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Collection Assessment and the Library Liaison Program

A Practical Focus

David Brennan

David Brennan is Assistant Librarian for Collection Development/Digital Resources Management at George T. Harrell Health Sciences Library, Penn State Hershey, dbrennan@hmc.psu.edu

In the fall of 2013, the George T. Harrell Health Sciences Library (HHSL) undertook a collection assessment and development project to determine journal and monograph holdings across the Penn State University Libraries in subject areas related to librarian liaison assignments in the health sciences at Penn State Hershey. This project had several aims: a) to assist in collection development activities by showing current journal and monograph holdings in relation to liaison areas in a way related to the strategic plans of the HHSL, the medical center, and University Libraries; b) to inform library users of holdings and improve access; and c) to assist liaison librarians in acquiring a more complete understanding of core resources in their liaison areas. This article presents the process involved in the assessment and development project, connections with relevant areas of the strategic plans, and areas for further improvement.

Introduction

The George T. Harrell Health Sciences Library (HHSL) at the Penn State College of Medicine is the health sciences library for the Pennsylvania State University Libraries. The college has on average 600 medical students in the program at any given time in addition to graduate students, residents, faculty, clinical personnel, and other staff for a campus size of over 10,000. Library faculty serve in many capacities to support both the HHSL and the University Libraries as a whole. The HHSL plays an active role in collection development for the health sciences, both for the College of Medicine campus as well as across the University Libraries. The HHSL has had an active library liaison program in place since 2008, and the liaison program plays an important role in collection development activities, serving as a

conduit for communication to and from the approximately 30 departments served (www.libraries.psu.edu/psul/hershey/services/liaisons.html). As part of the widely distributed system of University Libraries, which was described by Crawford & German (2013) as "one library geographically dispersed," the HHSL does not collect all of the possibly relevant materials in the health sciences, particularly in the basic sciences. As a result, print materials of interest to the Penn State Hershey campus may be spread across the state, either in other regional campus libraries or at the central Pattee and Paterno Libraries at University Park. The collections are highly mobile with easy access via the "I Want It" delivery service to any Penn State user at any campus, which reduces the need to duplicate print items. The vast majority of electronic resources are licensed for access by all Penn State users, regardless of location, with a few narrowly clinical titles solely licensed to the Hershey campus. In order to determine if (and demonstrate that) the collections of the HHSL and University Libraries were adequately serving our users' needs, it was necessary to analyze journal and monograph holdings in the health sciences, which had not been done before. Criteria and methods for this analysis had to be developed, as well as determining which systems and tools were to be used to collect and analyze the data. The University Libraries had a number of management tools available, such as SIRSI ILS, Serials Solutions, and subscription data sources like Ulrich's and Web of Science (Thomson Reuters), which included bibliometric data in the Journal Citation Reports module. Vendor databases like Yankee Book Peddler (YBP) were also used to obtain rough pricing data after purchase priorities were identified. The Assistant Librarian for Collection Development/Digital Resources Management had overall responsibility for the project, including the development of analysis criteria and supporting tools. The remainder of the HHSL liaison librarians were responsible for collecting data in their respective subject areas as well as analyzing and ranking these areas in relation to the strategic priorities of the institution.

The result of this project was a ranking of lacking journal and monograph titles identified as strategically important to the HHSL and Penn State Hershey and an estimate of the expenditure necessary to achieve full coverage in each subject area.

Literature Review

The literature on the role of the liaison librarian in collection assessment and development is quite extensive, coming from a wide variety of perspectives and library environments. A search of the Library Literature & Information Science Index (H. W. Wilson) and Library, Information Science & Technology Abstracts resulted in 291 citations for ["collection* assessment" or "collection* analysis"], 95 citations for ["liaison" and "collection development"], and 11 for [liaison AND ("collection* assessment" or "collection* analysis")] between 1985 and 2014. Guidelines for liaison librarians were developed by the American Library Association Reference and Adult Services Division. Initially, the primary purpose of the liaison librarian was to involve library users in the collection development process. "Liaison work is taken to mean the relationships, formal and informal[,] that librarians… develop with the library's clientele for the specific purpose of seeking input regarding the selection of materials" (ALA RASD, 1992, p. 198).

Cooper and Crum (2013) note that the role of the liaison librarian has evolved over time to include a larger emphasis on services and instruction. Changes to the ALA Reference and User Services Association (RUSA) *Guidelines for Liaison Work in Managing Collections and Services* reflect those evolving roles. Our project was guided in particular by guidelines 3.1 through 3.3:

> 3.1 Liaison work is the process by which librarians involve the library's clientele in the assessment of collection needs and services and the measurement of user satisfaction with the collection.
>
> 3.2 Liaison work includes identifying user needs, evaluating existing collections, removing extraneous materials, and locating resources that will enhance the collections.

3.3 Liaison work enables the library to communicate its collection policies, services, and needs to its clientele and to enhance the library's public relations (ALA RUSA, 2010).

The emphasis on the collection assessment and development role of the liaison librarian (point 3.2 above) retains its importance even in a journal-centric, digital environment, particularly in light of economic realities that require careful and appropriate selection of materials.

The literature on collection development in relation to institutional strategic plans is less extensive. A search of the Library Literature & Information Science Index (H. W. Wilson) and Library, Information Science & Technology Abstracts resulted in 91 hits for ["collection* development" and "strategic plan*"] between 1984 and 2014; however, there were fewer relevant papers. Most of the citations returned in this search were concerned with the library's overall strategic planning process and how collection development was an internal strategic goal. However, part of the collection development process is aligning the strategic plans of the library to those of the parent organization. This alignment reflects the reality that collection development vis-à-vis the liaison program cannot just be a wish list from each liaison department. Purchasing decisions must be connected to and justified by organizational priorities and existing subject area coverage. Among the relevant citations, several made a connection between the library's collection activities and larger strategic imperatives, particularly Franklin (2009) who emphasized the role of an "assessment culture" in demonstrating value, and Franklin again in 2012, discussing the importance of "demonstrat[ing] the value of the academic research library in providing quality services that advance the institutional mission" (p. 94). A number of citations linked budget allocation formulas to strategic goals (e.g., Cochrane, 1995; Kalyan, 2003). Discussion of reconfiguring budget allocations is beyond the scope of the present project. However, the authors present an intriguing possibility to use the data derived from the project as the basis for developing a formula for future allocations. This formula would require additional research as well as additional longitudinal data.

Methodology

A two-phased assessment and development project was initiated in August 2013. Phase 1 consisted of

a) developing a set of tools to inform collection assessment at the HHSL, and
b) completing a collection assessment related to current liaison coverage by the end of December 2013.

At the close of this assessment, Phase 2 involved taking the Phase 1 data and developing a model to prioritize purchases from the materials identified as not being held by the HHSL or the University Libraries. Given budgetary constraints, it was understood that not all of these purchases would be possible to acquire, nor those possible achieved in the current fiscal year. A target cap for both journals and monographs was set at $60,000, so there would be a cutoff point even with materials that were ranked as priorities. Funding for initial purchases of monographs and ongoing subscriptions for journals was factored into the regular budgeting process, with the bulk funded through using carryover funds from the previous fiscal year. This model was implemented by the HHSL liaison librarians in order to

a) rank priorities and identify specific monograph and journal titles for purchase. These would be purchased in electronic format, if possible, and licensed for all Penn State users in keeping with the HHSL collection development policy (bit.ly/1EqSpyc), and
b) increase the liaison librarians' awareness of institutional strategic priorities in relation to collections and collection development.

Phase 1—Tools and Assessment

The project began with developing a set of tools and resources to inform collection analysis and communication at the HHSL. These tools were created and maintained by the Assistant Librarian for Collection Development/Digital Resources Management. A wiki page for HHSL liaison librarians was constructed (Figure 1), which included the major data sets to use in the analysis as well as a rolling ledger of internal and external collection requests with their current status. This ledger was an Excel spreadsheet that contained title, cost, and status information as requests were received, and it was updated as purchases or decisions were made in order to facilitate communication between liaison librarians and their departments. At the close of the assessment and development project, all resulting documents were posted to this wiki page for use in continuing liaison activities. The ledger has been maintained since the project's conclusion and is posted to the collection development wiki page on a monthly basis.

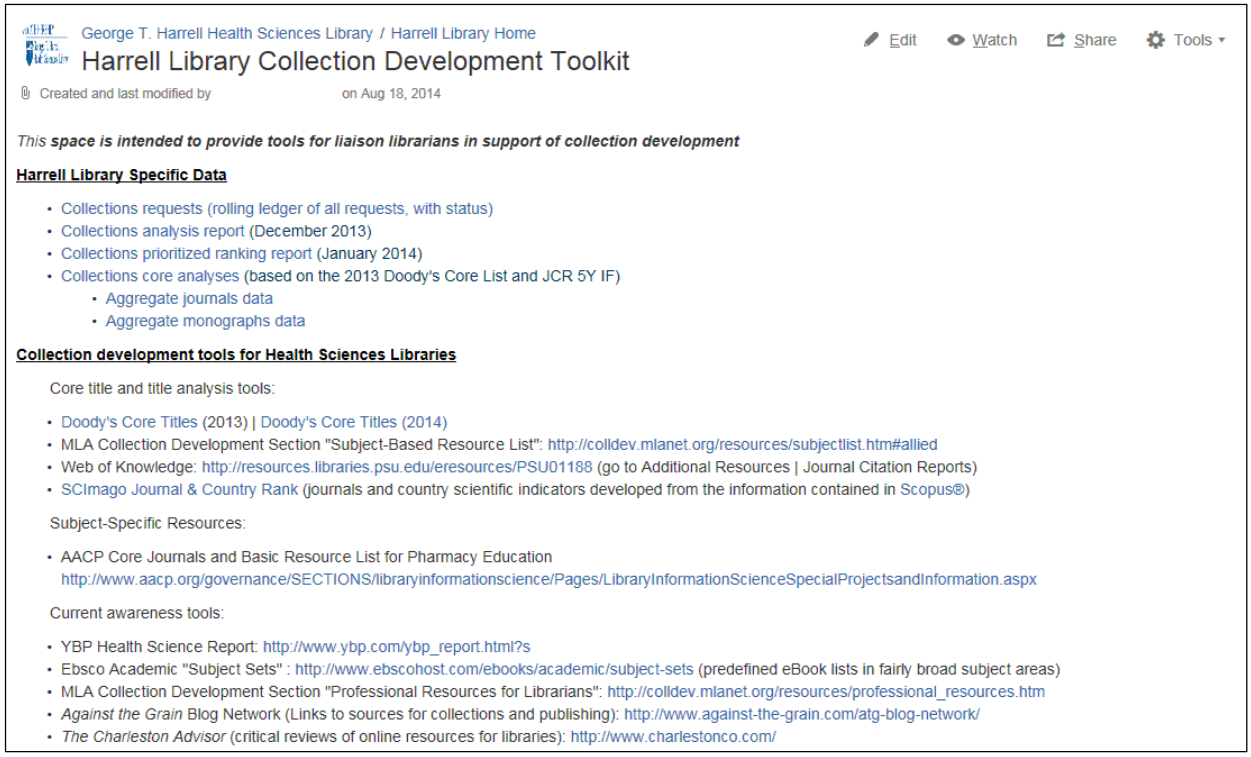

Figure 1
HHSL collection development wiki

To begin the analysis, the Assistant Librarian for Collection Development/Digital Resources Management reviewed available collection development tools and measures in the health sciences and created data-entry templates for liaison librarians to use in analyzing collection holdings in their areas. These templates (one for journals, one for monographs) were intended to standardize data collection. Created as an Excel spreadsheet, each template included entry points for title, control number, format (print or electronic), edition, and location.

Monographic selection was less difficult, since the most clearly recognized core title list is *Doody's Core Titles* (DCT), which supplanted and was seen as "the likely heir to" the Brandon-Hill list in 2004 (Shedlock and Walton, 2006).

For journals, finding a method for ascertaining core titles was more problematic. There has been significant discussion in the literature concerning the evaluation of journals, including extensive analysis of a number of ranking

schemes such as the H-factor, Eigenfactor, and Journal Citation Reports (JCR) Impact Factor (IF). Key problems cited by Glänzel and Moed (2013) include the "tend[ency] to condense … statistics into one single indicator at the end, but … demand solutions for inference at the individual level at the same time" (p. 387). To rely on such conflicting data is a discussion beyond the scope of this paper. For the purposes of this project, a factor had to be chosen. Buela-Casal and Zych (2012) cite a number of studies showing the popularity and durability of the IF, indicating that it is a well-known measure, highly promoted by journal publishers, and accepted (or at least tolerated) by researchers. A decision also had to be made as to the IF chosen: single-year or 5-year. It was decided that in order to account for single-year spikes in impact of any one journal title, journal holdings were to be analyzed using the 5-year IF.

For both monographic and journal data, it was clearly recognized that any attempt to assign subject categories to a specific liaison department was necessarily a fluid construct that allowed for a great deal of discretion by those doing the mapping. The initial data sets were significant in size: The 2013 DCT list contained some 2,400 titles with 117 subject categories, and the journal data contained over 8,000 titles in 226 subject categories. Often there was no one-to-one relationship between a journal or monographic subject heading and a liaison department assignment (Figure 2). For example, while Anesthesiology is consistent, there is no liaison assignment for Biochemistry (DCT) or Biochemistry and Molecular Biology (JCR). These would fall under the Basic Sciences liaison. It was also recognized that there would be overlap in these selections. For example, titles in Case Management in the DCT list might be selected as appropriate for both Nursing and Family & Community Medicine.

Thus, for the data collection phase of the project, data from DCT and JCR had to be mapped to the data collection templates, and the University Libraries' holdings had to be determined. To facilitate this mapping, master spreadsheets for journals and monographs were created. These spreadsheets included a complete DCT and JCR title list with title, control, and subject data. Using a similar technique to that shown in Brennan (2011), which embeds call number or subject data in a URL to search the library catalog, the spreadsheets also contained links to allow one-click searching of both monograph titles in the library catalog by ISBN and journal titles in the Serials Solutions journals list by ISSN. These URL links sped up data collection for those titles that had exact control number matches. An instruction session was conducted for liaison librarians to demonstrate how to use the Excel filtering function to take data from the master lists and move it to their templates, so they could complete the holdings assessment.

HHSL Liaison Assignments, 2013	JCR Sciences Subjects	DCT Subjects
Anesthesiology	Acoustics	Administration/Management
Basic Sciences	Agricultural Economics & Policy	Advanced Practice
Comparative Medicine	Agricultural Engineering	Allergy/Clinical Immunology
Dermatology	Agriculture, Dairy & Animal Science	Alternative Therapies
Emergency Medicine	Agriculture, Multidisciplinary	Ambulatory
Family & Community Medicine	Agronomy	Anatomy/Embryology
Graduate Education	Allergy	Anatomy/Physiology
Hematology & Oncology	Anatomy & Morphology	Anesthesiology
Humanities	Andralogy	Biochemistry
Medicine, General	Anesthesiology	Biostatistics
Neurology	Astronomy & Astrophysics	Cardiac Surgery
Neurosurgery	Audiology & Speech-language Pathology Au	Cardiology
Nursing	Automation & Control Systems	Case Management
Obstetrics & Gynecology	Behavioral Sciences	Cell Biology/Histology
Ophthalmology	Biochemical Research Methods	Chiropractic
Orthopedics	Biochemistry & Molecular Biology	Clinical Genetics
Pathology	Biodiversity Conservation	Community Health
Pediatrics	Biology	Coronary Care
Pharmacy, Clinical	Biophysics	Critical Care
Psychiatry	Biotechnology & Applied Microbiology	Dental Auxiliaries
Public Health Sciences	Cardiac & Cardiovascular Systems	
Radiology	Cell &Tissue Engineering	
Surgery	Cell Biology	

Figure 2

Sample comparison of liaison assignments to JCR and DCT subjects

Another discretionary decision was the determination to analyze monographs and journals differently: Liaison librarians could choose appropriate subjects from the DCT list and assess all the titles in those subjects, while journal data was limited to the top 20 titles in any given JCR subject area. This construct was developed after some discussion (in no particular order of priority):

- It was considered easier and more consistent to communicate to liaison departments that the library held x% of the top 20 journals in their subject areas rather than a series of widely variable numbers.
- It facilitated coverage comparisons among departments for the purpose of prioritizing purchases.
- It recognized that purchase models for journals and monographs were markedly different in terms of cost, in that more monographs could be purchased for a given dollar amount than journals. Thus, a wider choice of monographs was available to improve subject coverage in areas that might be lacking, and this diversity was an advantage and a reason to not limit as with journals.
- It recognized that many journals crossed a number of disciplines, whereas a monograph (unless it is a general textbook) is more narrowly targeted. Equally, the crossover would again lead to duplication in journal titles that would be addressed by de-duping the ranked lists at the close of the analysis.

The construct was an attempt to reduce the number of titles analyzed due to the volume of data (8,000 journals and 2,400 monographs) and number of subjects assigned (226 journal subjects and 117 monographic subjects) within the time frame of the project.

The liaison librarian's role was to select items from these lists according to the methodologies outlined above and analyze the library's holdings of journals and monographs. This process was the most labor-intensive part of the project. While those titles with exact ISBN or ISSN matches were obvious, those without control number matches had to be manually searched to verify holdings. The additional work involved in verifying titles without exact control number matches pointed to the need to develop tools to more fully automate the process, which could reduce the need for the artificial limitations that were placed on this phase of the project and allow for a more comprehensive (and more frequently recurring) assessment.

Data collection work began in October 2013. Selections by the reviewing liaison librarians resulted in 62 monographic subject areas and 52 journal subject areas to be analyzed for holdings. Several reviewers made significant changes to the reporting template, which necessitated additional labor in reformatting. There were also many variations in format of the data reported, which necessitated labor in normalizing responses. The major issue in assessing holdings of monographic titles was the source of the catalog record. If there was not an exact ISBN match, the librarian had to conduct a manual search to determine holdings of that title. A further complication was that the title data in the DCT list did not always match the cataloged title of the monograph (e.g., in the DCT list, *Drug Eruption Reference Manual: DERM* is listed as *Litt's D.E.R.M.: Drug Eruptions and Reactions Manual* for the earlier edition, which the University Libraries own). Not all reviewers exhibited the same level of thoroughness in searching for variations in title, ISBN mismatches, or title variations in earlier editions. To extend or repeat this analysis model, additional effort would be recommended to streamline this part of the process to improve the consistency of the data.

Journal holdings assessment was more straightforward as ISSN matching for journals was much more consistent than ISBN matching was for monographs. However, analysis of actual holdings required a librarian to make a judgment call to determine if there was current full access to a given title. "Partial open access" did not count as a current subscription.

For example:

Journal of cardiovascular disease research (0975-3583)

from 01/01/2010 to present in Academic Search Complete (EBSCOhost) [not full text]

from 2010 to present in Free Medical Journals [actually same as PubMed, 1 year embargo]

from 2010 to 1 year ago in PubMed (Medline)

Although this title showed current holdings in the Free Medical Journals collection, when attempting to access current articles, it showed that they too were embargoed: "Currently embargoed: Free in PMC on Sep 1, 2014." Thus, in reality, there was not complete current access to the title. These variations in reporting required the reviewer to investigate access to titles that appeared to have free or open access listed as current. As with the monographs analysis, thoroughness among reviewers varied. It was assumed that any access listed as current via a standard package subscription (e.g., Springer or Elsevier) was reliable.

Analysis of the assessment data began in November 2013 after collecting reports from the liaison librarians. The average holdings reported for coverage in each liaison area included all data, reflecting that the same subject could be chosen by more than one liaison librarian as applying to his or her department. For the purposes of ascertaining the cost to eliminate gaps in coverage, however, the aggregate data files for both monographs and journals were de-duped (by ISBN and ISSN respectively) prior to running a cost analysis.

Monographic data was analyzed first. Responses were normalized from all reports in order to provide consistent data (Figure 3). Monographic data variables were

- Owned, Electronic—exact match for title/edition in electronic format;
- Owned, Print—exact match for title/edition in print format;
- Owned, previous edition—holdings of title in an earlier edition, regardless of format; and
- Not owned—no holdings for title.

DCT subject category	Number of titles	Owned, Electronic	Owned, Print	% Owned	Owned, previous edition	% Owned, previous edition	Not Owned	% Not Owned
Allergy/Clinical Immunology	22	5	6	50%	6	27%	5	23%
Alternative therapies	28	9	8	61%	1	4%	10	36%
Anatomy	31	2	19	68%	7	23%	3	10%
Anesthesiology	30	5	3	27%	13	43%	9	30%
Biochemistry and molecular biology	7	0	4	57%	1	14%	2	29%
Biostatistics	23	2	9	48%	7	30%	5	22%
Cardiac surgery	16	4	0	25%	6	38%	6	38%
Cardiology	30	14	2	53%	3	10%	11	37%
Cell biology	19	3	8	58%	2	11%	6	32%
Dermatology	21	5	3	38%	4	19%	9	43%
Diagnosis	15	2	4	40%	6	40%	3	20%
Emergency medicine	71	15	15	42%	13	18%	28	39%
Endocrinology	40	18	6	60%	2	5%	14	35%
Endocrine surgery	16	6	2	50%	2	13%	6	38%

Figure 3

Monograph data analysis sample

After the aggregate analysis, which showed that an average of 53% of core monographs were held by University Libraries for the 62 subject categories analyzed, the title list was de-duped and mapped with the YBP Library Services list print price to derive an approximate cost of acquiring all of the remaining core monographs ($127,820). Not all titles had cost data. Cost data was available for roughly 90% of monographic titles, and this was determined to be sufficiently accurate for planning purposes. This cost data would be applied to the Phase 2 ranking portion of the project.

Journal data was then analyzed. Responses were normalized from all reports in order to provide consistent data (Figure 4). Journal data variables were

- Current—current holdings for title;
- Not current—no current holdings for title; and
- No access—no holdings for title.

There was no distinction made between print and electronic holdings for journal titles, since 1) a small minority of journals are held as print, which was not the case for monographs; and 2) the Serials Solutions platform does not reflect print holdings.

JCR Subject category	Number of titles	Current, Electronic	% Current	Not Current	% Not Current	No Access	% No Access
Anatomy & morphology	20	11	55%	7	35%	2	10%
Anesthesiology	20	16	80%	3	15%	1	5%
Behavioral sciences	20	15	75%	3	15%	2	10%
Biochemical research methods	20	19	95%	1	5%	0	0%
Biochemistry and molecular biology	20	19	95%	1	5%	0	0%
Biotechnology and applied microbiology	20	16	80%	3	15%	1	5%
Cardiac & cardiovasvcular systems	20	20	100%	0	0%	0	0%
Cell biology	20	18	90%	2	10%	0	0%
Chemistry, medicinal	20	15	75%	2	10%	3	15%
Clincial neurology	20	12	60%	5	25%	3	15%
Critical care	20	14	70%	5	25%	1	5%
Dermatology	20	13	65%	4	20%	3	15%
Emergency medicine	20	15	75%	2	10%	3	15%
Endocrinology	20	16	80%	3	15%	1	5%

Figure 4

Journal data analysis sample

This data was then de-duped across titles, since costs for some liaison areas contained titles that crossed subject areas. In aggregate, an average of 73% of the top 20 impact factor journal titles had current subscriptions in the 52 subject areas analyzed. Cost data for titles not held was obtained via Ulrich's where available. As the price libraries pay for subscriptions can vary widely, from the retail price to several times that, retail pricing was only included as a relative measure. Final pricing was obtained if a title was determined to be a priority acquisition in Phase 2 of the project. Acquisition of current subscriptions to all of the remaining top impact factor journal titles would cost approximately $300,603.

This analysis showed that while the University Libraries held a majority of core monograph and top impact factor journal titles in the health sciences, there were certainly opportunities for improvement across a number of disciplines, particularly in monographs. There were also opportunities with this data to improve the library's marketing and communication of collection strengths to its user base; for example, the results of this phase of the project were communicated to the Hershey campus community via the library newsletter and a poster presentation at the annual EdVenture medical and graduate education symposium. In addition, the liaison librarians used the Phase 1 data to improve communication with their departments, as many users were not aware of the depth of coverage to which they already had access. Anecdotally, the number of purchase requests being relayed to collections staff has declined since the completion of this project, although this cannot be quantified. The results of Phase 1 of the project shaped the model developed in Phase 2.

Phase 2—Ranking Methodologies and Prioritization

The second phase of the project consisted of ranking priorities, identifying specific monograph and journal titles for purchase, and increasing the liaison librarians' awareness of institutional strategic priorities in relation to collections and collection development. It required developing a model that used strategic planning documents to rank potential purchases of journals and monographs. This ranking process was intended to diverge from the "wish list" model and eliminate favoritism or bias as much as possible from developing collection priorities. It was also intended to look at collection development in a more high-level fashion, reflecting the strategic direction of the institution rather than a single department, clinician, or researcher.

An initial meeting was held in January 2014 to determine the ranking process. Each liaison librarian was given a duplicate-identified list of all of the monograph and journal subject categories used in the initial coverage analysis and tasked with the ranking of purchase priorities in terms of strategic importance to Penn State Hershey's services and programs. This ranking was to be derived from a number of factors, including

- the librarians' knowledge as well as work with their liaison departments and connections within the institution;
- the Penn State Hershey strategic plan (bit.ly/1GILTUl);
- the Penn State Hershey *Annual Report* (www.pennstatehershey.org/web/guest/home/aboutus/annualreport); and
- other Penn State Hershey Communications, such as the *CEO Perspectives* (bit.ly/1KxcYLA) and the *Crescent* employee newsletter.

Similar to the issues in the Phase 1 assessment (e.g., variations in the taxonomy between the JCR and DCT subject categories), rankings were grouped in like categories as closely aligned as possible (e.g., Pediatric Surgery and Pediatrics were grouped together, as were Geriatrics and Long-Term Care). These groups were at the discretion of the liaison librarian doing the rankings. For categories where the taxonomy was identical for both journals and monographs (e.g., Pathology or Medical Education), they were equally ranked.

The results of this process were a ranking of purchase priorities in subject areas of strategic importance to the HHSL and, by extension, the University Libraries as a whole, as well as an estimate of the collections expenditure necessary to achieve full coverage in these areas. Realizing that even this prioritized subset would require more funding than the $60,000 target, IF and DCT ranking scores were retained to allow for additional cutoff points within each subject set (i.e., only purchase monographs with a DCT score over 2.25 across the board).

Analysis of Ranking Recommendations

Data analysis began after collecting reports from the liaison librarians. The initial ranking was sorted by two factors: first, by the number of reviewers who chose a given subject ("weight") and, second, by the average of their rankings ("avg rank") (Figure 5). As with the initial analysis, there were subjects that were similar but not identical across the JCR and DCT data, and they were grouped together as much as possible in the ranking exercise.

The ranking results were then combined with the holdings and cost data from the previous report to produce cost estimates across subject categories. Not all categories had matches for both journals, and monographs or duplicates crossed other subject areas (Figure 6, sorted by subject area).

Avg rank	Weight	Subject Category
7.2	6	Medical Informatics
4.6	6	Genetics and heredity
1.6	5	Family practice
4.4	5	Pediatrics
4.4	5	Pediatric surgery
3.6	5	Oncology
3.6	5	Oncologic surgery
1.6	5	Internal medicine
1.6	5	Primary health care
1.6	5	General medicine
9.33	4	Geriatrics & gerontology
9.33	4	Geriatrics
6.75	4	Statistics
6.75	4	Biostatistics
6	4	Medical education
8	3	Emergency medicine
8	3	Trauma surgery
7.66	3	Nursing
5	3	Neuroimaging
5	3	Neurosciences
5	3	Neurology
5	3	Neuroscience
5	3	Neurosurgery
2	3	Biochemistry and molecular biology
9	2	Long term care

Figure 5

Ranking sample

Subject Area	Monograph % held	Cost	Journal % held	Cost
Biochemistry and molecular biology	57%	$1,346.00	95%	$3,145.00
Biostatistics	48%	$1,019.00		
Critical care			70%	$2,474.00
Emergency medicine	42%	$4,862.00	75%	$1,114.00
Family practice	55%	$1,250.00		
General medicine	60%	$1,136.00		
Genetics and heredity			100%	-
Geriatrics	85%	$169.00		
Geriatrics & gerontology			90%	$9,601.00
Internal medicine			80%	$4,376.00
Long term care	56%	$469.00		
Medical education	67%	$903.00	83%	$3,871.00
Medical informatics (monographs included in medical education total)			55%	$8,544.00
Neuroimaging			64%	$3,354.00
Neurology	74%	$1,788.00		
Neuroscience	64%	$362.00		
Neurosciences (also includes neurology & neuroimaging)			85%	$9,262.00
Neurosurgery	31%	$2,148.00		
Nursing	80%	$1,034.00	90%	$805.00
Oncologic surgery	41%	$2,273.00		
Oncology	53%	$1,295.00	90%	$1,847.00
Pediatric surgery	50%	$2,633.00		
Pediatrics	51%	$3,273.00	85%	$3,190.00
Primary health care			78%	$4,182.00
Statistics			45%	$8,464.00
Trauma surgery	30%	$2,959.00		

Figure 6

Ranking cost analysis sample

The analysis resulted in the following estimates (subject to actual cost and holdings verification due to changes since the initial data collection exercise):

- 203 monograph titles ($28,919.00); and
- 73 journal titles ($64,229.00).

Each subject area report with title and cost data was then sorted by 5-year IF for journals and DCT ranking for monographs in order to formulate cutoff points to meet the $60,000 target. A cutoff at the top half of the ranked lists resulted in a set of materials with an approximate cost of $53,547.00:

- 101 monograph titles ($16,635.00); and
- 36 journal titles ($36,912.00).

Actual costs for these titles were ascertained, and purchasing of these priority titles started in early 2014 and are ongoing as funding permits. Using the ledger on the collection development wiki, liaison librarians are kept aware of purchases and communicate acquisitions back to their departments. At the close of FY 2014, all outstanding monograph requests had been purchased, and 14 of the 36 prioritized journal titles had current subscriptions.

Conclusions

Identifying purchase priorities is a key part of the collection development process, and developing recognized and easily applied metrics aids in determining and communicating these priorities. The experience of the HHSL in completing an analysis and ranking priorities exercise has resulted in improved communication between the HHSL faculty librarians, their University Libraries colleagues, and their HHSL liaison departments. Having a data-driven process in place to analyze collections significantly benefited the HHSL by allowing it to demonstrate to constituents that the library accommodates and responds to institutional and user needs. The project has demonstrably improved collection coverage in areas of strategic importance to Penn State Hershey and aided in the revision of the HHSL Collection Development Policy Statement (bit.ly/1EqSpyc).

Collection development is a classic example of a "moving target," in that during course of the assessment, holdings changed as journal and e-book packages were added and adjusted, and priority titles became available or changed format. Spanning budget years with purchases also caused changes in cost or edition for an identified item, which impacted the number of titles that could be acquired while still keeping within our target budget. The major impediment to keeping the process going is the lack of tools to reduce the labor involved in verifying holdings. Further development of these tools would make it possible to repeat the process more frequently and improve the library's responsiveness in collection development. As a result, the HHSL development team has been working on tools to improve and expedite this process and plans to repeat this project in late 2015.

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