

Smart Shifting for Less Maintenance

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A	B	C	D	E	F	G	H	I	J	K
Call No. Range	Current Inches (rounded)	Linear Feet	Items Added 2013-2015	% of Total Growth 2013-2015	5 Years Est. Growth (inches)	Linear Feet	Space Need in 5 Years (inches)	Current % of Projected Need	Initial Shelf Fill (inches, based on 80% max. and 35" shelf)	Number of Shelves
M4-5	2	0.2	0	0.0%	0.0	0.0	2	100%	28	0.1
M6-175.5	2949	245.8	1363	20.2%	704.2	58.7	3653	81%	23	130.5
M176	1	0.1	1	0.0%	0.5	0.0	2	66%	18	0.1
M177-990	4032	336.0	2103	31.1%	1086.6	90.5	5119	79%	22	182.8
M991-999	1	0.1	0	0.0%	0.0	0.0	1	100%	28	0.0
M1000-1075	1245	103.8	519	7.7%	268.2	22.3	1513	82%	23	54.0
M1100-1160	300	25.0	160	2.4%	82.7	6.9	383	78%	22	13.7
M1200-1270	97	8.1	36	0.5%	18.6	1.6	116	84%	23	4.1
M1350-1366	19	1.6	5	0.1%	2.6	0.2	22	88%	25	0.8
M1375-1420	35	2.9	22	0.3%	11.4	0.9	46	75%	21	1.7

Abstract

Planning for growth is an important part of managing print collections, and reallocating space by shifting materials is a necessary, but laborious, task. The literature suggests that growth space is determined at the level of LC class in most academic library shifting projects. Within a music library collection, however, growth rates can vary widely within a single subclass (M, ML or MT). This poster explains how to plan a collection shift in a more granular way, segmenting it by call number ranges and tying growth space to recent acquisition patterns. By doing so, libraries can make best use of the available space and the need for future shifting can be minimized. The spreadsheet above is used for the final calculations.

Take Measurements

First the collection is measured, using a simple spreadsheet (separate from the one above) to record, shelf by shelf, the number of inches in each call number range. We used the ranges found in the subclass outlines published by the Library of Congress (Column A above). After measurements are gathered, the number of shelves is checked against the number of cells in the spreadsheet to ensure that there are no omissions or duplications. A quick visual check of the numbers is made to detect any obvious entry errors. The measurements are then totaled and recorded in Column B of the main spreadsheet.

Determine Average Width

Reports are run in the integrated library system (ILS) to determine the number of items in each subclass, less the number checked out or not on the shelf for other reasons such as repair, binding, missing, etc. The collection measurements for the entire subclass are totaled, then used to calculate the average width per item:

total number of inches ÷ total number of items measured = average inches per item

Determine Average Items Added Per Year

ILS reports are also run to identify, by date cataloged, the items added during the last few years. Multiple years (three in our case) are used in order to reduce the impact of unusual purchases or large gifts in any one year. The added items are counted and recorded by call number range in Column D; Column E shows how the growth is distributed within the subclass.

Calculate the Future Space Need

Next, the needed growth space is calculated in Column F. The figures in Column D are divided by the number of years reported to produce an average number of items added per year. This is multiplied by average width (.31" in this case) and the number of years of growth being planned for (five). Adding this result to the current collection measurement yields the total space need for each call number range in Column H.

Calculate the Fill Rates

Column I shows the percentage of the projected space need that can be used now for the items currently on the shelves (Column B ÷ Column H). In Column J, the target shelf fill is calculated by multiplying Column I by the number of inches selected for the maximum fill at the end of the projected time period. We used a maximum fill rate of 80%, or 28 inches of a 35-inch shelf. As Metcalf, Leighton, and Weber stated in *Planning Academic and Research Library Buildings*, "... experience has shown that whenever shelves of classified books are filled on the average to 80% or more of absolute capacity, library service begins to suffer."¹

Calculate the Shelf Counts

Finally, in Column K, the current collection measurement is divided by the target fill to show the number of shelves that will be required. These figures can be checked throughout the shifting project to see if the actual use of shelving matches projections. This serves as an early warning system if actual fill rates are inaccurate or if there is an error in the calculations.

Season to Taste

Once the initial projections are complete, compare them with the shelving capacity that is available for the project. Adjust the years of projected growth, the maximum fill rate, or both until a close match is achieved.

If needed, the average width can be customized line by line to deal with the anomalies in a collection. In our score collection, for example, M1500-1503 was divided from the rest of the Dramatic Music section and average width was calculated separately. Other score sections that consist mostly of wider items, such as Hymnals, were also given a different average width in the calculations. No special calculations were made for books.

Conclusions

By dividing a subclass into smaller call number ranges and using recent collecting patterns to predict future space needs, growth space can be placed in the areas where it is likely to be needed. In areas where growth is slow or nonexistent, use of limited space can be maximized.

These methods are extensible; in order to further increase precision, music libraries might choose to use even smaller call number ranges; include more years when calculating the average number of items added per year; and/or calculate average width for each call number range separately. While the calculations do require additional investment of time and effort when planning a shift, this should be rewarded in the coming years by a reduction in maintenance shifting.

Get the spreadsheet at:

<http://bitly.com/shift-planning>

1. Keyes DeWitt Metcalf, Philip D. Leighton, and David C. Weber, *Planning Academic and Research Library Buildings*, 2nd ed. (Chicago: American Library Association, 1986), 155-156.