

Expanding services in a shrinking economy: desktop document delivery in a dental school library

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Question: How can library staff develop and promote a document delivery service and then expand the service to a wide audience?

Setting: The setting is the library at the Indiana University School of Dentistry (IUSD), Indianapolis.

Method: A faculty survey and a citation analysis were conducted to determine potential use of the service. Volume of interlibrary loan transactions and staff and equipment capacity were also studied.

Main results: IUSD Library staff created a desktop delivery service (DDSXpress) for faculty and then

expanded the service to practicing dental professionals and graduate students. The number of faculty using DDSXpress remains consistent. The number of practicing dental professionals using the service is low. Graduate students have been quick to adopt the service.

Conclusion: Through careful analysis of capacity and need for the service, staff successfully expanded document delivery service without incurring additional costs. Use of DDSXpress is continually monitored, and opportunities to market the service to practicing dental professionals are being investigated.

INTRODUCTION

Library patrons have come to expect electronic access to full-text articles and books. Libraries have responded to the current expectation by increasing access through subscriptions, journal back-file purchases, and acquisition of e-book collections. Additional access to materials is made possible through sharing agreements and interlibrary loan (ILL) transactions with other libraries. An increasingly popular method of increasing access to a library's print collection is through document delivery. Coopey and Rumble both describe institution of document delivery services and ways that these services have increased their libraries' visibility and value [1, 2]. Decreasing demand for ILL transactions offered the Indiana University School of Dentistry (IUSD) Library an opportunity to put a document delivery service into place. Even those libraries that are experiencing increases in ILL transactions might find that document delivery service is a worthwhile investment for increasing access to a print collection and creating good will across the organization.

ILL services are currently in a state of flux. In the United States, while some authors report decreases in ILL due to factors such as increased access to electronic journals [3–6], others have seen a slight decrease followed by a large increase in requests or have simply remained on a trajectory of increased requests for ILL services. The increases are attributed to cancellation of "big deal" packages [6], new programs added to curricula [5, 7, 8], materials budget cuts [9, 10], addition of document delivery service for library-owned materials [1, 11, 12], increased marketing for ILL services by the library [1, 13, 14], or discontinuation of fees for document delivery service [7].

These fluctuations in demand lead to discussions about the future of ILL departments, the services they

provide, and the changing nature of their work. Some libraries have responded to the challenges by providing new services to patrons or expanding existing services. One service that emerges as a popular addition to existing ILL services is document delivery. Document delivery services include hand-delivery of books and other returnables to the patron's office as well as electronic delivery of journal articles from the libraries' print collections. Some libraries offer these services to all patrons [2, 8, 11, 12, 15, 16]; others are limited to faculty, staff, graduate students, and/or distance education students [1, 12, 17, 18].

Much that is written, however, describes processes carried out at medium to large university and health sciences libraries. Many of the projects reported in the literature involved purchasing new equipment and hiring additional staff or shifting library personnel from other departments to process the increased number of requests. Small libraries have little room or budget for such maneuvers. The ILL "department" may consist of one part-time staff member or one full time staff member who has additional duties. Can these opportunities for adding useful services be fully realized in such a climate? This case study will show that through detailed planning, ongoing assessment, and incremental changes, small libraries can capitalize on the technologies and opportunities to provide new and valuable services to their patrons.

BACKGROUND

The IUSD, located in Indianapolis, offers dental assisting, dental hygiene, and doctor of dental science (DDS) programs as well as master of science degrees in nine dental specialties and doctoral programs. The number of students enrolled in these programs, combined with the number of faculty and staff, results in a patron base for the library of slightly over 800. The IUSD Library, located in the dental school,

Table 1

Article requests for borrowing and lending completed for academic years 2002–2007

Academic year	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07
Borrowing	285	167	120	170	139	66
Lending	1,073	1,185	835	960	1,041	1,194
Total	1,358	1,352	955	1,130	1,180	1,260

has a long tradition of providing quality materials and services to the faculty, staff, and students as well as to practicing dental professionals throughout the state and alumni all over the world. ILL is one such service.

ILL service is available for any journal article, book, or other material not held by the IUSD Library. However, the demand for this service is historically quite low. The IUSD Library processes far more lending requests than borrowing requests each year. This can, in part, be attributed to the strength of the journal collection. Additionally, the library has been increasing the number of journals available online and purchasing electronic back-files when possible. These two factors have caused the number of articles processed for borrowing to decrease. Lending requests for articles are somewhat erratic and show wide variance from year to year, but there is a sense in the IUSD Library that the overall movement is downward.

However, despite gains in electronic access to the dental journal literature, the IUSD Library still holds a significant number of journals in print only. This is especially true for journal issues published prior to 1995. It is this segment of the library's collection that became the focus in designing a useful service for patrons. If patrons need a copy of a journal article that is available only in print, they came into the library and either checked the journal out or made a photocopy of the article. Finding time in a busy schedule to photocopy articles can be difficult, and many staff and faculty members are located in clinics and offices across the campus and the city.

The library staff is always seeking ways to serve patrons by improving existing services or introducing new services. Two events led library staff to consider expanding the ILL service to include document delivery to the patron's desktop for print journal articles held in-house. In 2006, the library began using ILLiad. The ILLiad system made it possible to streamline the ILL workflow and features an authentication system for patrons to log-in using their university passwords rather than having to create and remember yet another password. Also in 2006, the library was able to purchase a new document scanner, which scanned more pages in less time.

The systematic approach to the project included assessing the need and capacity for providing the service, promoting and marketing the service, and, finally, evaluating the outcomes. This cycle of assessment, advocacy, and advertisement is recommended by Charbonneau et al. [13] as a good practice when planning a new service. To maximize the prospect for success, faculty were chosen as the first

group targeted for this new service. The audience was limited to ensure that the service would not negatively impact the high standard of current ILL services. Since that initial undertaking, DDSXpress document delivery service has been expanded to include two additional groups of patrons. This case study details the three-phases of growing a document delivery service.

PHASE I: DOCUMENT DELIVERY SERVICE FOR THE INDIANA UNIVERSITY SCHOOL OF DENTISTRY (IUSD) FACULTY: DDSXPRESS IS BORN

The first step in this project was to determine the capacity of library staff and equipment to fill an increased number of requests. The ILL statistics for fiscal years 2002–2007 were analyzed to determine the number of borrowing and lending requests for articles that were processed annually by 1 ILL clerk. As Table 1 shows, the number of requests fluctuated from year to year. In the peak academic year (2006/07), the number of ILL article requests processed numbered 1,260, roughly 25 per week. This number included both borrowing (66 articles) and lending (1,194). The requests were completed by 1 full-time staff member, with 2 staff members occasionally filling in during absences.

The amount of time spent by the ILL staff member on all ILL activity averaged about twenty hours per week. This meant that the scanner was standing idle for hours each week, and with three staff members trained in use of the software and the ILL process, many additional articles could be processed using current equipment and staffing levels.

To determine the faculty's interest in a document delivery service, a short survey was sent to 107 full-time faculty members. Fourteen faculty members responded to the survey. Thirteen of these indicated that they would be interested in using such a service.

Once it was determined that there was sufficient interest in the service, staff set about developing a marketing plan. The name DDSXpress immediately came to mind as the initials DDS described both the desktop delivery service and the patrons who would use it. IUSD Dental Illustrations designed the typography of the logo, which was then added to coversheets and automated email messages in the ILLiad system. Once the logo was in place, an email announcement that described the service, contained instructions, and provided a link to the registration page was sent to all full- and part-time faculty. Additionally, when staff encountered faculty or departmental staff in the library, they mentioned the

Table 2

Article requests for borrowing, lending, and document delivery completed since inception of the DDSXpress service

Academic year	2007/08*	2008/09†	2009/10
Borrowing	128	105	156
Lending	851	693	663
Document delivery	331	220	186
Total	1,310	1,018	1,005

* August 22, 2007: Document delivery service initially offered to faculty.

† August 1, 2008: Document delivery service expanded to include practicing dental professionals.

Graduate student numbers are not reflected here. The service began in academic year 2010/11.

service and offered to demonstrate the ease of registering and requesting articles.

Statistics such as turnaround time for completion of requests, number of users, and number of requests are kept automatically by ILLiad and are analyzed on a regular basis. The DDSXpress requests are processed in the regular workflow of ILL, and the faculty regularly use the service. In its first year, DDSXpress processed 340 articles for 25 faculty members. After 1 year of successful implementation of DDSXpress to the faculty, discussions began about expanding the service to additional patrons.

PHASE II: DOCUMENT DELIVERY SERVICE FOR THE PRACTICING DENTAL PROFESSIONAL

Library services, including ILL, have always been offered to practicing dental professionals in the state and to IUSD alumni worldwide. Literature searches are conducted at no charge, and documents are delivered at a \$0.25 per page copying fee. This ILL service was used only sporadically. The requests were submitted via a web form from the library's home page. Due to the authentication protocol in ILLiad, unaffiliated patrons were unable to log-in and use the ILLiad system. In 2008, an upgrade to the ILLiad software allowed for an additional authentication system to run concurrently on ILLiad, so that a patron from outside the university could create an account with a self-generated username and password and request articles and other materials through the ILLiad system.

Based on the past numbers of articles requested, averaging only one request per month from 2005 to 2008, library staff believed that DDSXpress could be promoted to practicing dental professionals with little impact on ILL workflow. The extent to which dental practitioners have access to the Internet in their offices or, in fact, know about the services that the library provides to them is not known. It was decided that a survey would not be useful to determine the audience for an enhanced document delivery service. However, the simple fact that many dental practitioners do not have ready access to a medical or dental library was reason enough to offer the service.

To market the service, the librarian and the ILL clerk coauthored an article for the *IUSD Alumni Bulletin* [19]. In addition, a new ILLiad information page was created and posted to the ILL section on the library's website.

The overall result was not an increase in the number of requests processed through ILLiad, but immediately after the article appeared, several new patrons created accounts. Given the lack of impact on the numbers of requests processed through ILLiad and overall ILL activity, plans were started for expansion of the DDSXpress service. Table 2 illustrates total use of DDSXpress from inception through June 30, 2010.

PHASE III: DOCUMENT DELIVERY SERVICE FOR THE IUSD GRADUATE STUDENTS

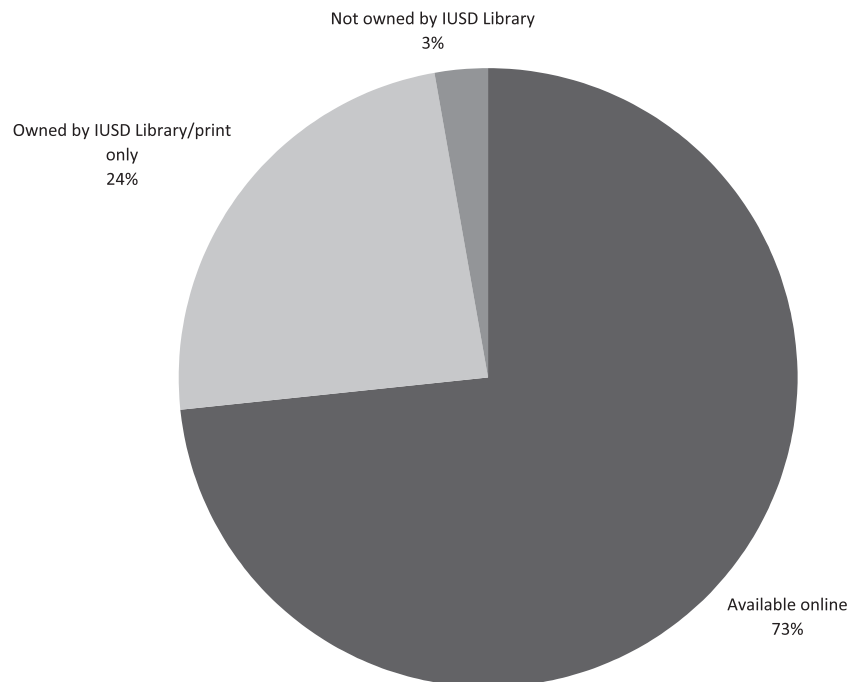
Approximately 100 students are enrolled in the 9 graduate programs at IUSD in a given year. They are enrolled in 2- or 3-year programs, at the end of which they write a thesis and conduct an oral defense prior to receiving the degree. Designing a research project and conducting extensive literature searches are major components of the graduate programs. However, much of the students' time during the day is spent in the clinics treating patients and in the classroom. This schedule leaves little time for students to visit the library.

The library provides access to many online databases so that the students can conduct literature searches from any location. The library provides access to hundreds of journal titles in electronic format, again, available from any location. With the increasing availability of online journals, the number of print titles on which the graduate students rely may be dwindling. However, due to the nature of the research in which the graduate students are engaged, they require access to many older journal issues and highly specialized titles that are not available electronically. Finding and photocopying the needed articles consumes a great deal of their time, much of this time being on evenings and weekends.

For this group of students, a method of determining both the library staff's capacity to serve additional patron requests and potential interest was readily available. A citation analysis of the graduate student theses from 2007 and 2008 was conducted in July 2009 to determine:

1. the number of journal articles cited in the theses that were available electronically and, therefore, not eligible for document delivery service;
2. the number of journals articles cited that are available in the library in print format only and, therefore, eligible for the service; and

Figure 1
Availability of material cited in 2007 and 2008 theses from Indiana University School of Dentistry (IUSD) (n=1,841 citations)



3. the number of journal articles that were not available in the library and, therefore, would be requested via ILL, a service that is already available to the graduate students.

The results of the analysis, as seen in Figure 1, demonstrate that graduate students are citing a large number of journal articles that are currently available only in print format. The amount of time these students are spending in the library locating the journals and photocopying them could be better spent in reading and analyzing the articles.

Additionally, the ILL statistics for fiscal years 2009 and 2010 were reviewed. These 2 years have shown a marked decline in the number of articles processed through ILL: 798 in 2009 and 819 in 2010. The numbers demonstrated that even with an increase of 220 articles per year from the graduate students, the total article transactions would still not reach the peak year of 2007, when more than 1,200 articles were processed. These findings convinced library staff that it was feasible to allow the graduate students to use the DDSXpress service.

To market the service, an email announcement was sent to the directors of all the graduate programs explaining the service and giving them a reminder that this same service was available to all faculty as well. During library instruction sessions for incoming graduate students in July of 2010, students were introduced to the DDSXpress service and given an opportunity to register. To alert continuing graduate students to the new service, an email announcement was sent to them. Embedded in the email message was a short instructional video developed by the ILL

clerk that demonstrated the process of requesting and retrieving materials. Finally, graduate students seen photocopying journal articles or checking journals out have been reminded about the service. In the two months since the service was first offered to the graduate students, eighteen students have registered and requested twenty-five articles.

COPYRIGHT CONSIDERATIONS

Every borrowing request processed in the ILLiad software goes through a copyright clearance step. ILLiad uses the National Commission on New Technological Uses of Copyrighted Works (CONTU) guideline of five. That is, in any one calendar year, no more than five articles from the most recent five years of a journal may be requested. The ILLiad software presents a list of those journal titles that have reached that limit of five, and the ILL clerk can deal with a request appropriately.

Section 108 allows for library copying when the following criteria are met: single copies of works are made for a user; reproduction and distribution are made without direct or indirect commercial advantage; the library must either be open to the public or to researchers doing research in the same or a similar field; and copies must contain a notice of copyright [20–24]. The IUSD Library makes only single copies; the small fee charged to practicing dental professionals is for cost recovery only; the library is open to the public; and, through the ILLiad software, the registrar's warning appears on the request screen and the front page of each article.

DISCUSSION

Developing the document delivery service at the IUSD proceeded with no problems and few surprises. During each phase of development, library staff gathered information about interest in DDSXpress as well as the capacity for expanding the service while maintaining a high level of quality. Ongoing analysis of the use of DDSXpress proved invaluable to the successful launch and continuation of the service.

When discussions first arose about starting a document delivery service, faculty were the first group targeted for the service. A survey was administered to gauge their interest. Response to the survey was low, with only 14 responses (13% of full-time faculty). However, 13 of the 14 respondents expressed great interest in the service. The decision was made to move forward with a "build it and they will come" philosophy. This optimism was well founded, because now 46 (43%) of the full-time faculty are using DDSXpress.

Graduate students will continue to need access to older journal issues that are, at present, only available in print. Until such time as the library is able to purchase electronic back-files of these journals, DDSXpress will be well used. In fact, an additional benefit to providing this service through ILLiad is that the library now has data on which print journal titles to prioritize for back-file purchase. Graduate student use of DDSXpress continues to grow as they become aware of the service through email reminders and word of mouth.

The efforts to market the service to practicing dental professionals have been less successful. The number of ILLs filled for this group has always been low, but it was hoped that by providing electronic access through the ILLiad system, more dental professionals would take advantage of the service. This has not been the case, and it is difficult to say why their participation remains low. More analysis needs to be conducted on the information needs of this group.

This service required thoughtful planning and an understanding of the workflows and capacity of the existing ILL operation. By incrementally increasing the reach of the service and constantly monitoring the results, DDSXpress continues to be a valued service. Plans for the future include a satisfaction survey that will include questions relating to other library services in the hope that this will enable the library to meet previously unknown and unmet needs.

CONCLUSION

Staff at small libraries may feel overwhelmed at the thought of developing a new service in an environment of shrinking resources and already full workloads. However, with careful planning and an evaluation of the library's capacity in resources, equipment, and staff, it is possible to find new ways to serve patrons.

There are many ways to gauge patron's needs and wants. A survey may not be ideal, and results can be

disappointing, but it is a place to start. Circulation statistics or citation analysis of faculty and student bibliographies can yield information about what library resources patrons are using for their research. Observation is another valuable method of gauging user needs. What are they doing while they are in the library? What questions are they asking? Are there whole segments of an organization that are under-represented as library users? What kinds of services might these groups find useful?

Providing a new library service need not involve major expenditures in staff and equipment. What is required is careful planning, knowledge of the library's capacity for the service, and continual evaluation to measure quality and ensure success.

REFERENCES

1. Coopey BM. Article delivery services at Penn State and partner libraries in the Committee on Institutional Cooperation Consortium. *J Interlibr Loan Doc Deliv Electron Res.* 2009 Apr;19(2):165-74.
2. Rumble J, King P. Desktop delivery of printed materials at Auburn University: AUBI Express. *J Interlibr Loan Doc Deliv Electron Res.* 2008 Mar;18(2):229-37.
3. McGrath M. Interlending and document supply: a review of the recent literature: 68. *Interlend Doc Supply.* 2009;37(3):156-63.
4. Barrett FA. The decline of the number of interlibrary loans by medical students in a small academic medical library: a study of 18 years of data. *J Interlibr Loan Doc Deliv Electron Res.* 2008 Sep;18(4):399-405.
5. Egan N. The impact of electronic full-text resources on interlibrary loan: a ten-year study at John Jay College of Criminal Justice. *J Interlibr Loan Doc Deliv Electron Res.* 2005 Mar;15(3):23-41.
6. Jackson ME. The "bigger deal" is OpenURL. *Interlend Doc Supply.* 2005;33(3):172-4.
7. Koehler BM, Harden H. Document services: fee to free-solutions for document delivery. *J Hosp Libr.* 2004 Jun;4(2):101-7.
8. Lee M, Baron S. Common practices for interlibrary loan and document delivery at a small private university: we want it and we want it now. *J Interlibr Loan Doc Deliv Electron Res.* 2008 Mar;18(2):205-18.
9. McCaslin D. What are the expectations of interlibrary loan and electronic reserves during an economic crisis? *J Interlibr Loan Doc Deliv Electron Res.* 2010 Sep;20(4):227-31.
10. Jackson ME. The future of interlending. *Interlend Doc Supply.* 2004;32(2):88-93.
11. McKay B, Foster C, Bedard M. Electronic document delivery: what users want and how to give it to them. *J Interlibr Loan Doc Deliv Electron Res.* 2007 Jun;17(3):49-56.
12. Mitchell E, Yu C. Bringing delivery into the fold: a discussion of cross-departmental document delivery service implementation in academic libraries. *J Access Serv.* 2008 Sep;5(1/2):331-42.
13. Charbonneau DH, Croatt-Moore C, Ellis-Danquah LV. Strategies for planning and promoting library services to new users. *MLA Forum.* 2004 Jul 14;3(2)
14. Curry E. Little changes to interlibrary loan services make a big difference at a small academic library. *J Interlibr Loan Doc Deliv Electron Res.* 2009 Oct;19(4):287-90.
15. Bardyn TP. Electronic document delivery of journal articles: one medical library's experience. *J Interlibr Loan Doc Deliv Inf Supply.* 2003 May;13(4):7-19.

16. Rodman RL. 3D: the paperless document delivery project at the Prior Health Sciences Library. *J Interlibr Loan Doc Deliv Inf Supply*. 2002 May;12(4):63.
17. Behr MD. Streamlining document delivery and interlibrary loan services for distance learners: survey and case study. *J Interlibr Loan Doc Deliv Electron Res*. 2008 Mar;18(2):129–39.
18. Dieterle U. Digital document delivery to the desktop. *J Libr Admin*. 2002 May;37(1/2):243–50.
19. Gushrowski BA, D'Albano KN. A new look for library services. *Alum Bull Indiana Univ Sch Dent*. 2008;21(1):50–1.
20. Gasaway LN. Copyright considerations for fee-based document delivery services. *J Interlibr Loan Doc Deliv Inf Supply*. 2000 Jul;10(1):75.
21. Nixon D. Copyright and interlibrary loan rights. *J Interlibr Loan Doc Deliv Inf Supply*. 2003 Mar;13(3):55.
22. Seadle M. Copyright in the networked world: interlibrary services. *Libr Hi Tech*. 2004;22(3):328–32.
23. Hilyer LA. Chapter 5: copyright in the interlibrary loan department. *J Interlibr Loan Doc Deliv Electron Res*. 2006 Mar;16(1/2):53–64.
24. Croft JB. Electronic delivery of interlibrary loan. *J Interlibr Loan Doc Deliv Inf Supply*. 2004 Mar;14(3):37–44.

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