Evaluating resource sharing performance in an academic health sciences library utilizing the Rapid*ILL* System

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To stay in line with user needs and workflow demands, interlibrary loan officers must continuously incorporate innovative technologies into their departments. Evaluating the usefulness of these new systems to ensure appropriate implementation, can be a large undertaking as there are many issues to address during such an assessment. This study tracked the interlibrary loan activity from June through November of 2005, 2007, and 2008 of Tufts University Hirsh Health Sciences Library, in order to explore the advantages and disadvantages of participating in the Rapid*ILL* resource sharing system. Volume changes, breadth of resource sharing circles, transactional fees, staffing needs, turnaround time, and fill rate, were the main facets of interlibrary loan borrowing and lending activity analyzed.

Interlibrary loan, document delivery, academic health sciences libraries, Boston Library Consortium, Rapid*ILL*

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INTRODUCTION

The relatively frequent launch of innovative technologies and workflow strategies in interlibrary loan (ILL) services is a dynamic that is typically welcomed and necessary for libraries. Evaluating the performance and usefulness of these systems, however, can prove taxing on many levels, as there are a number of questions to ask and answer during such an assessment. Is the system enhancing the library's ability to meet its users' needs? Is it increasing the satisfaction of the library's users? Does it improve efficiency in the ILL department? Is it cost-effective? Does it enable the library to further develop its role in the resource sharing community? These questions, among others, underscore the main concerns libraries face both for mere survival and for their development. They also lay the ground work for the components this paper addresses in its efforts to weigh the utility of one academic health science library's participation in the Rapid*ILL* resource sharing system, known as Rapid, for short. Observationally, several changes were noted when Tufts University Hirsh Health Sciences Library (HHSL) implementing Rapid. Almost instantly, lending volume grew and workflow was altered by the addition and replacement of several tasks and processes. This study was conducted in order to better comprehend the impact of these changes and determine the most appropriate level of involvement for HHSL in the Rapid system.

BACKGROUND

Hirsh Health Sciences Library <http://www.library.tufts.edu/hhsl/>, located on the Boston, Massachusetts campus of Tufts University, provides resources and services for medical, dental, nutrition and biomedical science students, faculty, and staff, as well

as for members of the Tufts Medical Center community and affiliate institutions throughout New England.   The library serves a community of nearly 10,000 users, not including hospital or consortium affiliates. As of 2008, HHSL held approximately 158,000 volumes in its collection[1], providing access to 159 print only journals, 336 print & online journals, and 504 journals only available electronically. Those journals only available electronically were not visible for resource sharing purposes outside of "in-house' copying, during the study period relevant to this paper, 2005-2008.

Designed by the ILL staff at Colorado State University Libraries, Rapid is a resource sharing system developed to provide fast and cost effective article requesting and delivery through ILL[3]. It integrates with existing document delivery software, in the case of HHSL, with the ILLiad Resource Sharing Management Software and the Ariel ILL Document Transmission Software. In the summer of 2006, the Boston Library Consortium (BLC) <http://www.blc.org/>, an association of 19 academic and research libraries in the New England area dedicated to sharing human and information resources to advance the research and learning of its constituency[2], began participating in Rapid in order to meet its needs for an unmediated article requesting option between consortium partners. As a member of the BLC, Tufts University joined this project.

Rapid participants commit to 24-hour turnaround time during business hours for lending requests, including either locating and filling requests within 24 hours of receipt or updating to unfilled or bad citation, within 24 hours for items that cannot be located. In addition, participants, with the exception of a few exempt libraries with unique collections, agree to reciprocity within Rapid, therefore there is no fee charged or

received per transaction[3]. All requests made between members of the BLC are always filled without transactional charges, whether through Rapid or any other means.

In order to take full advantage of free reciprocal borrowing, it has been HHSL's practice to run all non-returnable requests, that is, requests for articles, book chapters, and/or other items where it is sufficient to send a reproduction of the work that does not need to be returned to the lending library, through Rapid before trying any other resource sharing system. Starting in December of 2007, HHSL implemented Rapid's Unmediated Borrowing feature, which automatically pushes requests through the Rapid system without staff intervention, following copyright clearance.

From August 2006 through April 2008, HHSL belonged to two of Rapid's resource sharing communities, the Academic (Extensive) E pod and the BLC pod. Users can only lend and borrow to and from members in pods they participate in. The Academic E pod is comprised of approximately 100 sites and is open to institutions listed in the Carnegie Foundation's "Carnegie Classification of Institutions of Higher Education" as 'Very High' (RU/VH) or 'High' (RU/H) research activity universities[3]. While membership in the Academic E pod is dynamic, during the study period of this paper, 2005-2008, sites rarely left the pod and Rapid did not formally track the make-up of this group over time. The BLC pod is only open to members of the consortium and overlaps with some membership in the Academic E pod. Since May 2008, due to concerns about the overwhelming burden membership in the Academic E pod may be placing on HHSL's ILL department, HHSL has only been involved in the BLC pod.

METHODOLOGY

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Study Period

This study tracked HHSL's ILL activity from June through November of three years – 2005, 2007, and 2008, representing HHSL at various stages of involvement in the Rapid system. In 2005, HHSL had not yet started using the Rapid system. In 2007, involvement in both the Academic E and BLC pods was fully operational. In 2008, HHSL had ceased participation in the Academic E pod and was only part of the BLC pod in Rapid. 2006 was skipped since HHSL only began using Rapid part way through the data set in August 2006. The same time of year was consistently used in efforts to decrease the number of unrelated variables from the study. June through November, covering the summer and most of the fall academic semester, represents times of year with relatively lighter and heavier volume for ILL services at HHSL. Throughout this paper, the study periods are referred to by their respective years.

Several facets of ILL activity were considered in this study, namely, lending and borrowing volume, breadth of resource sharing circles, transactional fees, staffing needs, turnaround time, and fill rate in order to assess the efficiency and effectiveness of ILL productivity and workflow at HHSL. Various tools, such as ILLiad web reports, ILLiad custom reports, ILLiad Billing Manager, Rapid statistics, EFTS Member Accounting Reports, OCLC Usage Statistics, and NELINET account statements were used to generate data regarding these facets.

Lending Volume

Lending encompassed non-returnable item requests filled from the HHSL collection for libraries, companies, and individuals outside the HHSL user base, including

patrons at other Tufts libraries. Volume was calculated based on requests initiated within the study periods regardless of when they were completed.

Borrowing Volume

Borrowing consisted of all non-returnable item requests generated by the HHSL user base, except "in-house" requests, which are for items in HHSL holdings. All PubMed article requests for items outside HHSL's collection made by Loansome Doc users, whether they be members of the Tufts community or unaffiliated, were also included in borrowing. As was the case for lending, borrowing request volume was based on requests initiated during the study periods, regardless of when completed.

Transactional Fees

To calculate ILL transactional costs and payments, this study included the two electronic fund management programs HHSL is a member of, namely, OCLC ILL Fee Management (IFM) and DOCLINE Electronic Fund Transfer System (EFTS), as well as print invoices. As much as possible, data was collected for requests filled within June 1st through November 30th of 2005, 2007, and 2008, regardless of when payments were requested or received. However, some outlying fees that were charged several months beyond the transaction date may have been overlooked.

ILLiad Web Reports were used to calculate the IFM lending fees accrued, however, since unavailable in these reports, IFM borrowing charges were tallied using OCLC Usage Statistics. HHSL began using IFM in April 2006, therefore there is no IFM data for 2005 transactions. EFTS costs were calculated using the EFTS Member Accounting Reports for both credits and debits.

ILLiad Billing Manager was used to generate data for lending invoices. Electronic account statements from NELINET, a New England regional network for OCLC, were used to calculate document supplier borrowing charges, such as from the British Library Document Supply Centre. Print invoices were also tallied when necessary. Copyright Clearance Center payments for borrowing requests were not included, except in instances where document suppliers included copyright payment fees in their supply fees. While HHSL charges some segments of their user population for borrowing requests filled, these invoices were not included.

Staffing

For the interests of this study, staffing focused on employees who performed duties directly related to filling non-returnable requests, such as pulling, photocopying, scanning, and transmitting lending and borrowing items. Over the course of all three study periods, the ILL department maintained two full time paraprofessionals, and one librarian for approximately 15-20 hours per week. Their job functions outside this scope, such as filling requests for books and other returnable items and general billing responsibilities, were considered only with regard to the effects concentrating on filling non-returnable requests may have had on accomplishing these tasks.

Turnaround Time

Turnaround time data referred to the time it took a request to progress from entering the resource sharing system to reaching its final state, such as, filled, unfilled, canceled, or deleted. Requests were included that reached their final state between June 1st and November 30th of the select year, therefore, some requests may have been initiated prior to June 1st.
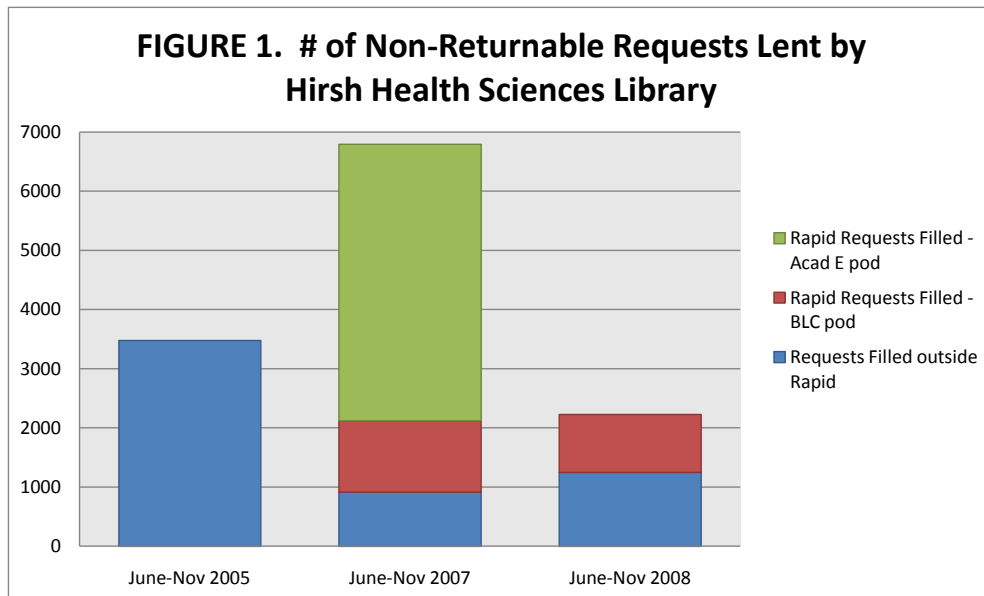
Fill Rate

Borrowing fill rate included all non-returnable requests, whether filled "in-house" or by an outside library. Since the fill rate for items copied from HHSL's own collection was virtually 100%, "in-house" copying negligibly affected the borrowing fill rate.

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FINDINGS – IMPACT ON LENDING

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Lending Volume

Joining the Academic E pod in Rapid had a dramatic effect on HHSL's lending volume. Figure 1 provides a breakdown of volume for the three study periods in 2005, 2007 and 2008. Examining the snapshot of data from 2005, when HHSL was not participating in Rapid, to the same months in 2007 when Rapid usage was in full swing at the library, the number of filled lending requests nearly doubled, increasing by 96%.

FIGURE 1. # of Non-Returnable Requests Lent by Hirsh Health Sciences Library

Legend:
- Rapid Requests Filled - Acad E pod
- Rapid Requests Filled - BLC pod
- Requests Filled outside Rapid

In June through November 2007, Rapid requests accounted for 86% of the total lending volume at HHSL. In 2008, when HHSL had left the   Academic E pod, lending volume decreased by 67%. Incidentally, this volume in June through November 2008 fell to an amount lower than it had been in 2005, when HHSL was not yet participating in any Rapid pod.

As one of few health sciences libraries involved in Rapid's Academic E pod in 2007, HHSL's collection was in high demand and HHSL filled a significantly higher number of requests than many other libraries in the Academic E or BLC pods that period, despite maintaining a considerably smaller collection than many other participating libraries. For example, HHSL lent approximately 15% more non-returnables in June through November 2007 than Tisch Library, Tufts University's main library for the Schools of Arts & Sciences and Engineering, which has a print serials collection approximately triple the size of HHSL's.[1] Overall, HHSL filled 72% more requests than the average library in the Academic or BLC pods during that six month period. Conversely, in 2008, when HHSL was only participating in the BLC pod, filled lending requests decreased dramatically to 56% below the average volume for other sites in the BLC pod during that same interval.

Resource Sharing Circles

Inclusion in the Academic E pod in Rapid increased HHSL's interaction with several libraries not otherwise in its regular resource sharing circles. As figure 2 indicates, the magnitude of all non-returnable requests made by Academic E pod libraries to HHSL outside of Rapid, pales in comparison to HHSL's volume from Academic E pod libraries within Rapid.

FIGURE 2. # of Non-Returnable Requests from Non-BLC Libraries Involved in the Academic E Pod* Filled by Hirsh Health Sciences Library

	Rapid	Other
June - Nov 2005	0	47
June - Nov 2007	4,674	11
June - Nov 2008	0	21

* based on the November 10, 2008 membership for requests not through Rapid

While Rapid's Academic E pod introduced HHSL to different borrowers, it did not necessarily increase the quantity of borrowing libraries with which it interacted. In 2005, HHSL filled non-returnable requests for 332 discrete borrowers, averaging approximately ten per borrower. In June through November 2007, despite the number of lending requests rising dramatically, the discrete number of borrowers only increased by two to 334, doubling the average number of non-returnable requests per borrower to over 20. In June through November 2008, lending activity dropped, as did the number of discrete borrowers, to 264, and the average number of requests to each borrower fell to roughly eight.

Transactional Fees

As figure 3 displays, fees charged in 2007 rose by 22%, as compared to the same time period in 2005. In 2008, when HHSL already dropped the Academic E pod, fees paid to HHSL decreased by 26%.

FIGURE 3. Fees (USD) Charged by Hirsh Health Sciences Library to Borrowing Libraries
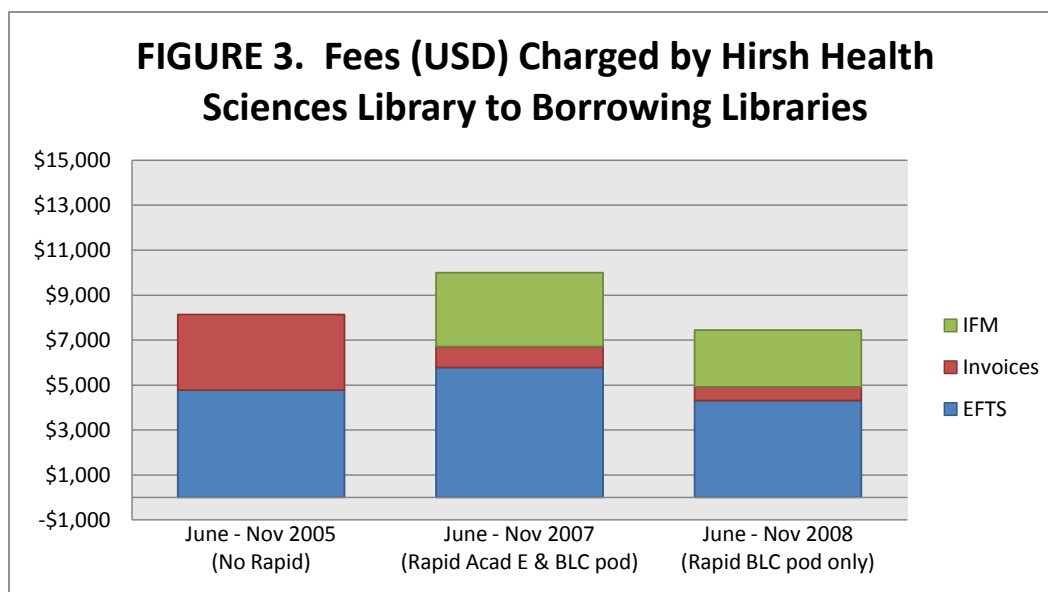
Staffing

In 2005, HHSL employed a full time photocopy clerk who dedicated 28 hours per week pulling, photocopying, and reshelving journals to fill ILL non-returnable lending requests. The library also retained a student worker, who, for two hours per week, scanned and transmitted lending documents, as well as performed tasks similar to the photocopy clerk. In addition, during July and August, a high school intern, paid by a source outside the library, carried out photocopy clerk duties roughly 15 hours per week. By 2007, the full time photocopy clerk position had been eliminated and the student employee time increased to 10 hours per week on lending tasks. The two full time ILL paraprofessional staffers also began participating in pulling and photocopying lending responsibilities, for five to ten hours per week, depending on volume. This meant that other tasks performed by these full time staffers, in particular clearing new ILL registrants, generating and processing billing invoices, and dealing with problem requests, were often deferred. No high school intern was employed in the ILL

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department during that summer. In June through November 2008, no student worker

was employed directly for the ILL department, however students working nights and

weekends in the Public Services department fulfilled photocopy clerk duties for generally

five hours per week in total. In addition, during July and August, a high school intern,

paid outside the library, devoted 15 hours per week pulling and photocopying non-

returnable lending requests. Midway through the study period, two full time public

service paraprofessional staff members began devoting approximately 4 hours each per

week pulling and photocopying lending requests. In addition, on occasion, one or both of

the two full time ILL paraprofessional staffers participated in pulling and photocopying

responsibilities, approximately two hours each per week.

Turnaround Time

HHSL did not experience a substantial difference in the speed with which lending

requests were filled based on the system used to process them. On average, all lending

requests filled at HHSL between June and November 2007, whether through Rapid or

other means, reached their final state in fewer than 24 hours.   As figure 4 illustrates,

though, the 2007 turnaround time was slightly faster than other years, despite being a

period of heavier lending volume for HHSL.

FIGURE 4. Average Turnaround Time (days) for Non-Returnable Requests Lent by Hirsh Health Sciences Library
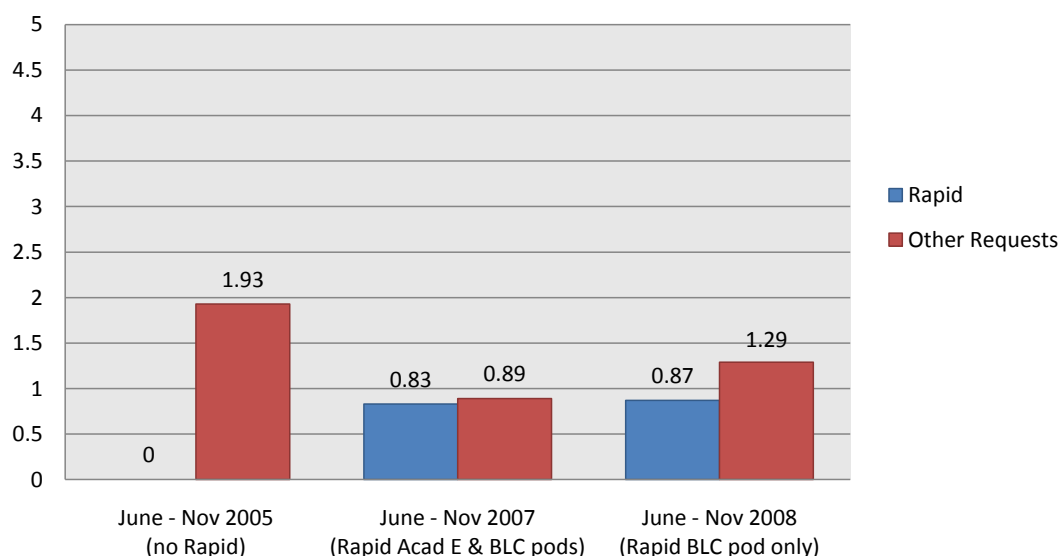
Fill Rate

During the 2007 and 2008 study periods, the fill rate in Rapid remained consistently higher, averaging 14% above the fill rate for all others requests HHSL processed. Figure 5 outlines the gradual rise in HHSL's overall fill rate for lending non-returnable requests over June through November of 2005, 2007, and 2008.

FIGURE 5. Fill Rate (%) for Non-Returnable Requests at Hirsh Health Sciences Library
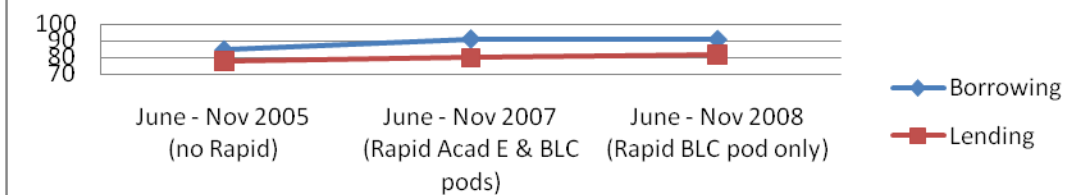
FINDINGS – IMPACT ON BORROWING

Borrowing Volume

The number of borrowing non-returnable requests at HHSL steadily increased each year of the study. Rapid played an influential role in how these requests were filled in the 2007 and 2008 study periods. As reflected in figure 6, 80% of all requests were filled in Rapid in 2007. In 2008, 50% of requests were filled in Rapid.

FIGURE 6. # of Non-Returnable Requests Borrowed by Hirsh Health Sciences Library
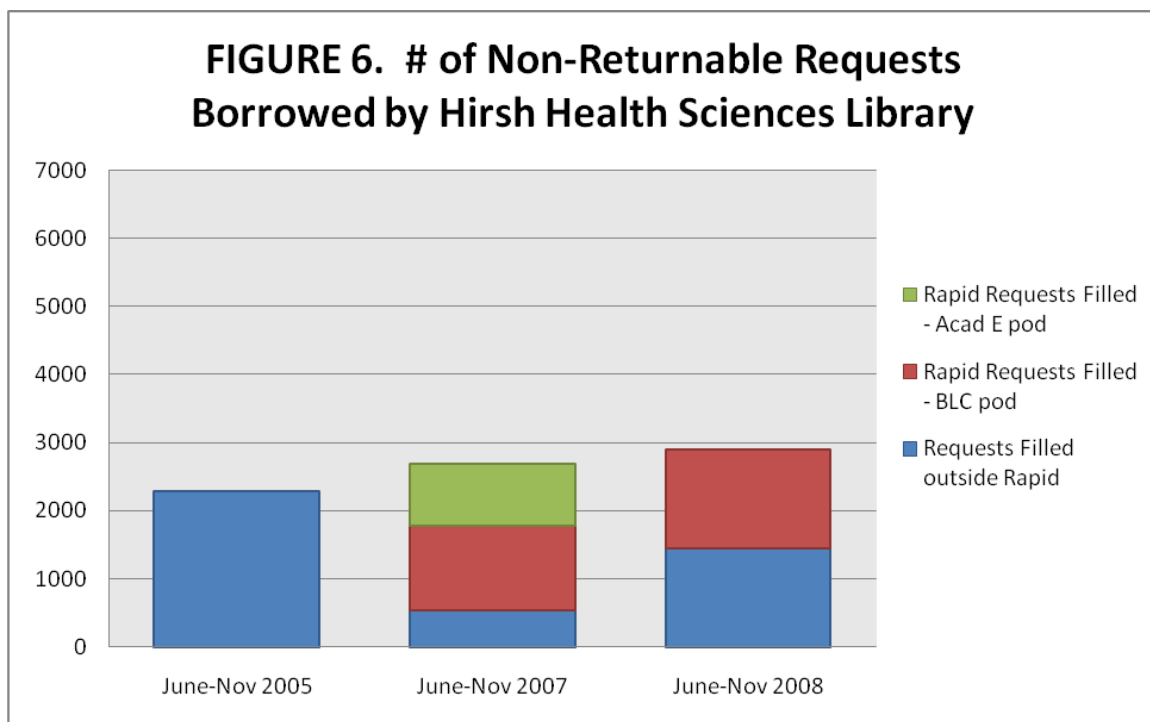
In general, HHSL's borrowing volume in Rapid remained substantially lower than other Rapid libraries. In 2007, the average library in the BLC and Academic E pods had 41% more borrowing requests filled through Rapid than HHSL did. In 2008, when HHSL was only in the BLC pod, the average library in the BLC pod had 60% more borrowing requests filled through Rapid than HHSL.

Resource Sharing Circles

In June through November 2007, requests filled in Rapid by non-BLC libraries in the Academic E pod accounted for approximately 34% of all filled non-returnable requests for HHSL. However, as was the case in lending, this phenomenon was not typical for HHSL. Outside of the Rapid system, as figure 7 confirms, HHSL interacted only minimally with the non-BLC libraries represented in the Academic E pod for borrowing requests.

FIGURE 7. # of Non-Returnable Requests Lent by Non-BLC Libraries Represented in the Academic E Pod* to Hirsh Health Sciences Library

	Rapid	Other
June - Nov 2005	0	30
June - Nov 2007	914	1
June - Nov 2008	0	20

* based on the November 10, 2008 membership for requests not through Rapid

The sheer number of lenders HHSL borrowed non-returnables from decreased while involved in the Academic E pod. In June through November 2005, HHSL borrowed from 257 discrete lenders, averaging approximately nine requests per lender. In 2007, while involved in te Academic E pod, the number of lenders reduced to 198, raising the average number of requests per lender to roughly 14. In June through November 2008, when only included in the BLC pod in Rapid, HHSL borrowed from 235 discrete lenders, approximately 12 requests per lender.

Transactional Fees

Figure 8 shows both the 34% decline in transactional fees HHSL paid for non-returnable borrowing requests between the 2005 and 2007 study periods, as well as the subsequent sharp, 104% escalation in transactional fees from 2007 to 2008.

FIGURE 8. Fees (USD) Paid by Hirsh Health Sciences Library to Lenders
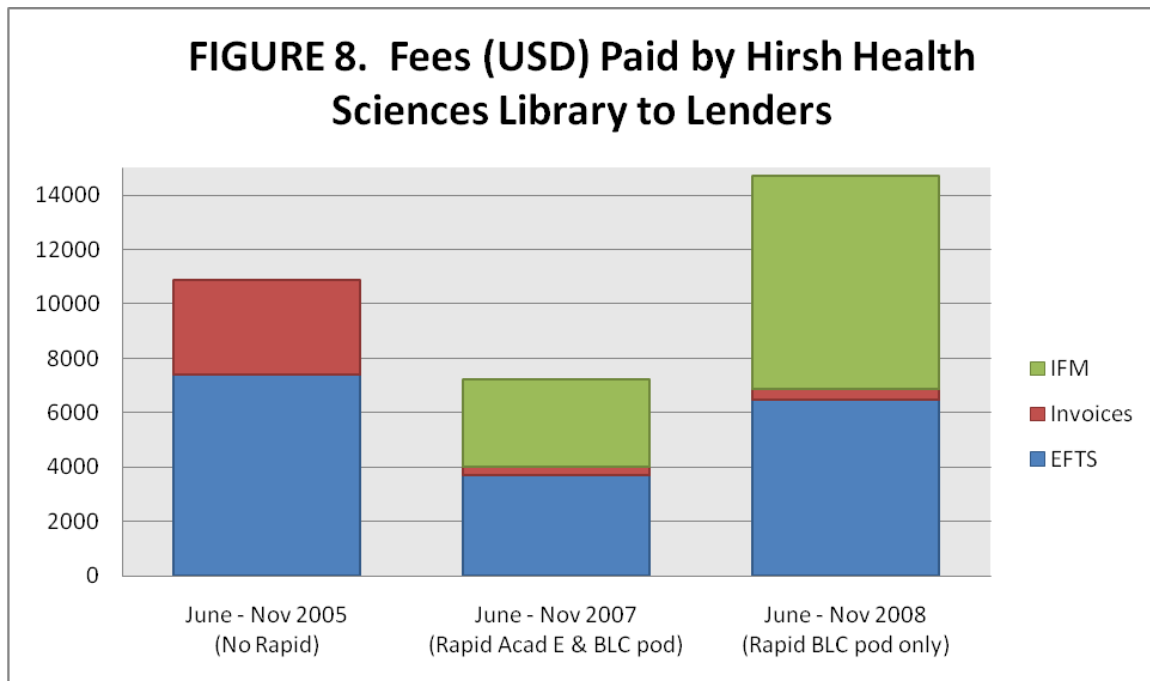
Staffing

In June through November 2005, the full time photocopy clerk was not involved in non-returnable borrowing activity. The part-time student worker allocated four hours per week to scanning and transmitting non-returnable borrowing requests, and during July and August, the high school intern also worked five hours per week on borrowing activities. In June through November 2007, the part-time student worker spent 2 hours per week on borrowing tasks. And, in June through November 2008, all borrowing tasks were assumed into the workload of the fulltime ILL paraprofessional employees.

Turnaround Time

As detailed in Figure 9, HHSL's turnaround time remained well within the 24 hour objective for non-returnable borrowing requests in Rapid, averaging fewer than 15 hours per request in both the 2007 and 2008 study period. Requests filled through other systems maintained much longer turnaround times, averaging over 4 days per request in 2005, 2007, and 2008.

FIGURE 9. Average Turnaround Time (days) for Non-Returnable Requests Borrowed by Hirsh Health Sciences Library
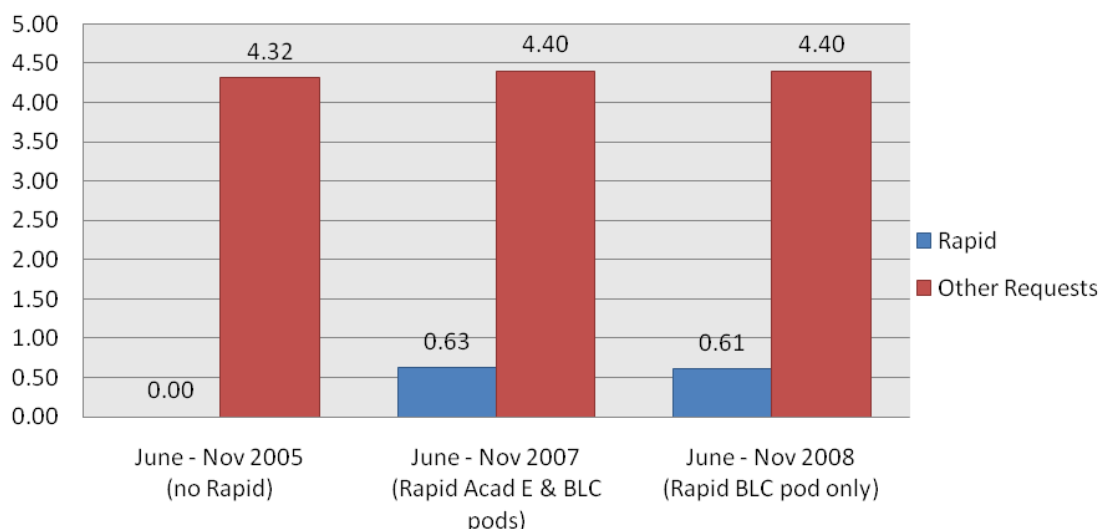
By nature, challenging requests leave Rapid and sit in ILLiad while awaiting resolution, therefore examining the median turnaround time may also useful. For June through November 2005, the median turnaround time for a non-Rapid borrowing request was just over three days at 3.04, meaning 50% of requests took fewer than 3.04 days and 50% took more than 3.04 days to be filled. In June through November 2007, the median turnaround time for non-Rapid requests of non-returnable items was 2.83 days and in 2008, it was 2.92 days.

Fill Rate

During the 2007 and 2008 study periods, HHSL's borrowing fill rate in Rapid remained consistently higher than the fill rate for requests through any other system. Figure 5 demonstrates how the borrowing fill rate for all non-returnable requests, both through Rapid and other systems, varied across the three time periods. Fill rate rose by

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approximately 7% from the study period in 2005 to 2007 and then dropped modestly, by a third of a percent from 2007 to 2008.

DISCUSSION – IMPACT ON LENDING

Lending Volume & Resource Sharing Circles

Among the most evident changes HHSL experienced when participating in Rapid's Academic E pod, were the surge in lending activity and increased interaction with different borrowing libraries. While these changes certainly enhanced HHSL's contribution to the resource sharing community, it is difficult to accurately measure the scop of this impact. The overall quantity of libraries to which HHSL lent did not substantially change from the 2005 to 2007 study period. However, in the 2008 study period, when HHSL had left the Academic E pod, the borrowing library base shrank by 21%. In addition while a net lender in 2005 and 2007, in the 2008 study period, borrowing and lending activity was at its closest to equilibrium of the three data sets, and HHSL became a net borrower.

Lending Fees

One unforeseen change during the spike in lending in 2007, was the increase in lending transactional fee payments. Since all Rapid requests were filled free of transactional charges, only requests made outside that system affected transactional costs. The 22% rise in fees accrued during the 2007 study period, therefore, was not anticipated given the 74% plummet in request count outside of Rapid during the same interval. Similarly, in 2008, when lending activity outside of Rapid grew by 36%, lending transactional fees managed to fall 26%. Variables, such as reciprocal agreements and

special service conditions, namely rush or color copy service, did somewhat impact the total fees accrued. Therefore, simply tallying the number of requests filled cannot provide the full picture of what shaped transactional costs since HHSL did not charge all borrowing libraries nor did they charge the same amount to all libraries it did invoice.
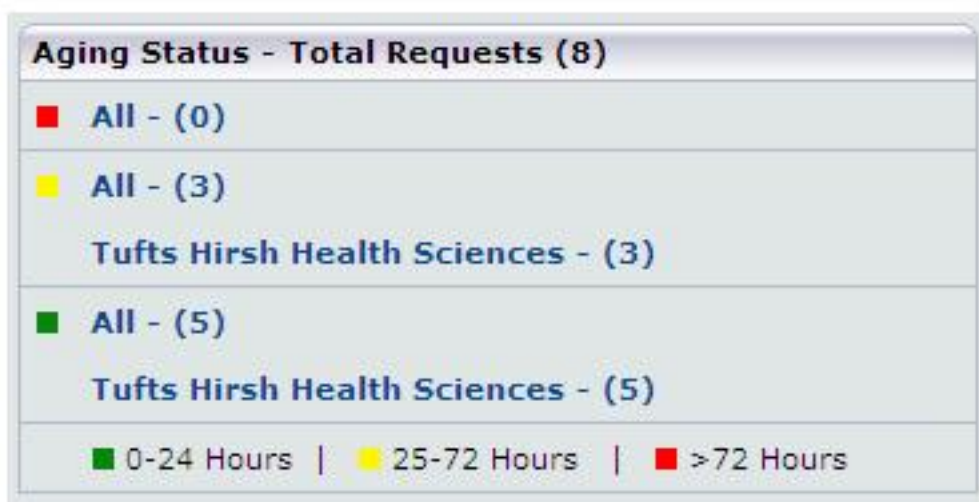
Staffing

Another counter finding was the decrease in staff hours for those involved in pulling, photocopying, scanning, and transmitting non-returnable items from 2005 to 2007, when lending volume overall increased. To put these changes in perspective, it is important to note that majority of these staff hour adjustments were decided prior to HHSL's participation in Rapid in 2006 and took into account other variables, such as increased availability of electronic full text materials, implementation of service automation and streamlining software, such as ILLiad and Ariel, as well as long-term lending volume trends, which, prior to participation in Rapid's Academic E pod, showed a general decline over several years. The shift in responsibilities for full time paraprofessional staff to take on pulling and photocopying tasks in 2007 was one exception. This adjustment was a direct result of the increased lending volume experienced through Rapid's Academic E pod. Since only needed as a temporary measure, the consequences of putting off other ILL duties in its place did not become insurmountable. Had the changes in workload been more permanent, potentially the case if HHSL continued with the Rapid Academic E pod, the effects of delaying tasks, may have become a greater concern.

Turnaround Time

One might have expected an improvement in turnaround time from 2005 to 2007, due to the increase in electronically available articles and growing facility by staff utilizing workflow streamlining technologies, such as ILLiad. However, 2007 was also the period of heaviest lending volume. Averaging all requests, both within and outside of Rapid, turnaround time was approximately five hours faster in 2007 than the same interval in 2008 when request volume was down by 67%. These figures would suggest that when the workload remained consistently higher, productivity improved.

While in the 2007 study period, the gap in turnaround time between Rapid and other requests was fewer that one and half hours, in 2008, that disparity grew and Rapid lending requests averaged over ten hours faster turnaround time than non-Rapid lending requests. The cause of this widening rift is unknown. In general, there may be several reasons that contribute to Rapid lending requests moving more quickly through the system. One worth pointing out is the constant presence of the aging status indicator in Rapid's lending staff interface, which presents a tremendous amount of transparency to turnaround time. It has not been HHSL's practice to prioritize Rapid requests ahead of other requests in its work queues. However, this indicator, excerpted in Figure 10, readily alerts staff to the age of lending requests in the system, and takes advantage of the cognitive associations individuals may have with the colors used on a traffic light. Requests in process fewer than 24 hours display in green, those in process between 25-72 hours are in yellow, and those older than 72 hours are in red. The "emotional trauma" associated with discovering requests have fallen into the red zone should not be under estimated.

FIGURE 10. Aging Status Indicator in Rapid's Lending Interface

Aging Status - Total Requests (8)

- All - (0)
- All - (3)
  - Tufts Hirsh Health Sciences - (3)
- All - (5)
  - Tufts Hirsh Health Sciences - (5)

■ 0-24 Hours | ■ 25-72 Hours | ■ >72 Hours

Fill Rate

Parallels between the steadily improving lending fill rate across the three study periods and HHSL's participation in Rapid are not readily apparent. Available holdings information in general improved over the years, decreasing errant lending requests for items unavailable or not owned by HHSL. In addition, Rapid employs some practices to improve their holding information not necessarily enforced by other ILL databases, specifically matching serial holdings to the year level and updating holdings information on a six-month cycle[3].

DISCUSSION – IMPACT ON BORROWING

Borrowing Volume

The steady increase HHSL encountered in borrowing volume over the three study periods is likely attributed to a number of causes, which are not necessarily readily isolated. The speedy turnaround time users experienced for requests filled through Rapid

may have promoted expanded use of ILL services. In addition, changes in HHSL's

holdings and/or breadth of collection could have affected the quantity of borrowing

requests. Also at play may have been efforts to streamline access to the interlibrary loan

request feature for users. Starting in Fall 2005, Tufts Libraries also implemented

Innovative Interfaces Inc.'s OpenURL link resolver, WebBridge, which, among other

features, enabled users to populate ILLiad request forms directly from databases where

the user discovered the citations of interest. Between June through November 2005,

when the service was implemented halfway through the study period, 14% of ILLiad

requests were placed via the WebBridge service. In the 2007 study period, that number

jumped to 48% and remained steady with 46% in the 2008 study period.

Resource Sharing Circles

While it is difficult to conclusively correlate many of the changes HHSL

experienced while participating in the borrowing component of the Rapid Academic E

pod, one clear result was HHSL's increased accessibility to lenders not otherwise

typically tapped by the library. This served to distribute borrowing requests among

different lenders. As was the case in lending, this did not translate to spreading the

workload among a larger group of lenders, but actually to the contrary, increased the load

on a smaller number of lenders.

Transactional Fees

An inverse correlation was also tracked between borrowing participation in the

Rapid Academic E pod and transactional costs paid. In 2007, when a member of the

Academic E pod in Rapid, HHSL's transactional fees paid to lending libraries decreased

by one-third, as compared to 2005 study data. In 2008, when no longer involved in the

Academic E pod, HHSL's transactional costs for borrowing requests doubled. While some increase in cost may be due to libraries raising their fees from one year to the next, the 171% upsurge in borrowing requests filled outside of Rapid between the 2007 and 2008 study periods clearly contributed to this rise in costs.

Staffing

Since the majority of responsibilities and tasks related to borrowing were already assumed by the full time paraprofessional staff even before the study period began, the personnel changes that occurred over the three years in borrowing were less disruptive than they were for lending. Similar to lending, though, the workload shift in 2007, which reassigned some job functions to the full-time employees instead of part-time staffers, did mean that other tasks were delayed. If the delay was more long-term, the negative effects may have become detrimental to the department workflow.

Turnaround Time

The difference in turnaround time between requests through Rapid and those processed through other means was much greater in borrowing than lending. It is important to note that the time it takes to resolve challenging requests is often not reflected in Rapid statistics. If no Rapid lender was found for the article in question, the request was booted out of the system into ILLiad until problems were resolved and lenders identified. While Rapid lenders can easily report bad citations to the borrowing library through the Rapid system, other types of challenging requests cannot be dealt with in this manner.

Fill Rate

The slight increase seen across the three study periods for borrowing fill rate does not seem to follow any pattern related to HHSL involvement in Rapid or, more specifically, the Academic E pod. The rise in HHSL's borrowing fill rate in 2007 may, to some degree, have been positively affected by the increased access to the pool of lenders HHSL interacted with in the Rapid Academic E pod, however few other connections can be made based on the changes observed.

CONCLUSIONS

HHSL's assertion in 2008 to work exclusively with the BLC pod in Rapid, was not necessarily a static decision and expanding HHSL's participation again in Rapid may be feasible. As this paper demonstrates, there are many facets HHSL has and will continue to consider regarding the advantages and disadvantages associated with involvement in Rapid, and specifically the Academic E pod. Tracking true costs and benefits, however still remains a bit obscure. Larger data sets would be necessary to counteract some of the extraneous variables that may be influencing the present results compiled.

Despite the shortcoming of the present study, it is evident that greater involvement in Rapid by academic health sciences libraries would provide a context more conducive to meeting the needs of HHSL users and reducing HHSL's burdens as a lender in Rapid. As recent trends have demonstrated, the pods within Rapid continue to expand and multiply, bringing with them the possibility that more libraries will join who represent a greater diversity of collections, including those stronger in the health sciences literature. One notion HHSL has itself contemplated is a pod dedicated exclusively to

academic health sciences libraries. HHSL is still weighing the costs and benefits such a

venture would invite, as the associated set-up and recurring charges must be taken into

account.

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