costs for data categories they were unable to report

The ILL Cost Calculator builds on and expands the previous ILL cost studies that were completed by Mary Jackson of ARL in 2002 (Jackson et al., 2004), and academic librarians Lars Leon and Nancy Kress in 2011 (Leon & Kress, 2012). The ILL Cost Calculator allows for a more in depth analysis of expenditures as well as allowing easy comparison with other peer libraries' anonymized data submitted into the tool. The data points that are gathered and entered into the ILL Cost Calculator are in the areas of systems used (for example, WorldShare ILL, Alma / Primo, and any state consortium or ILL management software); staff engaged in interlibrary loan processes including supervisors, full-time and part-time staff as well as student workers; equipment like scanners and servers, and shipping fees. While the number of data points gathered and entered may sound daunting, the ILL Cost Calculator comes with a quick start guide as well as an optional discussion list and a robust group of practitioners who are willing to assist others in the use of the tool. Illinois opted to focus on one aspect of the data input at a time and spread the process out over the period of August through December 2023 which directly followed the FY22 data points that were obtained for entry into the ILL Cost Calculator spreadsheets.

To further assess resource sharing avenues, once the ILL Cost Calculator calculations were complete, statewide consortial return on investment (ROI) was considered. CARLI calculates ROI annually per member institution and provides a customized annal report according to user activity of resources during the fiscal year. The ROI calculation includes all monies paid into CARLI for membership, software and e-resource subscriptions, and consortial participation; the amount is then divided by the total amount spent through CARLI for the services received (CARLI, n.d.-c).

The ROI is calculated three ways: for statewide consortial lending of physical materials, for investment in and use of e-resources, and overall investment into CARLI services and resources. The ROI for physical materials resource sharing (returnable items) only was taken into consideration for the purpose of this assessment. Comparing the results of the ILL Cost Calculator to CARLI's ROI of $2.74 for FY24 indicates that the statewide consortial resource sharing system is a more cost-effective way for Illinois to share and obtain materials than through traditional ILL. This is likely due to I-Share being able to leverage automated requesting in a way that ILL is not able to and the use of the statewide delivery system that enables materials to be delivered in a shorter period of time and with less packaging and processing.

Table 1

Consortium Statistics

Statewide Consortium	FY22	FY23	FY24
Borrowing	3,826	6,379	7063
Lending	11,659	13,452	13721

FINDINGS

Results from using the ILL Cost Calculator indicated that Illinois spends a lower amount on software infrastructure than peer institutions and a higher amount on staffing than peer institutions. Another area of note was the cost of shipping physical materials from Illinois to borrowing institutions in the region, nationwide, and worldwide. Anecdotally, Illinois observed that labor and shipping were areas where costs were higher, but having the ILL Cost Calculator confirm these assumptions with real data was critical in order to focus on cost-saving options.

Upon review of the data, the software infrastructure costs for Illinois remain at a lower rate due to a prior cost-saving decision to support a self-hosted server for ILLiad, which is an interlibrary loan request management system (Atlas Systems, n.d.). Illinois has also strategically selected to reduce the number of software products and platforms needed to provide streamlined interlibrary loan operations, which have also reduced costs. Another area where Illinois has found savings is the purchase of robust flatbed scanning equipment that operates well past the four year depreciation rate that the ILL Cost Calculator takes into consideration at the point of data entry.

Table 2

FY 2022 ILL Service Statistics

ILL Services FY22	Number of requests filled	Average Cost Per Request Filled
Borrowing Copies	5,166	$29.20
Borrowing Loans	8,969	$19.65
Lending Copies	4,439	$27.96
Lending Loans	28,325	$12.84

In contrast to the lower software infrastructure costs, Illinois has two primary factors that keep staffing costs at a higher rate. The first factor is that the mean wage of librarians and media collections specialists in the state of Illinois ranks in the second-highest tier across the nation; $61,970-$72,210 (U.S. Bureau of Labor Statistics, 2024). Second, there are automations for interlibrary borrowing request processing that cannot be taken advantage of due to the way that identity management is handled at the institution level for access and permissions to request interlibrary loan services.

IMPLICATIONS FOR PRACTICE

The findings from the ILL Cost Calculator indicated some areas of the operation that should be reviewed. These areas were staff costs and shipping costs. One way to reduce staff costs is to increase automation. The identity management environment at Illinois currently restricts fully utilizing automation options; however, partial automation can be taken advantage of and increased. Specifically, the RS4G (Resource Sharing for Groups) as developed by OCLC in consultation with the BTAA ILL Directors is being used by Illinois (UIU) when a request is manually kicked off into the process, thus some benefits of the automation are being utilized. Other institutions are using automated processes more robustly than Illinois and are able to leverage these tools to keep their staff costs slightly lower in comparison to Illinois.

A second area to be reviewed is the shipping costs for physical materials. Shipping costs have significantly increased worldwide since 2020 and will continue to do so as packaging supplies cost more and shipping fees rise due to labor, fuel, and equipment costs of courier service companies. Are there ways for consortia or individual institutions to negotiate and lower their costs with specific courier services to reduce the high cost of interlibrary loan transactions for returnables? A consortial-level investigation into this area seems worthwhile, as cost savings could be realized in this area of expenditure.

Illinois is a cost-recovery operation and must charge for loan of materials as well as the scanning of articles at a rate of $15 USD per article citation and $25.00 USD per loan for non-consortial partners. While these fees may seem prohibitive and counter to the ideas of resource sharing between libraries for the benefit of users, it is evident from the results of the ILL Cost Calculator that supplying scans to other libraries at a rate of $27.96 USD is not a service that is fully supported by the fee charged by Illinois of $15 USD per citation. In contrast, the costs of lending returnables are significantly impacted by the way that Illinois leverages the state consortial partnerships to lower costs. Lending returnables costs Illinois $12.84 USD per transaction, however, in reality that cost is significantly higher for international loans of returnable materials. Using the dedicated delivery system to deliver ILL materials to institutions who are not members of CARLI but are within the state of Illinois has reduced costs even further by lowering the shipping costs per transaction, which helps to offset the higher overhead for sharing materials nation-wide and internationally. The use of the dedicated delivery system is reflected in the ROI as one of the expenses CARLI pays on behalf of all governing members.

CONCLUSION

By using the ILL Cost Calculator, Illinois learned that the library was spending significant amounts of money on resource sharing services, particularly in the area of interlibrary loan requests, which provided the opportunity to review ILL policies, procedures, and workflow to determine where changes could be made.

With that in mind, Illinois continues to seek to maximize the benefits of their own collection first and then the resources in their statewide consortium I-Share before turning to traditional ILL to fill requests, as these methods are both more time- and cost-effective due to increased automation settings and a dedicated delivery system. When using ILL to fill requests for materials, costs can be minimized by prioritizing requesting from institutions with whom there are established reciprocal borrowing agreements and/or have closer proximity. Further ways to spread library resources include automating as much of the requesting process as possible, directing users to use public libraries for more popular or personal entertainment needs, and managing the number of requests coming in per library user or per day. Additionally, libraries should continue to engage in mass digitization of materials not only to realize cost savings, but to expand the access to materials for users worldwide as well as reduce the carbon footprint of international research and scholarship.

Illinois found that the time examining the true costs of resource sharing through using the ILL Cost Calculator and comparing it with the ROI of the statewide consortium was beneficial for the institution. If a library is part of a consortium, consider requesting ROI information from the consortial office to consider how beneficial membership is and what impact the membership is having on library users. Illinois would also encourage libraries who are interested in learning more about their own ILL costs to use the OCLC ILL Cost Calculator for further evaluation of ILL operations. Using data available from the ROI and the OCLC ILL Cost Calculator can help institutions explore options for maintaining a sustainable interlibrary loan program through automating requesting, examining delivery options, and leveraging consortial partners. The data is also useful when libraries are engaged in budgetary discussions with their institutions. Finally, resource sharing among libraries plays an important part in supporting the campus-wide ecosystem to advance research and scholarship; data that demonstrates the expenditures to operate these services can be used to obtain funding from the campus to provide robust and sustainable service levels.

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