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An Academic Library's Efforts to Justify Materials Budget Expenditures

Steven Carrico, Acquisitions Librarian, University of Florida Smathers Libraries

Abstract:

Academic libraries, like the universities and colleges they serve, are facing increasing pressures to justify budgets and expenditures. Using the business model employed at several other research institutions, the University of Florida (UF) has adopted the accounting system Responsibility Center Management (RCM) which necessitates the university's sixteen colleges to track their individual operational budgets including absorbing a revised tax levied to finance the library. This tax has created a renewed sense of urgency for the library to show details of the material budget expenditures for each college. This paper reveals how staff in the UF Library's Acquisitions Department developed a fresh mapping strategy to track costs of the traditional book budget, print serials, and other tangible materials, but also expenditures for all e-resources drilled down to the individual e-journals purchased through Big Deal packages. Going forward, the library can use this refashioned budget system to reallocate its materials budget to more accurately support the colleges of UF.

Note: This paper is based on a poster presented by Steven Carrico, Raimonda Margjoni, Trey Shelton, and Jack Waters, at the 31st Charleston Conference, November 3, 2011.

"How does a library determine and justify its basic annual budget from a funding agency?" This seemingly simple but deceptively complex two-part question was the focus of a 1983 paper written on material budget allocations in research libraries.¹ Evidently justifying material and resource expenditures has been an issue for academic libraries to deal with for quite some time. Many academic libraries are facing increasingly restrictive material budgets and are often required to provide a cost-benefit analysis of budget expenditures to their colleges and universities. For state-funded institutions the need to show how resource budgets are allocated and expended can be compounded by pressure placed on academia from state legislative authorities, the well-spring of a large percentage of a public university and its library's budget.

At the University of Florida (UF) Smathers Libraries the method for allocating material and resource budgets is one that has been used for at least two decades. Originally the allocation formula was based on the number of Bachelors, Masters, and PhDs awarded across departments and colleges at the university; degrees awarded per department were given weighted factors so that the allocation of the libraries' resource budgets paralleled the number and type of awards across campus. Although the allocation percentages were tweaked on occasion over the years, essentially the libraries' resource budgets doled out to support the university's programs of

study remained proportionally unchanged. The Smathers Libraries would provide a broad summary of the resources that supported specific departments or colleges across campus when asked, but these requests were very infrequent.

However, the landscape of accountability changed dramatically on the UF campus in 2009 with the emergence of a new administrative accounting system, known as Responsibility Center Management (RCM).² RCM was developed in the business world but was adapted by many universities across the U.S., although it should be noted that RCM does have its detractors and problems.³ UF administration elected to employ this system as it offers a decentralized accounting method that hands over more fiscal management to the sixteen colleges of the University of Florida.⁴ Full implementation of RCM at UF began on July 1, 2011, but the new system had been tracked or 'shadowed' in 2010 and accounting figures were provided to the deans and faculty of the colleges as a preliminary view of how RCM would operate. In the RCM model as adapted at UF the colleges in effect are now required to 'balance the ledgers,' and it is their obligation to track expenditures across their respective departments. Funding for each college is self-generating and based on a formula consisting of weighted values not unlike the methodology used to determine the libraries resource budgets. The values applied in the RCM system include the college's composite

student FTE, faculty FTE, the number of graduate and post-graduate degrees awarded, tuition, and many other factors. Based on this weighted allocation system, each college is provided an annual budget by the university's Chief Financial Officer that must pay for all salaries and operating expenses. Obviously larger colleges like UF's College of Liberal Arts & Sciences (CLAS) have far more student, faculty, post-grad FTE, research funding, etc., and thus are provided much larger operating budgets; but at the same time the larger colleges also have more faculty salaries and higher overhead to recoup, which in theory creates a fair playing field for all the colleges at UF regardless of size.

In the RCM model campus units such as the Smathers Libraries are considered 'support centers' and are not placed in the weighted system, rather they are funded by drawing funds from a 'tax' imposed on each of the colleges. This system will put the libraries on the firing line to an extent, as each college will have to budget a percentage of their overall revenue to pay this tax. Not surprising, the deans and faculty of fifteen colleges⁵ at UF are asking rather urgently what research and curriculum support their colleges and departments are receiving from the libraries in return for the soon-to-be imposed tax.

At UF the libraries have a complex budgetary structure in operation as there are two large library

systems within Smathers: (1) the University Libraries, which includes the Main Library (a.k.a. Library West), the Science Library, and five other branches; and (2) the Health Science Center Library, which includes the Veterinary Reading Room and the affiliated Borland Library in Jacksonville. Altogether, the entire materials budgets for the Smathers Libraries was 10.9 million dollars for Fiscal Year 2009-2010. The current system of allocating and managing the 443 individual resource budgets at Smathers is through a set of core "Budget Centers." (see Figure 1) The Budget Centers are organized by related subject collection areas (e.g. Documents), or through Branch Libraries (e.g. Marston Science Library) that are found within the Smathers Libraries system. Within each Budget Center are dozens of resource and material budgets divided by format and subject disciplines (see Figure 2). Unfortunately, the resource and material expenditures for the Budget Centers and their many subject disciplines do not necessarily reveal a direct correlation or support to the various colleges. The research and teaching conducted by CLAS, for example, is supported by the Smathers Libraries through a plethora of materials and resources purchased with budgets from several Budget Centers, so matching specific expenditures from a budgeting system designed around Budget Centers and not focused on the UF colleges produces inexact support figures, to say the least.

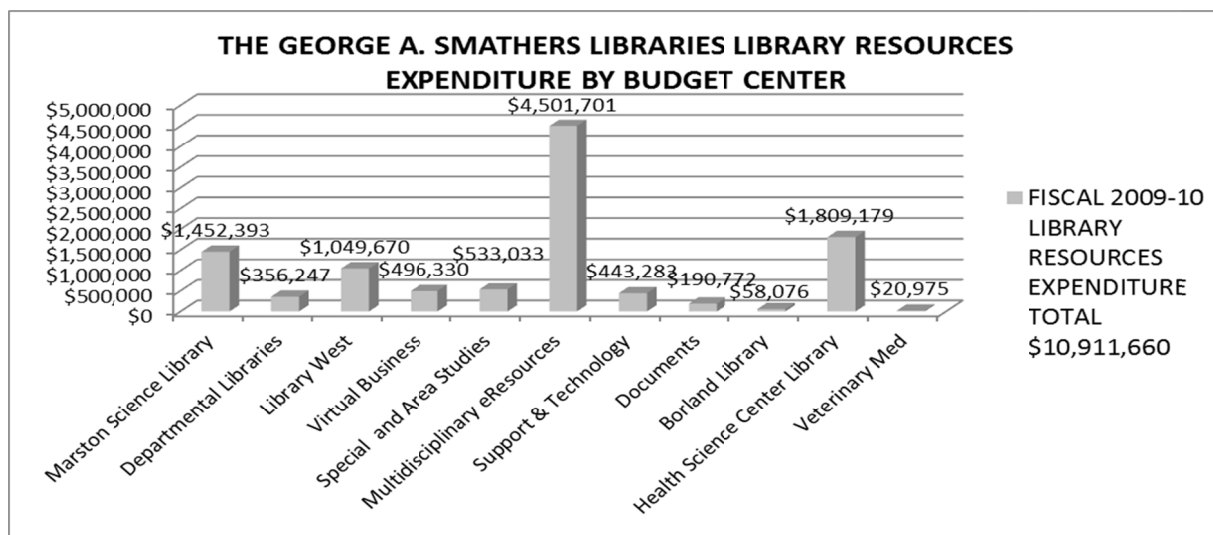


Figure 1. Library Materials Expenditure by Budget Center. FY 2009-2010; total expenditure \$10,911,660

Fund Code	Fund name	Initial Allocation	Allocation Post Tfr.	Expenditures
06000001	Agriculture Firm Order	\$3,958.32	\$2,133.91	-\$1,897.91
06000002	Agriculture Continuations	\$43,767.83	\$39,476.83	-\$36,895.65
06000003	Agriculture Approvals	\$2,276.75	\$2,276.75	-\$2,088.87
06030001	Botany Firm Order	\$2,375.16	\$3,183.86	-\$3,183.86
06030002	Botany Continuations	\$17,501.67	\$17,501.67	-\$13,530.80
06030003	Botany Approvals	\$2,048.08	\$1,498.08	-\$1,306.95
06040001	Computer Sci/Elec E Firm Order	\$6,853.79	\$7,446.94	-\$7,446.94
06040002	Computer Sci/Elec E Continuations	\$204.60	\$995.75	-\$995.74
06040003	Computer Sci/Elec E Approvals	\$5,709.74	\$4,709.74	-\$4,256.70
06050001	Chemistry Firm Order	\$3,954.59	\$2,736.43	-\$2,736.43
06050002	Chemistry continuations	\$83,116.06	\$37,125.06	-\$18,750.86
06050003	Chemistry Approvals	\$7,336.89	\$7,336.89	-\$7,112.55
06060001	Engineering Firm Order	\$7,135.48	\$4,937.30	-\$4,737.57
06060002	Engineering Continuations	\$81,684.85	\$77,541.85	-\$68,342.57
06060003	Engineering Approvals	\$8,718.18	\$8,268.18	-\$8,054.19
06080001	Envir'l Sci & Nat Res Firm Order	\$3,943.11	\$1,800.98	-\$1,800.98
06080002	Envir'l Sci & Nat Res Continuations	\$26,717.32	\$24,786.32	-\$20,576.96
06080003	Envir'l Sci & Nat Res Approvals	\$758.24	\$758.24	\$0.00
06100001	General Biology Firm Order	\$7,756.55	\$6,134.81	-\$6,136.22
06100002	General Biology Continuations	\$79,928.89	\$69,509.95	-\$69,315.22
06100003	General Biology Approvals	\$4,102.76	\$4,102.76	-\$4,322.70
06120001	Geology Firm Order	\$582.92	\$2,701.43	-\$2,721.86
06120002	Geology Continuations	\$31,610.55	\$31,842.55	-\$23,164.47
06120003	Geology Approvals	\$1,702.69	\$1,102.69	-\$803.18
06130001	Mathematics Firm Order	\$2,439.29	\$4,352.67	-\$4,288.39
06130002	Mathematics Continuations	\$114,016.94	\$105,078.94	-\$87,876.08
06130003	Mathematics Approvals	\$13,509.79	\$10,821.52	-\$11,255.07
06160001	Physics Firm Order	\$5,982.23	\$2,766.31	-\$2,766.31
06160002	Physics Continuations	\$31,989.50	\$27,585.50	-\$23,425.14
06160003	Physics Approvals	\$4,981.90	\$5,581.90	-\$5,502.67
06170001	Science General Firm Order	\$3,152.53	\$1,747.60	-\$1,747.60
06170002	Science General Continuations	\$26,063.60	\$26,063.60	-\$25,987.82
06170003	Science General Approvals	\$0.00	\$0.00	\$0.00
06180001	Zoology Firm Order	\$2,736.43	\$3,120.71	-\$3,120.71
06180002	Zoology Continuations	\$18,521.91	\$18,521.91	-\$15,696.30
06180003	Zoology Approvals	\$2,237.48	\$1,737.48	-\$1,610.42
06200006	Science eResources	\$800,500.04	\$879,797.01	-\$944,181.08
	Totals	\$1,459,876.66	\$1,447,084.12	-\$1,437,636.77

Figure 2. Snapshot : Material Budgets Distributed in a Budget Center (Science Library)

Beyond dealing with a complex two-library and multi-branch budget scheme that is organized by Budget Centers, Smathers Libraries faced other obstacles in attempting to define its how material and resource expenditures support each college. A substantial portion—4.2 million—of the overall 10.9 million dollar resource budget was allocated for large publisher packages (the so-called ‘Big Deals’) such as Elsevier ScienceDirect. These packages contain hundreds of e-journals that cover a wide variety of subject disciplines used by patrons from every college at UF. In addition to the Big Deal packages, another 3.5 million of the overall budget was spent on materials and resources viewed as cross-discipline; these expenditures included hundreds of online databases and smaller publisher e-journal packages, as well as other assorted vendor charges and the overhead to support the libraries’ collection building efforts. In many cases these e-resources were paid for by one substantial and somewhat loosely applied “Multidisciplinary” budget, although sometimes a resource (e.g. Web of Science) could be assigned to a ‘General’ budget in a Budget Center (Science) if it supported several subject disciplines within the center. All told, 7.7 million of the Smathers Libraries’ resource budget was classified as either Multidisciplinary or assigned to one of the Budget Center’s General funds and so not easily assigned to any one college.

The challenge of remapping budget expenditures by the university’s colleges and not by the libraries’ Budget Center was handed to the Acquisitions Department, as this department houses and manages the resource budget for the entire two-library Smathers organization. Using the expenditure figures recorded during Fiscal Year 2009-2010, the staff in Acquisitions elected to use subject disciplines as the link to campus departments - departments that were already apart of the fifteen colleges at UF. Thus, existing resource budgets assigned to subject disciplines could be mapped to the colleges. The staff also realized that the biggest impediment to the project would be assigning a primary subject discipline and college to the resources paid for with the Multidisciplinary and General budgets.

The remapping process started with what was known; that is, organizing the material and resource expenditures already pre-assigned and allocated by

specific subject disciplines. These pre-assigned budgets are long established and are based on Library of Congress or Dewey call number ranges.⁶ Historically print based, these budgets include firm order monographs budgets, approval monographs budgets, and print serial budgets assigned individual fund codes by subject discipline and designated for each format type. Budgets were regrouped by their subjects; subjects then were mapped to the departments they supported, then to the colleges that housed the departments. After this step of the exercise had been completed, 2.5 million dollars in expenditures had been realigned into the fifteen colleges.

The next step in the process was to determine what was not known. Many of the online databases and publisher e-journal packages were being acquired under the umbrella of the Acquisitions’ one large, general e-resource budget (Multidisciplinary) or the Budget Center’s General e-resources budgets. These budgets are used as the catch-all for paying for e-resources for the Smathers Libraries, so often the individual resources had never been assigned to specific subject disciplines much less tracked to one of the fifteen colleges. After a comprehensive review by Acquisitions staff and subject specialist librarians it was determined that many of the resources, e-books, and databases acquired on these general e-resource budgets could in fact be assigned to a subject discipline, department of study or research center, which could then be linked to its parent college. In cases where resources clearly support faculty and researchers in more than one college or across several subject disciplines, the resources were assigned the Multidisciplinary fund. At the conclusion of this stage, e-resources accounting for almost two million dollars in expenditures had been assigned a primary college of support; when added to the 2.5 million spent on print monographs and serials, 4.4 of the 10.9 million dollar budget had been redistributed across the fifteen colleges.

Next came the biggest stumbling block; determining a method of assigning specific subject disciplines to the individual e-journals contained in the largest packages being received at the Smathers Libraries – the so-called “Big Deals.” A review of the titles showed that pricing information was made available by the Big Deal publishers or vendors, but often the specific call numbers for the titles were not in-

cluded. The Acquisitions staff brought this problem to the attention of the libraries' main serial vendor, Harrassowitz, who successfully located catalog records with call numbers that could be downloaded into our spreadsheets. At that point Acquisitions staff were then able to sort the titles found in the Big Deal packages by call numbers and assign colleges and subject disciplines. Table 1 shows a snapshot of the classification map that was used to make these assignments. Most of the titles in the Big Deal packages were assigned a primary college of support, although many of the e-journals either could not be assigned one college as they provided equal cross-discipline support, or the bibliographic records were incomplete and voided the call number assignments. Despite this large subset of unassigned e-journals, staff did manage to assign approximately 3.2 million dollars of the Big Deal packages to one of the colleges. At this point, a master spreadsheet was created to show budget expenditures assigned to the fifteen colleges; the subtotal for each college was derived from the traditional budgets, plus adding in the reassigned budget expenditures from the General e-resources funds in each Budget Centers, along with the expenditures identified for each college from the Big Deal e-journal packages. Figure 3 illustrates how these budgets were reworked; note how the science

budgets from the Science Library's Budget Center (Figure 1) have been reassigned and spread out across four separate colleges (Ag & Life Sciences, Engineering, Health & Human Performance, and science related subject disciplines found within Liberal Arts & Sciences).

The final stage of the project was to take the remaining expenditures (approximately 3.2 million) from the Multidisciplinary fund and distribute it equally across the fifteen colleges. The rationale for dividing this substantial fund was these expenditures truly support research and teaching across campus, irrespective of college or discipline, so an equal distribution of these funds seemed a logical and practical way to show library support to every college dean and the university administration. Two pie charts illustrate the final distribution of material expenditures for both large libraries: Figure 4 details the resource expenditures assigned to the colleges of the University Libraries; Figure 5 details the resource expenditures assigned to the colleges of the Health Science Center Libraries. These charts and figures were submitted by the Acquisitions staff to the Library Deans, who incorporated them into a RCM budget report that was presented to the college deans and faculty at UF in January 2011.

Table 1. : Snapshot : Call Numbers Assignments by Colleges & Disciplines

<u>/Discipline</u>	<u>Call Numbers - Ranges</u>
1. College of Business	HB; HD; HF; HG; HJ
2. College of Agricultural and Life Sciences/IFAS	
i. Ag/Soil/Forestry	S-SD
ii. Animal Sci/Wildlife	SF-SK
iii. Env. Sci/Manufacture/	GE; TS; GB651-2998; QP141;
iv. Nutrition	QP771-800; RM; TX 950-1107
3. College of Liberal Arts & Sciences	
(a) Sciences	
i. General Science	Q1 – 294
ii. Mathematics/Stats	QA1-74; QA77-401; QA403-799; HA
iii. Astronomy	QB
iv. Physics	QC
v. Chemistry	QD
vi. Geological Sciences	QE
vii. Biology/ Botany/Zoology	QH301-559; QK; QL
(b) Social Sciences	
i. General/Reference	H
ii. Psychology	BF1-1999
iii. History	C-FC
iv. Sociology/Women St.	HM-HT
v. Anthropology	GN
vi. Political Science	J
vii. Library Science	Z
(c) Humanities	
i. Philosophy	B-BD
ii. Religion	BH-BX
iii. Linguistics	P
iv. Classics	PA
v. Languages	PC-PM
vi. English Literature	PN1-4500; PQ-PZ
4. College of Dentistry	RK1-715
5. College of Design, Construction & Planning	
i. City/Region Planning	HT161-395
ii. Architecture	NA
iii. Building Construction	TH

College / Discipline	Monographs Approvals	Monographs Firm Orders	Print Serials	Total Print	E-Resources from Budget Center	E-Resources from E-journal packages	Total E-Resources	Grand Total 09-10 spend
Ag & Life Sciences / IFAS						\$130,069.22	\$130,069.22	\$130,069.22
<i>Ag, Soil, Forestry</i>	\$2,088.87	\$1,897.91	\$36,895.65	\$40,882.43	\$43,656.70		\$43,656.70	\$84,539.13
<i>Animal Sci, Env Sci</i>	\$0.00	\$1,800.98	\$20,576.96	\$22,377.94	\$38,683.44		\$38,683.44	\$61,061.38
		\$422.45		\$422.45			\$0.00	\$422.45
Subtotal	\$2,088.87	\$4,121.34	\$57,472.61	\$63,682.82	\$82,340.14	\$130,069.22	\$212,409.36	\$276,092.18
Engineering					\$183,935.00	\$417,879.35	\$601,814.35	\$601,814.35
<i>Computer Sci. & Elec. Eng.</i>	\$4,256.70	\$7,446.94	\$995.74	\$12,699.38			\$0.00	\$12,699.38
<i>Engineering</i>	\$8,054.19	\$4,737.57	\$68,342.57	\$81,134.33			\$0.00	\$81,134.33
<i>Endowment</i>		\$3,600.00		\$3,600.00			\$0.00	\$3,600.00
Subtotal	\$12,310.89	\$15,784.51	\$69,338.31	\$97,433.71	\$183,935.00	\$417,879.35	\$601,814.35	\$699,248.06
Health & Human Performance	\$610.06	\$4,023.33	\$20,616.32	\$25,249.71	\$8,346.66	\$113,694.57	\$122,041.23	\$147,290.94
Subtotal	\$610.06	\$4,023.33	\$20,616.32	\$25,249.71	\$8,346.66	\$113,694.57	\$122,041.23	\$147,290.94
Liberal Arts & Sciences							\$0.00	
Sciences							\$0.00	
<i>Astronomy</i>					\$5,928.00		\$5,928.00	\$5,928.00
<i>Chemistry</i>	\$7,112.55	\$2,736.43	\$18,750.86	\$28,599.84	\$287,905.60		\$287,905.60	\$316,505.44
<i>Geology</i>	\$803.18	\$2,721.86	\$23,164.47	\$26,689.51	\$3,251.00		\$3,251.00	\$29,940.51
<i>Math/Stats</i>	\$11,255.07	\$4,288.39	\$87,876.08	\$103,419.54	\$45,900.95		\$45,900.95	\$149,320.49
<i>Physics</i>	\$5,502.67	\$2,766.31	\$23,425.14	\$31,694.12	\$228,144.12		\$228,144.12	\$259,838.24
<i>General</i>	\$0.00	\$1,747.60	\$25,987.82	\$27,735.42	\$56,532.52	\$1,741,111.23	\$1,797,643.75	\$1,825,379.17
<i>Botany</i>	\$1,306.95	\$3,183.86	\$13,530.80	\$18,021.61			\$0.00	\$18,021.61
<i>Biology</i>	\$4,322.70	\$6,136.22	\$69,315.22	\$79,774.14	\$51,711.16		\$51,711.16	\$131,485.30
<i>Zoology</i>	\$1,610.42	\$3,120.71	\$15,696.30	\$20,427.43			\$0.00	\$20,427.43
<i>Endowment</i>		\$10,733.48		\$10,733.48			\$0.00	\$10,733.48
Subtotal	\$31,913.54	\$37,434.86	\$277,746.69	\$347,095.09	\$679,373.35	\$1,741,111.23	\$2,420,484.58	\$2,767,579.67
<i>Geography</i>	\$403.71		\$9,047.42	\$9,451.13			\$0.00	\$9,451.13
Subtotal	\$403.71		\$9,047.42	\$9,451.13			\$0.00	\$9,451.13
Total from Colleges	\$47,327.07	\$61,364.04	\$434,221.35	\$542,912.46	\$953,995.15	\$2,402,754.37	\$3,356,749.52	\$3,899,661.98

Figure 3. Snapshot : Material Budgets in Science Distributed Across Colleges

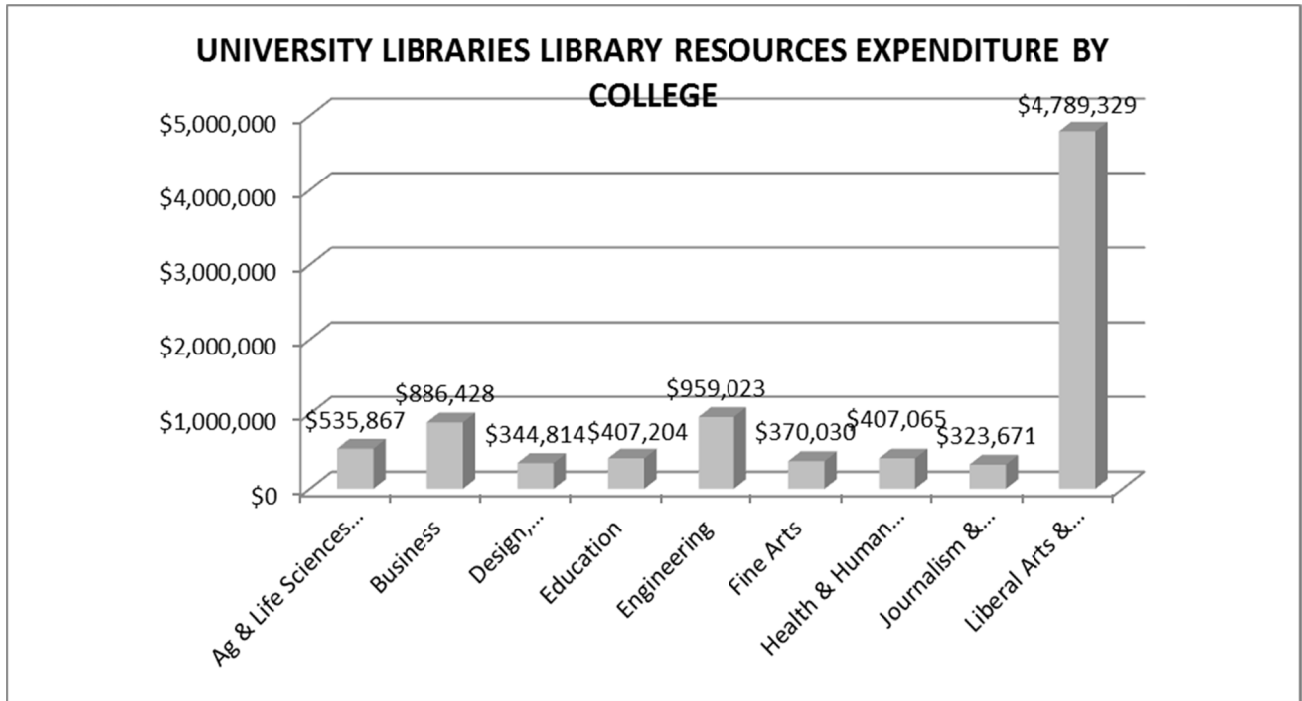


Figure 4. University Libraries Materials Expenditure by College. FY 2009-2010; total expenditure \$9,023,430

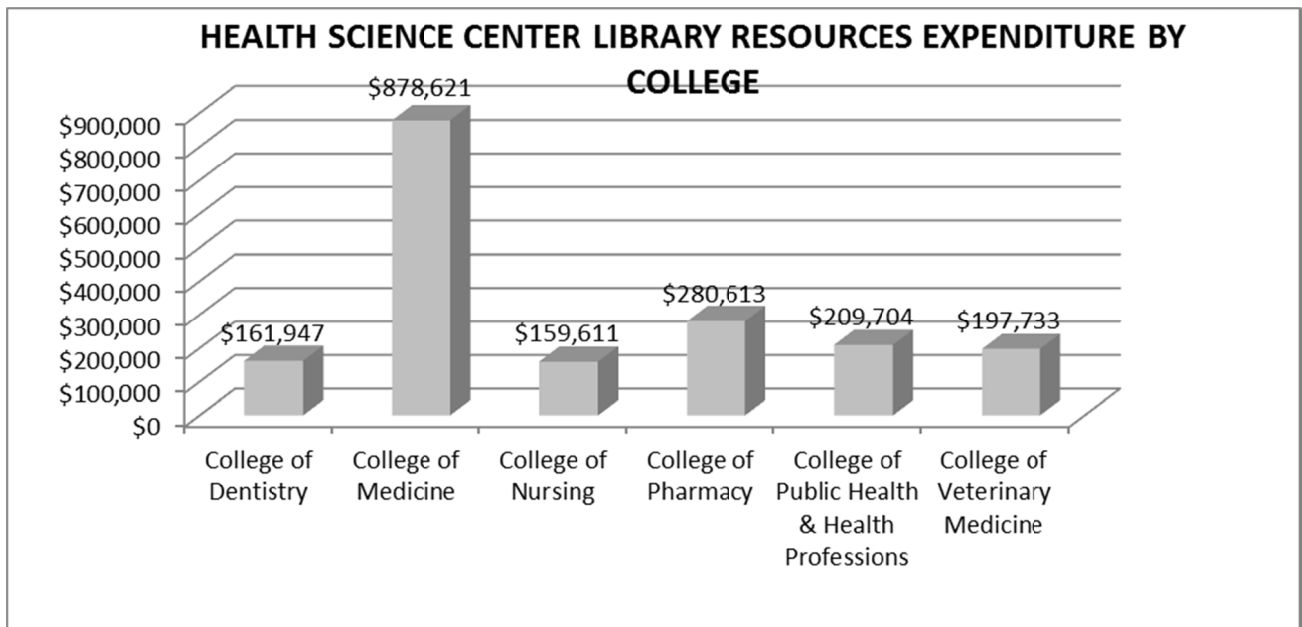


Figure 5. Health Science Center Library Materials Expenditure by College. FY 2009-2010; total expenditure \$1,888,230

Conclusion

With the advent of RCM a whole new level of budget accountability is appearing at the University of Florida. With this heightened budget responsibility

the libraries are now more than ever having to justify material expenditures. It is not enough for the libraries to merely claim the material funds are being spent prudently to support the research and

teaching missions of the colleges at UF; it now is essential that the libraries validate the resource and material expenditures provided to every college. With a simple mapping technique described in this paper, both the University and Health Science Center Libraries successfully demonstrated this support to their respective clientele. Yet, the justification process is far from over, and actually has just started. The next stage of the process of providing support to each college will come with the redistribu-

tion of the materials budget. A new allocation system for the materials budget must be devised that can fairly distribute the funds across the colleges to support research and coursework, and at the same time recognize and give credence to the amount of tax each college imparts annually to maintain the library as a service provider. The model of redistribution based on RCM support as expounded in this paper has laid a foundation for this next project.

¹ Vasi, John. Budget Allocation Systems for Research Libraries. *Occasional Paper #7*. Washington, DC: Association of Research Libraries, Office of Management Studies, 1983.

² Kirp, David. The Corporation of Learning: Nonprofit Higher Education Takes Lessons From Business. Research & Occasional Paper Series: CSHE.5.03 (Berkeley, CA: University of California's Center for Studies in Higher Education, 2003). <http://cshe.berkeley.edu/publications/docs/ROP.Kirp.5.03.pdf>.

³ Watson, Robert N. "The Humanities Really Do Produce A Profit." *The Chronicle of Higher Education*. March 21, 2010. <http://chronicle.com/article/The-Humanities-Really-Do/64740/>.

⁴ University of Florida, Office of the Vice President and Chief Financial Officer. *RCM Nuts and Bolts Presentation*. <http://cfo.ufl.edu/present/rcm+nuts+n+bolts+ilt+5-3-20101presentation.pdf>.

⁵ The sixteenth college at UF is the College of Law but is supported by the Legal Information Center and operates with a separate budget and autonomy from the Smathers Libraries.

⁶ Smathers Libraries, Acquisitions Department. "LC call number ranges." <http://www.uflib.ufl.edu/acqlic/mono/codes/LCRanges.html>.