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### **When there's only one**

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## When there's only one: resource sharing and the predicament of the dissertation request

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### Abstract:

*Electronic theses and dissertations (ETDs) are one of the many resources interspersed throughout the current environment of online content. The past two decades have witnessed a shift from print to electronic theses and dissertations and an accompanying growth in university mandates requiring deposit of ETDs in institutional repositories. While these changes should have paved the way for unfettered online access, barriers such as embargoes requested by the author and vendor licensing restrictions have also emerged, hampering access to these unpublished works. Likewise, policies governing cataloging, deposit, and repository access may differ widely across institutions, adding further complexity to the landscape. Interlibrary Loan practitioners are looking for ways to share this unique content and help users navigate the terrain despite the obstacles. This presentation will explore recent trends in thesis requesting and fulfillment using borrowing and lending requests for theses and dissertations from two U.S. public research universities, along with the perspectives of colleagues at peer institutions. These data sets demonstrate that the demand for these materials extends across borders, raising the question: how can we encourage the sharing of ETDs on a global scale? The authors hope their research on the accessibility of theses and dissertations will inform the international academic community on ways to improve the sharing of these important institutional assets, including raising awareness of the need for a policy and workflow that permits controlled ILL lending of embargoed ETDs that mirrors lending of print dissertations.*

**Keywords:** thesis, dissertation, embargo, interlibrary loan, interlending

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## Introduction

Graduate students and other researchers often request theses and dissertations through interlibrary loan (ILL), and difficulties associated with the borrowing and lending of these unpublished materials plagued ILL practitioners in academic libraries throughout the twentieth century. While the shift from print to electronic theses and dissertations (ETDs) over the past two decades should have paved the way for unfettered access to recently deposited graduate works, ETD embargoes by authors and vendor licensing restrictions have emerged as new barriers for resource sharing. Both the existing literature as well as the authors' experiences mediating ILL requests for ETDs suggest that further investigation is warranted to determine the extent to which these restrictions are preventing the dissemination of graduate works through ILL. Additionally, policies governing cataloging, deposit, and repository access may differ widely across institutions, adding further complexity to the landscape.

Interlibrary Loan practitioners are looking for ways to share this unique content and help users to navigate the terrain despite these obstacles. To inform best practices for sharing these materials, the authors explored recent trends in the requesting and fulfillment of theses and dissertations using ILL lending and borrowing request data from two U.S. public research universities (the University of Maryland, College Park and the University of Minnesota, Twin Cities). The authors also analyzed data sets for embargoes placed by authors on ETDs deposited within their respective institutional repositories and surveyed colleagues at peer institutions to gather their perspectives on lending ETDs. Together, the results reveal potential methods to improve sharing of these important institutional assets at a national and possibly global scale.

## Literature Review

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Theses and dissertations represent the culminating work of graduate students, in which they present original research or creative work in support of their candidature for a degree (ISO, 1986). These graduate works have been alternately decried as “a mere intellectual exercise of little real significance” (Tate, 1953) and touted as “the most useful form of invisible literature” (Suber, 2008) and “important primary research...that inspire better research and learning” (LaVeck, 2019). Regardless of the value commentators ascribe to them, continuing demand for theses and dissertations, and the need to meet this demand through ILL, is well documented in the literature. Several articles from the mid-twentieth century address both the frequency and difficulty of borrowing theses and dissertations from other libraries and the promise, never fully realized, of University Microforms, Inc. (UMI) to alleviate this difficulty (Tate, 1953; Gatliff & Foreman, 1964; Plotkin, 1965). Articles published in the 1990s and 2000s evaluate ILL and commercial document suppliers like Dissertation Express as fulfillment options for theses and dissertations, finding the latter preferable but the former still necessary in some cases (Burke, 2001; Gee & Shirkey, 2010). The demand for these works comes predominately from graduate students (Baich, 2015; Burke, 2001; Gee & Shirkey, 2010), and it extends across borders, with local dissertations ranked as the second or third most difficult type of material to acquire in the 2011, 2015, and 2019 international ILL surveys conducted by the Sharing and Transforming Access to Resources Section of the Reference & User Services Association, a division of the American Library Association (Baich & Weltin, 2012; Munson, Thompson, Cabaniss, Nance, & Erlandsen, 2016; Munson and Thompson, 2019).

Electronic theses and dissertations (ETDs) should solve this conundrum; free online access removes potential barriers related to cost, shipping, copyright, and even fear of loss of the only

available copy. In 1997 Virginia Tech became the first university to mandate deposit of ETDs as a graduation requirement (M. L. Ramirez et al., 2014), and over the past two decades, the practice has become common across the United States and the world. According to OpenDOAR, there are now at least 260 institutional repositories in the United States and 2,091 abroad containing theses or dissertations, making it the second most common content type within open access repositories behind journal articles (OpenDOAR, 2019). Inclusion within institutional repositories, most of whose contents are indexed by Google, enhances the discoverability of theses and dissertations, making it easier to find and retrieve these items by scholars and library staff alike. ILL units now use ETDs to fill their users' requests for theses and dissertations whenever possible (Baich, 2012, 2015; Gee & Shirkey, 2010), yet not all of the content in so-called open digital repositories are accessible to scholars. Embargoes of ETDs are one of the primary culprits behind these "degrees of openness" (Schöpfel & Prost, 2014b), and they represent a barrier not only to open access on the Internet, but also to resource sharing.

Common types of restrictions on ETDs include limiting immediate access to the campus community, restricting access for a specified period, or restricting access indefinitely. Hawkins, Kimball, and Ives (2013) found that most North American universities with doctoral programs in the humanities conform to ProQuest UMI's standard embargoes of six months, one year, and two years, but some universities offer initial embargoes as long as five and six years and renewals for up to ten years. Graduate students elect to embargo their work for a variety of reasons, most notably pending patent applications and concern that open access to an ETD would prevent later publication of its contents (Lowry, 2006; Owen, Hackman, & Harrod, 2009; Pickton & McKnight, 2006). As numerous studies over the past fifteen years show, concerns about unrestricted access to ETDs and support for embargoes may stem from faculty advisors, publishers, professional associations, and graduate students themselves, with attitudes varying by institution and discipline (Dalton, Joan T., Seamans, 2004; Kaufka & Bryan, 2007; Lippincott & Lynch, 2010; Owen et al., 2009; M. L. Ramirez et al., 2014; Marisa L Ramirez, Dalton, Mcmillan, Read, & Seamans, 2013; Thomas & Shirkey, 2013; American Historical Association, 2013). Despite growing evidence that the perception of publishers considering ETDs as prior publication is greater than reality, the number of embargoes requested by graduate students appears to be increasing over time (Schöpfel & Prost, 2014a).

The potential growth of ETD embargoes is concerning for resource sharing practitioners striving to fill a researcher's immediate information need. Unless proactive action has been taken in local policy and workflows to permit interlibrary loan, embargoes represent an insurmountable barrier to the borrowing and lending of theses and dissertations, even if only a temporary one. While Lowry (2006) asserted that embargoes at the University of Maryland would only affect electronic distribution of ETDs (not lending of the print copy through ILL), the elimination of the practice of depositing print dissertations seven years later left the ILL unit without options to lend newly embargoed materials. Indeed, even the American Historical Association's recommendation added the caveat that authors who elect to embargo their ETD should also deposit a print copy in their university library for lending, or alternatively provide a digital copy to those on campus or access via the author's explicit permission (2013). Morris (2004) discusses the University of Georgia's successful transition from lending print to electronic dissertations, including steps taken to ensure ETDs with embargoes could still be lent via ILL. As Morris' article is the only known paper to address this subject, it is unclear how many academic libraries have enacted similar protective measures, and if not, to what extent resource sharing is hampered by ETD embargoes. The authors seek to answer these questions, first by analyzing borrowing and lending data from their own institutions, then by surveying peer institutions to learn more about the

constraints affecting their ability to lend ETDs and any effective workarounds that have been developed. Much like the graduate works themselves, each institutional context is unique (with its own deposit requirements, ILL and cataloging policies and workflows, and licensing agreements), but the authors hope that general patterns and recommendations to improve access will emerge from these datasets.

## **Methodology**

### ***Identifying Thesis and Dissertation Requests***

The University of Maryland and the University of Minnesota use the same interlibrary loan management system, ILLiad, which stores detailed information about all requests in an SQL database. This information can be queried using a built-in reporting tool or by running queries directly against the database. Both methods were used for this study, and examples of these searches are included in Appendix A. The data gathered from ILLiad for both borrowing and lending requests included bibliographic information on the items requested (such as title, year of publication, and OCLC number) as well as information on when the request was submitted, whether it was filled or cancelled, the reason for cancellation, the format delivered, and the department of the requesting patron.

### ***Defining Filled Requests***

While the traditional definition of a filled interlibrary loan request includes only materials provided to or received from other libraries, such a limited scope does not reflect the current work performed by ILL employees. ILL has increasingly become a service that connects users to full text online resources that they were unable to discover on their own, with staff members frequently delivering content that is available online at no cost or via a university subscription. ILL practitioners may find ETDs by searching Google, institutional or other digital repositories, and aggregated catalogs such as DART-Europe E-Thesis Portal and OATD.org. These requests are usually high-touch, requiring mediation and good online searching skills. Accordingly, the authors have considered any request which was made available by ILL staff to have been filled, regardless of the material's ultimate source.

### ***ETD Embargoes***

For the lending case studies, additional data were gathered from the Digital Repository at the University of Maryland (DRUM) and the Office of the Registrar at the University of Minnesota, which handles the ETD embargo process for graduate works deposited in the University Digital Conservancy (UDC). These data sets included the type of degree, department and school, year of deposit, and the length of the embargo chosen by the author.

## **Borrowing Case Studies**

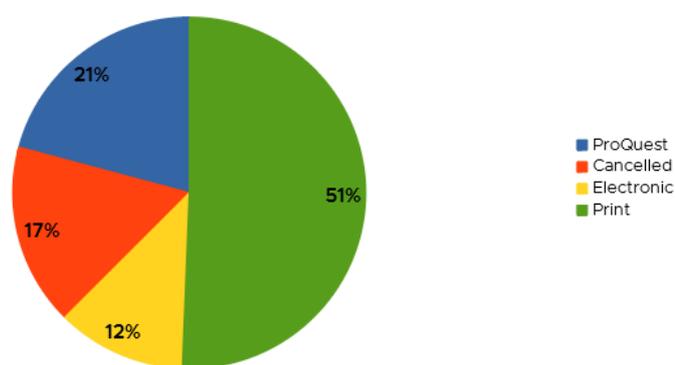
### ***University of Maryland***

#### ***Volume, Format, and Fill Rate***

The University of Maryland examined borrowing data for all theses and dissertations requested in fiscal years 2015 through 2018. Of the ILL requests submitted over this period, 2,570 (2% of

total borrowing requests) were identified as requests for theses or dissertations. One half of these requests were filled by borrowing print, one third were delivered electronically, and one sixth were cancelled (see Figure 1). This yields a total fill rate for thesis and dissertation requests of 83%, which is somewhat lower than Maryland's overall ILL fill rate of 88%. Requests delivered electronically included items that were scanned and delivered by other libraries (20%) and ETDs that were freely available online (16%), but the bulk of these items (64%) were available via subscription to the ProQuest Theses & Dissertations Global database (henceforth referred to as ProQuest). Over the four years considered, the proportion of theses and dissertations delivered electronically increased substantially, from 16% in 2015 to 51% in 2018. The proportion of ETDs which came from ProQuest also increased, from 60% in 2015 to 70% in 2018. In 2018, 35% of all ILL requests for theses and dissertations were filled from ProQuest, making in the largest single source of these materials by an order of magnitude.

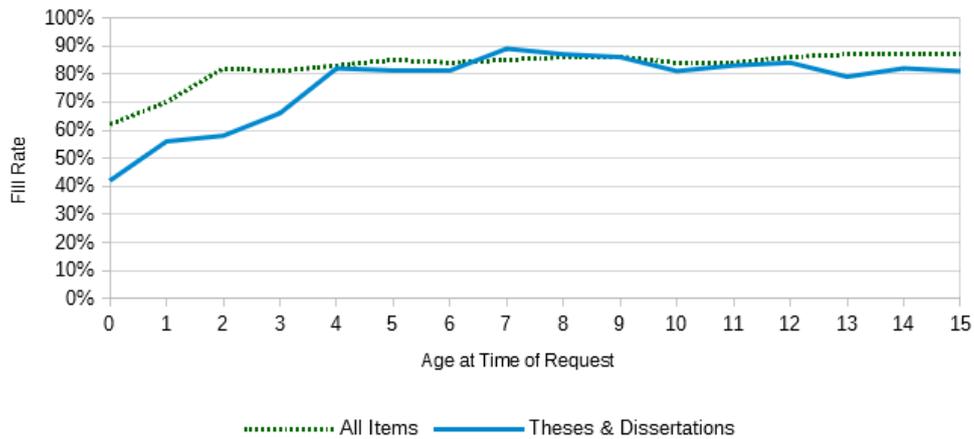
**Figure 1. Fulfilment of Thesis and Dissertation Requests at Maryland, Fiscal Years 2015-2018**



### *Impact of ETD Embargoes*

The data did not allow the authors to easily determine which requests were cancelled due to author embargo as opposed to other reasons. In order to estimate the effect of embargoes on ILL availability, fill rate and delivery format were considered as functions of the age of materials. Generally speaking, items requested in the year of their publication are less likely to be obtained than items requested a few years after publication. For most types of publications, this trend levels off after three years, and remains stable for several decades. For theses and dissertations, however, Maryland observed a different trend. Items requested in the year of their deposit (approximately 40%) had a much lower fill rate than other materials (approximately 60%). The fill rate increases significantly after one, two, and five years. After six years, the fill rate for theses and dissertations achieves parity with the overall fill rate (see Figure 2). While this does not speak directly to an increase in embargoed ETDs, it does indicate that embargoes are a significant impediment to obtaining ETDs through ILL. Maryland's increasing reliance on ProQuest is likely to exacerbate this problem.

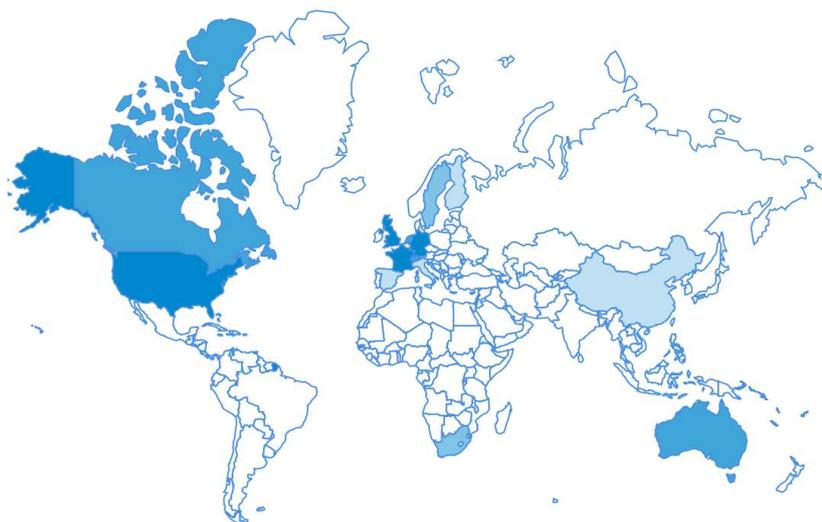
**Figure 2. Maryland Fill Rate by Material Age, Fiscal Years 2015-2018**



*International Theses and Dissertations*

Maryland was able to identify the country of origin for the majority (92%) of theses and dissertations requested between 2015 and 2018 (see Figure 3). Seventeen percent of submitted requests were for graduate works originating outside of the United States; of those, 75% were from European universities, and 38% were from the Commonwealth of Nations. The fulfillment rate for international graduate works (73%) was noticeably lower than for those written in the United States (86%). International graduate works were around twice as likely as U.S. graduate works to be delivered as scanned PDFs (13% v. 6% of filled requests) and were less likely to be available in ProQuest (25% v. 33% of filled requests). At least 22 of the international graduate works that Maryland was unable to obtain were unavailable due to embargoes, which is proportionally more than for U.S. dissertations. While the data on reasons for cancellation are not reliable enough to draw conclusions, they do indicate that embargoes are likely to be an obstacle worldwide.

**Figure 3. Maryland Thesis and Dissertation Requests by Country, Fiscal Years 2015-2018**

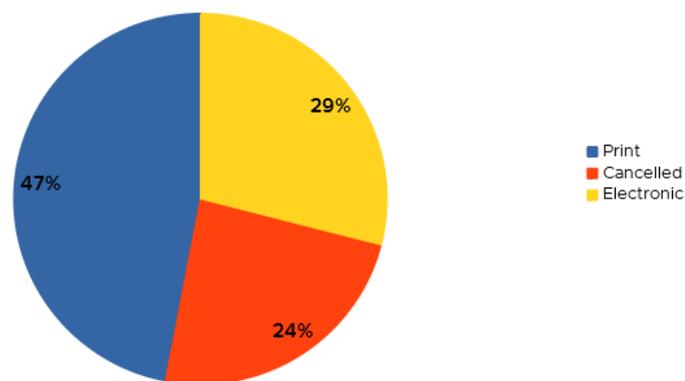


## University of Minnesota

### Volume, Format, and Fill Rate

The University of Minnesota examined borrowing data for theses and dissertations requested in fiscal year 2018 in order to determine the number of requests filled and cancelled, how many were filled with print vs. electronic copies, and the number impacted by author embargoes. Minnesota identified 1,719 requests for theses and dissertations. Removing duplicates and those cancelled by the patron, 47% of these requests were filled by borrowing a print copy, 29% were delivered electronically, and 24% were cancelled (see Figure 4). Of the ETDs provided to patrons, 19% were filled by another library, and 81% were available via open access. The results of the data analysis show a significantly lower fill rate for these materials (76%) in comparison to the institution's overall fill rate of 92%.

**Figure 4. Fulfilment of Thesis and Dissertation Requests at Minnesota, Fiscal Year 2018**



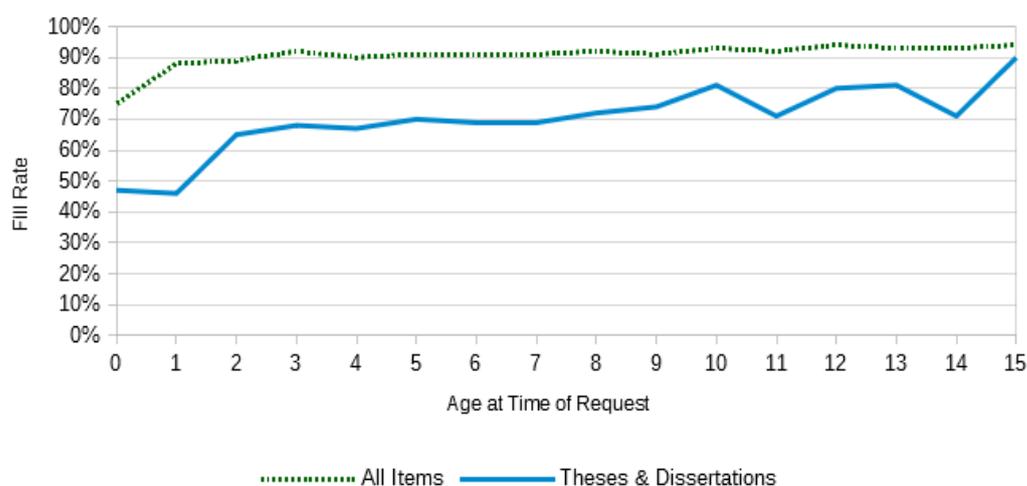
### Impact of Subscriptions, Licensing, and ETD Embargoes

For this particular institution, there are more factors than just embargoes impacting the library's ability to fill these requests. According to the authors' 2019 survey (see p.14-15), the University of Minnesota is among the minority of U.S. R1 university libraries who do not subscribe to ProQuest Dissertations and Theses Global.<sup>1</sup> Minnesota's lack of a subscription to this database had an effect on the fill rate, as do any licensing terms that restrict a lending library's ability to share ProQuest content with other libraries. While Maryland's ETD fill rate leveled with their overall fill rate after six years, Minnesota's fill rate for ETDs remains lower than the overall (see Figure 5). Cancellations due to author embargoes accounted for 6% of cancellations; 88% of cancellations are due to lack of subscription to ProQuest; and another 6% were cancelled for other reasons such as the non-circulating status of print copies. Due to these limitations, ILL staff are sometimes forced into the predicament of not only being unable to fill the request, but also informing the patron that they can elect to buy a copy themselves. Many patrons reply to these cancellation emails with a plea asking if there is anything more the library can do to access this graduate work on their behalf so they will not have to pay for it. On occasion ILL staff will purchase ETDs from ProQuest (e.g., if a user needs a copy with optical character recognition). According to fiscal year 2018 data, it would have cost the library approximately \$12,000 to purchase all ETDs that were not available to our users, but are available for purchase from

<sup>1</sup> Minnesota does subscribe to ProQuest Dissertations and Theses A&I, which includes full-text access to theses and dissertations of University of Minnesota-Twin Cities students and those of the Big Ten Academic Alliance.

ProQuest. This is a financial burden that Minnesota would like to avoid passing on to its researchers, but like many libraries, its budget cannot always accommodate these purchases.

**Figure 5. Minnesota Fill Rate by Material Age, Fiscal Year 2018**



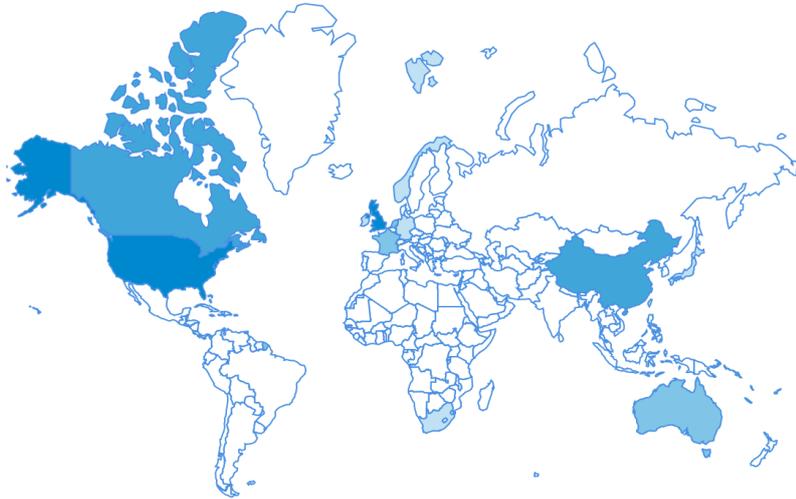
### *International Theses and Dissertations*

International theses and dissertations accounted for 8% of Minnesota’s total requests for theses and dissertations in fiscal year 2018. 138 of the 1,719 requests were for international graduate works, some of which were borrowed from U.S. libraries. Volume of requests by country of deposit can be seen in Figure 6. The breakdown of filled and cancelled requests is as follows:

- *Filled Print*, 15 (11%). Unsurprisingly, there were very few print international theses borrowed since these usually belong to the “there’s only one” scenario. Minnesota borrowed 15 hardcopy international dissertations. Of those, 10 were print copies held within U.S. libraries, including eight purchased by the Center for Research Libraries. Four were borrowed from Canada and one from the University of Haifa in Israel.
- *Filled Electronic*, 82 (60%). The majority of these requests were filled with an open access link found by ILL staff. Many were filled through EThOS, the British Library's Electronic Theses Online Service, which requires the patron to create an account in order to access the content.
- *Cancelled*, 39 (27%). While this percentage is only slightly higher than the overall rate of cancellation, the reasons for cancellation proved to be unique to overseas materials. Thirteen of the international cancellations were available for purchase through ProQuest, so they would have been filled if the library had a subscription. Most of the remaining cancellations were for master’s level theses. The Center for Research Libraries will not purchase master’s theses, and these items are less often deposited in institutional repositories. Past experience with requesting this content has shown a trend of non-circulating overseas. The international master’s theses requested ranged in deposit year from 1982 to 2017, but regardless of the year, they proved to be inaccessible through interlibrary loan. This is a good example of a set of materials that would benefit from a controlled digital lending process.

Within this one year of borrowing data, none of the international request cancellations appeared to be due to embargoes, but this could very well just be due to the small pool of data.

**Figure 6. Minnesota Thesis and Dissertation Requests by Country, Fiscal Year 2018**



## **Lending Case Studies**

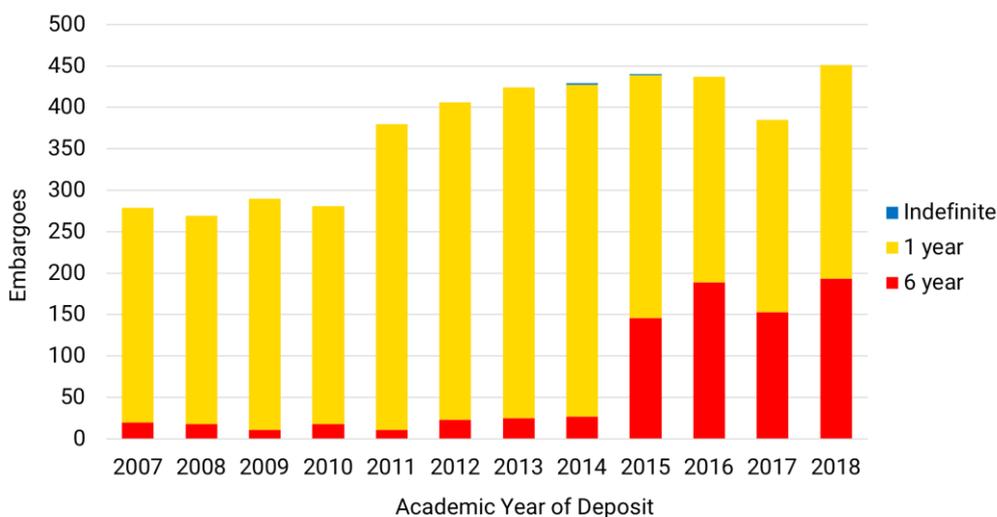
### ***University of Maryland***

At the University of Maryland the deposit of an electronic version of a thesis or dissertation in DRUM and ProQuest became a requirement for all graduate students starting in Fall 2003. At first the ETD supplemented the deposit of an archival print copy in the library, but when the university-wide practice of depositing print copies ceased a decade later, the ETD became the only version except in cases where copyright of images posed a concern. Since 2006 Maryland graduate students have had the option to place an embargo on their work for one year, six years, or an indefinite period, provided that they supply an “explicit and real” justification that is approved by their faculty advisor; in the case of indefinite embargoes, the approval of the Dean of the Graduate School is also required (Lowry, 2006).

An examination of twelve years of data on ETDs deposited in DRUM reveals that embargoes are on the rise, with a 62% increase in frequency between academic year 2006-2007 and 2017-2018. Similarly, the percentage of graduate students electing to embargo their ETD increased from 29% to 51% during this period. As Figure 7 illustrates, there are distinct differences between the volume and type of embargoes between academic years 2006-2007 to 2009-2010, 2010-2011 to 2013-2014, and 2014-2015 to 2017-2018. 2010-2011 marked the first rise in embargoes, with all colleges and schools experiencing an increase in embargoes placed between the first four academic years and the four that followed. One year embargoes were primarily responsible for this rise; they increased from 250-300 per year between 2006-2010 to 350-400 per year between 2010-2014 before returning to previous levels. 2014-2015 saw the start of a second and more concerning trend: the rise in six year embargoes, which have increased 615% over the past four academic years. While the American Historical Association’s 2013 *Statement on Policies Regarding the Option to Embargo Completed History PhD Dissertations* (which encourages embargoes for up to six years) likely contributed to this change, all UMD colleges and schools

experienced an increase in six year embargoes during this four-year period. Graduate students in the Robert H. Smith School of Business (74%) and the College of Arts & Humanities (37%) selected this option the most often; Arts & Humanities also placed the greatest number of six-year embargoes (n=184) of any college or school. Indefinite embargoes are—thankfully—rare, with only three being approved to date.

**Figure 7. ETD Embargoes Placed by Maryland Authors, Academic Years 2007-2018**



What impact has the change in deposit practices and rise of embargoes had on the lending of Maryland theses and dissertations via ILL? The volume of requests received for graduate works fluctuated between FY 2011 and FY 2018, with a general downward trend that can likely be attributed to the continuing growth of ETDs in DRUM (see Table 1). While requests for graduate works represent less than 2% of all lending requests received, their unique nature lends an importance to filling these requests that far exceeds their relatively small volume. It is thus concerning that the fill rate for these materials has been on the decline since FY2011, when 79% of these requests were filled. The fill rate dropped as low as 35% in FY2017 before improving to 50% in FY2018. Several factors contributed to this decline, including the withdrawal of the main library’s circulating copies of historical theses and dissertations in 2014 and the aforementioned increase in the volume and length of ETD embargoes.

**Table 1. Lending Requests for Maryland Theses and Dissertations, Fiscal Years 2011-2018**

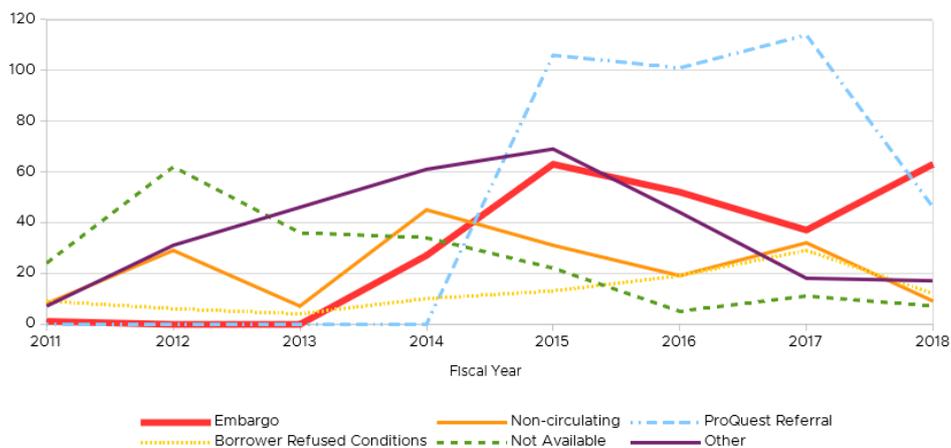
<i>Fiscal Year</i>	<i>Filled</i>	<i>Cancelled</i>	<i>Total</i>	<i>Percentage</i>
<i>FY 2011</i>	421	109	530	79%
<i>FY 2012</i>	329	129	458	72%
<i>FY 2013</i>	167	93	260	64%
<i>FY 2014</i>	251	172	423	59%
<i>FY 2015</i>	182	302	484	38%
<i>FY 2016</i>	147	237	384	38%
<i>FY 2017</i>	128	239	367	35%
<i>FY 2018</i>	158	159	317	50%

As a result of the changing local landscape for graduate works and evolving lending policies to adapt to those changes, there was great fluctuation in the frequency of cancellation reasons used for theses and dissertations between FY 2011 and FY 2018 (see Figure 8). In FY 2011 to FY 2013 lack of availability (e.g., checked out, missing, or currently unavailable) was the most

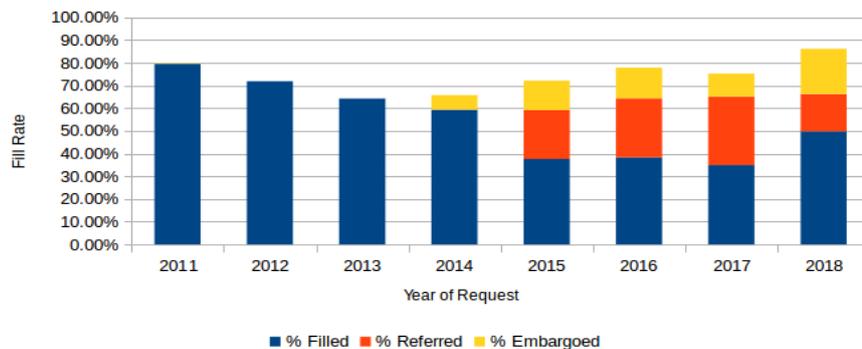
common reason that ILL staff could not supply a thesis or dissertation, but in FY 2014 this shifted to policy reasons (e.g., non-circulating, following the withdrawal of circulating print copies before an on-demand digitization workflow was developed). The transfer of pre-2014 archival copies to high density storage between October 2016 to August 2017 temporarily reduced access to graduate works, but improved the library’s ability to digitize them on demand once intake was complete. In FY 2018 embargoes emerged as the top cancellation reason, with the percentage of thesis and dissertation requests received that were cancelled due to embargo reaching an all-time high of 20%. Embargoes impede the success of ILL’s ongoing efforts to improve access to these materials because the current university policy provides no exception for controlled lending of embargoed ETDs that mirrors lending of print theses and dissertations. If such an exception existed, Maryland’s combined fill and referral rate for FY2018 would have been 86%, an increase of 6.7% over FY2011 (see Figure 9). This growing gap visually represents the unfilled promise of ETDs to improve access to these unique materials.

The rise in ETD embargoes, especially six year embargoes, and the subsequent rise in ILL cancellations due to embargoes clearly demonstrate that ILL staff at Maryland need both the right and means to lend embargoed ETDs to library users in a mediated fashion. Paradoxically the population that is requesting and approving the highest number of six year embargoes for its own ETDs—the College of Arts & Humanities—is also requesting the most graduate works from other institutions. Given its high level of involvement on both sides of this cycle, faculty and graduate students in this college would be key stakeholders in any efforts to implement controlled digital lending of embargoed ETDs at Maryland.

**Figure 8. Cancellation Reasons for Maryland Theses and Dissertations, Fiscal Years 2011-2018**



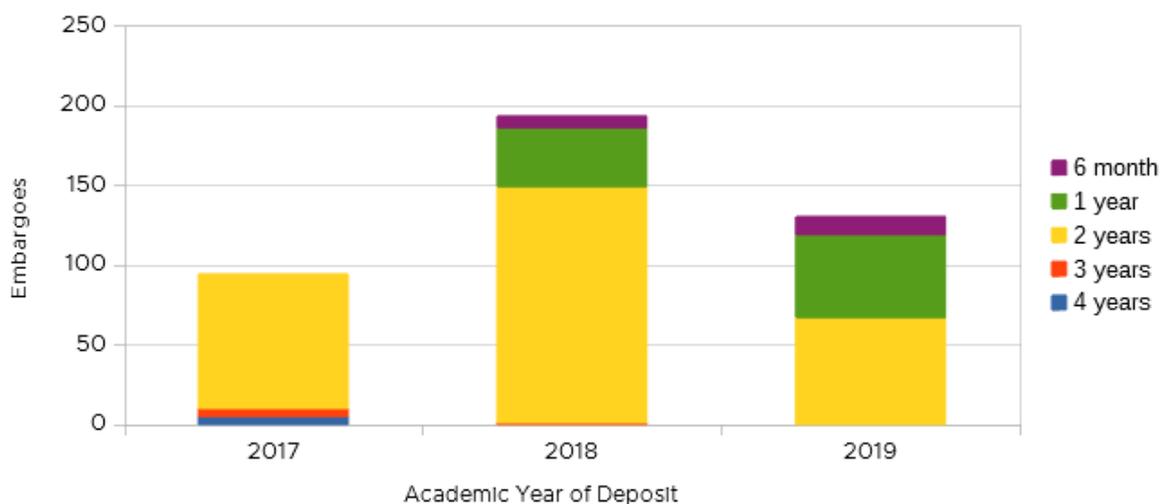
**Figure 9. Fill Rate for Maryland Theses and Dissertations, Fiscal Years 2011-2018**



## University of Minnesota

The University of Minnesota’s graduate and professional enrollment is about 16,000 students each semester, which is a comparable number to the University of Maryland. Minnesota’s graduate students were first required to submit their ETDs to both the UDC and ProQuest in 2008.<sup>2</sup> Since at least 2004 an elective embargo process has been in place, whereby students have the option to embargo for six months, one year, or two years, but they may extend their embargo more than once for a total of four years. The embargo process is handled by the Office of the Registrar, which was able to supply a limited amount of data on ETD embargoes as well as the total number of graduate works deposited each term. The most interesting finding from this set of data is undoubtedly the relatively small numbers of elective embargoes by University of Minnesota graduate students. *Dissertation Review*’s 2015 survey of 336 respondents found that 42% of those scholars had elected to embargo their dissertation for some length; Truschke (2015) also noted that 46% of Stanford University students elected to embargo their theses in 2014. University culture likely plays a role, as this study found that “nearly eight times as many junior scholars admitted to following the pack in deciding the dissemination fate of their dissertation rather than making a contrary decision” (Truschke, 2015). In academic year 2018, 21% of Minnesota’s ETDs had embargoes placed on them (193 of 929 deposits), which is significantly lower than Maryland’s embargo rate of 51% for the same period. The College of Science and Engineering (CSE) has the highest number of embargoes at 29%, followed by the College of Liberal Arts (CLA) at 19%. Within CSE the subjects of Chemistry and Biomedical Engineering had the highest number of embargoes, while within CLA dissertations in History had the highest number. Most of the students who elected to embargo their ETD chose a two-year embargo, with only a small number of ETDs being renewed to four years (Figure 10). The impact of these embargoes on ILL’s ability to fill requests is unclear for reasons that are expanded on below.

Figure 10. ETD Embargoes Placed by Minnesota Authors, Academic Years 2016-2018



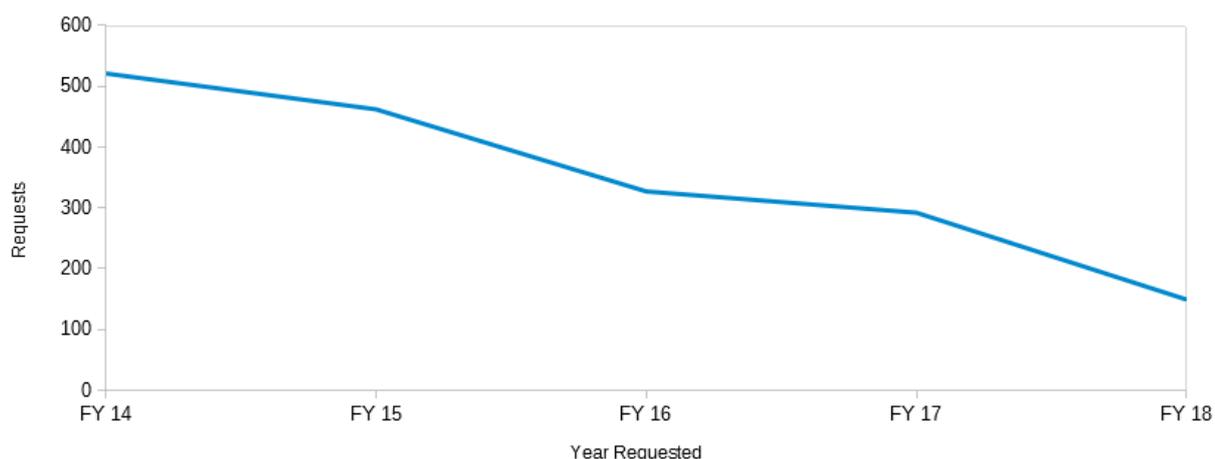
The Libraries continued to receive some print PhD dissertations from 2008 to at least 2013, and about two dozen master’s theses were received between 2009 and 2012. To date, the Libraries have not undertaken on-demand digitization of print theses that are not available online. A large

<sup>2</sup> Only Doctoral and Master’s (Plan A) works are mandatory for deposit into the UDC.

number of historical master's theses are held within the University Archives and are non-circulating, while most doctoral dissertations are in the circulating collection.

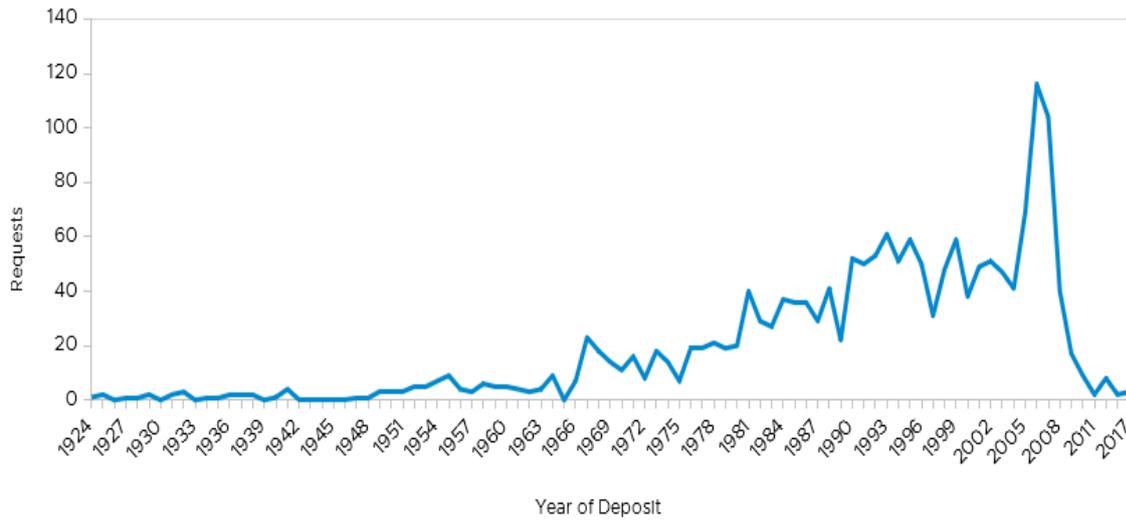
The authors found more differences than commonalities between Maryland and Minnesota in our examination of lending requests during the same period. This is due to a number of factors, including differing ILL workflows and levels of discoverability of ETDs at our respective institutions. For Minnesota, there was a marked decrease in thesis and dissertation requests over the past four years (see Figure 11), although the fill rate remained high at 84%. The drop in requests received is likely due to Minnesota ceasing to catalog its ETDs in OCLC's WorldCat after migrating to a new integrated library system in 2014. The free availability of ETDs in UDC and a borrowing library's subscription to ProQuest may also be a factor. Anecdotally, the authors know that researchers and ILL staff members often search online for a free copy before submitting an ILL request. Even so, Maryland has not seen this precipitous drop in requests for theses and dissertations; it is thus possible that the lack of cataloging contributed to this decrease. Since Maryland's ETDs are cataloged in WorldCat, unmediated automations like OCLC Direct Request could allow requests to be sent without borrowing staff mediation.

**Figure 11. Minnesota Thesis and Dissertation Requests by Year Requested**



Only a tiny fraction (1%) of Minnesota's requests were filled with an electronic copy, and indeed, the vast majority of requests were for older theses and dissertations held in print. ILL received a particularly high number of requests for graduate works that were deposited in 2006 and 2007, with a 60% decrease for those deposited in 2008 (the same year that Minnesota began requiring ETD deposit in the institutional repository instead of a print copy in the library) and a 92% decrease from 2008 to 2017 (see Figure 12). Only 81 requests (5%) were received for graduate works with deposit dates between 2009 and 2017 during this five year period. Reasons for cancelling requests for graduate works included their non-circulating status, not being held within the collection, and the inability to lend PhD dissertations overseas. The policy of not lending dissertations abroad was established based on the uniqueness of the material, but it should be noted that there is no known data from Minnesota to suggest that materials sent abroad are any more likely to be lost than those shared domestically. Cancellations due to embargoes were not tracked in ILLiad, and since Minnesota received so few requests for ETDs deposited in recent years, the impact of embargoes is inconclusive.

**Figure 12. Minnesota Thesis and Dissertation Requests by Deposit Date**



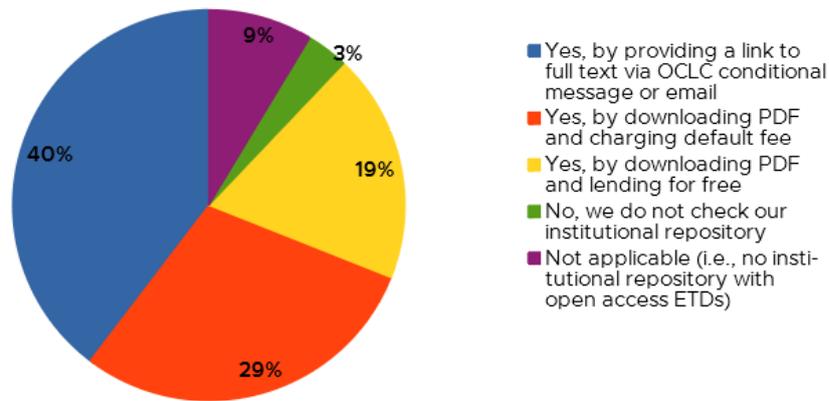
## Peer Perspectives

Since libraries' ability to lend theses and dissertations affect other libraries' ability to supply these materials to their patrons, the authors conducted a survey of peer institutions' lending practices to determine if the issues affecting their institutions were unique or common among research university libraries and what best practices, if any, exist for lending graduate works. A nine-question survey created in Qualtrics was distributed to ILL supervisors at 131 R1 institutions across the United States (see Appendix B for questions).<sup>3</sup> Sixty-three responses were received, yielding a response rate of 48%. Lending ETDs appears to be a topic of interest to resource sharing practitioners, as evidenced by the high participation rate and multiple open comments expressing gratitude for the study and a desire to see the results.

Eighty-eight percent of respondents search for ETDs in their university's institutional repository and connect borrowing libraries with open access ETDs when found, indicating a high awareness of leveraging digital repositories for fulfillment. However, there is not yet a standard for connecting users with the ETD once it is found (see Figure 13). Providing a link to the full text via an OCLC conditional message or email is the most prevalent method (40%), but downloading and sending the PDF is also common at 30% (with charging default fee) and 19% (with no charge). The survey also asked a series of questions related to lending ETDs from ProQuest. While the majority of respondents deposit graduate works within (94%) and/or subscribe (75%) to this database, the responses reveal inconsistency in licensing language and/or understanding of those terms across institutions. Accordingly, the authors urge ILL managers to verify the terms of these agreements with e-resource librarians and to advocate for changes that permit lending as well as electronic delivery, especially of local theses and dissertations. While 41% of R1 libraries have obtained such permissions for their own graduate works (and 38% for other works within this database), there is not yet a significant majority that are able to electronically lend ETDs from ProQuest.

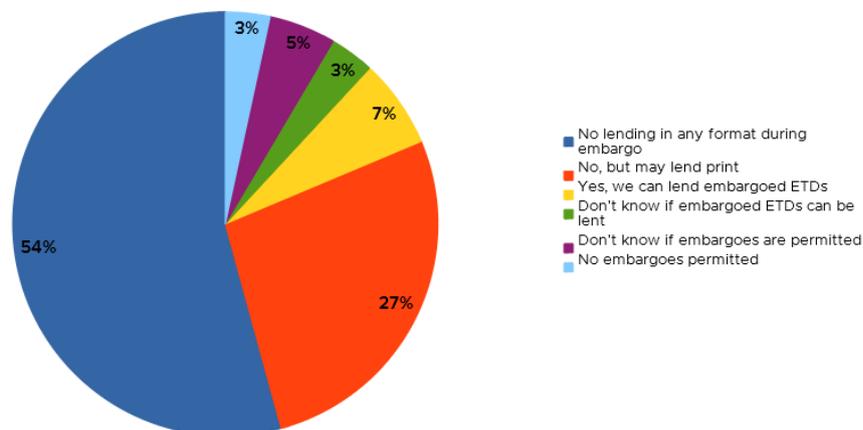
<sup>3</sup> R1 institutions are doctoral universities with very high research activity according to the Carnegie Classification of Institutions of Higher Education. During the update year, these institutions awarded at least 20 research/scholarship doctoral degrees and had at least \$5 million in total research expenditures as reported through the National Science Foundation Higher Education Research & Development Survey (Carnegie, 2018).

**Figure 13. Survey Respondents' Lending of Open Access ETDs from Institutional Repositories**



The survey responses suggest that embargoes are a common barrier to sharing theses and dissertations at U.S. research libraries (see Figure 14). Ninety-two percent of respondents indicated that embargoes are permitted at their institutions, but only 7% can lend an electronic copy before the embargo period ends. Additionally, the majority of respondents (54%) cannot lend any version of the ETD while it is under embargo. Fortunately, there are some libraries who have overcome this barrier and were willing to share their workflows for lending embargoed ETDs, each of which is different. One library contacts the author to request permission and a PDF copy for lending, while another refers the request to the local ETD team, which in turn shares the request with the author (who may elect to share a copy directly with the borrower). In both of these cases, it is the author who makes the decision and supplies the file. At least two libraries have developed methods to share embargoed ETDs without the additional step of contacting the author. At one library an ILL staff member downloads and shares a PDF with a fair use statement attached, implying that ILL has special authorization to access the embargoed files. At another library an ILL staff member places a request (presumably with those who manage the institutional repository) to create a temporary link that expires in two weeks, which they then share with the borrowing library via an OCLC conditional message. Both methods allow for controlled access to the embargoed ETD, but explicit permission from the author is not sought at the point of lending. (Presumed, but not disclosed by the respondents, is whether permission for such use was granted by the author at the time of deposit).

**Figure 14. Survey Respondents' Ability to Lend Embargoed ETDs**



Answers to the last question, which invited respondents to share other information about lending theses and dissertations at their library, also reveal actions that ILL practitioners could undertake to improve access to these unique materials. Six open responses mentioned one-time projects or ongoing workflows to digitize print theses and dissertations as a means of increasing access to these unique materials. As one respondent asserted, “It’s faster and safer to send out electronic copies.” The importance of advocacy for resource sharing also appeared repeatedly. One respondent urged “advocating for ILL with ProQuest and ensuring that the license agreements permit ILL,” while another described communicating their needs as part of a process of transferring management of incoming ETDs from the library to a vendor: “We have traditionally lent the print copies and all ETDs ... everyone at our institution involved in the transition (at the Graduate School and the Library) is aware that we want to preserve this ability to share all ETDs via ILL.” The authors wish this respondent and others undertaking similar initiatives success in their efforts to advocate for sharing these materials!

## Conclusion

After analyzing the six datasets and survey results, the complexity of the landscape surrounding the deposit and access of theses and dissertations within the U.S. is clear. This landscape is also shifting, from longtime obstacles to accessing graduate works (i.e., the cost of shipping, limited availability of a single print copy, and fears of losing unique materials) to new barriers that ILL staff cannot easily circumvent (i.e., ETD embargos and vendor licensing restrictions). In the case of ETD embargos, both a university-level policy change as well as the development of supporting infrastructure may be required for a library to undertake controlled digital lending that mirrors lending of print dissertations. While pursuing change to the submission practices for graduate works in order to obtain authors’ permission for lending via ILL may be difficult, it is a worthwhile undertaking for the library, especially if the ETD embargo rate is on the rise at one’s institution. Beyond mediated lending of embargoed ETDs, there are other ways for lending libraries to improve access to theses and dissertations, including digitization of print copies (where copyright law permits), rethinking policies that restrict lending abroad, making sure ILL practitioners understand licensing terms for databases with theses and dissertations, ensuring the discoverability of these materials within OCLC’s WorldCat, and negotiating with vendors to improve licensing terms (if needed). Where funds permit, subscribing to ProQuest’s Dissertations & Theses Global database has benefits too, as does membership in the Center for Research Libraries, which collects foreign doctoral dissertations from outside North America on demand to meet the information needs of its members’ users. Advocacy is required at multiple levels and with different players, and since it appears that the U.S. is not alone in encountering difficulties lending or borrowing theses and dissertations, the authors hope this paper inspires colleagues from all countries that are affected by the same or similar challenges to join them in advocating for improved access to graduate works moving forward.

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Manager, Minitex, University of Minnesota; Terry Owen, Digital Scholarship Librarian, University of Maryland; Cassie Visser, Library Associate, Minitex, University of Minnesota.

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## Appendix A: Data Gathering Queries

Example of an SQL query used to collect borrowing request data from the ILLiad database:

```
SELECT t.TransactionNumber, t.ProcessType, t.RequestType, t.DocumentType, t.CreationDate,
t.Location, t.CallNumber, t.ESPNumber, t.ISSN, t.LoanTitle, t.PhotoJournalTitle,
t.PhotoArticleTitle, t.LoanDate, t.LendingString, t.LendingLibrary, t.TransactionStatus,
t.ReasonForCancellation, u.Status, u.Department
FROM dbo_Transactions AS t LEFT JOIN dbo_Users AS u ON t.Username = u.Username
WHERE t.ProcessType <> "Lending"
AND t.CreationDate > #7/1/2017# AND t.CreationDate < #7/1/2018#;
```

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Examples of some ILLiad custom searches used to collect lending data from ILLiad:

CallNumber Contains LD3231.M70 [*specific call number used for Maryland TDs*]

ReasonforCancellation Contains embargoed [*conditional reason used to cancel embargoed ETDs*]

CallNumber Contains Theses [*specific call number used for Minnesota TDs*]

LoanPublisher Contains Thesis OR LoanPublisher Contains PhD OR LoanPublisher contains Dissertation OR ... [*additional fields for identifying Minnesota TDs*]

## Appendix B: Survey Questions

Start of Block: Default Question Block

This survey is collecting information about if and how U.S. research university libraries lend electronic theses and dissertations (ETDs) via interlibrary loan (ILL). There are nine questions, not all of which may be applicable. Participation in this survey is voluntary and anonymous. Data gathered from the survey will be summarized and shared with ILL practitioners at the 16th IFLA Interlending & Document Supply Conference, October 9-11, 2019, in Prague, Czech Republic.

If you are able and willing to participate, please provide a response by Friday, June 21.

End of Block: Default Question Block

Start of Block: Institutional Repository

### **Institutional Repository**

When mediating requests for theses and dissertations, do ILL staff search for ETDs in your university's institutional repository and connect borrowing libraries with open access ETDs when found?

- Yes, by downloading PDF and charging default fee
- Yes, by downloading PDF and lending for free
- Yes, by providing a link to full text via OCLC conditional message or email
- No, we do not check our institutional repository
- Not applicable (i.e., no institutional repository with open access ETDs)

*Display This Question: If When mediating requests for theses and dissertations, do ILL staff search for ETDs in your univer... = No, we do not check our institutional repository*

Please explain why not.

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End of Block: Institutional Repository

Start of Block: ProQuest Theses & Dissertations

### **ProQuest Theses & Dissertations**

If your institution deposits theses and dissertations with ProQuest, are you allowed to lend the electronic version to other libraries?

- Yes
- No
- I don't know
- Not applicable (i.e., institution does not deposit ETDs with ProQuest)

Does your library subscribe to the ProQuest Dissertations & Theses Global database? (In other words, do you have access to full text beyond those of your own institution and any consortia to which you belong?)

- Yes
- No

*Display This Question: If Does your library subscribe to the ProQuest Dissertations & Theses Global database? (In other words... = Yes*

Does your licensing agreement permit lending ETDs from other institutions to other libraries?

- Yes
- No
- I don't know

End of Block: ProQuest Theses & Dissertations

Start of Block: ETD Embargoes

### **ETD Embargoes**

Does your university allow graduate students to place embargoes on their ETDs?

- Yes
- No
- I don't know

*Display This Question: If Does your university allow graduate students to place embargoes on their ETDs? = Yes*

Does ILL have permission to lend embargoed ETDs to users at other libraries through a mediated workflow?

- Yes, we can lend an electronic copy before the embargo period ends.
- No, but we may be able to lend a print copy instead.
- No, we cannot lend a copy in any format while the ETD is under embargo.
- I don't know.

*Display This Question: If Does ILL have permission to lend embargoed ETDs to users at other libraries through a mediated wo... = Yes, we can lend an electronic copy before the embargo period ends.*

Please describe your local workflow for lending.

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### **Final Thoughts**

Is there anything else you would like to share with us about lending ETDs or other thesis and dissertation formats at your library?

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End of Block: ETD Embargoes