Making Room for Innovation: Using Systematic Random Sampling to Quickly and Efficiently Obtain Shelf Occupancy Data

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OVERVIEW

In order to prepare for the reallocation of library space, two members of the University Library Access Services team used **systematic random sampling** to measure existing—and anticipated—free shelf space. This data will be used to inform decision-making about shifting and/or withdrawal of library materials in preparation for the renovation of additional library spaces.

DEFINITION

Systematic Random Sampling occurs when the researcher selects every nth unit.

(Beck, S. E. & Manuel, K. (2008). *Practical research methods for librarians and informational professionals* (p. 48). New York: Neal-Schuman.)

A simple process estimates a projection of the current holdings to help answer questions such as:

- How much shelf space is currently occupied by monographs?
- By serials?
- How much is empty?
- How much space would be available if serials were relocated or withdrawn?
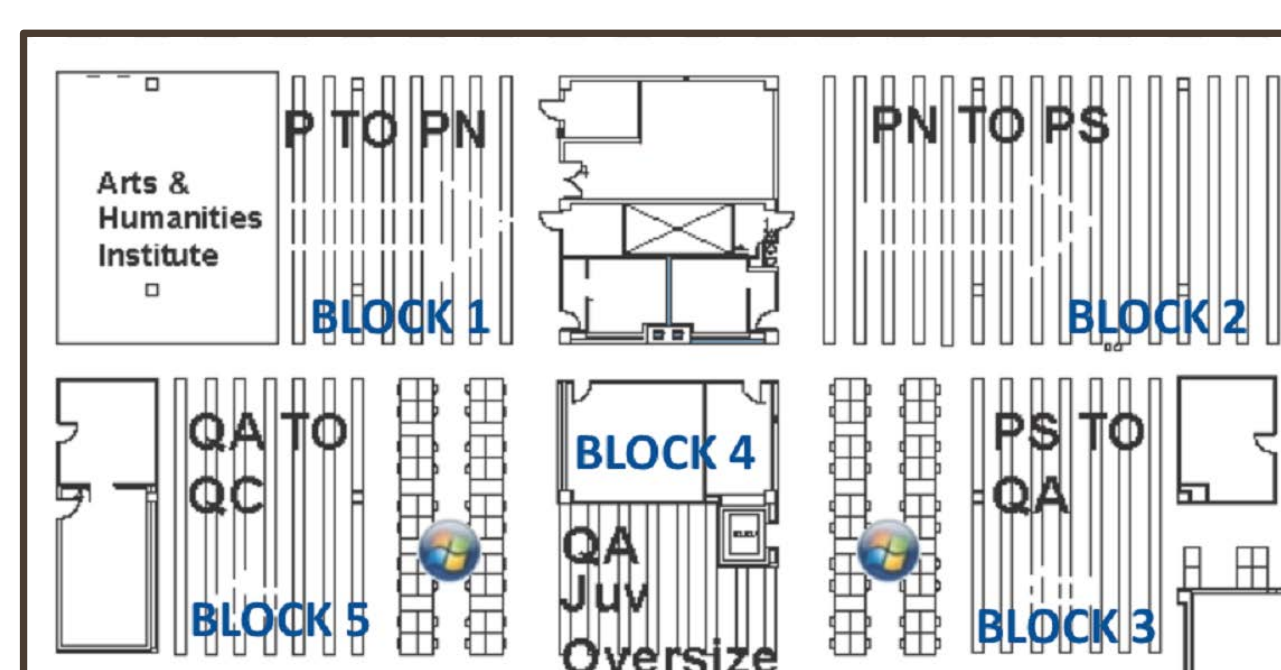
FLOOR PLANS

The main print collection at University Library is housed on two floors. The close-up map shows the relationship between call number sections and block layouts.
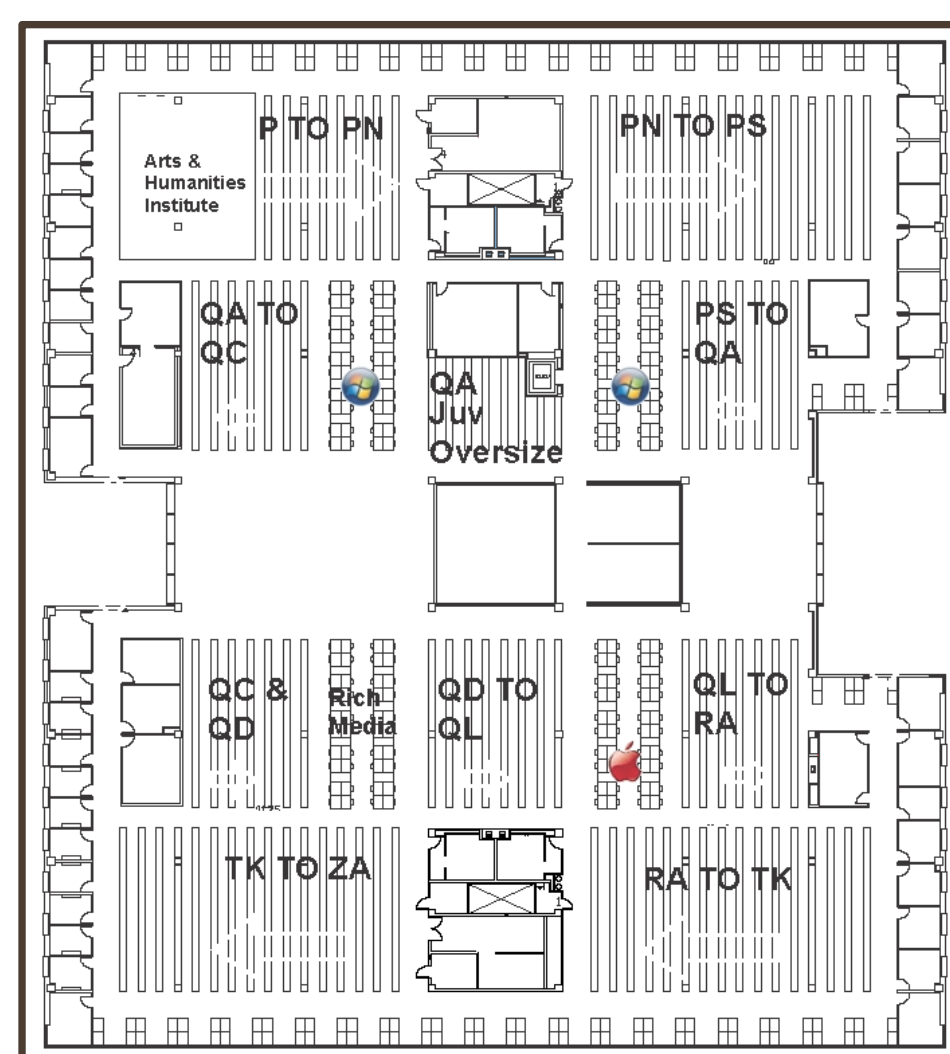
THIRD FLOOR
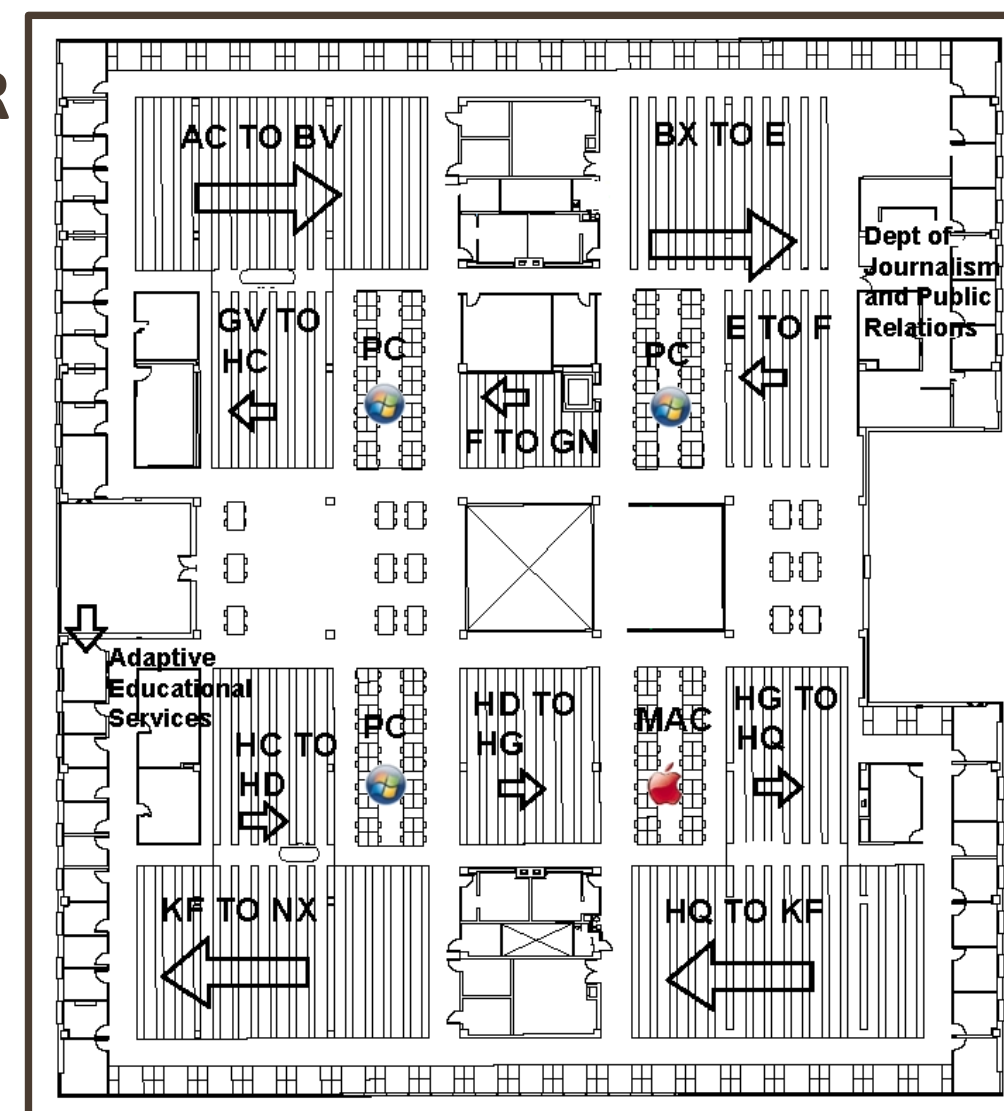
FOURTH FLOOR

CLOSE-UP

METHOD

DATA COLLECTION

A shelf from every fifth section was selected as the sampling unit. Then a form was created to capture the following data: length of the shelf, number of inches occupied by monographs, inches occupied by serials, and inches of unoccupied space.

The data collected was recorded in an Excel spreadsheet.

THIRD FLOOR DATA SUMMARY - CALL NUMBER

Call Number	Shelves	Total Inches	Empty Inches	Journal Inches	Book Inches		% Empty	% Journal	% Book
A	724	25,812	8,461	16,240	1,111	A	33%	63%	4%
B	2513	90,216	34,555	16,801	38,861	B	38%	19%	43%
C	147	5,292	1,507	0	3,785	C	28%	0%	72%
D	1673	59,892	16,238	10,509	33,144	D	27%	18%	55%
E	1117	38,826	14,595	7,878	16,353	E	38%	20%	42%
F	658	22,638	8,322	3,738	10,579	F	37%	17%	47%
G	1425	49,164	15,599	10,210	23,355	G	32%	21%	48%
H	7103	247,026	93,365	51,018	102,643	H	38%	21%	42%
J	826	29,400	9,156	5,453	14,791	J	31%	19%	50%
K	539	19,404	6,252	5,403	7,749	K	32%	28%	40%
L	1678	60,072	25,453	9,765	24,854	L	42%	16%	41%
M	336	12,096	3,323	1,289	7,484	M	27%	11%	62%
N	813	28,980	11,953	7,428	9,599	N	41%	26%	33%

CALCULATION

The sample data was used to calculate estimates of the percent of shelving occupied by monographs, percent of shelving occupied by serials, and the percent of empty space.

ANALYSIS

The calculations were displayed to represent the relationship between call number class and block.

Third Floor - Call Number

Third Floor - Block
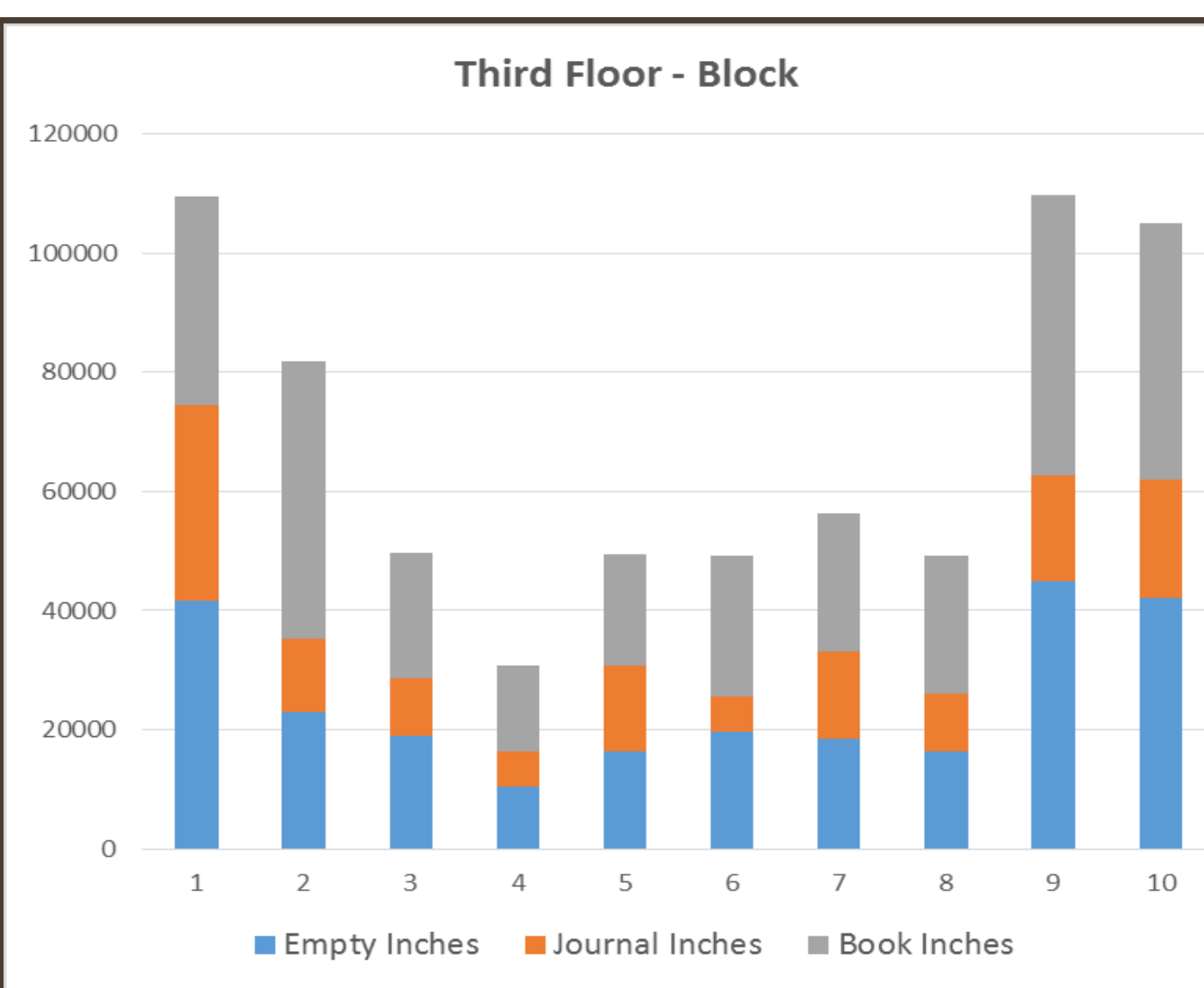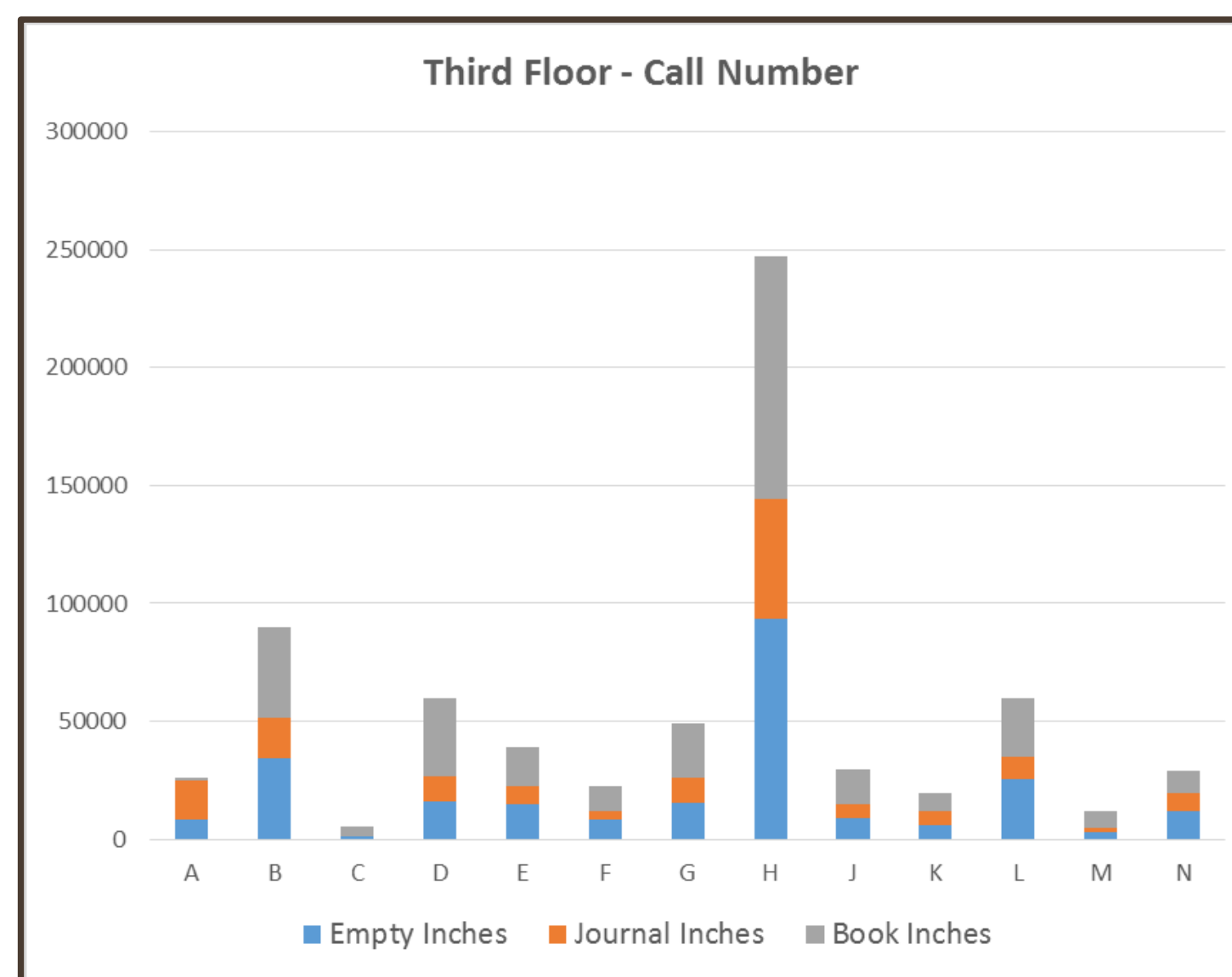
RENOVATION

Bookstacks

New Spaces

Learning Spaces III

Arts & Humanities Institute

Dewey Den