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Assessment Committee

2016 Boston University Faculty and Student Library Survey

2017-02

Boston University Libraries 2016 Survey Report

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BOSTON UNIVERSITY LIBRARIES

2016 SURVEY REPORT

Boston University Libraries Assessment Committee
February 2017

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CHAPTER ONE: INTRODUCTION AND SUMMARY

INTRODUCTION

In the spring of 2016, the Boston University libraries surveyed BU faculty, graduate students, and undergraduates to determine their use of and satisfaction with library services and resources. The following chapters describe findings from the survey on library collections, library support for research, library support for teaching and learning, and library as place. This initial chapter describes findings on overall satisfaction with the libraries and the

contributions made by the libraries, and provides a summary of the other chapters.

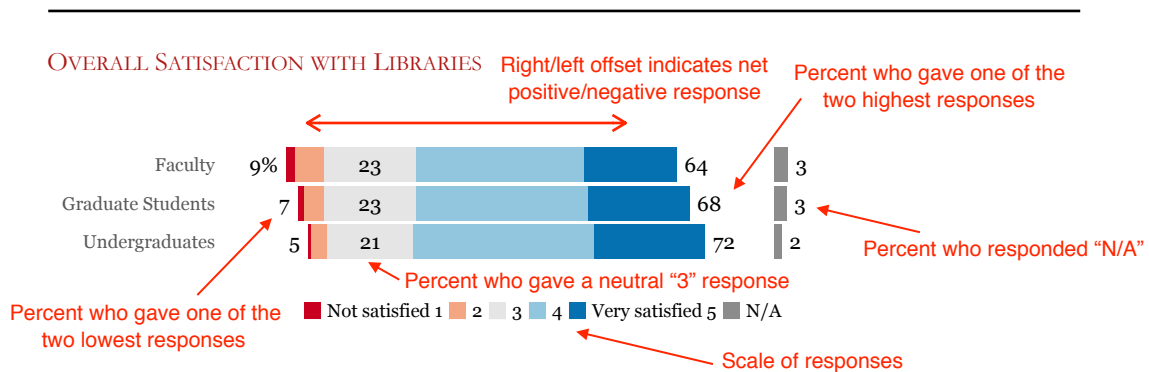
SATISFACTION WITH LIBRARIES

Using a five-point scale from “1 Not Satisfied” to “5 Very Satisfied,” patrons were asked how satisfied they were with the libraries overall and with the libraries’ collections, services, physical spaces, and staff. The same questions (with a few exceptions) were asked in previous surveys

READING DIVERGING STACKED BAR CHARTS

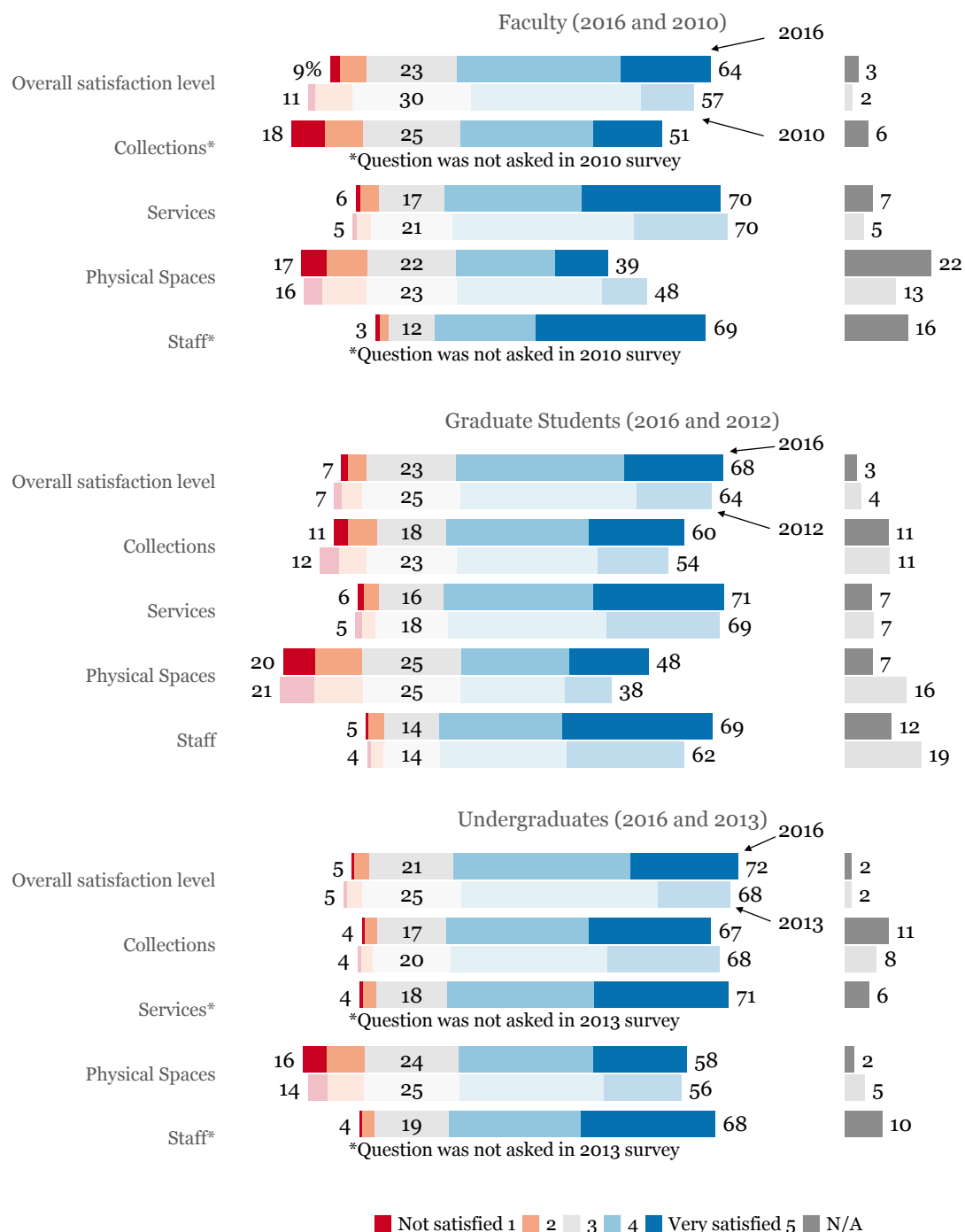
Many of the questions in the survey asked for opinions on a five-point scale, such as “1 Not Important” to “5 Very Important,” or “1 Not Satisfied” to “5 Very Satisfied.”

To display the results from such questions in a readable yet compact manner, this report uses diverging stacked bar charts. Since such charts are somewhat uncommon, this example gives some pointers on how to interpret them.



The survey asked patrons how satisfied they were with the libraries overall.

SATISFACTION WITH LIBRARIES



Faculty, graduate students, and undergraduates were asked about their satisfaction with various aspects of the libraries. For comparison with the results from the current 2016 survey (top bar of each pair), results are also shown from the previous surveys of each group, conducted in 2010, 2012, and 2013 respectively (bottom, faded bar of each pair).

of faculty in 2010, graduate students in 2012, and undergraduates in 2013, allowing a view of how satisfaction has changed over time.¹

Most patrons were satisfied with the libraries overall, with 64% of faculty, 68% of graduate students, and 72% of undergraduates giving one of the top two satisfaction ratings. For all three groups, these results were increases from the previous surveys. The percent giving one of the top two satisfaction ratings went up 7 percentage points for faculty and 4 for both graduate students and undergraduates. The percent giving the highest rating also increased for all three groups.

For the sub-categories, all three groups gave similar satisfaction ratings for services (70% of faculty gave high ratings, 71% of both graduate students and undergraduates). Ratings for staff were almost as high and again similar across the groups (69% faculty and graduate students, 68% undergraduates). Ratings for collections were somewhat lower and showed more variance among the groups (51% faculty, 60% graduate students, 67% undergraduates). The lowest ratings were for physical spaces, and again the groups varied widely (39%, 48%, 58%). An unusually high percentage (22%) of faculty answered “N/A” to the question about satisfaction with the physical libraries.

When results in the sub-categories were compared to previous surveys, the changes were in most cases small with no overall trend. The largest changes were for satisfaction with the physical libraries. Faculty satisfaction decreased: 48% gave high ratings in 2010 while 39% gave them in 2016 (at the same time, the percentage answering “N/A” increased from 13% to 22%). Graduate students, on the other hand, increased from 38% in 2012 to 48% in

2016 (while the percentage answering “N/A” decreased from 16% to 7%). Undergraduates showed only a minor change, increasing from 56% in 2013 to 58% in 2016.

“Libraries are spaces for learning and research and in particular for interacting around source material. But the way we use source material, and even the way we do research and learning in collaborative ways has changed significantly, even in the last 10 years. The library could be an engine of that change here, providing collaboration spaces, creativity [...] spaces, and innovative research spaces, as well as the access to source material.”

Faculty member comment

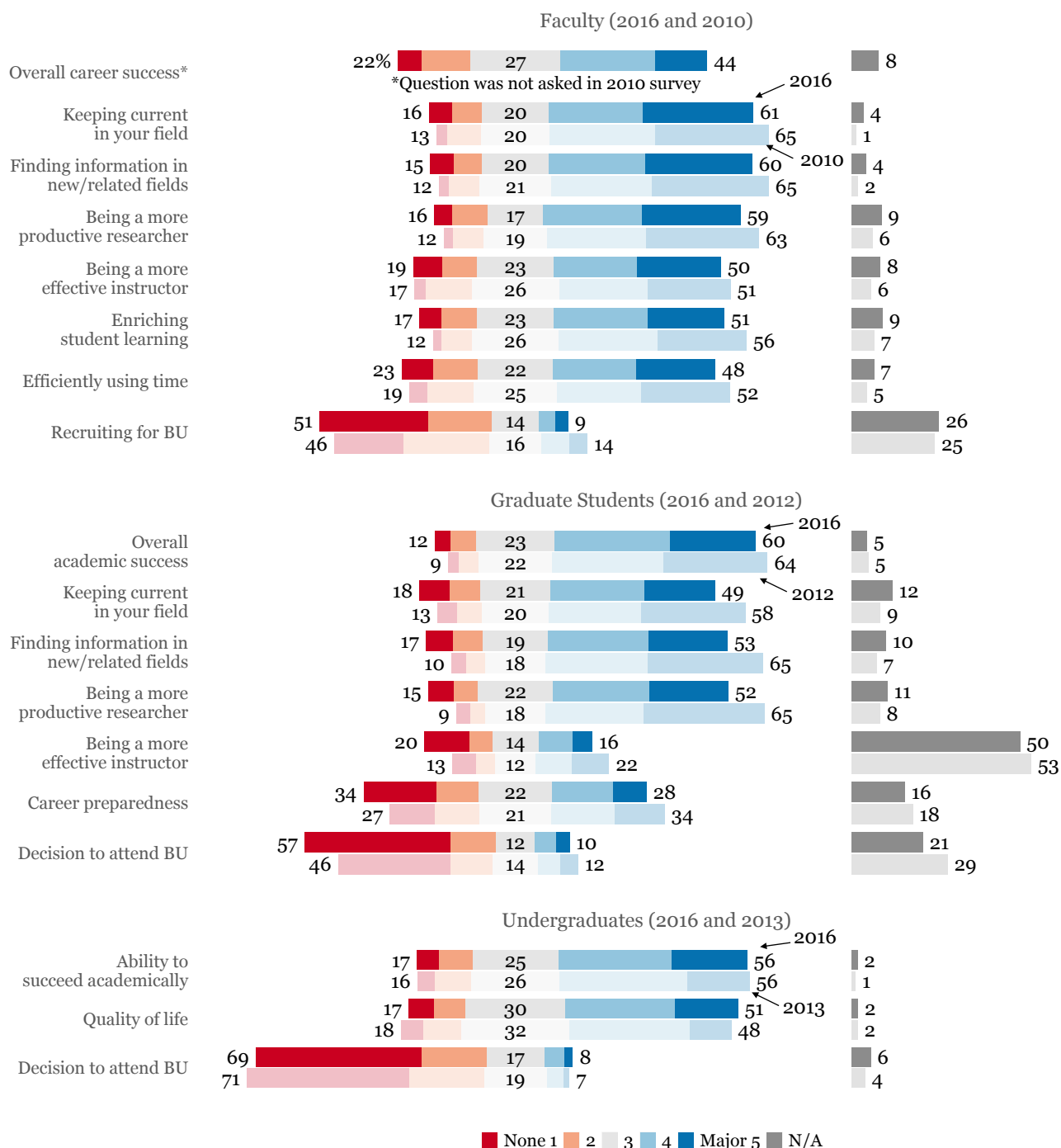
LIBRARY CONTRIBUTIONS

Using a five-point scale from “1 None” to “5 Major,” patrons were asked what contributions the libraries made in various areas.

For faculty, the areas with the highest ratings for library contributions were keeping current in your field, finding information in new/related fields, and being a more productive researcher. 59%-61% gave one of the top two ratings for these areas. About half (48%-51%) gave high ratings for the contributions to being a more effective instructor, enriching student learning, and efficiently using time. 44% gave high ratings for overall career success, and only 9% for recruiting for BU.

¹ *Boston University 2010 Faculty Library Survey Report* (March 2011, <http://hdl.handle.net/2144/20038>), *Boston University 2012 Graduate Student Library Survey Report* (September 2012, <http://hdl.handle.net/2144/20039>), *Boston University 2013 Undergraduate Student Library Survey Report* (September 2013, <http://hdl.handle.net/2144/20041>)

LIBRARY CONTRIBUTIONS



Faculty, graduate students, and undergraduates were asked what contributions the libraries made in various areas. For comparison with the results from the current 2016 survey (top bar of each pair), results are also shown from the previous surveys of each group, conducted in 2010, 2012, and 2013, respectively (bottom, faded bar of each pair).

For graduate students, the area with the highest ratings for contributions was overall academic success (60%). 49%-53% gave high ratings for keeping current in your field, finding information in new/related fields, and being a more productive researcher. 28% gave high ratings for contribution to career preparedness. For being a more effective instructor, only 16% gave high ratings, while 50% answered "N/A." 9% gave high ratings for contribution to their decision to attend BU.

Undergraduates were asked fewer questions on contributions. 56% gave high ratings for library contributions to their ability to succeed academically, and 51% for their quality of life. Only 8% gave high ratings for the contribution to their decision to attend BU.

When compared to results from previous surveys, faculty and graduate students showed a clear downward trend in the contributions the libraries made in all areas. In most cases, the decrease in high ratings ranged from 1 to 5 percentage points. The largest decreases were for graduate students in the areas of keeping current in your field, finding information in new/related fields, and being a more productive researcher. In those areas, the number giving high ratings decreased by 9 to 13 percentage points.

Undergraduates did not see a decrease in contribution ratings and in fact had a slight increase for contribution to quality of life, with the number giving high ratings increasing by 3 percentage points from 48% to 51%.

SUMMARY OF FINDINGS

LIBRARY COLLECTIONS

Most faculty gave high ratings to the importance of library journals (93%) and databases (90%) to their work. Graduate students gave similarly high ratings to the importance of library journals (84%) and databases (86%). Slightly fewer (70% faculty, 65% graduate students) considered library books important. More specialized material (audiovisual, manuscripts, datasets) were only important to a subset (20% - 33%) of these groups. Two-thirds of undergraduates used library articles and books for their coursework or research.

Both faculty and graduate students were generally satisfied with what the libraries provided for each type of resource. However, those who were dissatisfied felt strongly about it and were particularly outspoken in the survey comments.

BU Libraries Search was used by 79% of faculty, 78% of graduate students, and 68% of undergraduates. Most users (from 88% of faculty to 92% of undergraduates) considered

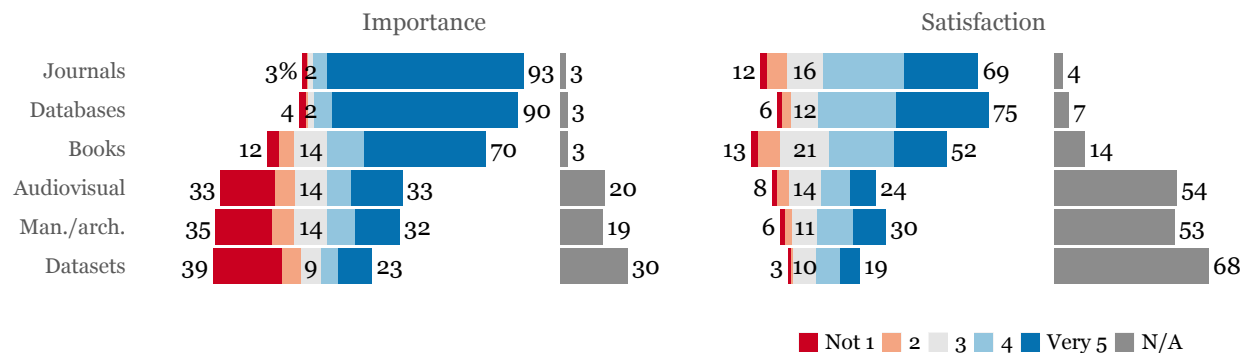
it important, and many (65% to 85%) were satisfied with it.

When asked about the importance of methods for finding library resources, all three groups gave the highest ratings (71% - 89%) to library databases, search engines, and BU Libraries Search. For faculty and graduate students, colleagues were next in importance (51% and 63%), while for undergraduates it was professors and instructors (65%). BU library staff were important for 44% of faculty, and for 25% - 28% of students. Library guides and tutorials were important to only about a quarter of patrons (21% - 25%).

Faculty used the libraries' online resources at the highest rate: 64% accessed the libraries online at least once a week. Graduate student frequency was only a bit less, at 57%, while undergraduates had the lowest rate, 21%.

Faculty were also the most frequent users of the libraries' interlibrary borrowing service, with 46% using the service. The service was used by 31% of graduate students and 15% of undergraduates. In all three groups, those who

FACULTY OPINION OF LIBRARY RESOURCES



Faculty were asked the importance of various types of resources to their work, and their satisfaction with the resources available from BU libraries. "Man./arch." is "Manuscripts or archives."

used the service gave it high ratings for importance and satisfaction.

LIBRARY SUPPORT OF RESEARCH

26% of faculty, 24% of graduate students, and 19% of undergraduates used research assistance (reference services) from the libraries. Those who did use the service generally considered it important and satisfactory.

90% of faculty and graduate students who received external research funding worked with data, compared to 34% of those who didn't receive funding. 33% of faculty and 47% of graduate students gave high ratings to the idea of enhanced library support for data management. The most commonly used location for storing research data was on a local computer or drive, and the most commonly used method for sharing research data was to share on a case-by-case basis when requested.

Asked about the usefulness of enhanced library assistance in various areas related to publishing and sharing, 39% of faculty and 41% of graduate students gave high ratings to

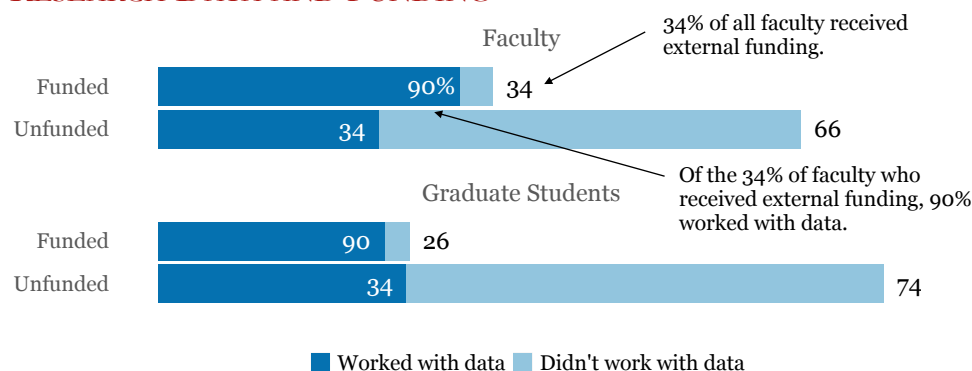
assistance with archiving publications in digital repositories, 45% of faculty gave high ratings to assistance with open access issues, and 51% of graduate students gave high ratings to assistance with submitting papers to journals.

The most important factors for faculty in deciding where to publish were journal reputation and timeliness of publication. Another factor, the absence of page charges, was less important but showed the largest increase in importance since a 2010 survey of faculty. In the 2016 survey, 44% of faculty and 31% of published graduate students had published in an open access journal, but only 6% of faculty and 3% of published graduate students had deposited an article in OpenBU.

LIBRARY SUPPORT OF TEACHING AND LEARNING

Learning management systems, such as Blackboard, were the method most commonly used by teaching faculty to distribute their course material: 73% reported using them. 52% of faculty and 47% of graduate students who were involved in instruction gave high ratings to the usefulness of enhancing the assistance

RESEARCH DATA AND FUNDING



Faculty were asked whether they had received federal or external funding for research in the current academic year, and graduate students were asked whether they had worked on federally or externally funded research while a graduate student at BU. Both groups were asked whether they had worked on a research project involving data during the current academic year.

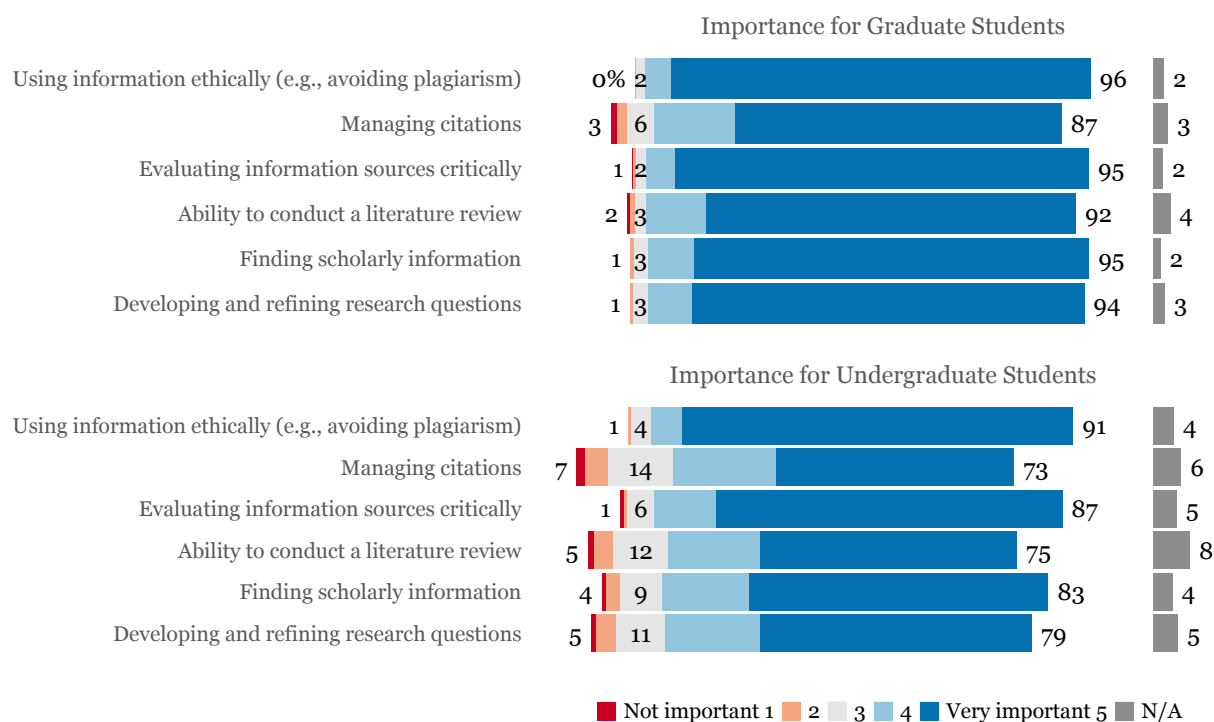
the library provides in integrating library materials with such systems. Library course reserves were only used by 26% of faculty, but for those who did use reserves, 80% gave high ratings for their importance, and 83% for their satisfaction with the service.

There was a wide consensus among the teaching faculty that skills related to information literacy were important to student academic success: 87% to 96% of faculty gave high ratings for the importance of such skills to graduate students, and 73% to 91% for undergraduate students. Most graduate students agreed on the importance of these skills to their success: 69% to 83% gave high ratings.

There was less agreement among the teaching faculty on their students' abilities: only 45% to 64% gave high assessments of the performance of graduate students in information literacy skills, and 15% to 39% for the performance of undergraduates.

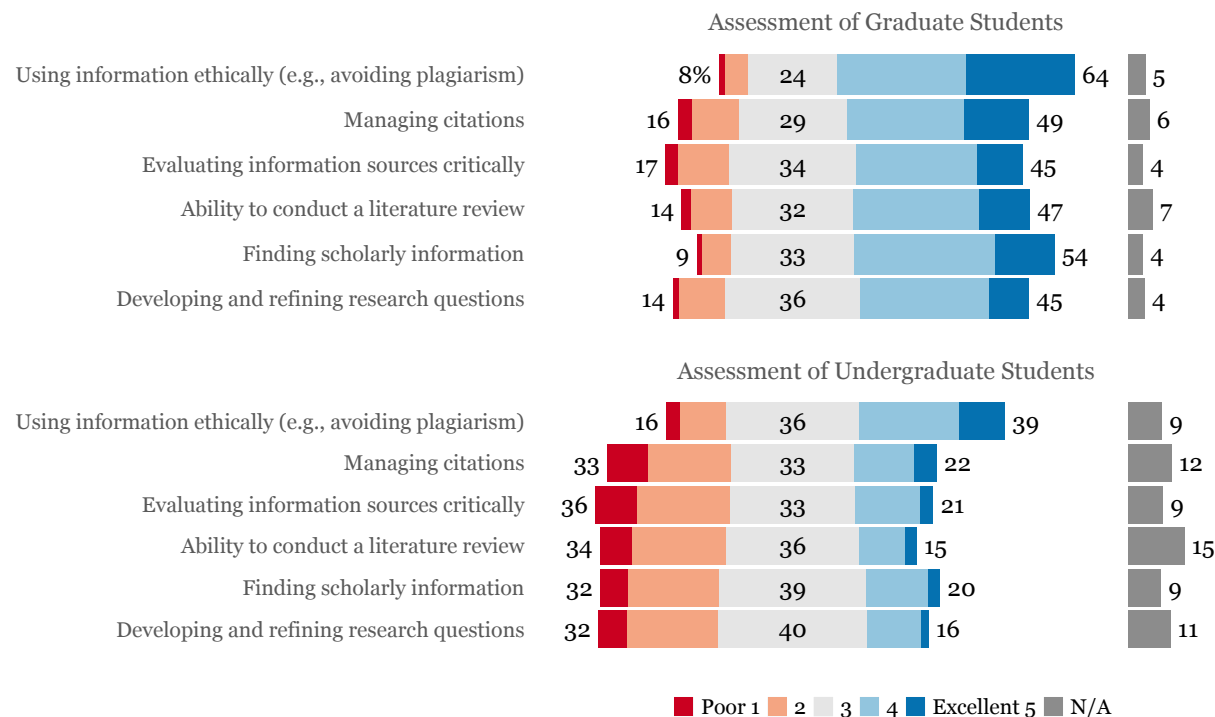
The libraries provide instruction in these skills through in-person presentations and workshops, as well as online guides and tutorials. However, only 18% to 20% of undergraduates and 26% to 28% of graduate students reported being exposed to such instruction in the current academic year.

TEACHING FACULTY PERCEPTION OF IMPORTANCE OF INFORMATION LITERACY SKILLS TO STUDENTS



Faculty were asked about the importance of various information literacy skills to academic success of graduate and undergraduate students in their programs. For graduate students, the chart shows responses from the 67% of faculty who reported teaching graduate students in the current academic year. For undergraduates, the chart shows responses from the 52% of faculty who reported teaching undergraduates in the current academic year.

TEACHING FACULTY ASSESSMENT OF STUDENTS' INFORMATION LITERACY SKILLS



Faculty were asked to assess student performance in various information literacy skills. For graduate students, the chart shows responses from the 67% of faculty who reported teaching graduate students in the current academic year. For undergraduates, the chart shows responses from the 52% who reported teaching undergraduates in the current academic year.

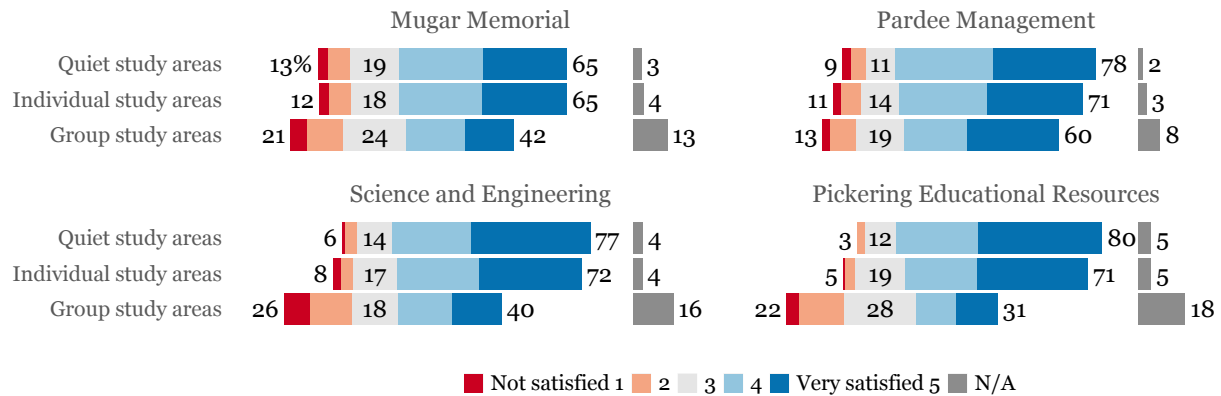
LIBRARY AS PLACE

71% of faculty reported they visited a library once or twice a semester or less. Students were much more active users: 52% of undergraduates and 38% of graduate students reported visiting once a week or more.

Mugar Memorial Library was the library most used by students: 70% of undergraduates and 35% of graduate students picked it as their most visited library. The other top libraries for undergraduates were Pardee Management Library (10%) and the Science and Engineering Library (8%). For graduate students, the other top libraries were professional school libraries: Alumni Medical Library (25%) and the Fineman & Pappas Law Libraries (11%).

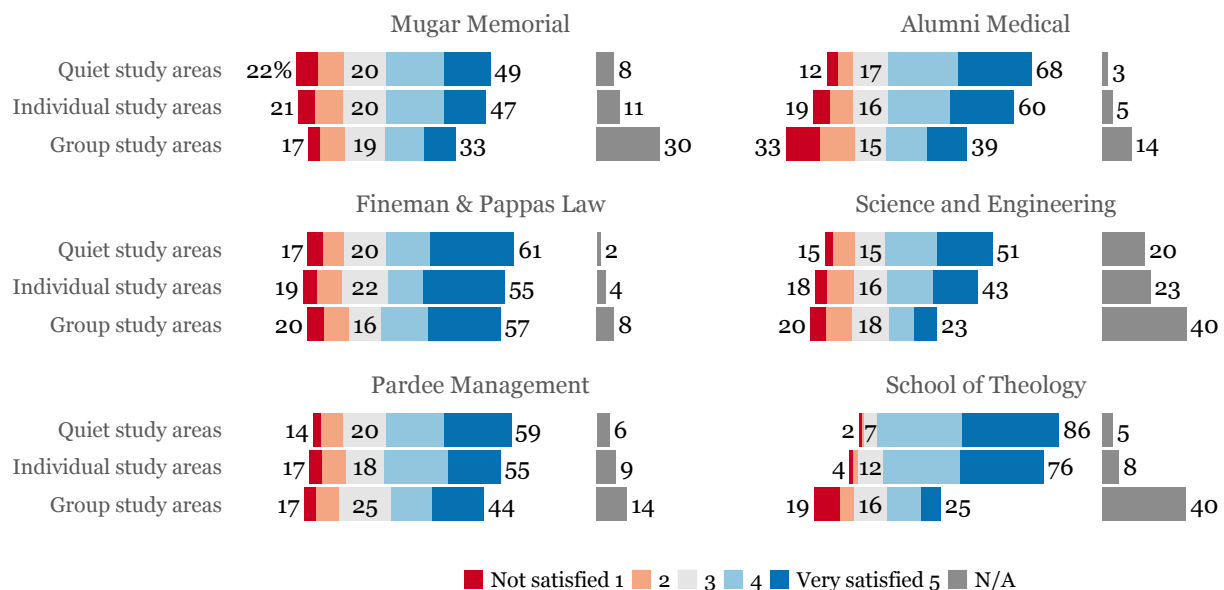
83% of undergraduates and 73% of graduate students reported using the libraries for individual study, and most of these students considered individual study at the libraries important for their work. Fewer students reported using the libraries for group study: 49% of undergraduates and 39% of graduate students. Most of these students considered group study important for their work, but importance ratings were lower than for individual study. Overall, students were satisfied with individual and quiet study areas in their most used libraries, though graduate students generally gave lower ratings. There was less satisfaction with group study areas in the libraries; in some cases, positive ratings were barely ahead of negative ratings.

UNDERGRADUATE SATISFACTION WITH STUDY AREAS OF MOST VISITED LIBRARIES



Satisfaction with the study areas of the libraries most frequently visited by undergraduates. The ratings for each library are from undergraduates who chose that library as their most or second most frequently visited library.

GRADUATE STUDENT SATISFACTION WITH STUDY AREAS OF MOST VISITED LIBRARIES



Satisfaction with the study areas of the libraries most frequently visited by graduate students. The ratings for each library are from graduate students who chose that library as their most or second most frequently visited library.

SUMMARY OF RECOMMENDATIONS

Based on the findings, a number of actions should be taken by the libraries. See the following chapters for fuller descriptions of the recommendations.

LIBRARY COLLECTIONS

- Continue to find ways to increase needed library resources
- Increase access to resources in East Asian languages
- Continue to improve BU Libraries Search
- Increase the availability and accessibility of streaming media

LIBRARY SUPPORT OF RESEARCH

- Improve library services supporting research
 - Expand and strengthen services
 - Publicize services
- Investigate the data management needs of BU researchers

LIBRARY SUPPORT OF TEACHING AND INSTRUCTION

- Increase effectiveness of library support for instruction and student learning

- Increase support for learning management systems
- Continue to support course reserves
- Seek faculty-librarian partnerships to improve information literacy skills
- Explore direct student assistance with information literacy skills
- Increase support for bibliographic managers

LIBRARY AS PLACE

- Upgrade the physical libraries
 - Improve the appearance and infrastructure of libraries
 - Improve group study spaces
 - Improve individual/quiet study space for graduate students
- Explore adjusting hours of several libraries

FINAL RECOMMENDATION

Given the usefulness of the data gathered by the 2016 and previous surveys to improving the libraries, and the importance of ongoing assessment of the libraries and their role in the university, the libraries should conduct a survey of faculty, graduate students, and undergraduates every three years, with the next survey in 2019.

CHAPTER TWO: LIBRARY COLLECTIONS

THE COLLECTIONS

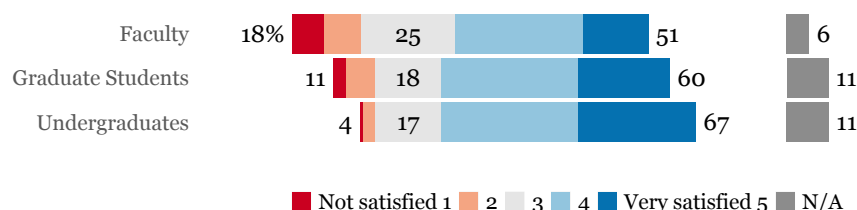
The libraries' collections include print items owned by the libraries and online resources made available through ownership, subscriptions, or other arrangements.

51% of faculty gave one of the top two ratings on a five-point scale for their satisfaction with the libraries' collections. Students were more satisfied: 60% of graduate students and 67% of undergraduates

“As an institution that bills itself as ‘global’ and has students from all over the world, it is embarrassing that we have almost nothing in the library in most of their languages.”

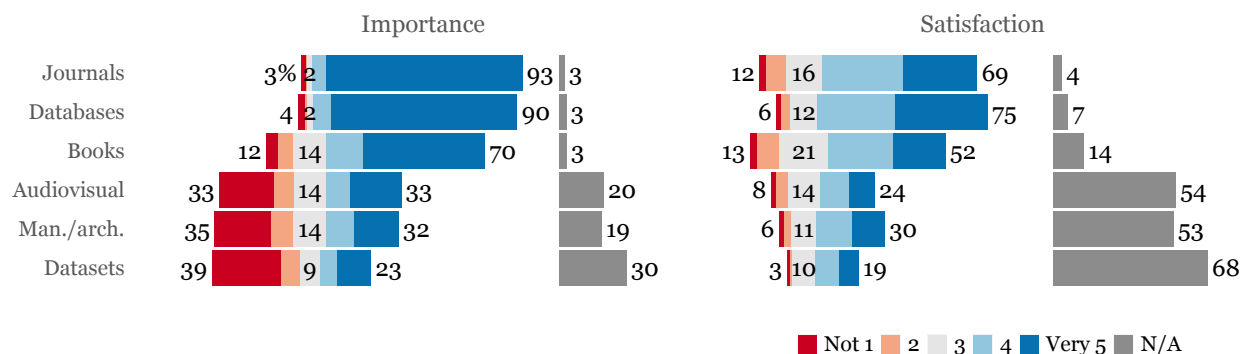
Faculty member comment

SATISFACTION WITH LIBRARY COLLECTIONS



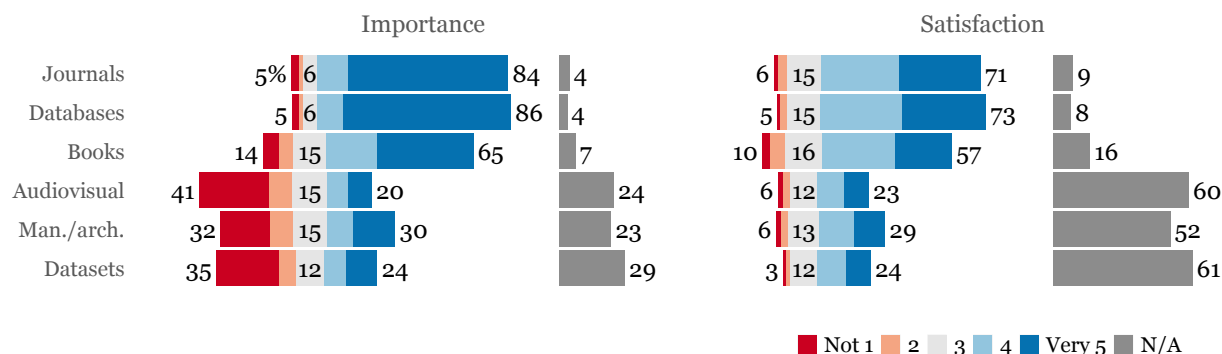
The survey asked how satisfied patrons were with the libraries' collections.

FACULTY OPINION OF LIBRARY RESOURCES



Faculty were asked the importance of various types of resources to their work, and their satisfaction with the resources available from BU libraries. “Man./arch.” is “Manuscripts or archives.”

GRADUATE STUDENT OPINION OF LIBRARY RESOURCES



Graduate students were asked the importance of various types of resources to their work, and their satisfaction with the resources available from BU libraries. “Man./arch.” is “Manuscripts or archives.”

undergraduates gave high ratings.

Those who were dissatisfied with the libraries’ collections were particularly outspoken in the survey comments. One major reason for dissatisfaction was the absence of needed online journals from the libraries’ collections. Some complaints were about the lack of subscriptions to current journals, and others were about the lack of access to older volumes of journals to which the libraries do subscribe.

“I find that BU’s libraries often do not have access to the journal issues or books that I need for my work.”

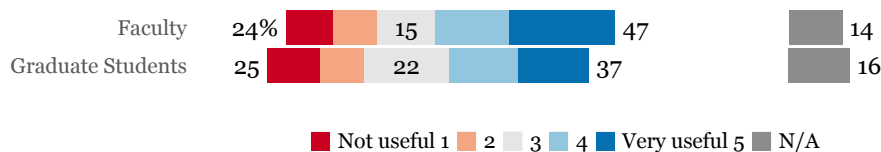
Faculty member comment

“The BU libraries are completely insufficient in East Asian language materials.”

Faculty member comment

Many comments called for more resources in foreign languages, including French, Hebrew, and Arabic, but particularly East Asian languages. BU libraries’ collections were also compared unfavorably to those of other local institutions (such as Harvard, MIT, and BC) and those of previous affiliations (such as Yale, the University of California San Diego, and the University of Illinois Urbana-Champaign).

USEFULNESS OF ENHANCING STREAMING MEDIA



Faculty and graduate students were asked about the usefulness of enhancing access to streaming audio or video resources.

TYPES OF LIBRARY RESOURCES

Faculty and graduate students were asked their opinions of various types of library resources. For both groups, the types that were considered most important were journals (93% of faculty and 84% of graduate students gave high importance ratings) and databases (90% and 86%). Books came next in importance (70% and 65%).

Other resources, such as audiovisual media, numeric/scientific datasets, and manuscripts or archival materials, were important to fewer faculty members and graduate students, and had more for whom the resource was not applicable to their work.

Most of those who had an opinion on each type of resource were satisfied with the resources provided by the libraries. The ratio of

positive ratings to negative ratings ranged from 15:1 to 3:1. The lowest ratios were for satisfaction with audiovisual material, at 3:1 for faculty and 4:1 for graduate students.

“I have found that the Kanopy streaming video service is extremely useful for my teaching.”

Graduate student comment

Faculty and graduate students were asked how useful it would be for the libraries to enhance access to streaming audio or video resources: 47% of faculty and 37% of graduate students gave high ratings.

FINDING LIBRARY RESOURCES

A primary tool provided by the libraries is BU Libraries Search (BULS), the search box on the library websites. BULS was used by most patrons: 79% of faculty, 78% of graduate students, and 68% of undergraduates reported using it. Almost all considered BULS important: 92% of faculty, 89% of graduate students, and 88% of undergraduates gave high ratings. Most who used BULS were satisfied with it. Faculty had the lowest satisfaction: 65% gave high ratings. Graduate students were more satisfied (72%), and undergraduates were the most satisfied (85%).

“The BU Libraries search interfaces are not yet comparable in ease of use to other Boston libraries.”

Faculty member comment

In comments, those who were dissatisfied with BULS complained about the difficulty of locating and then accessing items from search results, and the difficulty of using BULS to find a specific known book or journal article. Many faculty and graduate students expressed a preference for traditional catalogs, while others mentioned Google, Google Scholar, or WorldCat as their preferred search tool.

Undergraduates’ comments, on the other hand, largely confirmed their satisfaction with BULS.

A major upgrade to the interface of BULS was implemented in January 2017, after the survey was conducted, so these findings might not apply to the current version of BULS.

“I love the BU Libraries search and think that it is the best thing there is!”

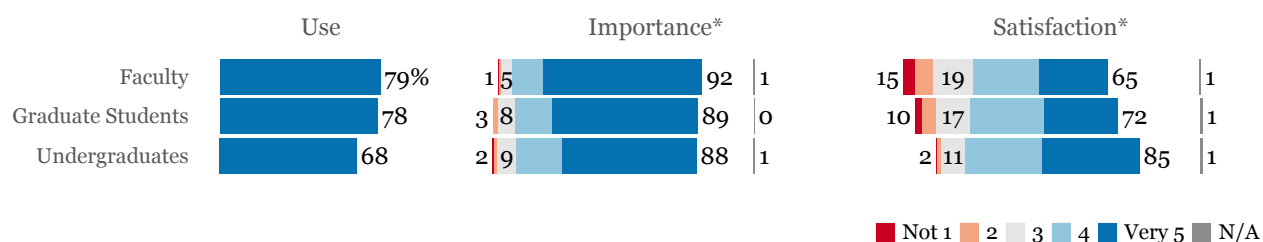
Undergraduate comment

FINDING RESOURCES

BULS is not the only tool available to find resources, and the survey asked patrons about the importance of various methods for finding the resources they needed for their work.

For faculty, the most important methods for finding resources were library databases (89% gave high ratings), search engines (82%), and BULS (80%). After that there was a noticeable drop in importance for colleagues (51%) and library staff (44%). Important to even fewer faculty members were teaching/research assistants (30%) and library guides and tutorials (25%). Only 14% of faculty gave high importance to social media.

USE AND OPINION OF BU LIBRARIES SEARCH



*Only shows results from those who reported using the service

The survey asked about use and opinions of BU Libraries Search.

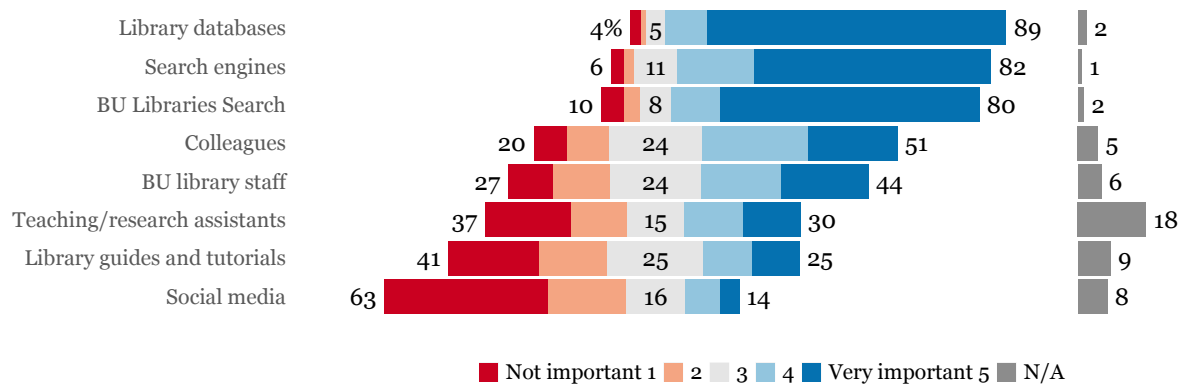
For graduate students, the results were roughly similar. Again, library databases (82%), search engines (79%) and BULS (73%) were the most important methods for finding resources. At 63%, colleagues were somewhat more important for graduate students than for faculty. The importance of library staff (28%), library guides and tutorials (25%), and social media (14%) were similar to the faculty results.

(65%). 44% gave high ratings for fellow students. Importance to undergraduates of library staff (25%) and library guides and tutorials (21%) were similar to faculty and graduate student results. Social media (18%) was again the least important method, though it was somewhat more important for undergraduates than for faculty and graduate students.

For undergraduates, search engines were the most important method for finding resources (82%), followed by library databases (74%), BULS (71%), and professors and instructors

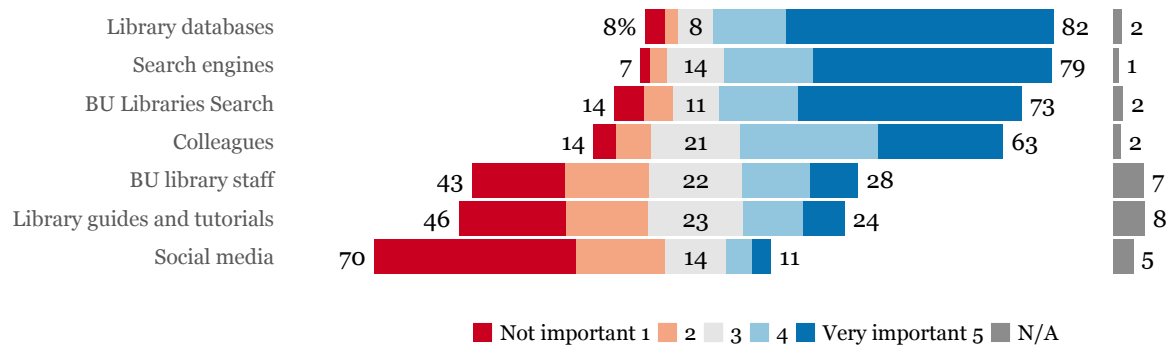
In response to a separate survey question, library guides and tutorials were used by 22% of faculty, 28% of graduate students, and 21% of undergraduates. These results on guides and

HOW FACULTY FIND RESOURCES



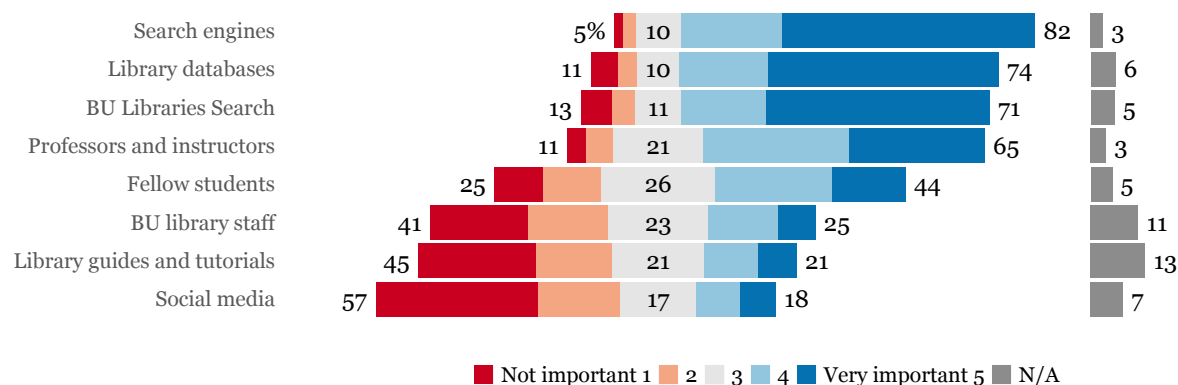
Faculty were asked the importance of various methods for finding the resources needed for their work.

HOW GRADUATE STUDENTS FIND RESOURCES



Graduate students were asked the importance of various methods for finding the resources needed for their work.

HOW UNDERGRADUATE STUDENTS FIND RESOURCES



Undergraduates were asked the importance of various methods for finding the resources needed for their work.

tutorials, as well as findings on information literacy instruction (which includes skills for finding resources) and course reserves, are given in Chapter Four: Library Support of Teaching and Learning.

Research assistance from the libraries, which often includes help in finding resources, was used by 26% of faculty, 24% of graduate students, and 19% of undergraduates. These results and other findings from the survey on the libraries' support of research are given in Chapter Three: Library Support of Research.

“The guides on the website and BU Libraries search are both extremely convenient and helpful, and they feel like they were made to answer my exact questions.”

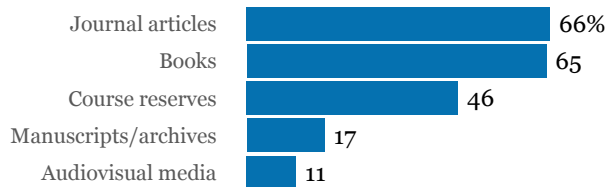
Undergraduate comment

USE OF LIBRARY RESOURCES

Undergraduate students were asked whether they had used various types of library resources for course assignments or other research. The most used were journal articles (used by 66%) and books (65%). Somewhat less used were course reserves (46%). Fewer undergraduates used manuscripts or archival material (17%) and audiovisual media (11%).

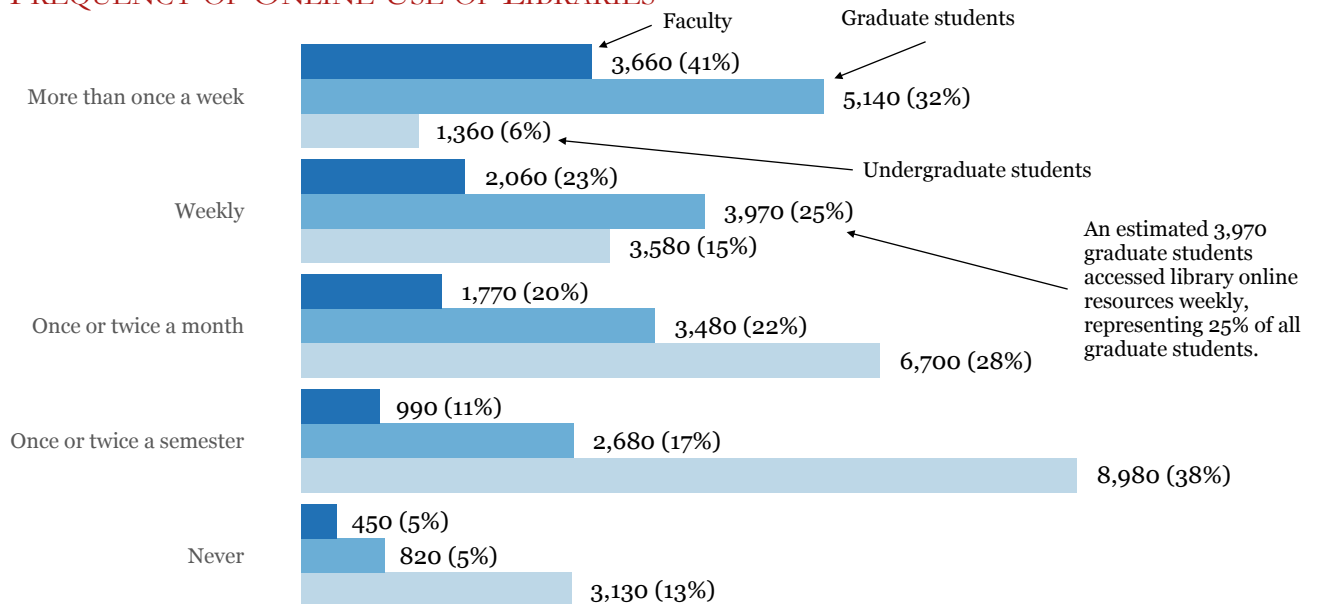
Some sense of the use of online resources comes from the frequency with which patrons use the library online. Although there can be other reasons for accessing the libraries' websites (guides and tutorials, renewing books, checking hours, etc.), most such access is likely related to using collections.

UNDERGRADUATE USE OF LIBRARY RESOURCES



Undergraduates were asked whether they had used various types of library resources for their course assignments and other research during the current academic year.

FREQUENCY OF ONLINE USE OF LIBRARIES



Estimated number of each group who accessed library online resources, services, or websites with each frequency, based on survey answers and response rates.

In the survey, faculty reported the highest rate of use: 64% accessed the libraries online at least once a week. Graduate student rate of use was only a bit less, at 57%, while undergraduates had the lowest rate, with only 21% accessing the libraries online at least weekly.

The current survey did not ask any further questions on the use of the libraries' collections, but more insights can be found in the report on a 2015 study that focused on use of BU libraries' online resources.² That study found that most use (67%) of online library resources by faculty was for research, while

most use by graduate students (58%) and undergraduates (86%) was for course work.

“If resources in their entirety are not online or digital at this point, they are often skipped over or left out.”

Graduate student comment

INTERLIBRARY BORROWING

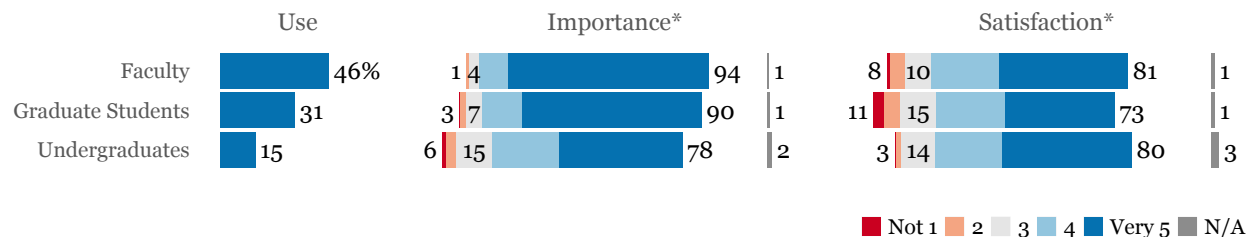
BU libraries are able to provide access to many books and articles not in their own collections through interlibrary loan (ILL) arrangements with other libraries. 46% of faculty, 31% of

REASONS FOR USING ONLINE LIBRARY RESOURCES

	Number of Online Sessions	Purpose				
		Course Work	Teaching	Research	Patient Care	Other
Faculty	88,600	5%	20%	67%	5%	3%
Graduate Students	339,100	58%	1%	34%	4%	4%
Undergraduates	175,600	86%	0%	9%	0%	4%

The number of online sessions initiated by each group to access library resources, from March 2014 to February 2015, and a breakdown of the purpose of each session. From *Use of the Library's Collection: Findings from the MINES Survey*.

USE AND OPINION OF INTERLIBRARY BORROWING



*Only shows results from those who reported using the service

The survey asked about use and opinions of interlibrary borrowing.

² *Use of the Library's Collection: Findings from the MINES Survey* (November 2015, <http://hdl.handle.net/2144/20333>)

graduate students, and 15% of undergraduates used this service. All considered the service important, especially faculty: 94% of those who used it gave high ratings for importance. Most users were also satisfied: 81% of faculty who used it gave high ratings for satisfaction.

Comments generally expressed high levels of satisfaction with ILL but also lamented how often they had to rely on ILL to access the materials they needed for research. Graduate students also complained about having to wait a few days for requested material to arrive. The length of the loan periods were considered by

many to be too short, and that, combined with the inability to renew or extend the loan without returning the materials, hampered their research. For patrons on the Medical campus, the charges for ILL were viewed by many as unreasonable.

RECOMMENDATIONS

CONTINUE TO FIND WAYS TO INCREASE NEEDED LIBRARY RESOURCES

The survey results showed the importance of the libraries' collections, particularly journals and databases, to BU's academic community. Most faculty (93%-90%) and graduate students (84%-86%) gave high ratings to the importance of journals and databases for their work, and 66% of undergraduates used journal articles for their coursework.

More faculty than not were satisfied with the collections (51% gave high ratings), and a higher proportion of graduate students (60%) and undergraduates (67%) gave high satisfaction ratings. Still, these results left significant numbers for whom the libraries' current collections were not satisfactory.

This dissatisfaction with the collections was also seen in comments. Faculty and graduate students repeatedly mentioned the need for access to more journals, both current subscriptions and older volumes (for many online journals the libraries' access extends only back into the 1990s). These needs might in part be a consequence of BU's continuing growth in new research areas and programs.

Given these results, the libraries should strive to expand the access they provide to the resources most needed by the BU community. This effort is complicated by the rising costs of subscriptions to journals and other resources, which mean that maintaining the status quo is increasingly expensive.

The libraries have already made great efforts in this area. Over the past few years, the libraries have increased the number of books and journals available to the BU community by reducing costs, increasing coordinated purchasing across all BU libraries, collaborating with a variety of consortia, and partnering with

vendors to experiment with new, more cost effective purchasing models. In one example of expanded access made possible by these cost savings, the libraries have recently acquired the biomedical database EMBASE and additional JSTOR collections, two resources that were repeatedly requested in the comments.

The libraries should continue these efforts to expand their collections by increasing efficiency. However, it should be noted that the libraries are rapidly reaching a point where further attempts to increase efficiency can only produce modest returns. As research and teaching at BU continues to expand into new areas, savings found in new efficiencies will not be sufficient. Support for new areas will require additional funding or cutting collections in other areas.

INCREASE ACCESS TO RESOURCES IN EAST ASIAN LANGUAGES

Many comments in the survey called for increased access to materials, both primary and secondary, in foreign languages. A wide range of languages were mentioned (e.g., French, Hebrew, Arabic), but it was clear from the comments that there is a significant, unmet need for additional resources in East Asian languages.

The libraries should take steps to meet this need by reaching out to faculty and graduate students working in East Asian languages to further determine their needs, and then expand collections appropriately.

The libraries should also explore creative solutions, possibly including outsourcing or staff sharing with other area libraries, to meet the challenge of finding the needed expertise to evaluate, catalog, and in some cases negotiate the purchase of material in East Asian languages.

CONTINUE TO IMPROVE BU LIBRARIES SEARCH

BU Libraries Search (BULS) was a library service with one of the highest rates of reported use: 79% of faculty, 78% of graduate students, and 68% of undergraduates used it. As a method for finding the resources they need for their work, all three groups placed it in their top three for importance, with ratings roughly similar to databases and search engines. Of these three tools, BULS is the only one where the libraries have direct (but limited) control of its user interface and integration with library resources.

In January 2017, the libraries implemented an upgrade to the interface of BULS that might have addressed some of the concerns raised in comments by those dissatisfied with it. Given the results on the high use and importance of BULS, the libraries should continue to do usability studies and reach out to faculty and students to ensure the search tool meets their needs, and continue its ongoing work to improve both the user interface and search functionality of BULS.

INCREASE THE AVAILABILITY AND ACCESSIBILITY OF STREAMING MEDIA

There is an increasing emphasis at BU on the importance of incorporating appropriate technology and audiovisual materials into classroom environments. In the survey, 33% of faculty gave a high rating to the importance of audiovisual materials to their work, but audiovisual material had the lowest ratio of satisfied to unsatisfied ratings of all types of library resources. When asked specifically about the usefulness of enhancing access to streaming audio or video, 47% of faculty and 37% of graduate students gave high ratings.

Based on these results, the libraries should provide increased access to streaming media. Even before the survey, the libraries recognized this demand, particularly for feature films and documentaries, and made it a priority for the coming years. The catalog of Kanopy online videos is being expanded, and the libraries are exploring discounted pricing through the Boston Library Consortium. The libraries have also recently hired a Communications & Media librarian, who will be working with faculty to understand their media needs and how these can best be met by the libraries.

CHAPTER THREE: LIBRARY SUPPORT OF RESEARCH

In the context of libraries, the term “research” is often used to mean the process of finding the needed library materials. This report considers research in the broader sense of the systematic, scholarly investigation into a topic conducted by researchers across BU. Such research often includes finding material in libraries, but can also involve field work, lab work, data analysis, exploring archives, writing and publishing books and articles, and a host of other activities.

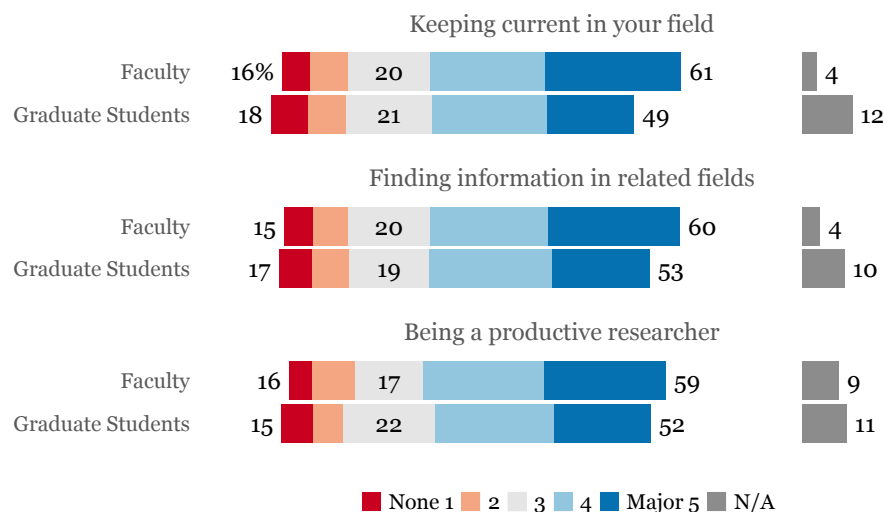
The BU libraries support research at BU in a variety of ways. The libraries’ collections have

been shaped to support research. Library services include instruction and consultation on data management, an institutional repository (OpenBU) to help make the results of research more widely available, information on issues related to open access and copyright, and assistance with library research.

“The libraries are critical to academic research, teaching and learning!!!!”

Faculty member comment

CONTRIBUTIONS OF BU LIBRARIES



Faculty and graduate students were asked what contributions the libraries make to various areas related to research.

GENERAL SUPPORT FOR RESEARCH

CONTRIBUTIONS

The survey asked faculty and graduate students what contributions the libraries made to various research-related areas. Most faculty gave high ratings for the libraries' contribution: 59% gave one of the top two ratings (on a five point scale) for the libraries' contribution to their being a more productive researcher, 60% for finding information in related fields, and 61% for keeping current in their field.

“In doing historical research at the main library and the Gotlieb, I have found archivists and research librarians extremely helpful -- not only in finding materials I am looking for but also in making suggestions for new materials that might be of interest.”

Faculty member comment

Graduate students also generally gave high ratings for contributions, though somewhat less than faculty: 52% for being a more productive researcher, 53% for finding information in

related fields, and 49% for keeping current in their field.

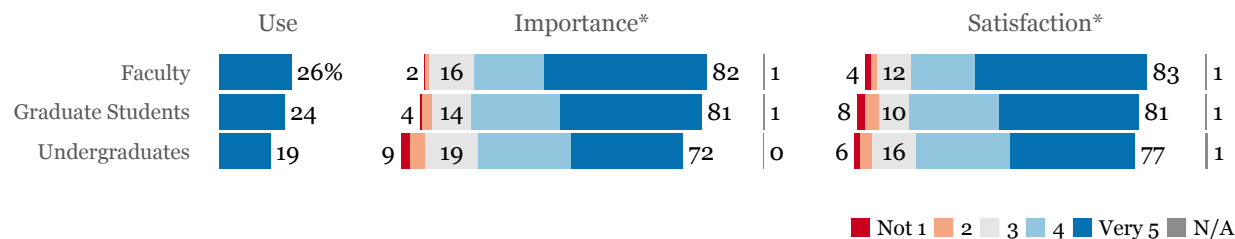
RESEARCH ASSISTANCE

“Though one may not access these services often, one cannot deny their intrinsic value; the techniques and methods of gathering and organizing information are irrefutably enhanced by the services that the BU Libraries provide.”

Faculty member comment

Research assistance (sometimes called reference) is a service provided by the libraries that includes assisting patrons in finding information and library materials. The service is provided in person as well as over the telephone and through email and chat. A minority of survey respondents reported having used the research assistance service: 26% of faculty, 24% of graduate students, and 19% of undergraduates. For context, during the 2015-2016 fiscal year the BU libraries

USE AND OPINION OF RESEARCH ASSISTANCE



*Only shows results from those who reported using the service

The survey asked about use and opinions of research assistance from the libraries.

conducted 27,326 research assistance (i.e., reference) transactions.³

In addition to having the highest usage rate, faculty who used the service also gave it the highest ratings for importance and satisfaction. 82% of faculty who used it gave high ratings for importance and 83% for satisfaction.

Importance and satisfaction ratings from graduate students who used the service were just below faculty, at 81% for both. Undergraduate ratings were the lowest, though still high, at 72% and 77%.

Comments in the survey generally reflected this positive opinion, with many praising the helpfulness, skill, and knowledge of BU's research librarians. There were, however, a few comments criticizing the librarians for their lack of helpfulness and limited expertise.

COLLECTIONS

A major way the libraries support research is by providing access to the information resources needed by researchers. Journals and databases

were the types of library resources most likely to be considered important by both faculty and graduate students, followed by books. Additional findings from the survey about use and opinions of the collections are described in Chapter Two: Library Collections.

“The research librarians are sometimes, helpful, sometimes not, depending on the individual and topic.”

Faculty member comment

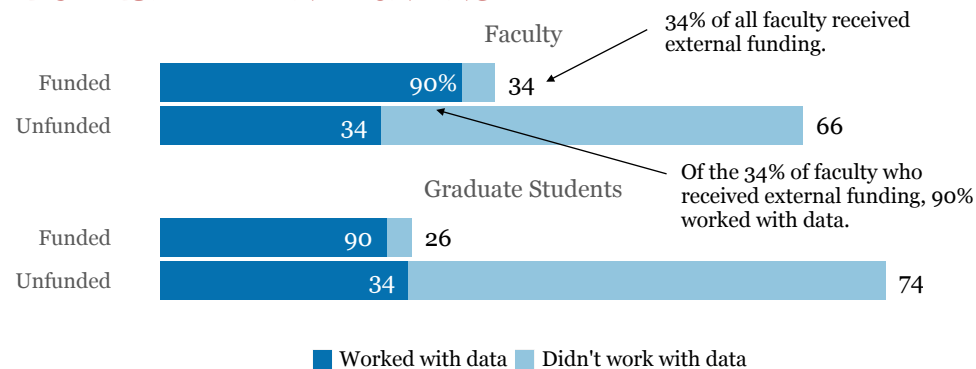
“I love getting help from real people in person at the library.”

Undergraduate comment

³ Data submitted by Boston University's office of Institutional Research to the Association of Research Libraries for inclusion in *ARL Statistics 2015-2016*, projected to be published in July/August, 2017.

DATA MANAGEMENT

RESEARCH DATA AND FUNDING



Faculty were asked whether they had received federal or external funding for research in the current academic year, and graduate students were asked whether they had worked on federally or externally funded research while a graduate student at BU. Both groups were asked whether they had worked on a research project involving data during the current academic year.

54% of faculty and 48% of graduate students reported working on a research project involving data in the current academic year. Researchers who received external funding for research were much more likely to have worked with data: 90% of both faculty and graduate students who received external funding worked with data, as compared to 34% of those who didn't receive funding.

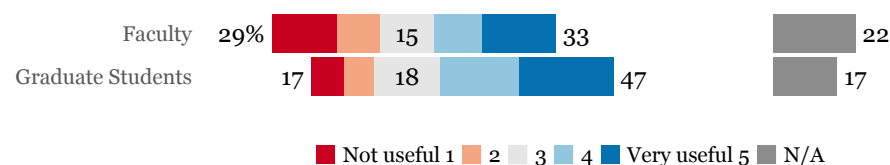
“I think that research faculty need to be doing a better job of archiving data--we all write data management plans for our grants, but I'm not sure that we are state-of-the-art in this regard.”

Faculty member comment

Recognition of the importance of properly managing, archiving, and sharing research data has increased in recent years, and many funding agencies now mandate some form of data

management or sharing. When asked about the usefulness of enhanced support from the library in managing and archiving research data,

USEFULNESS OF ENHANCED SUPPORT FOR DATA MANAGEMENT



Faculty and graduate students were asked about the usefulness of enhanced support in managing and archiving research data.

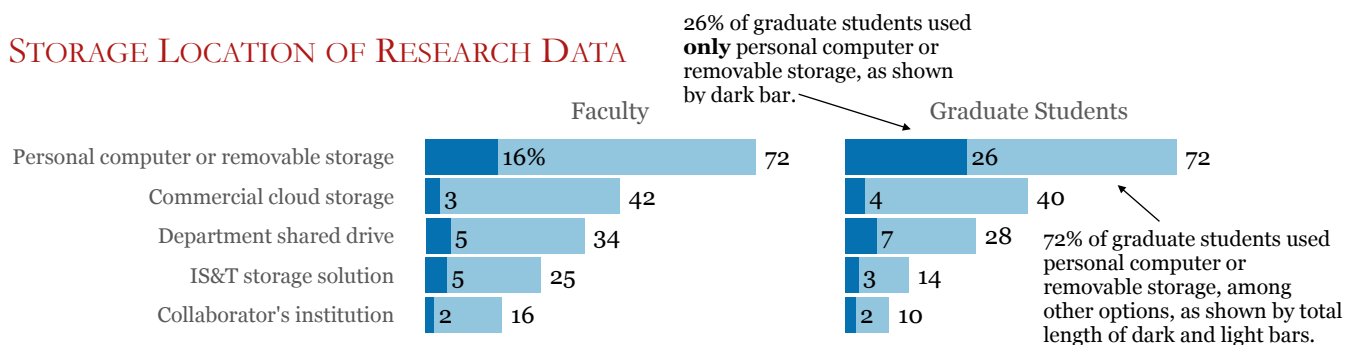
33% of faculty and 47% of graduate students gave a high rating. Several comments from faculty and graduate students also expressed the desire for more data management assistance and infrastructure.

“I wasn't aware that the library could support archiving of research data. Would that include digital data? We have a tremendous amount of it.”

Faculty member comment

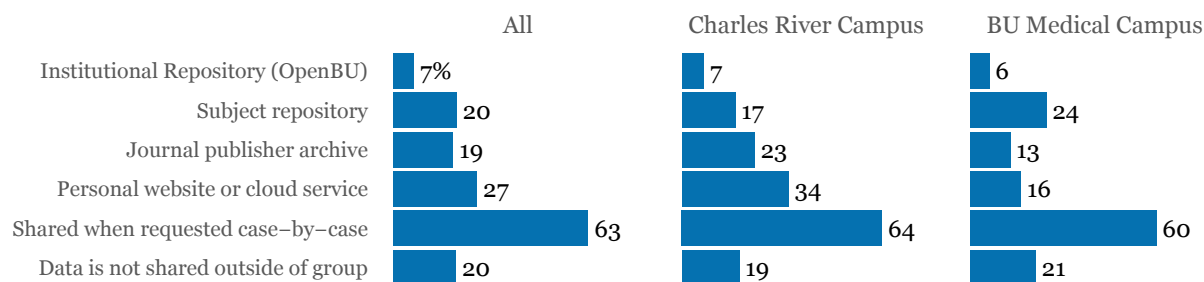
The survey asked two questions about data management practices. Faculty and graduate students who worked with data were asked where their research data was stored. The most common location was on a personal computer or removable storage: 72% of both faculty and graduate students who worked with data used this location. Commercial cloud storage, such as Dropbox and Google Drive, was used by 42% of faculty and 40% of graduate students. Less used were departmental shared drives (34% and 28%), IS&T storage solutions (25% and 14%), and storage at a collaborator's institution (16% and 10%).⁴

STORAGE LOCATION OF RESEARCH DATA



The 54% of faculty and 48% of graduate students who worked with data were asked where the data for their active research projects was stored. Totals exceed 100% because respondents were able to select multiple locations.

FACULTY SHARING OF RESEARCH DATA



The 54% of faculty who worked with research data were asked how their data was shared outside their group. Totals exceed 100% because respondents were able to select multiple methods.

⁴ Google Drive is a special case, since it is both a commercial cloud storage service and can be an IS&T storage solution (as part of IS&T supported BU Google Apps). Thus, researchers who used Google Drive to store their data could reasonably have chosen either or both options in the survey.

A personal computer or removable storage was the *only* location given by 16% of faculty and 26% of graduate students who worked with data. These results suggest the need for improved data management practices at BU.

Faculty were asked how their research data was shared outside their group. The most common method of sharing, chosen by 63% of faculty who worked with data, was “shared when requested on a case-by-case basis.”

The use of other methods ranged from 27% for a personal website or cloud service to 7% for BU’s institutional repository (OpenBU). 20% of faculty who worked with data did not share data outside their group.

A comparison of the results from faculty on the two campuses showed a basic similarity. Sharing on a case-by-case basis was the most

used method on both campuses, and OpenBU was the least used method. But there were some differences in the use of other methods. Faculty on the Charles River campus were more likely than faculty on the Medical Campus to have used journal publisher archives and a personal website or cloud services: 23% to 13% for journal publisher archives, and 34% to 16% for a personal website or cloud service.

On the other hand, faculty on the Medical campus were more likely to have used a subject repository, at 24% to 17%.

“Are there any plans to do something like Open BU but for institutional data or code?”

Graduate student comment

PUBLISHING AND OPEN ACCESS

Computers and the internet have revolutionized academic publishing. Researchers face complex decisions about how to disseminate their work in a rapidly changing publishing environment.

The survey asked faculty and graduate students about the usefulness of enhancing library services related to navigating this environment. Both groups were asked about the usefulness of guidance on archiving papers and other publications in digital repositories. 39% of faculty and 41% of graduate students gave it high usefulness ratings.

Faculty were also asked about the usefulness of enhanced assistance with open access issues such as funding mandates, publisher agreements, and copyright: 45% gave a high rating.

Graduate students were asked about the usefulness of enhanced assistance with submitting papers to journals: 51% gave high ratings.

“It would be immensely helpful if you could help with data archiving - even in teaching and guidance.”

Faculty member comment

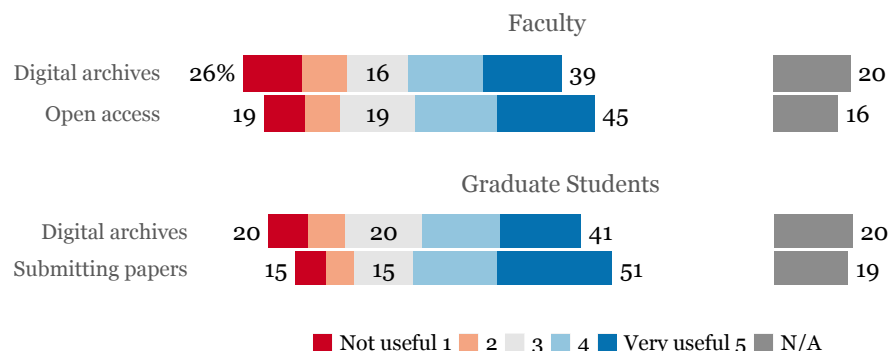
WHERE TO PUBLISH?

Faculty were asked the importance of various factors in their decision on where to publish journal articles. The most important factor for most faculty was journal reputation or ranking: 87% of faculty gave it a high importance rating.

Also important to many faculty were the timeliness of the publication process (62% high ratings), and being published by a scholarly society (53%).

Factors connected to open access and copyright had less importance for most faculty. Of these factors, the absence of page or other publication charges for the author was the most important: 48% gave it a high rating. Then

USEFULNESS OF ENHANCED LIBRARY ASSISTANCE WITH PUBLICATION ISSUES



Faculty and graduate students were asked about the usefulness of enhanced guidance on archiving papers and other publications in digital repositories. Faculty were also asked about enhanced assistance with open access issues, while graduate students were asked about enhanced assistance with submitting papers to journals.

came retaining copyright to work (34%), the journal allowing open access (28%), and the ability to include research data with the publication (28%).

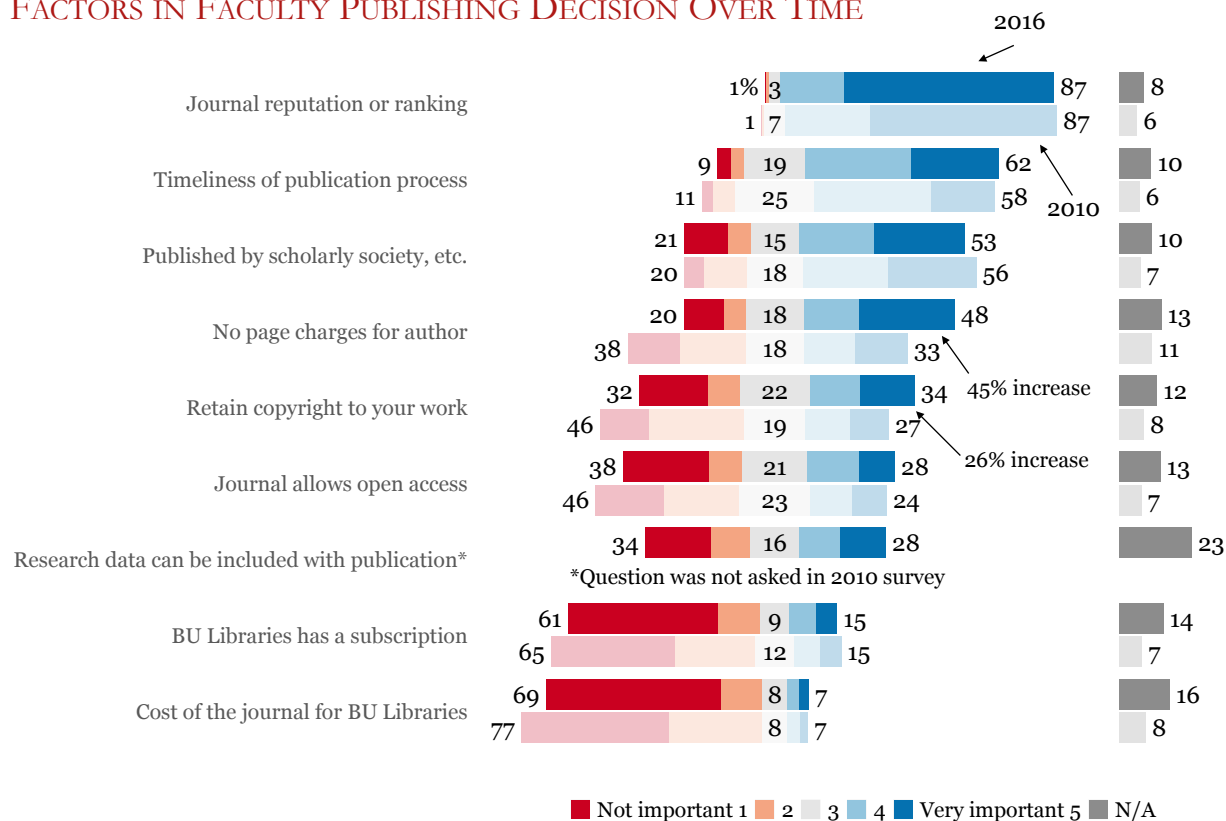
“We need better guidance on appropriate, reputable journals to publish in, beyond the self-evident AAA list in each discipline.”

Faculty member comment

The least important factors were directly connected to the library. Only 15% gave high ratings for whether BU libraries have a subscription, and 7% for the cost of the journal to BU libraries.

When compared to the results from a 2010 survey of the faculty, there has been no change in the ranking of these factors, and only minor changes in the ratings for most factors.⁵ The biggest changes were related to page charges and copyright. The percent of faculty who gave high ratings for the importance of the absence of page charges went from 33% in 2010 to 48% in 2016, a 45% increase. High ratings for

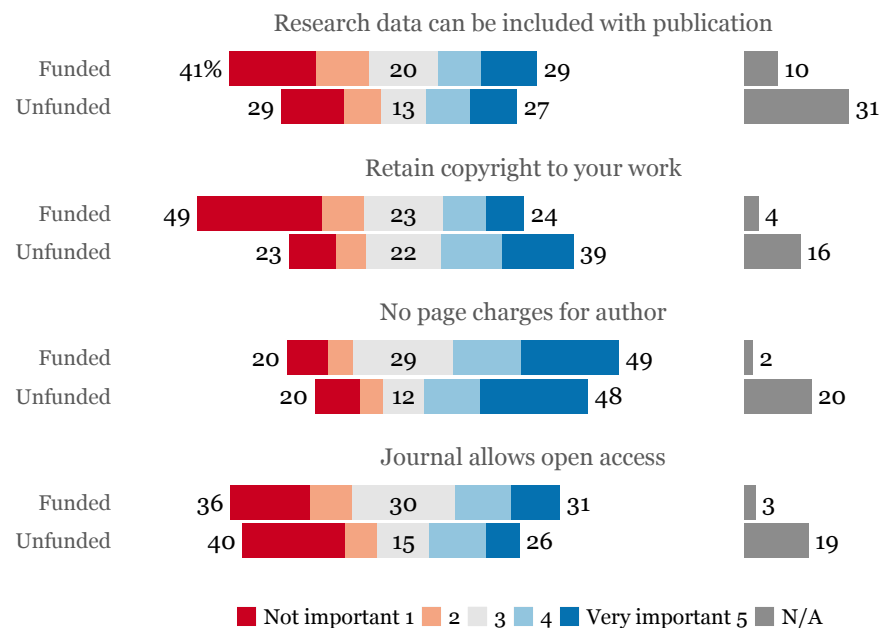
FACTORS IN FACULTY PUBLISHING DECISION OVER TIME



Faculty were asked about the importance of various factors in their decision on where to publish journal articles. For comparison, results are shown from the current 2016 survey (top bar of each pair) and from the 2010 survey (bottom bar).

⁵ Boston University 2010 Faculty Library Survey Report (March 2011, <http://hdl.handle.net/2144/20038>).

INFLUENCE OF FUNDING ON FACULTY PUBLISHING DECISION



Results from a subset of possible factors in faculty decision on where to publish journal articles, comparing results from those that reported receiving federal or external funding for research in the current academic year and those who did not.

the ability to retain copyright went from 27% to 34%, a 26% increase.

It is also interesting to compare the results for faculty who received external funding for their research and those who did not. For most of the factors related to open access and copyright, these factors were important to a higher percentage of faculty who received funding than those who did not. Part of this difference is because significantly more unfunded faculty responded that the factor was not applicable (ranging from 16% to 31%) than did funded faculty (3% to 10%).

The one exception to the trend of these factors being more important to funded researchers is retention of copyright. For this factor, 39% of unfunded faculty gave it a high importance rating, compared to 24% of funded faculty, even though significantly more unfunded

faculty (16%) gave a “N/A” response than funded faculty (4%).

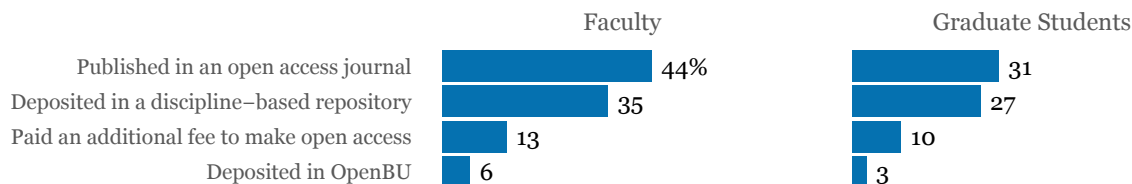
“Perhaps moving forward, the library can continue to play a role in educating the research community about the importance of open access, so information can be more widely available in the future.”

Graduate student comment

OPEN ACCESS

Faculty and graduate students were asked whether they used various options for making their published articles available. (Graduate students were also asked whether they had published a scholarly work, and results in this

USE OF OPEN ACCESS PUBLISHING



Faculty and graduate students were asked whether they had used various options for making their published articles freely available. For graduate students, the chart only shows responses from the 19% who report having been published.

section only include published graduate students.)

44% of faculty and 31% of published graduate students reported being published in an open access journal. 35% of faculty and 27% of published graduate students deposited their work in a discipline-based repository; 13% and 10% paid an additional fee to make an article open access; and 6% and 3% deposited an article in OpenBU.

Comparing faculty who received external funding for their research to those who did not shows that funded faculty were much more likely to have made their work freely available. The percent who published in an open access journal went from 32% of unfunded faculty to 64% of funded; for depositing in a discipline-

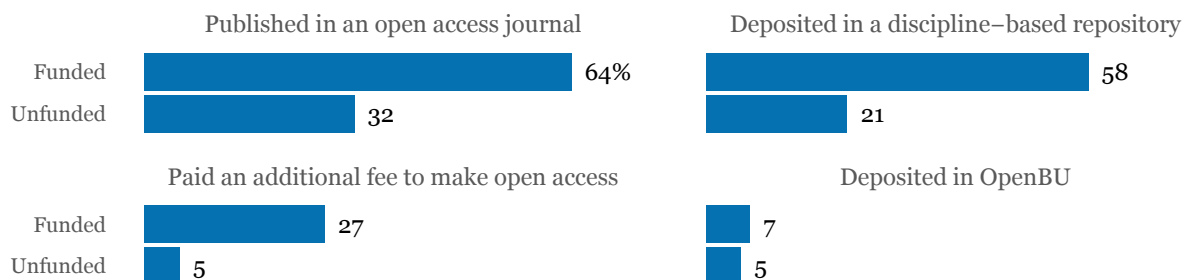
based repository, it went from 21% to 58%; and for paying an additional fee for open access, it went from 5% to 27%. The smallest change was for depositing in OpenBU, which went from 5% to 7%.

“Open access and fair use issues are complex. More evaluative assistance with these such as a personalized audit might help.”

Faculty member comment

Open access fees were a concern for several faculty members in their comments, who found such fees a barrier to publishing in open access journals. Some suggested that BU consider

INFLUENCE OF FUNDING ON FACULTY USE OF OPEN ACCESS PUBLISHING



Comparison of use of open access publishing options by faculty that reported receiving federal or external funding for research in the current academic year and those who did not.

covering these author fees or making arrangements with journals to waive these fees for BU researchers.

There were mixed opinions of open access journals in the comments, with some faculty members questioning their reputations, while others expressed strong support. Comments also revealed some confusion about OpenBU, with several faculty members and graduate students revealing that they were unaware that BU had an institutional repository.

BIBLIOGRAPHIC MANAGERS

One part of preparing a scholarly work for publication is assembling and formatting the

citations and bibliography. Software tools known as bibliographic managers can assist in this process. The libraries provide instruction and support in the use of bibliographic managers, and BU Libraries Search and many of the databases provided by the libraries provide integration with them.

In the survey, 55% of faculty and 66% of graduate students reported they had used a bibliographic manager in the current academic year. Additional findings from the survey in this area, including which bibliographic managers are used by each group, are given in Chapter Four: Library Support of Teaching and Learning.

RECOMMENDATIONS

IMPROVE LIBRARY SERVICES SUPPORTING RESEARCH

The libraries already serve an important role in supporting research at BU, as seen in the 59% of faculty and 52% of graduate students who gave high ratings to the contributions the libraries made to their being more productive researchers. But there is clearly a need for increased support in several areas.

These areas include data management, where 33% of faculty and 47% of graduate students gave high ratings to the idea of enhancing library assistance; archiving publications in digital repositories (high ratings to the idea from 39% of faculty and 41% of graduate students); assistance with open access issues (45% of faculty gave high ratings to the idea); and assistance with submitting papers for publication (51% of graduate students gave high ratings).

At the same time, there is reason to believe that many researchers at BU are not aware of existing library services that could support their research. For example, although most faculty and graduate students who made use of research assistance from the library considered the service important and were satisfied, only a quarter had actually made use of the service. In comments, many faculty members and graduate students expressed a lack of awareness of BU's institutional repository.

Given this desire for increased research support from the libraries, coupled with a lack of awareness of existing services, the libraries should take steps to expand and strengthen services to support research, and also to make the relevant members of the BU community more aware of these services.

Expand and Strengthen Services

The libraries should engage with researchers at BU, as well as other offices at BU that support research, to discover how the libraries can enhance their services to better meet the needs of researchers. This engagement could include focus groups, one-on-one interviews, and other methods. Areas to explore should include those identified in the survey (data management, digital repositories, open access, and publication), but the process should be open to discovering new areas.

The libraries should then implement changes in their services based on the results of this engagement. Depending on what is discovered, these changes might include expanded online tutorials, additional in-person and online workshops, forums, or enhanced consultation services, among other possibilities.

Publicize Services

The engagement with researchers to determine how to expand and strengthen services should also explore how researchers learn about available services, and the best ways to communicate with the research community. The resulting plan for expanding services should also include a plan to make researchers aware of any new services as well as existing services, such as research assistance. This plan might include a more unified branding for the array of services provided by the libraries.

INVESTIGATE THE DATA MANAGEMENT NEEDS OF BU RESEARCHERS

54% of faculty and 48% of graduate students worked on a research project involving data; for those who received external funding, the figure rose to 90%. 33% of faculty and 47% of graduate students gave a high rating for the usefulness of enhanced support from the libraries in managing and archiving data. The

most commonly used storage location for research data was a personal computer or removable storage, and most researchers do not make use of repositories to share their data. These results suggest many researchers at BU could benefit from more institutional support for data management.

During the last year, the libraries have been investigating the data management needs of BU researchers. The libraries are now looking to partner with other groups at BU, including the BU Research office and IS&T. Together, these groups should further explore data management needs at BU so they can provide appropriate services to BU researchers.

CHAPTER FOUR: LIBRARY SUPPORT OF TEACHING AND LEARNING

GENERAL SUPPORT FOR TEACHING AND LEARNING

As articulated in BU Libraries’ strategic plan, “the Libraries are responsible for not only the curation and dissemination of information, but facilitating learning and knowledge creation.”⁶

who responded to the question gave one of the top two responses on a five-point scale from “None” to “Major.”

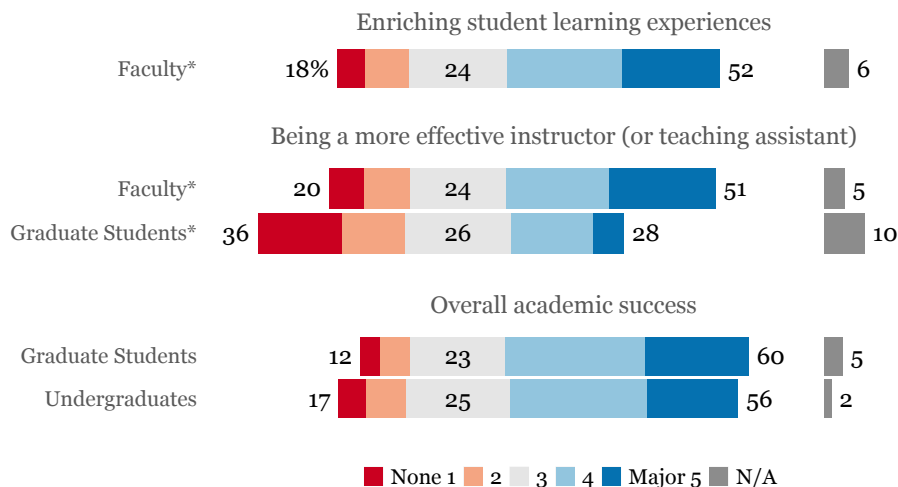
LIBRARY CONTRIBUTIONS

Survey questions about library contributions can help gauge how well the libraries succeed in facilitating learning. Students were asked what contributions the libraries made to their overall academic success, and 60% of graduate students and 56% of undergraduate students

“I give my classes a library orientation that they all admit is one of the most important and valuable lessons of the semester.”

Faculty member comment

CONTRIBUTIONS OF BU LIBRARIES



*Only shows results from the 91% of faculty and 31% of graduate students involved in teaching

Responses to survey questions about contributions made by BU libraries in three areas.

⁶ Boston University Libraries *Strategic Plan: 2010-2017* (<https://www.bu.edu/library/about/strategic-plan/>)

On the instruction side, 91% of faculty who took the survey reported they were involved in teaching (of undergraduates, graduates, and/or clinically) in the current academic year. Of that group, 52% gave high ratings for the libraries' contribution to enriching the student learning experiences, and 51% gave high ratings for the libraries' contribution to their being a more effective instructor.

31% of graduate students reported being a teaching assistant or instructor while a graduate student at BU. Of that group, only 28% gave high ratings for the libraries' contribution to their being a more effective instructor or teaching assistant. It is not clear why comparatively few graduate students believed that the libraries contributed to their teaching. It may be because many graduate students are not involved in creating the curriculum they are

teaching, so there is less opportunity for library support. More investigation needs to be done to determine whether the libraries are missing an opportunity to support graduate students in this area.

“I find that BU library consistently lacks access to journals and databases I require for my research and coursework.”

Graduate student comment

“I find the response of the staff to be useful, timely and just what I need. I especially appreciate being able to integrate library resources for the students into my classes.”

Faculty member comment

COLLECTIONS

Instructors at BU can draw upon the libraries' collections when creating their curricula, and course assignments often require students to make use of the libraries' collections, either by using material selected by the instructor or by finding their own material. 66% of undergraduates reported using journal articles from the libraries for course assignments in the current academic year, and 65% reported using library books.

Findings from the survey on use and opinions of the libraries' collections, and how patrons

REASONS FOR USING ONLINE LIBRARY RESOURCES

	Number of Online Sessions	Purpose				
		Course Work	Teaching	Research	Patient Care	Other
Faculty	88,600	5%	20%	67%	5%	3%
Graduate Students	339,100	58%	1%	34%	4%	4%
Undergraduates	175,600	86%	0%	9%	0%	4%

The number of online sessions initiated by each group to access library resources, from March 2014 to February 2015, and a breakdown of the purpose of each session. From *Use of the Library's Collection: Findings from the MINES Survey*.

TEACHING FACULTY DISTRIBUTION OF READING MATERIAL AND RESOURCES



Shows percent of faculty who reported using each method in the current academic year to make assigned reading material and resources for their courses available to students. Only includes results from the 91% of faculty who reported being involved in teaching in the current academic year.

found the resources needed for their work, are given in Chapter Two: Library Collections.

The survey questions did not go into any detail on why patrons were using the libraries' collections, but some information on this topic can be found in a recent study of the online use of BU library materials.⁷ This study found that graduate students made more use of online resources than faculty and undergraduates combined. Course work was the purpose of 58% of graduate student online sessions, and 86% of undergraduate. 20% of faculty online sessions were for teaching.

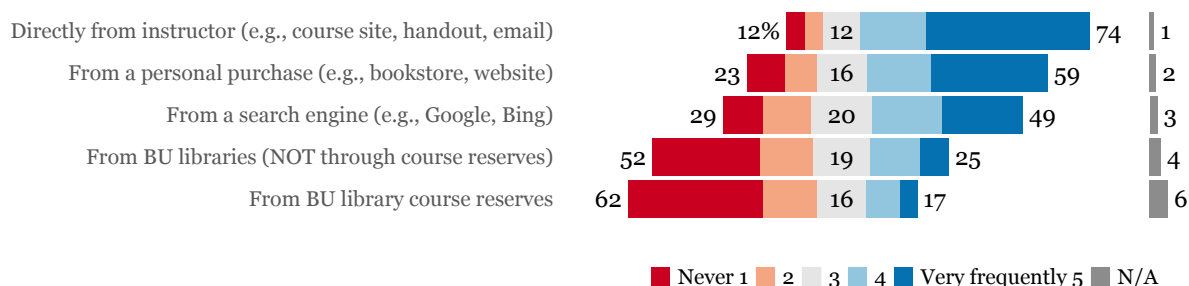
DISTRIBUTION OF COURSE MATERIAL

Instructors have a variety of methods available to distribute assigned reading material and resources for their classes, and many of these methods involve the libraries either directly or indirectly.

73% of faculty who taught during the current academic year reported using a learning management system (such as Blackboard) to distribute assigned material. Only 22% reported using library course reserves.

On the student side, undergraduates were asked how frequently they obtained assigned resources and reading material through various

UNDERGRADUATE ACQUISITION OF ASSIGNED COURSE MATERIAL



Undergraduates were asked how frequently during the current academic year they obtained assigned resources and reading material through various methods.

⁷ *Use of the Library's Collection: Findings from the MINES Survey* (November 2015, <http://hdl.handle.net/2144/20333>)

methods. The most frequently used method was to receive material directly from the instructor (e.g., through a course site, handout, or email), while the least frequently used method was library course reserves. In a separate question, 46% of undergraduates reported using course reserves in the current academic year.

“Having ready access to images and sound recordings that could be utilized in Blackboard or uploaded to PowerPoint presentations would be enormously useful.”

Faculty member comment

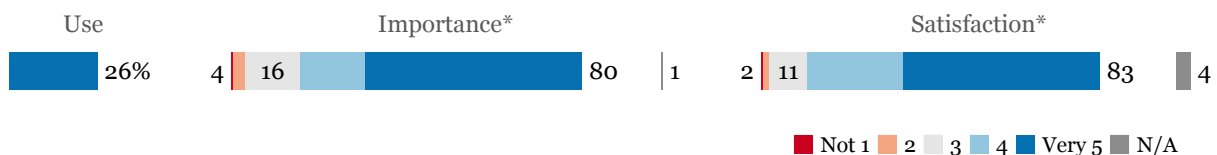
“Blackboard is a super clunky solution. Especially uploading files etc. It takes forever, loads slowly, and looks like it was designed in the early 2000's (because it was). I've resorted to using dropbox for files (and teacher link for announcements) in some of my classes just to make the interface easier.”

Graduate student comment

Those faculty who did use course reserves generally considered the service important and were satisfied with it. 80% of them gave high ratings for importance, and 83% gave high ratings for satisfaction.

Faculty and graduate students were asked how useful it would be if the library enhanced its assistance in integrating library material and services with learning management systems. 52% of faculty and 47% of graduate students who responded to the question gave high usefulness ratings.

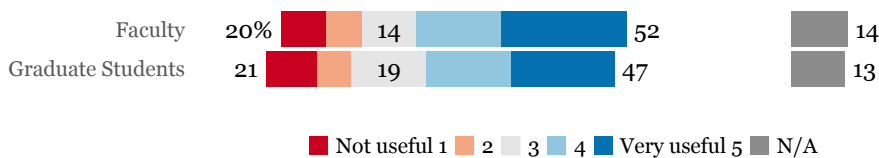
FACULTY USE AND OPINION OF COURSE RESERVES



*Only shows results from those who reported using the service

Faculty were asked about their use and opinion of library course reserves.

USEFULNESS OF ENHANCING LIBRARY ASSISTANCE IN INTEGRATING LIBRARY MATERIALS WITH LEARNING MANAGEMENT SYSTEMS



Faculty and graduate students were asked about the usefulness of enhancing assistance provided by the library in integrating library materials and services into learning management systems such as Blackboard or Sakai.

A PLACE TO STUDY

Students need a place to do the studying required by their courses. 73% of graduate students and 83% of undergraduates reported they used the libraries for individual study, while 39% of graduate students and 49% of undergraduates used the libraries for group study. 44% of graduate students and 52% of undergraduates reported they visited a library at least once a week.

Additional findings from the survey on how students use the physical libraries, and their satisfaction with aspects of the physical libraries, are given in Chapter Five: Library as Place.

INFORMATION LITERACY INSTRUCTION

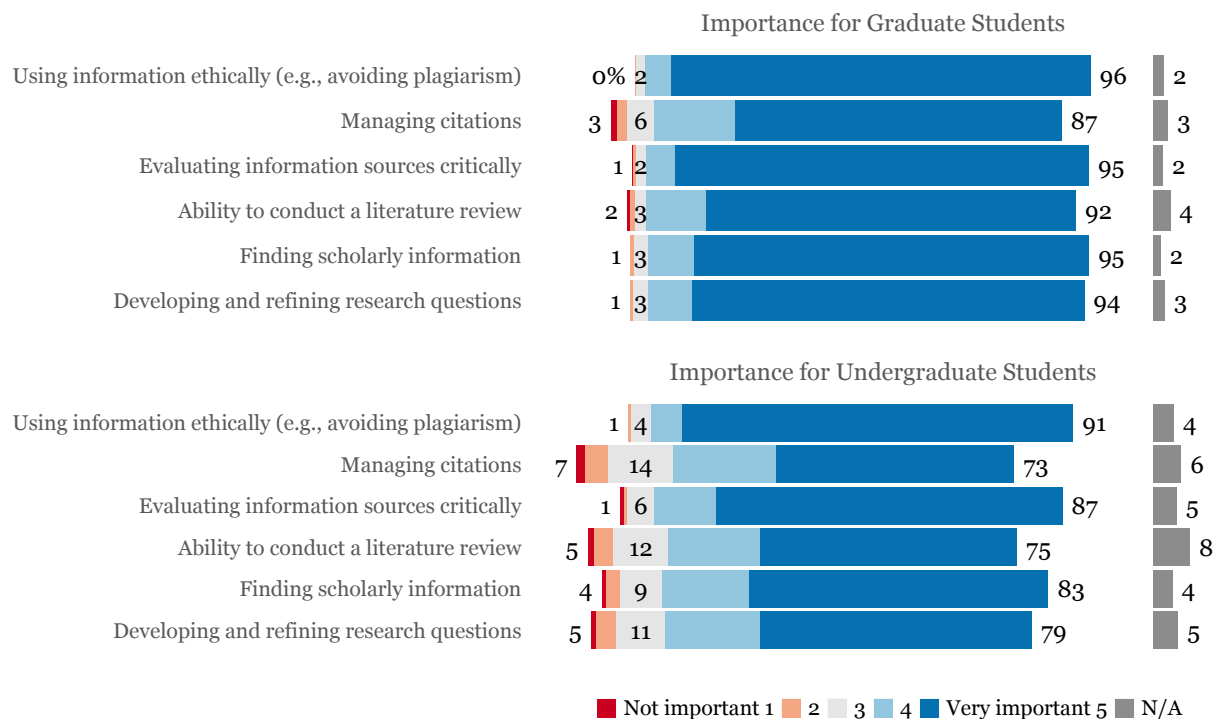
In addition to providing general support for teaching and learning at BU, the libraries have a special role in promoting and providing instruction to the BU community in the set of skills and competencies often referred to as “information literacy.” Information literacy has been defined as “the set of integrated abilities encompassing the reflective discovery of information, the understanding of how information is produced and valued, and the use of information in creating new knowledge

and participating ethically in communities of learning.”⁸

NEED FOR INFORMATION LITERACY INSTRUCTION

When asked to rate the importance of various information literacy skills to student success in their programs, most faculty involved in teaching rated the skills as “very important” for both undergraduate and graduate students.

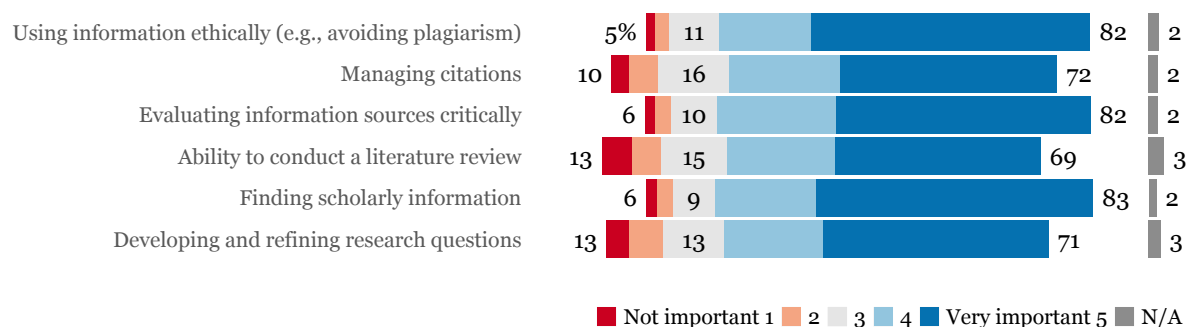
TEACHING FACULTY PERCEPTION OF IMPORTANCE OF INFORMATION LITERACY SKILLS TO STUDENTS



Faculty were asked about the importance of various information literacy skills to academic success of graduate and undergraduate students in their programs. For graduate students, the chart shows responses from the 67% of faculty who reported teaching graduate students in the current academic year. For undergraduates, the chart shows responses from the 52% of faculty who reported teaching undergraduates in the current academic year.

⁸ *Framework for Information Literacy for Higher Education* (February 2015, <http://www.ala.org/acrl/standards/ilframework>)

IMPORTANCE OF INFORMATION LITERACY SKILLS TO GRADUATE STUDENTS



Graduate students were asked about the importance of various information literacy skills to success in their current academic program.

Graduate students were asked to rate the importance of the same skills to success in their academic program, and their own ratings were in line with the faculty ratings: most graduate students considered the skills important.

“Finding credible, relevant sources is the hardest part of the research process. Students need all the help we can get in this area.”

Undergraduate comment

Faculty were also asked to assess student performance in these skills, on a five-point scale from “Poor 1” to “Excellent 5.” The results of this assessment were more mixed, especially for undergraduate students. For all skills except using information ethically, more faculty gave low assessments of undergraduate performance than gave high assessments.

In comments, many faculty members expressed a need for more training in information literacy skills for both graduate and undergraduate students. A variety of methods were suggested, including online tutorials, library workshops, and instructional classes. Several comments

pointed out a particular need to support international students in this area, with classes and tutorials tailored to their needs.

Undergraduate students were not asked about the importance of these skills, but were asked how helpful library assistance would be for a subset of them. Nearly half of undergraduates responded they would find such assistance helpful, with a particular demand for help in finding sources.

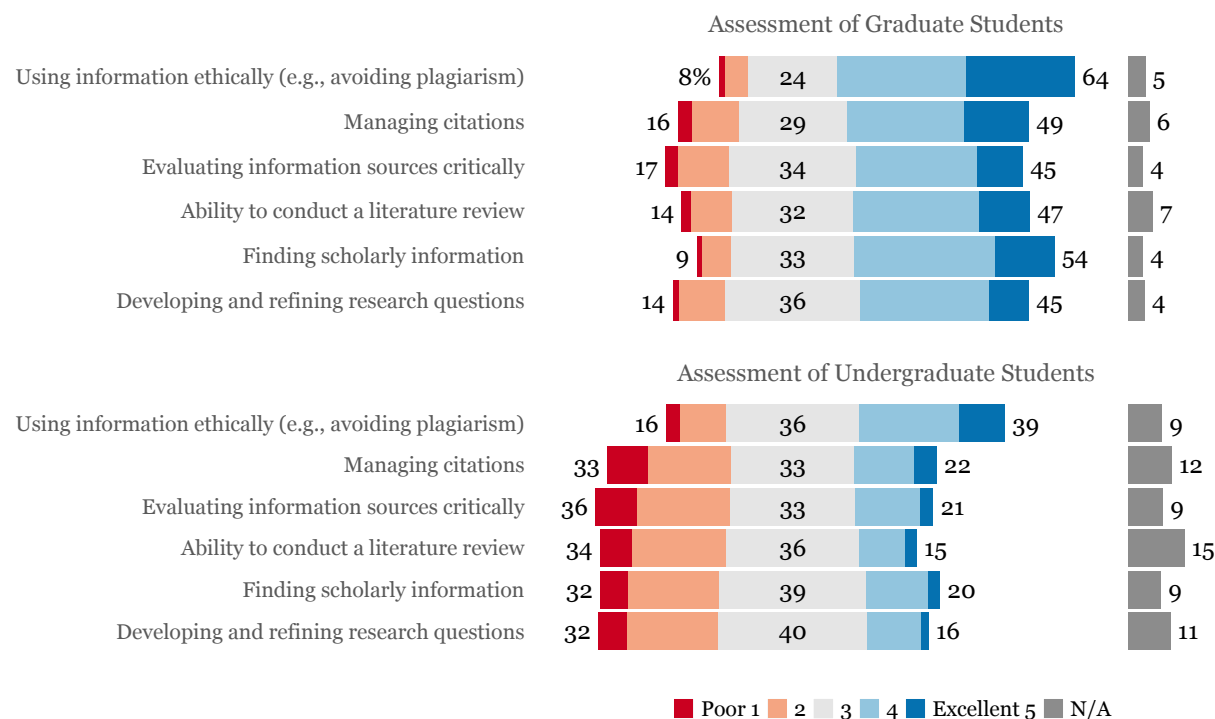
ASSESSMENT OF INFORMATION LITERACY SERVICES

The libraries provide a variety of services to promote and teach information literacy at BU. Not everyone is aware of these services; in comments some faculty, graduate students, and undergraduates seemed unaware of currently available services.

“What I am generally unaware of is the range of possible services the library could provide to assist in teaching/research.”

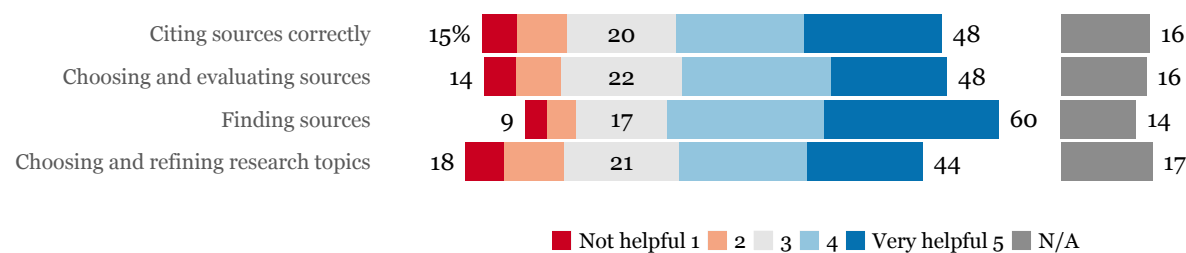
Faculty member comment

TEACHING FACULTY ASSESSMENT OF STUDENTS' INFORMATION LITERACY SKILLS



Faculty were asked to assess student performance in various information literacy skills. For graduate students, the chart shows responses from the 67% of faculty who reported teaching graduate students in the current academic year. For undergraduates, the chart shows responses from the 52% who reported teaching undergraduates in the current academic year.

USEFULNESS TO UNDERGRADUATES OF ASSISTANCE WITH INFORMATION LITERACY SKILLS

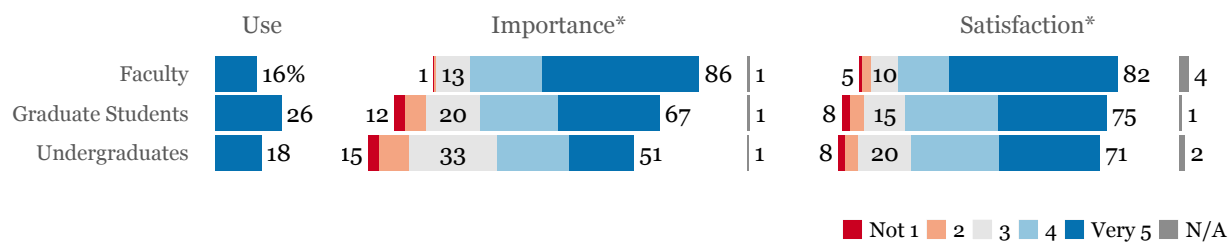


Undergraduate students were asked how helpful library assistance in various information skills would be.

One such service includes librarian presentations and workshops, held either in the library or in classrooms. Most of these presentations and workshops provide

instruction on topics directly related to information literacy. The survey asked patrons about their use and opinion of this service. It

USE AND OPINION OF LIBRARIAN-LED PRESENTATIONS AND WORKSHOPS



*Only shows results from those who reported using the service

Faculty and students were asked about their use and opinion of librarian-led presentations and workshops.

was used by 26% of graduate students, 18% of undergraduates, and 16% of faculty.

For those who did use it, the responses showed that most considered the service important and were satisfied with it. Faculty gave the highest ratings: 86% of faculty who used the service gave high ratings for importance and 82% gave high ratings for satisfaction.

Another service provided by the libraries makes available online guides and tutorials on a wide variety of topics. These include guides to

“Loved the training I get from the library staff in using the online search tools.”

Graduate student comment

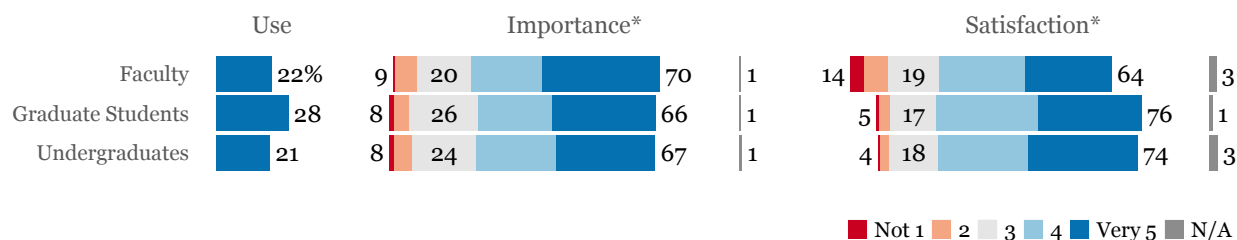
“I never heard there is a lecture or class to tell students how to use library resources effectively, and if there is one, I will be there.”

Graduate student comment

finding resources in specific subjects, how to use specific databases, and how to cite sources.

Patrons were asked about their use and opinion of guides and tutorials on the libraries’ websites, and again the results showed that most patrons did not use this service, although the use, ranging from 28% for graduate students to 21% for undergraduate students, was slightly higher than for presentations and workshops. Most patrons who did use the

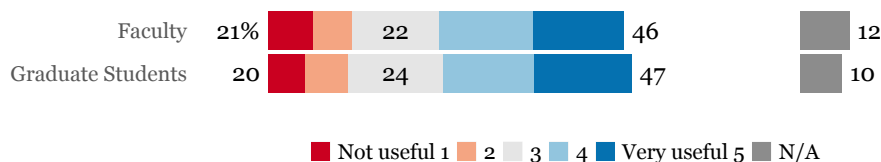
USE AND OPINION OF LIBRARY GUIDES AND TUTORIALS



*Only shows results from those who reported using the service

Faculty and students were asked about their use and opinion of the guides and tutorials on the libraries’ websites.

USEFULNESS OF ENHANCING ONLINE TUTORIALS



Faculty and graduate students were asked about the usefulness of enhancing online tutorials for databases and research tools.

service found it important and were satisfied with it.

“Having library staff that can teach about search strategies, changes in databases and maximizing results is very helpful.”

Faculty member comment

Faculty and graduate students were also asked about the usefulness of the libraries’ enhancing their online tutorials for databases and research tools; a bit under half of each group gave the proposal high ratings. In comments, faculty and students requested increased availability of online tutorials covering such topics as efficiently finding resources using BU Libraries Search and other databases, evaluating resources, creating citations, and linking to library resources from within learning management systems.

BIBLIOGRAPHIC MANAGERS

One element of information literacy, especially in an academic context, is the proper use of citations. Software that can help with the creation and formatting of citations and bibliographies are known as bibliographic managers or reference management tools.

The libraries provide instruction and support in the use of bibliographic managers, and BU Libraries Search and many of the libraries’ databases support integration with them. Through licensing, the libraries make the bibliographic manager RefWorks available to the BU community.

In the survey, 55% of faculty, 66% of graduate students, and 72% of undergraduate students reported using a reference management tool.

For undergraduates, the most used bibliographic manager was EasyBib (used by 85% of undergraduates who used bibliographic managers), with Citation Machine (28%) in

USE OF BIBLIOGRAPHIC MANAGERS



Shows the percentage of each group who reported using a reference management tool in the current academic year.

second place; all others were used by less than 10%.

For faculty, the most used bibliographic manager was the desktop version of EndNote, used by 53% of faculty who used a bibliographic manager.

Graduate students did not have a single most-used bibliographic manager, and their use was spread roughly evenly among the available options.

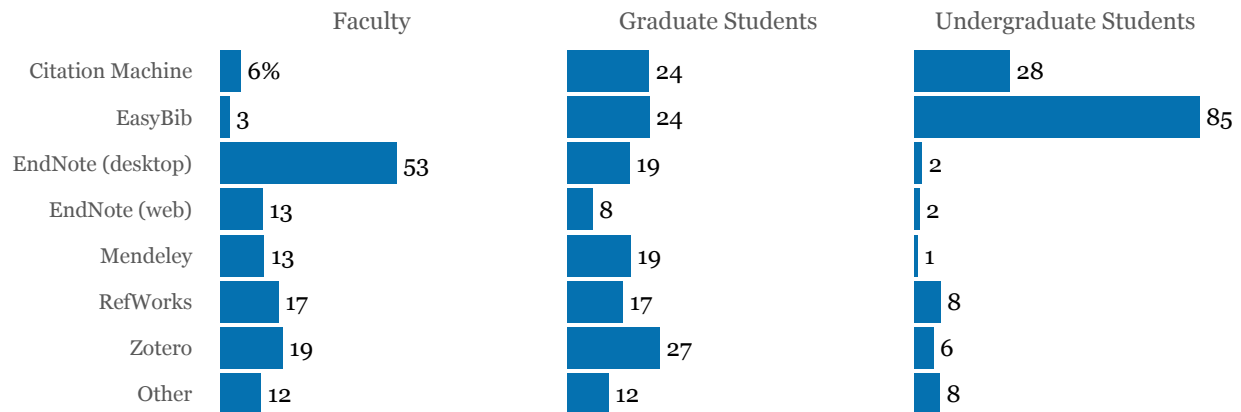
Comments about bibliographic managers included praise and criticism of RefWorks (the

manager provided by the libraries); calls for the libraries to provide other managers, such as Endnote, Zotero, or EasyBib; and suggestions for the libraries to provide instructional support such as classes and guides for various managers.

“I really, really wish EndNote was still supported.”

Graduate student comment

BIBLIOGRAPHIC MANAGERS USED



For the subset of survey respondents who reported using a reference management tool (see previous chart), this chart shows what percentage use each type of tool. Totals exceed 100% since respondents could pick more than one choice.

RECOMMENDATIONS

INCREASE EFFECTIVENESS OF LIBRARY SUPPORT FOR INSTRUCTION AND STUDENT LEARNING

While it is encouraging that more than half of teaching faculty gave a high rating for the libraries' contribution to enriching student learning and to their being a more effective instructor, there are still many faculty members who did not see the libraries as making major contributions in these areas. The libraries should reach out to teaching faculty to learn more about this range of reactions, discover more specifically what faculty consider to be the most effective and enriching library contributions to instruction, and then act on these findings to increase the contribution to more teaching faculty.

INCREASE SUPPORT FOR LEARNING MANAGEMENT SYSTEMS

The survey results show that learning management systems (LMS) are the primary method used by instructors to distribute course materials. Just over half of teaching faculty indicated a high degree of interest in having enhanced assistance with integrating library material with an LMS.

The libraries should increase their knowledge and expertise on the various LMS used at BU, and reach out to faculty to learn more about the challenges they face in using library materials with LMS. Based on these findings, and working with faculty, IS&T, and other relevant stakeholders, the libraries should develop and provide increased support for LMS. Such support may include tighter technical integration of library systems with

LMS, online guides and tutorials, workshops, or consulting services.

CONTINUE TO SUPPORT COURSE RESERVES

Although library course reserves were only used by a fraction of teaching faculty, those who did use the service overwhelmingly found it important and were satisfied with it. Therefore, the libraries should continue to support course reserves for the immediate future. However, as LMS evolve and library support for faculty use of LMS is enhanced, course reserves might naturally diminish in importance or largely be folded into LMS support.

SEEK FACULTY-LIBRARIAN PARTNERSHIPS TO IMPROVE INFORMATION LITERACY SKILLS

Given the extremely high ratings given to the importance of various information literacy skills, and the more mixed assessment by the faculty of student performance of these same skills, there is a clear need for improved instruction in information literacy at BU. The importance of these skills was recognized by the Boston University Task Force on General Education, which in its March 2016 report included information literacy in its list of "knowledge, skills, and habits of mind that all BU undergraduates need to thrive in their professional, personal and civic lives."⁹

In light of this need, the libraries should see this as an opportunity to leverage librarian expertise for student success. The libraries should advocate to ensure that the general education curriculum for undergraduate students includes appropriate support for information literacy as envisioned in the task force's report. Building on faculty-librarian

⁹ Boston University Task Force on General Education *The BU Hub: A Vision for University-Wide Undergraduate General Education at Boston University* (March 2016, http://www.bu.edu/gened/files/__restricted/entire-bu-community/Final-Report-of-the-Task-Force-on-General-Education-4-6-16.pdf)

relationships developed with the Arts & Sciences Writing Program, the libraries should then reach out to faculty to discuss how librarians might best support faculty teaching and student learning of various information literacy skills.

EXPLORE DIRECT STUDENT ASSISTANCE WITH INFORMATION LITERACY SKILLS

In addition to partnering with faculty, librarians should engage directly with students to discover how to offer useful assistance with information literacy skills. Nearly half of undergraduates responded that they would find such assistance helpful, and most graduate students consider such skills important to their academic success. The libraries should convene a number of focus groups with undergraduates and graduate students to identify the best ways to offer such assistance to them. Some of these focus groups should concentrate on the needs of international students.

INCREASE SUPPORT FOR BIBLIOGRAPHIC MANAGERS

Most faculty and students use bibliographic managers to organize their citations, and there were several requests in comments for the libraries to increase their support for bibliographic managers, either by providing access to managers beyond RefWorks or by providing classes and guides.

Building on these results, the libraries should work with faculty and students to determine their needs in this area, and should then develop a plan for the libraries to increase their support for bibliographic managers. Depending on what is found, this plan might include providing access to other managers in addition to or instead of RefWorks, improving BU Libraries Search's integration with bibliographic managers, developing additional expertise among library staff, increasing the workshops and online guides the libraries provide on a range of managers, as well as better publicizing the libraries' new and existing services.

CHAPTER FIVE: LIBRARY AS PLACE

THE PHYSICAL LIBRARIES

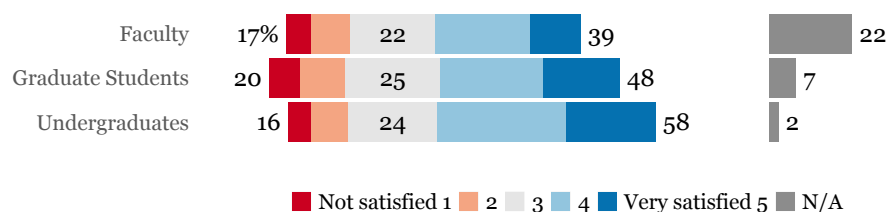
SATISFACTION AND CONTRIBUTIONS

Satisfaction with the physical libraries varied across the patron groups. Undergraduates were the most satisfied: 58% gave one of the top two ratings for satisfaction on a five-point scale. 48% of graduate students gave similar ratings, and only 39% of faculty. 22% of faculty

responded to the question with “N/A,” suggesting that a significant fraction of the faculty consider the physical libraries to be irrelevant to them.

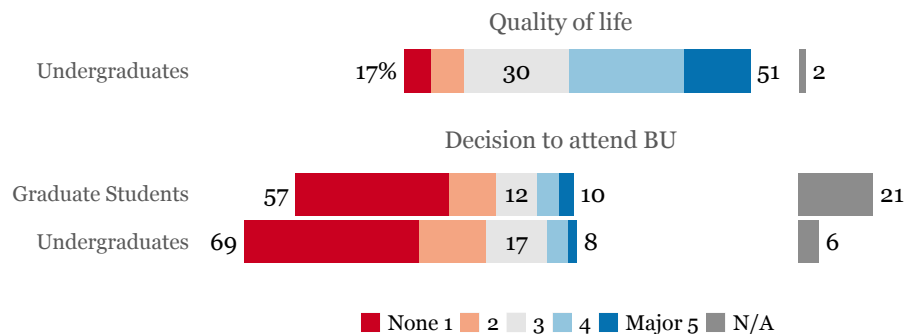
Two of the questions in the survey about the contributions made by the libraries are

SATISFACTION WITH PHYSICAL LIBRARIES



The survey asked how satisfied patrons are with the libraries’ physical spaces.

CONTRIBUTIONS OF BU LIBRARIES



Undergraduates were asked what contribution the libraries made to their quality of life, and both graduate and undergraduate students were asked what contribution the libraries made to their decision to attend BU.

particularly relevant to libraries as physical spaces.

51% of undergraduates gave a high rating for the contributions the libraries made to their quality of life. Providing a space separate from dorms and classrooms is one way the physical libraries contribute to the quality of undergraduate life.

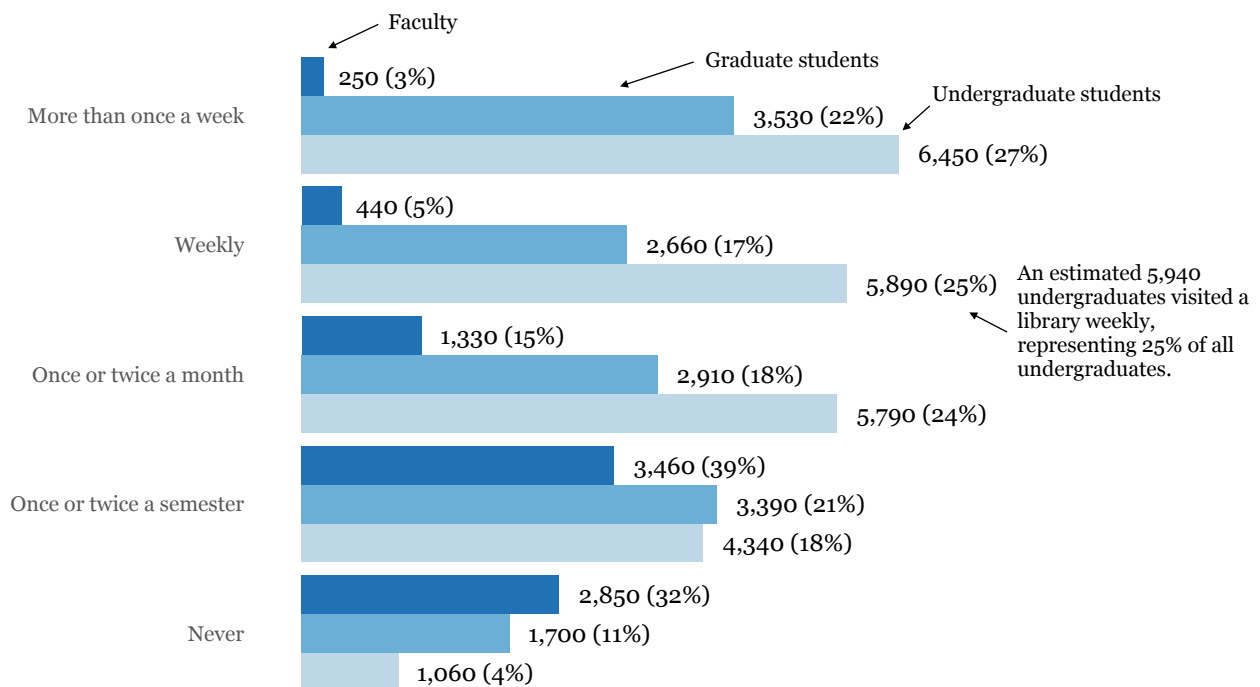
Only 8% of undergraduates and 10% of graduate students gave a high rating for the contributions the libraries made to their decision to attend BU. Although the question was not restricted to the physical libraries, the main impression of the libraries for potential students, particularly undergraduates, is likely to come from a visit to a physical library.

There were many comments calling for renovation of the libraries, particularly for Mugar Memorial, Alumni Medical, and Science and Engineering libraries. There were also comments complaining about the cleanliness of several libraries, calling for more frequent cleaning of bathrooms, tables, computer keyboards, and floors.

“On a very practical, mortar-bricks-steel and glass level, is the present building an inspiration for those activities appropriate to the library's future? I think the library's time has come for large-scale renovation.”

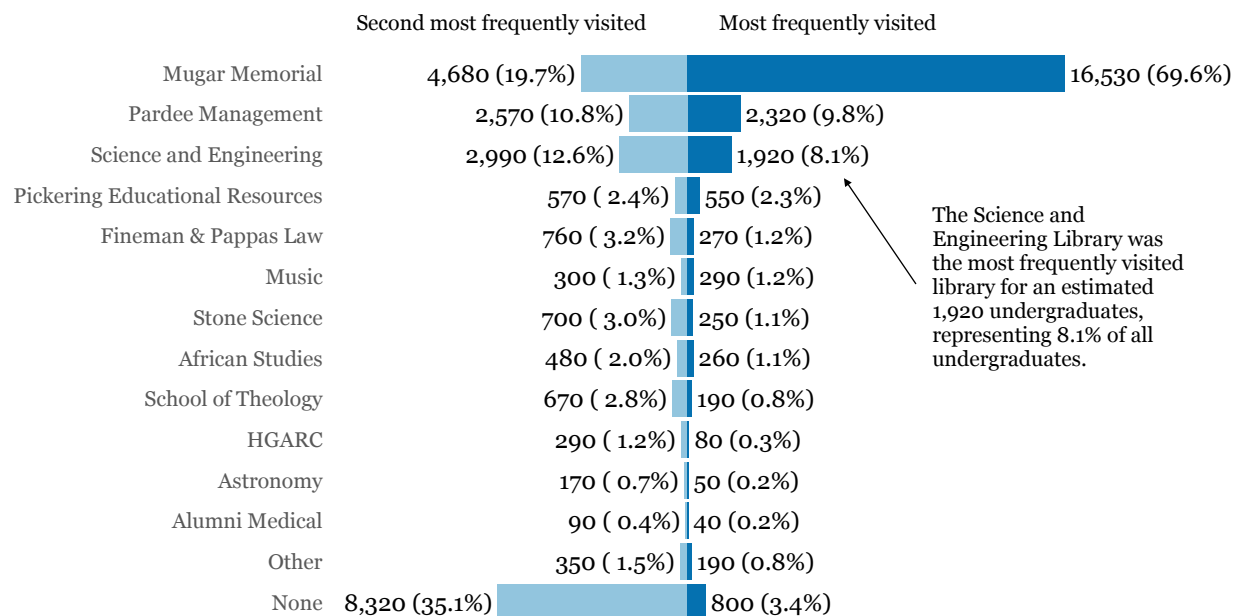
Faculty member comment

FREQUENCY OF IN-PERSON VISITS TO LIBRARIES



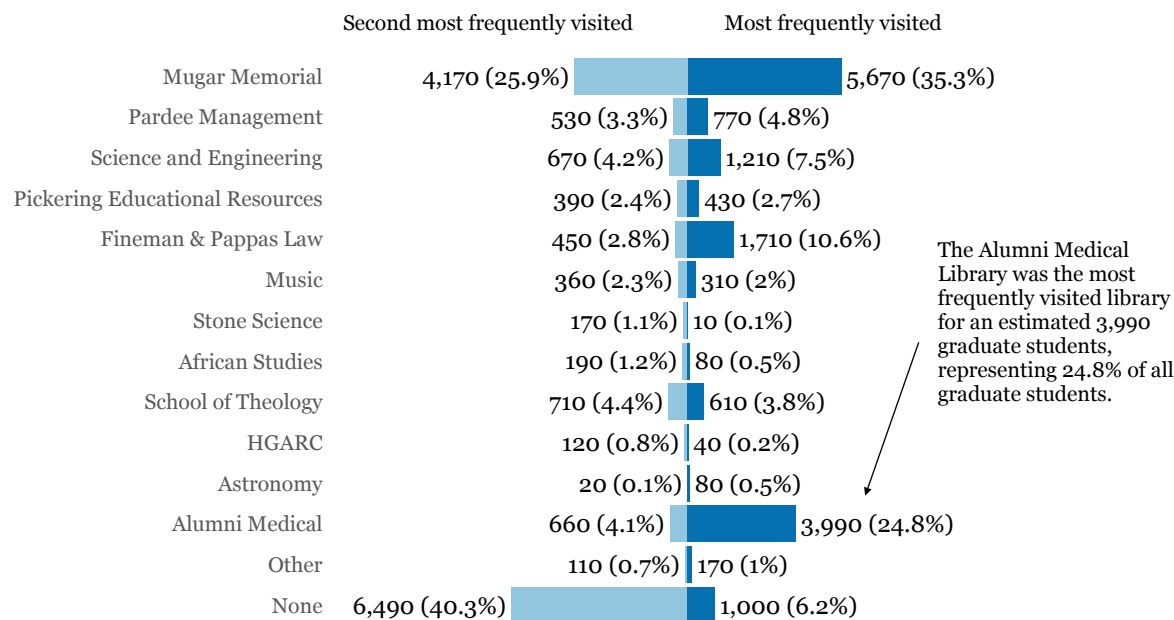
Estimated number of each group who visited libraries with each frequency, based on survey answers and response rates.

LIBRARIES MOST VISITED BY UNDERGRADUATE STUDENTS



Estimated number of undergraduate students for whom each library was their most frequently visited and second most frequently visited, based on survey answers and response rates.

LIBRARIES MOST VISITED BY GRADUATE STUDENTS



Estimated number of graduate students for whom each library was their most frequently visited and second most frequently visited, based on survey answers and response rates.

“I have spent a TON of time in BU libraries. They have made a huge difference in my academic success. Thanks for constantly improving them!”

Undergraduate comment

LIBRARY VISITS AND VISITED LIBRARIES

Undergraduates reported the highest usage of the physical libraries: 52% reported that they visited a library at least weekly, and only 23% reported that they visited once or twice a semester or less. Faculty had the lowest usage: only 8% reported at least weekly visits, and 76% reported that they visited once or twice a semester or less. Graduate students fell in between: 44% reported that they visited weekly or more, while 36% reported that they visited once or twice a semester or less.

Students were asked about their most frequently visited and second most frequently visited BU libraries. For undergraduates, Mugar Memorial Library was by far the most used library: 70% reported that it was their most frequently visited library, and a further 20% reported it was their second most frequently used.

“I love working in Mugar because of the ample space and tables, even though the science and engineering library has the actual texts I would be using.”

Graduate student comment

Two other libraries had significant use by undergraduates: Pardee Management Library (most visited by 10%, second most by 11%) and the Science and Engineering Library (8%/13%). Other libraries had some use, but under 3%.¹⁰

35% of undergraduates gave “none” as their second most frequently visited library, while in comments many undergraduates stated that they were not aware that BU had more than one library.

For graduate students, Mugar was also the most visited library, but it was not as dominant as for undergraduates: 35% reported it as their most visited library, and 26% as their second most visited.

Professional school libraries were important for graduate students. After Mugar, the most visited were the Alumni Medical Library (25% most visited, 4% second most) and the Fineman & Pappas Law Libraries (11%/3%). These libraries were overwhelmingly the most visited by students in the schools they serve, and such students make up most of the population for whom they were the most visited libraries.¹¹

SATISFACTION WITH HOURS AND PHYSICAL ASPECTS

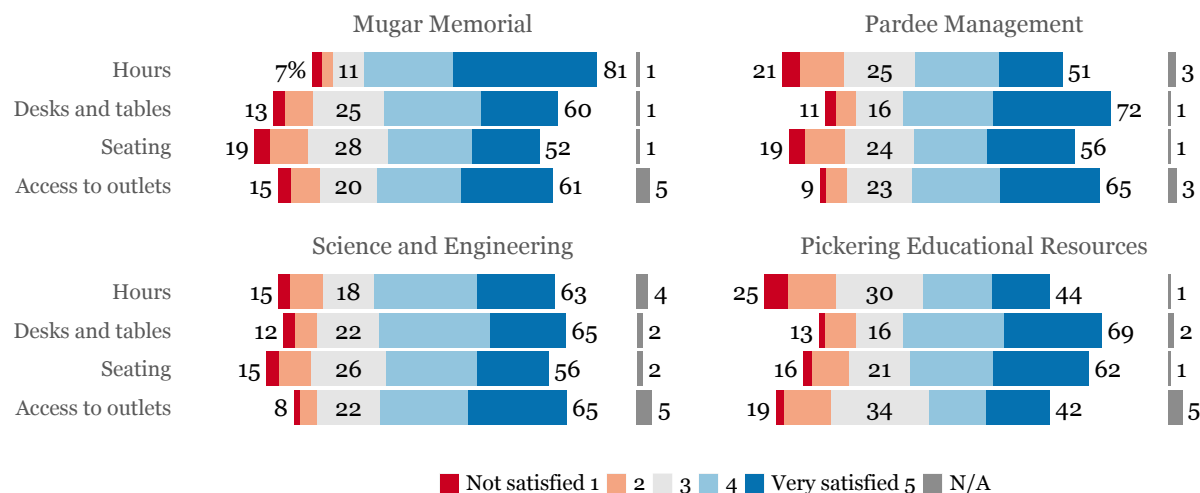
Graduate and undergraduate students were asked their satisfaction with various aspects of their most and second most visited libraries.

Most students (81% of undergraduates and 80% of graduate students) gave high satisfaction ratings for the hours of Mugar Memorial Library. Students were less satisfied

¹⁰ The African Studies Library and the Music Library are located inside Mugar, and some students might not have distinguished them from Mugar in their answers. Therefore, the assessment of these libraries might not be completely accurate.

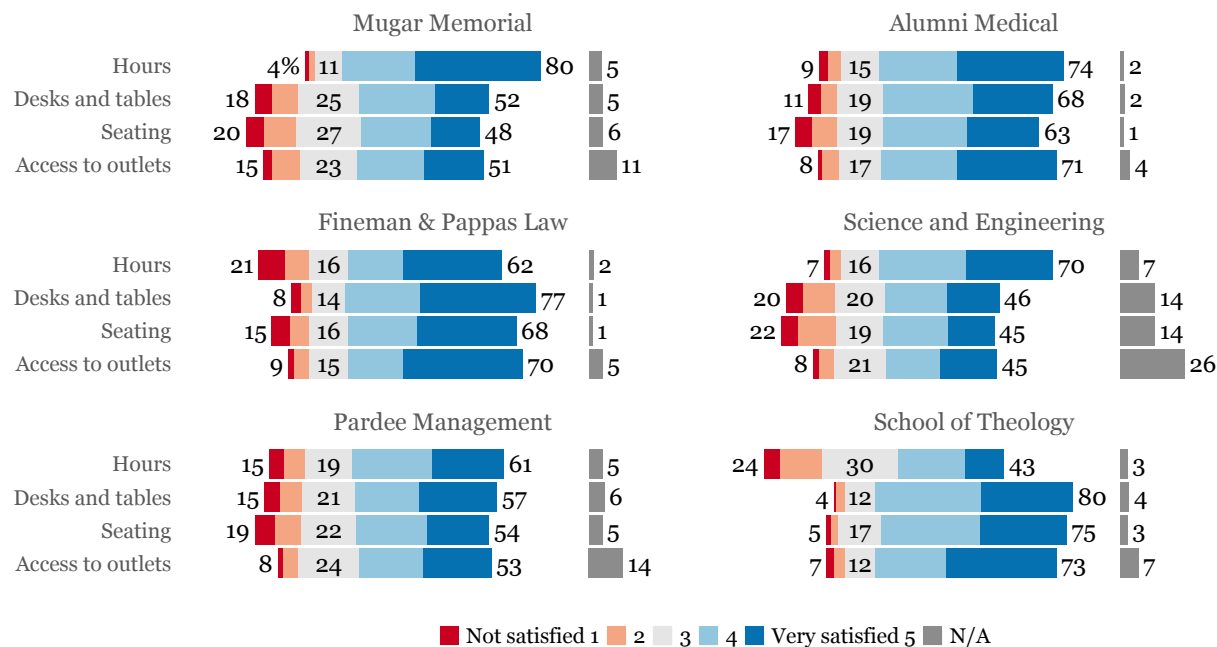
¹¹ The Alumni Medical Library serves the schools of Medicine, Dental Medicine, Public Health, and the Boston Medical Center, while the Fineman & Pappas Law Libraries serve the School of Law.

UNDERGRADUATE SATISFACTION WITH HOURS AND PHYSICAL ASPECTS OF MOST VISITED LIBRARIES



Satisfaction with physical aspects of libraries most frequently visited by undergraduates. The ratings for each library are from undergraduates who chose that library as their most or second most frequently visited library.

GRADUATE STUDENT SATISFACTION WITH HOURS AND PHYSICAL ASPECTS OF MOST VISITED LIBRARIES



Satisfaction with physical aspects of libraries most frequently visited by graduate students. The ratings for each library are from graduate students who chose that library as their most or second most frequently visited library.

with the hours of other most-visited libraries, with the lowest satisfaction given by undergraduates for Pardee Management Library (51% gave top two ratings) and Pickering Educational Resources Library (44%). Graduate students were least satisfied with the hours for the School of Theology Library (43%). In comments, there were multiple requests for a 24/7 library, earlier weekend hours at the Science and Engineering Library, and longer hours at the Pickering Educational Resources Library, the School of Theology Library, and the Fineman & Pappas Law Libraries.

Satisfaction with desks and tables, seating, and access to outlets varied, though in all cases positive ratings exceeded negative ratings by at

“Mugar needs serious renovations, it is not an inviting place to study. Also during finals, there is not enough space. How can the main library on campus not accommodate the student body?”

Undergraduate comment

“At Mugar Memorial Library there is often not enough seating or no available outlets. It makes doing work in the library difficult or impossible. The desks could also be cleaner, and the silence more strictly enforced.”

Undergraduate comment

least a two-to-one margin, and often higher. In the comments, there were many complaints about the difficulty of finding seating in the libraries, particularly at the Alumni Medical and Mugar Memorial libraries. Comments also called for more outlets or complained that many existing outlets were broken.

The highest percentage of “N/A” responses for these questions were given by graduate students for the Science and Engineering Library (7% to 26%), and to a lesser extent for Mugar Memorial Library (5% to 11%). This higher percentage of “N/A” responses could suggest that a subset of graduate students visited these libraries exclusively to access the collections or services and did not spend time studying in these libraries.

A PLACE TO STUDY AND COLLABORATE

Physical libraries are places for students to study, either individually or in groups. 83% of undergraduates and 73% of graduate students reported using libraries for individual study. Of those who used them in this way, 83% of undergraduates and 85% of graduate students gave a high rating for importance.

“The library is very good to provide us a quiet and safe place to study. Also, the library research center is very useful.”

Undergraduate comment

Fewer students used the libraries for group study. 49% of undergraduates and 39% of graduate students reported using the libraries for group study. Of those who used them in

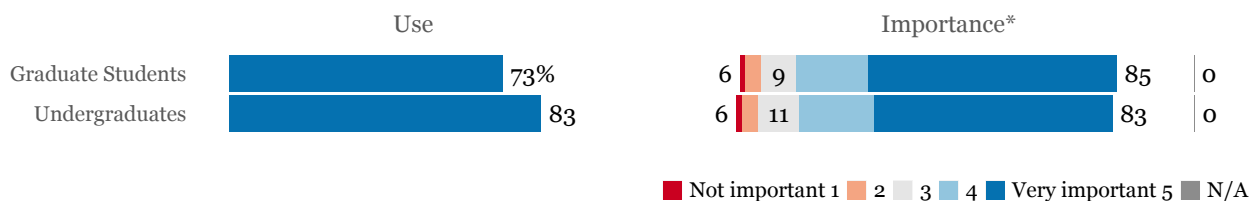
this way, 65% of undergraduates and 74% of graduates students gave a high rating for importance.

“I wish the library space could be upgraded to a cleaner, more open space, that is conducive to a quiet and comfortable studying area.”

Graduate student comment

Undergraduates generally expressed satisfaction with individual and quiet study areas at their most visited libraries. The highest satisfaction ratings were for the branches: 71% to 80% gave high ratings to Pardee Management Library, the Science and Engineering Library, and Pickering Educational Resources Library. Undergraduates were a little less satisfied with individual and

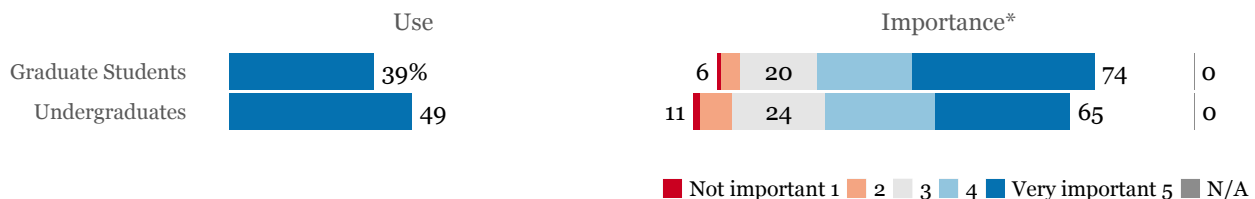
USE AND IMPORTANCE OF LIBRARIES FOR INDIVIDUAL STUDY



*Only shows results from those who reported using the service

Graduate and undergraduate students were asked about their use and the importance of libraries for individual study.

USE AND IMPORTANCE OF LIBRARIES FOR GROUP STUDY



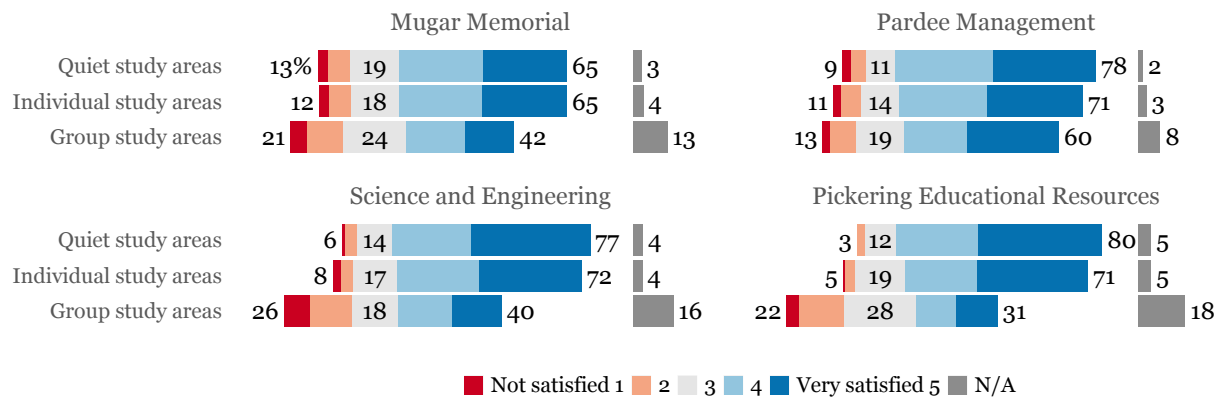
*Only shows results from those who reported using the service

Graduate and undergraduate students were asked about their use and the importance of libraries for group study.

quiet study areas at Mugar: 65% gave high satisfaction ratings for both types of study there.

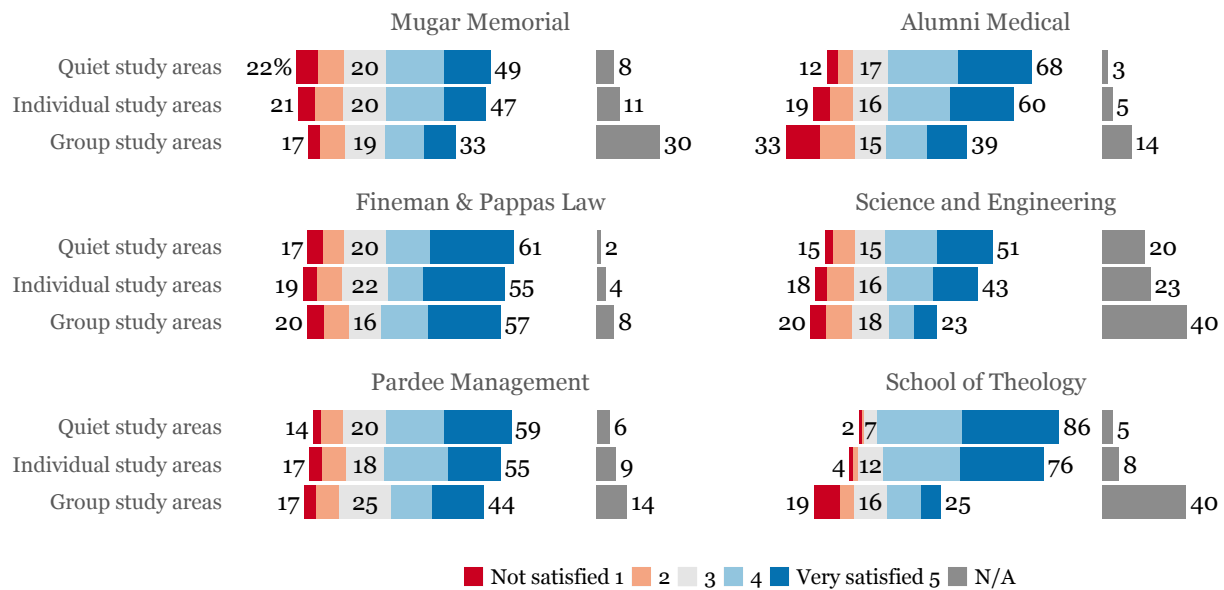
Graduate students gave somewhat lower satisfaction ratings for individual and quiet study areas at most libraries. The School of

UNDERGRADUATE SATISFACTION WITH STUDY AREAS OF MOST VISITED LIBRARIES



Satisfaction with the study areas of the libraries most frequently visited by undergraduates. The ratings for each library are from undergraduates who chose that library as their most or second most frequently visited library.

GRADUATE STUDENT SATISFACTION WITH STUDY AREAS OF MOST VISITED LIBRARIES



Satisfaction with the study areas of the libraries most frequently visited by graduate students. The ratings for each library are from graduate students who chose that library as their most or second most frequently visited library.

Theology Library received the highest satisfaction ratings from graduate students for quiet and individual study: 86% (quiet) and 76% (individual) gave high ratings. The professional libraries and Pardee Management Library had the next highest satisfaction for quiet/individual study: 68%/60% gave high ratings for the Alumni Medical Library, 61%/55% for the Fineman & Pappas Law Libraries, and 59%/55% for Pardee. Mugar Memorial Library and the Science and Engineering Library received lower ratings and also a higher percentage of graduate students who gave “N/A” ratings, perhaps indicating that they visited the libraries but didn’t use them for individual or quiet study.

“Mugar Memorial Library is really comfortable for me to study and work with others.”

Graduate student comment

There were many comments complaining about noise at the libraries, and requests for better delineation of quiet areas and/or more enforcement by library staff. Several faculty and graduate student comments referred to their groups’ different research and study needs, and requested dedicated library space unavailable to undergraduates.

“Pardee library has team rooms essential to the success of team project[s] assigned in Questrom.”

Undergraduate comment

With the exception of the Fineman & Pappas Law Libraries for graduate students and Pardee Management Library for undergraduates, fewer students reported satisfaction with group study areas at their most or second most visited

“[The] School of Theology [...] Library has a wonderful staff and it [is] well run. I wish that it had better group study areas.”

Graduate student comment

libraries. 57% of graduate students gave high ratings for group study at the Law Libraries, and 60% of undergraduates gave high ratings for Pardee. Ratings for group study at other libraries ranged from 42% from undergraduates at Mugar Memorial Library to 23% from graduate students at the Science and Engineering Library.

A portion of these lower ratings for group study areas can be attributed to the higher percentage of “N/A” responses given for the question from students who might not use the libraries for such study. But the lower proportion of positive to negative ratings confirms that there is less satisfaction with group study areas even after accounting for “N/A” responses.

Comments from all three groups called for more collaborative spaces, from seminar rooms for faculty to group study rooms for graduate students and undergraduates. Such comments were especially common for Mugar Memorial and Alumni Medical libraries.

A PLACE TO ACCESS THE COLLECTION

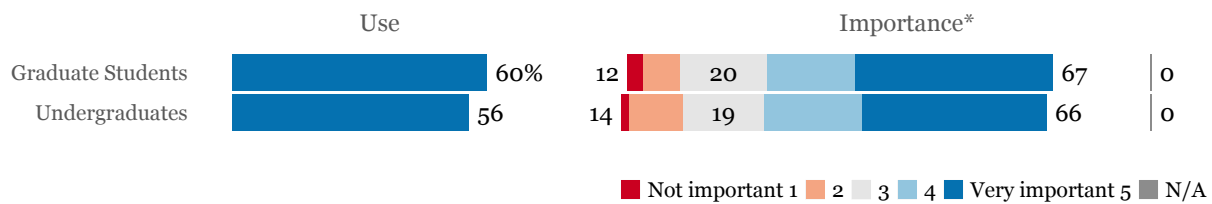
A second reason to visit libraries is to access the collections. The libraries have extensive physical collections that require a visit to check out or use. In the 2015-2016 fiscal year, 65,294 items were checked out from the libraries, excluding reserves.¹² Except for a handful of specialized databases, the libraries' online collections can be accessed from both inside and outside the library. A recent study at BU showed that 14% of undergraduate and 9% of graduate student online use of the libraries' collections was from inside a library.¹³ Findings from the survey about use and opinions of the

collection are described in Chapter Two: Library Collections.

In the survey, 56% of undergraduates and 60% of graduate students reported using the computers in the library. Of those who used the computers, 66% of undergraduates and 67% of graduate students gave high ratings to their importance.

The ability to scan items in the libraries can be useful for accessing the libraries' collections, especially for items such as print journals that can generally only be used in the library. 35%

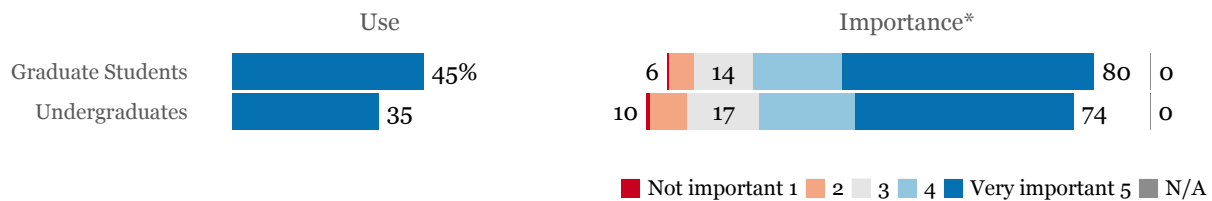
USE AND IMPORTANCE OF ACCESS TO COMPUTERS IN LIBRARIES



*Only shows results from those who reported using the service

Graduate and undergraduate students were asked about their use and the importance of access to computers in libraries.

USE AND IMPORTANCE OF ACCESS TO SCANNERS IN LIBRARIES



*Only shows results from those who reported using the service

Graduate and undergraduate students were asked about their use and the importance of access to scanners in libraries.

¹² Data submitted by Boston University's office of Institutional Research to the Association of Research Libraries for inclusion in *ARL Statistics 2015-2016*, projected to be published in July/August, 2017.

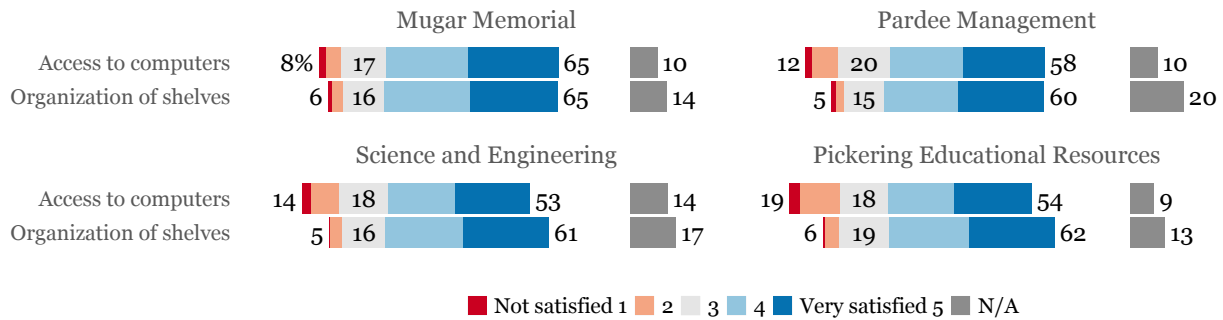
¹³ *Use of the Library's Collection: Findings from the MINES Survey* (November 2015, <http://hdl.handle.net/2144/20333>)

of undergraduates and 45% of graduate students reported using the scanners in the libraries, and of those who did use them, 74% of undergraduates and 80% of graduate students gave high ratings for their importance.

Undergraduates generally reported being satisfied with access to computers: 53% to 65% gave high ratings for their most visited libraries.

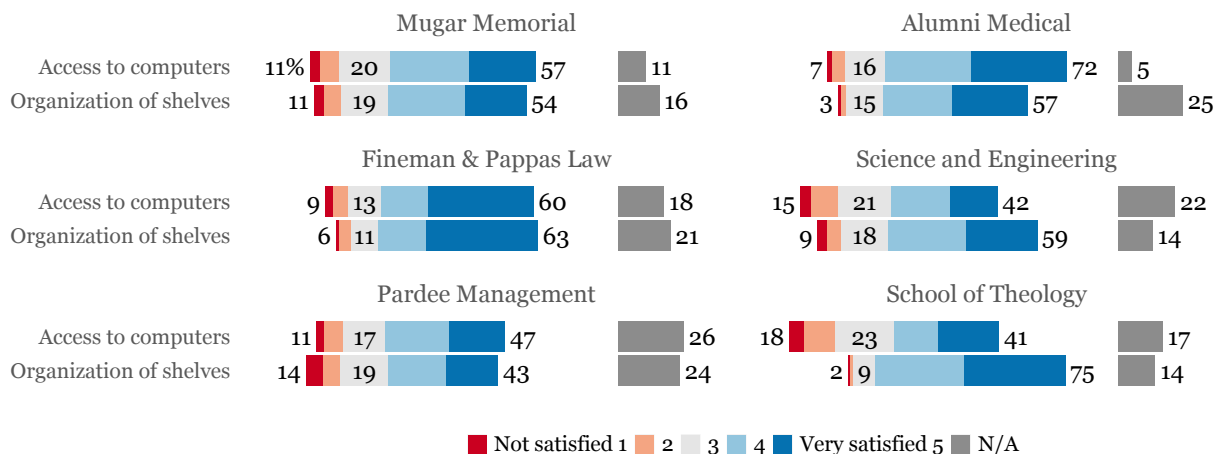
Graduate students had more varied opinions of access to computers at their most used libraries. 72% gave high ratings for the Alumni Medical Library, while only 57% gave high ratings for

UNDERGRADUATE SATISFACTION WITH COMPUTERS AND SHELF ORGANIZATION



Satisfaction with access to computers and shelf organization for the libraries most frequently visited by undergraduates. The ratings for each library are from undergraduates who chose that library as their most or second most frequently visited library.

GRADUATE STUDENT SATISFACTION WITH COMPUTERS AND SHELF ORGANIZATION



Satisfaction with access to computers and shelf organization for the libraries most frequently visited by graduate students. The ratings for each library are from graduate students who chose that library as their most or second most frequently visited library.

Mugar Memorial Library, and 42% for the Science and Engineering Library. In the latter case, part of the lower ratings appeared to be due to the higher percentage (22%) who answered “N/A.”

Several comments expressed appreciation for the availability of computers but complained that they are slow, outdated, and in need of replacement. Complaints were also made about the age and lack of cleanliness of the keyboards.

Multiple comments from all three groups—faculty, graduate students, and undergraduates—expressed frustration that books were missing from their proper places on the shelves. In response, the libraries have begun an inventory project that will ensure items are shelved in the proper order and that missing items are replaced or removed from the catalog as appropriate.

“Using technological resources (computers, printers, scanners) is of absolute importance to me as a student because I do not own my own laptop.”

Undergraduate comment

A PLACE FOR ASSISTANCE

A third reason to visit libraries is to use library services, such as research assistance and course reserves, and to learn information literacy skills. 26% of faculty, 24% of graduate students, and 19% of undergraduates reported having used research assistance from the libraries, either in person or online. More findings from the survey about the libraries’ support for research are given in Chapter Three: Library Support of Research. Findings from the survey about subjects such as the use of course reserves and information literacy instruction are given in Chapter Four: Library Support of Teaching and Learning.

Patrons sometimes need assistance from the libraries on a variety of topics, including asking about library hours, help with printing, and how to find things in the libraries. While assistance is available online or over the phone, it is often provided in person.

Faculty used general assistance from the libraries at the highest rate: 40% reported using

the service. Of those who used it, 81% gave high importance ratings, and 83% gave high satisfaction ratings.

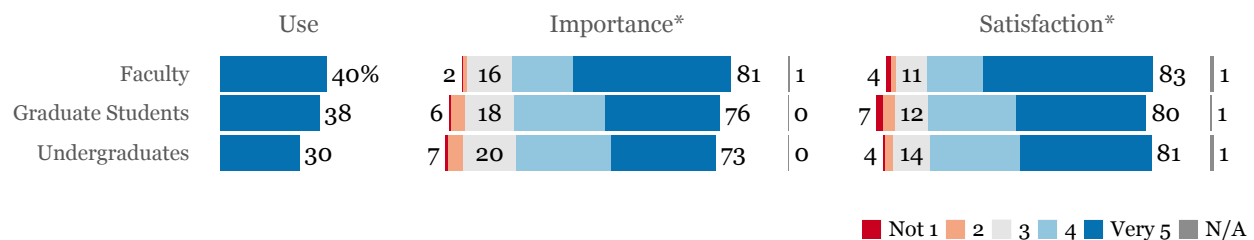
Graduate students were next: 38% of graduate students reported using it; of those, 76% gave high importance ratings, and 80% gave high satisfaction ratings.

Finally, 30% of undergraduates used the service; of those, 73% gave high importance ratings, and 81% gave high satisfaction ratings.

“Having worked for several other law schools, I can say that compared to most the quality and talent of the BU Libraries staff are second to none.”

Faculty member comment

USE AND OPINION OF GENERAL ASSISTANCE



*Only shows results from those who reported using the service

Faculty and students were asked about their use and opinion of general assistance, in person, by phone, or email.

RECOMMENDATIONS

UPGRADE THE PHYSICAL LIBRARIES

Students were the primary users of the physical libraries, and the survey results showed that most students were generally satisfied with them. However, the results did suggest several areas where the physical libraries should be improved.

52% of undergraduates and 38% of graduate students visited a library at least once a week, so such improvements would have a positive impact on a large number of students. Mugar Memorial Library was the most visited library for 70% of undergraduates and 35% of graduate students, and should therefore be the primary focus for improvements. However, other libraries should not be neglected, since collectively more graduate students use them than use Mugar.

The libraries should work with the university administration to explore in more depth what the BU community needs in its physical libraries and develop a comprehensive, practical plan to make needed improvements.

Improve the Appearance and Infrastructure of Libraries

There were many comments deploring the appearance, condition, and cleanliness of the libraries. While there were no questions that directly asked about the appearance of the libraries, only 8% of undergraduates and 10% of graduate students gave a high rating to the contributions the libraries made to their decision to attend BU. The question was not restricted to the physical libraries, but the low rating suggests that many students do not form a positive first impression of the libraries during their initial visits to BU.

Given the importance of recruitment to the overall academic standing and fiscal health of the University, the appearance of the physical

libraries should be upgraded to improve the impression visitors form of them. Improvements are also needed in the infrastructure of libraries to address problems such as leaking roofs and inconsistent temperatures. These improvements would also make the libraries more pleasant destinations for the many students who visit them on a regular basis.

Such improvements are especially important for Mugar Memorial Library, which is the most used library and the library most likely to be visited during campus tours. However, comments called out many of the libraries as needing renovation. In addition to Mugar, the Alumni Medical and Science and Engineering libraries were the most frequently mentioned.

Improve Group Study Spaces

Students gave substantially lower satisfaction ratings for group study spaces than for individual study space, and these differences were only partially accounted for by the lower use of group study. Therefore, the libraries should give priority to improving their collaborative spaces. Before proposing changes, the libraries should learn from the experiences of peer institutions which have recently redesigned their spaces to accommodate a variety of individual and group study styles. At the same time, the libraries should engage with BU students, possibly in focus groups, to explore their preferences and needs.

Improve Individual/Quiet Study Space for Graduate Students

Although graduate students used the libraries for individual study at almost the same rate as undergraduates (73% compared to 83%), they generally expressed less satisfaction with the individual and quiet study spaces in the libraries. At Mugar, the library most visited by

graduate students, 22% gave low satisfaction ratings for quiet study.

Given the University's emphasis on improving the caliber of graduate students, the libraries should address this shortcoming. Using focus groups and other methods, the libraries should engage with graduate students to learn why so many are dissatisfied with the study spaces at the libraries and make changes to meet their needs.

EXPLORE ADJUSTING HOURS OF THE PARDEE MANAGEMENT, PICKERING EDUCATIONAL RESOURCES, AND SCHOOL OF THEOLOGY LIBRARIES

Although most students gave high satisfaction ratings for the hours of Mugar, students were

less satisfied with the hours of other most visited libraries. The lowest satisfaction ratings given by undergraduates were for Pardee Management Library and Pickering Educational Resources Library (PERL). 21% (of those for whom it was a frequently visited library) gave low ratings for the hours at Pardee, and 25% for PERL. The lowest satisfaction ratings given by graduate students were for the School of Theology Library: 24% gave low ratings.

Currently, Pardee is open 91 hours per week during academic semesters, Theology is open 69 hours, and PERL is open 65.5 hours. The libraries should engage with students to learn if there are adjustments that can be made to these hours to better meet their needs.

APPENDIX

METHODOLOGY

SURVEY INSTRUMENTS

Because of each group's different needs and relationships with the libraries, three different survey instruments were used for faculty, graduate students, and undergraduates. Where appropriate, however, the same wording was used across the surveys to allow direct comparison of results.

The instruments were refinements of the instruments used in the 2010 faculty survey, the 2012 graduate student survey, and the 2013 undergraduates survey.¹⁴ Some changes were made in the instruments based on lessons learned from conducting and analyzing the previous surveys, and to reflect changes in the libraries, but overall most questions were unchanged to facilitate comparisons over time.

The original instruments were loosely adapted, with permission, from a survey instrument developed by the University of Washington Libraries.¹⁵

CONDUCTING THE SURVEY

Since the survey involved working with human subjects, the survey instruments and protocols were submitted to BU's Institutional Review Board, and the project was granted an exemption.

The survey was conducted from March 15th to April 7th, 2016. It was done entirely online using the Qualtrics Research Suite.¹⁶ With the assistance of the Office of the Provost, Human Resources (for faculty) and the Office of the University Registrar (for students), email lists were compiled for all current faculty and students, and each person was emailed a personalized link to the appropriate survey. Using this personalized link, Qualtrics was able to automatically capture demographic data (affiliated school or college, part-time or full-time status, etc.) associated with each individual without compromising the survey's anonymity. In previous surveys, this demographic data was gathered by asking questions in the survey. This new approach allowed for shorter surveys and ensured that the data would be more accurate and uniform.

Multiple reminders were sent to those who had not completed the survey, and posters were placed around the BU campuses to publicize the survey. To encourage participation, survey participants could enter into a raffle to win an iPad mini. To maintain anonymity, the personally identifiable information captured for the drawing was kept separate from the survey results.

¹⁴ *Boston University 2010 Faculty Library Survey Report* (March 2011, <http://hdl.handle.net/2144/20038>), *Boston University 2012 Graduate Student Library Survey Report* (September 2012, <http://hdl.handle.net/2144/20039>), *Boston University 2013 Undergraduate Student Library Survey Report* (September 2013, <http://hdl.handle.net/2144/20041>)

¹⁵ University of Washington Libraries *Triennial Survey* (<http://www.lib.washington.edu/assessment/surveys/triennial>)

¹⁶ Qualtrics (<https://www.qualtrics.com/>). BU has a license for Qualtrics (<http://www.bu.edu/tech/services/cccs/desktop/distribution/qualtrics/>)

2016 SURVEY RESPONSE RATES

	Sent Survey	Took Survey	Response Rate
Faculty	8,936	867	9.7%
Graduate Students	16,088	2,120	13.2%
Undergraduates	23,744	2,362	9.9%

The response rate is the number of each group who took the survey (by answering at least one question) divided by the number who were sent a personalized link to the survey.

DATA ANALYSIS

The data was downloaded from Qualtrics in Microsoft Excel format, and Excel was used for preliminary cleaning of the data. This cleaning primarily involved removing responses from 6 faculty members, 6 graduate students, and 199 undergraduates who accessed the survey but didn't answer a single question. The response rate shown in the table was calculated after this clean-up.

The data was then imported into R, an environment for statistical computing and graphics.¹⁷ All of the quantitative data analysis was conducted in R, and all the charts were created using the ggplot2 extension to R.¹⁸ The analysis was double-checked by performing the same calculations in Excel. Since most of the questions in the survey used a five-point Likert-like scale for responses, diverging stacked bar charts were used to represent the data, as suggested by Robbins and Heiberger.¹⁹ Existing implementations in R of diverging stacked bar

charts were found to be inadequate for the needs of the report, so a custom extension of ggplot2 was implemented.

The survey comments and data were imported into NVivo qualitative data analysis software from QSR International.²⁰ NVivo permitted the comments to be tagged by subject and characteristics, and allowed the discovery of trends and issues not addressed directly by the quantitative data.

¹⁷ The R Project for Statistical Computing (<https://www.r-project.org/>)

¹⁸ H. Wickham, *ggplot2* (<http://ggplot2.org/>)

¹⁹ N. B. Robbins & R.M. Heiberger, Plotting Likert and other rating scales. *JSM Proceedings, Survey Research Methods Section* (2011, pp. 1058-1066)

²⁰ QSR International (<http://www.qsrinternational.com/>). BU has a license for NVivo (<https://www.bu.edu/tech/services/cccs/desktop/distribution/nvivo/>)

UNDERSTANDING THE CHARTS AND STATISTICS

As a graduate student at BU, have you:			
	Yes	No	Unsure
Been a teaching assistant/instructor?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Been a research assistant?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

MISSING RESPONSES AND CALCULATING PERCENTAGES

Most of the numbers in the charts and text of the report give percentages of survey respondents who gave a particular response on the survey.

The survey did not require respondents to answer any questions, and some respondents left one or more questions unanswered. Therefore, for most cases in these reports, the denominator of the reported percentage is not the total number of respondents to the survey, but the number of respondents who gave an answer to the particular question.

For example, 2,210 graduate students responded to the survey. Of those, 2,061 gave some response for the question about teaching experience, with 633 answering “Yes.” Thus, the reported percent of graduate students involved in teaching, 31%, was calculated by dividing the 633 who answered yes by the 2,061 who answered the question, and not by the 2,210 who responded to the survey.

There were a small number of questions where this approach could not be taken, such as the corresponding questions about teaching from the faculty survey. These questions were asked using check boxes that did not have an option for a negative response. In such questions, there was no way to distinguish between respondents who left the box unchecked because they didn't teach, and those who left it unchecked because they skipped the question. In such cases, the total number of survey respondents who saw the question was used as the denominator when calculating percentages. Fortunately, only a small number of questions fell into this category. The questions will be changed in future surveys to avoid this problem.

These cases, and other charts and statistics in the report that required special handling, are noted in the next section.

During the past academic year at BU, have you... (Check all that apply)	
<input type="checkbox"/>	Taught an undergraduate level course
<input type="checkbox"/>	Taught a graduate level course
<input type="checkbox"/>	Taught regularly in a clinical setting

NOTES ON THE CHARTS

Annotations are only provided for charts that required additional handling of the data beyond what is described in the chart caption and the above section on *Understanding the Charts and Statistics*.

LIBRARY COLLECTIONS

Undergraduate Use of Library Resources

For each type of resource, undergraduates were offered a choice of “Yes,” “No,” or “Unsure” as an answer to whether they had used the type. The percentage for each type was calculated by dividing the number who answered “Yes” by the number who had given any answer, so undergraduates who skipped the question were ignored, and those who answered “Unsure” were treated as if they had answered “No.”

Frequency of Online Use of Libraries The estimates were calculated by assuming that those who answered the question were representative of the entire population of each group. For example, since 41% of the faculty who responded picked “More than once a week,” the estimate of 3,660 faculty was calculated by multiplying the 8,936 faculty who were sent the survey by 41% (with rounding).

LIBRARY SUPPORT OF RESEARCH

Research Data and Funding The faculty survey used check boxes to ask about funding and use of data, while graduate students were offered the choice of “Yes,” “No,” or “Unsure.” As noted above in *Understanding the Charts and Statistics*, this difference required different calculations of the percentages for each group.

Storage Location of Research Data Only respondents who indicated they worked with data saw this question. The denominator for

the percentages given in the chart was the number of respondents who checked any of the options (which included choices for “Research data is not digital,” “Don’t know,” and “Other,” which are not shown in the chart). Those who checked none of the options were assumed to have skipped the question and were ignored for the calculation.

Faculty Sharing of Research Data Only respondents who indicated they worked with data saw this question. The denominator for the percentages given in the chart was the number of respondents who checked any of the options (which included choices for “Don’t know” and “Other,” which are not shown in the chart). Those who checked none of the options were assumed to have skipped the question and were ignored for the calculation.

Influence of Funding on Faculty Publishing Decision Because the question about receiving funding was asked using a check box, the unfunded group may contain respondents who simply ignored the question about funding.

Use of Open Access Publishing Graduate students were asked whether they had been published, and the chart only shows responses from those who responded that they had been. Faculty were not asked whether they had been published, so the chart shows responses from all faculty, published or not.

Influence of Funding on Faculty Use of Open Access Publishing Because the question about receiving funding was asked using a check box, the unfunded group may contain respondents who simply ignored the question about funding.

LIBRARY SUPPORT OF TEACHING AND LEARNING

Contributions of BU Libraries For “Enriching student learning experiences” and “Being a more effective instructor,” the chart only includes responses from the 91% of faculty and 31% of graduate students who indicated they were involved in teaching. Because their surveys asked the questions about teaching in slightly different ways, different methods were used to calculate the percentage for each group. Faculty were asked using check boxes, so the total number of faculty respondents was used as the denominator. Graduate students were given the choice of “Yes,” “No,” or “Unsure” for the teaching question, and the denominator for their percentage was the total who answered the question, ignoring those who skipped it.

The question about being a more effective instructor was worded slightly differently for the two groups; graduate students were asked about being a “More effective instructor/teaching assistant,” while faculty were asked about being a “More effective instructor.”

Teaching Faculty Distribution of Reading Material and Resources As explained in the note for the previous chart, the 91% given as the percentage of faculty who teach was based on a question using check boxes. The question about distributing reading material was also asked using check boxes. The denominator for the percentages given in the chart was the number of respondents who checked any of the options (which included a choice for “Other” which is not shown in the chart). Those who checked none of the options were assumed to have skipped the question (or didn’t distribute reading material) and were ignored for the calculation.

Faculty Use and Opinion of Course Reserves This chart shows that 26% of faculty

who responded to the question indicated they used course reserves, while a previous chart, *Teaching Faculty Distribution of Reading Material and Resources*, showed only 22% of teaching faculty who responded to that question used course reserves. These were two different questions about course reserves, and for some reason a significant number of faculty who answered they used reserves in one question gave a different answer in the other.

Teaching Faculty Perception of Importance of Information Literacy Skills to Students and Teaching Faculty Assessment of Students’ Information Literacy Skills The figures given in the captions of 67% and 52% of faculty who teach graduate students and undergraduate students were based on a question using check boxes; see the explanation in the previous section regarding the handling of such questions.

Use of Bibliographic Managers and Bibliographic Managers Used Faculty and graduate students were not asked directly if they used a reference management tool. Instead, they were presented with a list of tools (including “Other” and “None”) with check boxes, and were asked to choose all that they used. The results given were the percentage of those who made a choice and picked something other than “None.” Undergraduates were asked directly if they used a reference management tool, and the result given was the percentage who said “Yes” out of all those who responded to the question. For the chart on *Bibliographic Managers Used*, the denominator for the percentages is the number who said they used a tool (for undergraduates), or those who checked one or more choices other than “None” (for faculty and graduate students).

LIBRARY AS PLACE

Frequency of In-Person Visits to Libraries The estimates were calculated by assuming that

those who answered the question were representative of the entire population of each group. For example, since 27% of the undergraduates who responded picked “More than once a week,” the estimate of 6,510 undergraduates was calculated by multiplying the 23,744 undergraduates who were sent the survey by 27% (with rounding).

Libraries Most Visited by Undergraduate Students and Libraries Most Visited by Graduate Students As with the chart *Frequency of In-Person Visits to Libraries*, the estimates are made by assuming that those who answered the question were representative of the entire population. Those who answered “None” as their most visited library were not asked about

their second most visited, and thus the results for second most frequently visited add up to less than 100%.

Satisfaction with Most Visited Libraries For the charts dealing with graduate student and undergraduate satisfaction with various aspects of their most visited libraries, the charts combine satisfaction ratings from those who chose each library as their most or second most frequently visited. For the small number of students who choose the same library for their most and second most visited, responses to the satisfaction questions about their second most visited library were ignored.

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LIBRARY ASSESSMENT COMMITTEE

Linda Plunket (Chair)
Dan Benedetti
Brendan DeRoo

David Fristrom
Ellen Frentzen
Tom Hohenstein

Steve Smith
Sarah Struble
Konstantin Starikov